SAFETY
Manual

JAXPORT
JACKSONVILLE PORT AUTHORITY

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I. PREFACE / PURPOSE / SCOPE

PREFACE

It is the policy of JAXPORT to provide a safe and healthy work environment. JAXPORT's Safety Manual has been prepared in an effort to prevent injuries, illnesses, and death from work related factors and to minimize losses of material resources and interruptions from accidental occurrences. It is directed toward the control of all types of hazards encountered in daily operations.

This safety manual is a part of a continuing program for providing safety information and updating safety awareness to all personnel. We all share in the responsibility for the health and safety of our employees, contractors, visitors, and tenants. Use this manual as a guide in working safely in your workplace. It is the responsibility of each employee to perform work duties safely using proper methods and techniques and associated On-the-Job training.

PURPOSE

This manual brings together information that will assist employees and supervisors to carry out their responsibility to ensure a safe environment throughout JAXPORT. It is also a source for obtaining instructions on how to report accidents and injuries. All personnel are required to become very familiar with this manual and follow safety policies, and procedures while performing their work.

SCOPE

The information and requirements given in this manual are applicable to all areas of JAXPORT and represent only general minimum standards. This manual will serve as a basis to which Supervisors shall add safety measures relevant to their work operations.

It must be emphasized that this is an in-house manual. The procedures and requirements are established based on the facilities and resources available. They represent, nonetheless, a code of standard safe work practices to complete assigned work duties.

II. REGULATORY

JAXPORT establishes the Safety Manual in accordance with all applicable federal, state, and local laws and regulations including, but not limited to, the following:

- Federal and State Occupational Safety and Health Administration (OSHA) standards
- F.S. 440.56, Workers Compensation

- 29CFR-1910.184 Slings
- 49 CFR 172.420 (Flammable Solid Label)
- 40 CFR 112 Spill Prevention Control and Countermeasures
- F.S.311.12 Homeland Security
- F.S.633, Fire Prevention and Control
- F.S.442, Florida Right-to-Know Law
- F.S.768.28 Sovereign Immunity
- National Fire Protection Association Codes and Standards (NFPA)
- City of Jacksonville Risk Management Code Chapter 128

III. GENERAL SAFETY RULES

The safety rules contained in this section have been prepared to protect each employee in their daily work area. While these rules are not all-inclusive, they offer general guidelines. The way a task is performed can influence the risk of injury and general work productivity. JAXPORT encourages good techniques, which can make a job easy and safe to accomplish. Always **THINK SAFETY FIRST**.

IV. GENERAL SAFE WORK PRACTICES

1. Obey all safety rules and follow published work instructions.
2. Become familiar with and observe approved safe work procedures during the course of your work activities.
3. Wear required personal protective equipment.
4. Promptly report all unsafe actions, practices, or conditions before commencing work.
5. Do not undertake any task, use any tool, or operate equipment unless authorized to do so. Make sure you have received the proper training in the use of such equipment.
6. Keep work areas clean and orderly at all times.
7. Promptly report all accidents and injuries occurring within the course of their employment, no matter how minor.
8. Cooperate with and assist in the investigation of accidents to identify causes and corrective measures to prevent reoccurrence.
9. Avoid engaging in any horseplay.
10. Report all near-miss incidents to supervisors for correction of a potential hazardous condition.
11. Use equipment and tools only for their intended purposes within the manufacturer's limitations.
12. Ensure proper safeguards when working under hazardous conditions.

Lifting Procedures

1. Plan the move before lifting; remove obstructions from your chosen pathway.

2. Test the weight of the load before lifting by slightly pushing the load along its resting surface to determine if lifting equipment or assistance is required.
3. If the load is too heavy or bulky, use lifting and carrying aids such as hand trucks, dollies, pallet jacks and carts, or get assistance from a co- worker.
4. If assistance is required to perform a lift, coordinate and communicate your movements with co-worker.
5. Position your feet 6 to 12 inches apart with one foot slightly in front of the other.
6. Face the load.
7. Bend at the knees, not at the back.
8. Keep your back as neutral in the upright position as possible.
9. Get a firm grip on the object with your hands and fingers. Use handles when present.
10. Never lift anything if your hands are greasy or wet.
11. Wear protective gloves if there are hand or finger hazards.
12. Hold objects as close to your body as possible.
13. Perform lifting movements smoothly and gradually; do not jerk the load.
14. If you must change direction while lifting or carrying the load, pivot your feet and turn your entire body. Do not twist at the waist.
15. Set down objects in the same manner as you picked them up, except in reverse.
16. Do not lift an object from the floor to a level above your waist in one motion. Set the load down on a table or bench and then adjust your grip before lifting it higher.
17. Slide materials to the end of the tailgate before attempting to lift them off of a pick-up truck.

V. GENERAL HOUSEKEEPING

No matter what kind of work you do, good housekeeping is important. Good housekeeping helps make your work safer, easier, more productive, and more pleasant. Good housekeeping helps prevent accidents. Treating your work area with respect will help you avoid slips and falls.

VI. SITE SPECIFIC HOUSEKEEPING

1. Do not place material such as boxes or trash in walkways and passageways.
2. Do not store or leave items on stairways.
3. Do not block or obstruct passages or exit routes to stair wells and emergency equipment such as fire extinguishers or fire alarms.
4. Do not store chemicals and food in the same space.

VII. PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. The proper use of PPE is required for dealing with hazards.
2. JAXPORT approved orange T-Shirts can be worn in place of safety vests during daylight, approved safety vests are required to be on at all times while inside the terminal at night.
3. Wear safety glasses, goggles or face shields when operating chippers, grinders, lathes, sanders and anytime flying particles/objects are or may be near.
4. Wear protective leather gloves when working with sharp, pointed, electrical energized equipment and anytime hands and fingers may be impacted by or caught between objects.
5. Wear appropriate protective gloves when working with chemicals.
6. Do not continue to work if your safety glasses become fogged.
7. Stop work and clean the glasses until the lenses are clear and defogged.
8. Wear safety shoes when required.
9. Wear earplugs or earmuffs in areas posted "Hearing Protection Required" and when working near or operating loud equipment
10. Wear hard hats when working near areas where falling objects may potentially be a hazard.

Wear a life jacket when working over water.

VIII. HAZARDOUS COMMUNICATIONS (RIGHT-TO-KNOW)

JAXPORT uses an independent contractor to provide on demand live assistance 24 hours a day, 7 days a week, 365 days a year for all Safety Data Sheet (SDS) requests. To respond to a SDS request, the contractor requires the product name and number, manufacturer's name, manufacturer's phone number and UPC. The contractor will fax the SDS to the requesting individual. JAXPORT remains in compliance with OSHA's Hazard Communication Standard, 29 CFR 1910.1200, by using this service. The contractor's phone number is **800- 451-8346**.

JAXPORT also conducts annual HAZMAT training that includes a background of the law, employee rights under this law, and how to review Safety Data Sheets (SDS). In addition, each workplace area supervisor will provide the following to employee(s):

1. The location of the toxic substances in the workplace.
2. Proper and safe handling practices.
3. First aid treatment in case of overexposure.
4. Adverse health effects of the substances.
5. Appropriate emergency procedures.
6. Proper procedures for clean-up of leaks or spills.
7. Potential for flammability, explosion and reactivity.

Hazardous wastes generated at JAXPORT include the following:

8. Corrosive wastes (inorganic acids and alkali solutions)
9. Ignitable paint products to be discarded

10. Ignitable waste paint thinners
11. Various spent paint and epoxy stripper solutions
12. Miscellaneous chlorinated solvent mixtures
13. Miscellaneous flammable non-chlorinated solvent mixtures
14. Infrequently, contaminated waste oil
15. Waste rags and cleanup debris
16. Mercury and mercury containing debris

If there is hazardous spill, please clear the area and call 911 informing them of the following information:

1. Name, address, and telephone number of Port facility affected;
2. Date, time and type of accident;
3. Name and quantity of material involved in the release;
4. The extent of injuries, if any;
5. An assessment of actual or potential hazards to human health or the environment, where applicable;
6. Estimated quantity and disposition of any recovered materials that resulted from the incident.

*Note: JAXPORT has a contract with a designated spill responder: Jacksonville Spillage Control. 24/7, (904) 355-4164

IX. FIRE PREVENTION

1. Remove and dispose of all empty cartons, packing boxes, wrapping material, waste and trash.
2. Flammable fluids such as gasoline or kerosene shall be kept in UL or FM approved containers and painted red. The containers shall be clearly marked as to the contents.
3. Leaks in fuel and oil tanks shall be reported immediately.
4. Paint spray houses should be properly ventilated and adequate extinguishers provided.
5. Keep fire extinguishers fully charged, inspected monthly and serviced annually.
6. Replace discharged or partially discharged extinguishers immediately.
   Return them to the area designated for recharging. Notify your supervisor of the incident requiring the use of fire extinguishers.
7. Employees shall familiarize themselves with the location and proper use of fire extinguishing equipment in their departments. All extinguishers must be located in accessible, conspicuous places along normal paths of travel and exit. Portable fire extinguishers are to be placed within 75 feet of office work areas.
8. Never direct a stream of water on flammable liquids, electrical fires or metal fires.
9. Use only carbon dioxide and dry chemical extinguishers on electrical fires. If possible, turn OFF power to an electrical fire.

10. Evacuate an area immediately where a fixed fire extinguishing system (sprinkler or halon) alarm has sounded.

Smoking

1. JAXPORT complies with **33 CFR 126.15 (a) (10)** "Smoking. Smoking is allowed on the facility where permitted under State or local law. Posted signs will mark authorized smoking areas. "No Smoking" signs are also conspicuously posted elsewhere on the facility."
2. JAXPORT has a Tariff which explains that it is prohibited for any person to smoke, use electronic vapor cigarettes or produce open flame upon JAXPORT common areas, wharves, aprons, common cargo staging areas or other areas in the immediate vicinity of vessels containing, loading, or discharging explosives or dangerous cargo to include vessel fuel transfer operations and /or any other areas as determined by JAXPORT, Fire Department, State or Federal Regulation.
3. There is to be no smoking, smokeless tobacco or use of electronic vapor cigarettes in any commonly used equipment including port vehicles, forklifts, fuel truck, cranes, high reach, back hoe, lawn mowers, etc.

Fire Extinguishers

All fire extinguishers shall bear a tag showing the date it was last inspected or filled. They should also bear labels showing their class ratings. Immediately report when an extinguisher has been used/emptied, so that it can be serviced in a timely manner.

Storage of Flammable Materials

1. All empty cartons, packing boxes, wrapping materials and dirty rags shall be safely stored, removed from buildings, or destroyed at the end of each day.
2. All oily waste rags and trash shall be placed immediately in approved waste cans. These cans shall be emptied as often as necessary.
3. Rubbish shall not be allowed to accumulate, nor grass and weeds be allowed to grow where they will create a fire hazard. Rubbish shall not be burned near combustible structures.
4. Combustible material in the vicinity of welding operations shall be protected from sparks and slag.
5. Adequate ventilation shall be provided for those areas where volatile flammable liquids are stored to prevent the accumulation of explosive mixtures.
6. Flammable fluids such as gasoline and kerosene shall be kept in containers approved by the "Fire Underwriters" and shall be painted

red. Fuel cans shall be clearly marked as to contents. Gasoline shall not be used for cleaning.

7. Control static electricity. Static electricity has caused many serious fires and is a constant danger when transferring flammable liquids between containers. The formation of static electricity is due to the action of contact and separation of dissimilar substances. Liquids produce static electricity when they flow through pipes or hoses, when they fall through the air in drops or as spray, when they are splashed around in tanks and when air or other gas is bubbled through them.

X. GENERAL ELECTRIC REQUIREMENTS

1. Installations and changes in electrical wiring or fittings or attachments for electrical appliances should never be made except by authorized personnel. Authorized personnel must follow lockout procedure.
2. Public address systems, communications systems, fire systems, call systems, and disaster warning signals shall be installed by authorized personnel.

   Defective electrical cords, lighting fixtures, appliances, and switches shall be repaired or removed. All defective electrical equipment shall be reported and shall be repaired by authorized personnel.

   Temporary wiring shall be kept to a minimum and never substituted for permanent wiring, except on installations of a temporary nature, when in use not more than 30 working days. Extension cords shall not be used in lieu of permanent wiring. If it is necessary to use portable lamps or portable appliances, flexible cord designed for hard usage shall be used. Flexible electric card shall not be tied to nails or draped over metal rods and shall be kept dry and free from oil and grease. They shall be removed when the temporary job is completed. Flexible cords shall contain one extra insulated conductor to form a grounding connection for metal lamp guards, motor frames and all other exposed metal portions of portable lamps and appliances.
3. Use a cord cover or tape the cord down when running electrical cords across aisles, or across entrances or exits.
4. Do not connect multiple electrical devices into a single outlet.
5. Turn the power switch to “OFF” and unplug office machines before adjusting, lubricating or cleaning them.

Fueling and Refueling

The following procedures will be observed when fueling/refueling:

1. **DO NOT SMOKE!**
2. Always fill on a level surface.
3. Do not fill while engine is running or hot. Let the engine cool.
4. Do not overfill the tank, wipe up all spills.

5. Prevent any dirt and debris from entering the fuel tank.
6. Keep fuel in an approved safety can.
7. Mix two cycle fuel in the safety can, not in the fuel tank.
8. Do not use your cell phone while fueling.

General Welding Requirements

Welding, brazing, flame or plasma cutting, hot riveting, grinding, chipping, soldering and other activities that produce sparks or use flame are important tools of modern industry. The portability of some of the equipment and its careless use - outside of maintenance areas specifically designed for its safe use -can increase the likelihood of fire that will destroy facilities and interrupt productive work. Make sure portable cutting, welding, and other hot work for maintenance, construction, or modifications is done safely, and all permit systems are in compliance. OSHA regulations: 29CFR1910.253 and 254, subpart Q, 29CFR1926 subpart J, NFPA 51B.

The principal hazard associated with portable hot work equipment is the introduction of unauthorized ignition sources into random areas of the facility. Temperatures sufficient to start fires or ignite explosive materials may come from a number of sources including:

1. The open flame of a torch.
2. Metals being welded or cut.
3. Molten slag or metal that flows from the work.
4. Sparks that fly from the work.
5. An improperly handled soldering iron.
6. Improperly applied grounding clamps during electric arc welding.

Welders and other personnel who might be using hot work equipment should be instructed in precautions to be taken, and a list of these precautions should be posted in the maintenance shop, on the equipment, or on the work permit. All welders should obtain and wear appropriate personal protective equipment. Precautions should include:

1. Performing hot work in a properly arranged maintenance shop except when the job cannot be moved to it.
2. Using only equipment that is in good condition. Valves, regulators, hoses, and torches should be thoroughly checked.
3. Refraining from using welding, cutting, or other hot work equipment in a building where sprinklers are out of service. Moving combustibles at least 35 feet from hot work operations. If combustibles cannot be moved, they must be protected by metal guards, by flameproof curtains or covers rather than ordinary tarpaulin.
4. Prohibiting hot work around flammable or combustible materials.
5. Checking the atmosphere for combustible gases or vapors where necessary, using reliable detection equipment. If there is a chance of a gas vapor release during hot work operations, continuous duty

portable combustible gas detectors should be used to constantly monitor the area.

6. Prohibiting hot work until surrounding floors have been swept clean, and if combustible, wet down.
7. Prohibiting hot work until all wall and floor openings within 35 feet of the operations have been tightly covered or otherwise protected with metal guards or flameproof tarpaulins. Must use a fire watch when required or necessary.
8. Prohibiting hot work until responsible persons have been assigned to watch for sparks in the area and on floors above and below.
9. Securing gas cutting and welding cylinders so they will not be damaged and replacing protective caps on all cylinders not actually in use.
10. Carefully connecting the ground clamp when using electrical arc welding equipment. Since an improperly made ground can be a source of ignition, the ground clamp should be connected as close to the work as possible so that it may be easily observed.
11. Arranging for a patrol of the area, to include floors above and below, during any breaks, such as lunch or rest periods, and for at least half an hour after the work has been completed. If the hot work ends near the time of a shift change, arrangements should be made for the patrols to continue into the next shift.
12. Using portable stands to elevate welding hose or cable off floor areas where it can be damaged.

Acetylene, Electric, Micro-wire and Heliarc Welding

Additionally, more specific precautions for these various types of welding need to be observed. Preventative measures include:

1. Always use pressure reducing regulators on oxygen and acetylene cylinder. Never attempt to control pressure at the blow-pipe or torch by throttling at the cylinder outlet valve. Use different colored hose to connect cutting torch or blowpipe to acetylene and oxygen cylinders. The standard is green for oxygen and red for acetylene. Reverse flow check valves shall be installed at torch handle and regulators on each hose. Hoses should be maintained in good operating condition, and care should be used when cutting and welding to prevent the hose from being burned with molten metal or by a carelessly handled torch.
2. Portable screens should be used where electric welding operations are in progress. This is especially true where employees approach within 75 feet of the work. Electric welders shall be equipped with, and shall use face shields and leather gloves. A fire extinguisher should be kept close by for use in the event of fire. Make certain that flying sparks do not ignite nearby material.
3. Safe methods must be followed carefully in the use of oxygen and acetylene for welding purposes.

CAUTION: Use no oil on equipment through which oxygen passes. This means

cylinder outlets, regulators, hose lines, fittings and blowpipes. Do not handle with oily or greasy gloves. Greasy and oil-soaked clothing catches fire very easily and should not be worn.

4. Make certain that cylinders are fastened so that they cannot overturn. Close valves on oxygen and acetylene cylinders when not in use and release pressure on regulators. Keep material, tools, etc. out of recessed heads of acetylene cylinders since they may hinder the operation of safety plugs.

Compressed Gases

Pressurized cylinders such as oxygen, acetylene and propane are dangerous if improperly handled. Ensure that you are familiar with the safe handling of pressurized cylinders.

1. When handling gas bottles, ensure that safety caps are securely fastened on bottles. Use the cap provided when moving pressurized cylinders.
2. Store pressurized bottles in the upright position, safely secured by chains or other means. Do not secure gas cylinders to conduit, i-bolts mounted in plaster, or any other structure that cannot sustain the force of one or more falling cylinders.
3. Always turn off valves on oxygen and acetylene bottles when not in use. Replace the safety cap.
4. Treat pressurized cylinders with respect and treat all cylinders as if they were full.
5. Store compressed gas cylinder in designated areas posted with a sign identifying the contents and a sign reading "Danger -No Smoking or Open Flames."
6. Protect gas cylinders from undue absorption of heat.
7. Never store oxygen cylinders near highly combustible materials, especially oil and grease, near other fuel gas cylinders or near reserve stocks of carbide and acetylene (including acetylene generators) unless separated by a suitable wall.
8. Separate oxygen cylinders in storage from acetylene or other fuel gas cylinders by a distance of 20 feet or by a noncombustible barrier 5 feet high.
9. Do not allow oil or grease to contact oxygen cylinders, valves, regulators, or other fittings.
10. Convey compressed gas cylinders in portable service using a suitable hand truck, secure the cylinder securely to tire hand truck. Secure gas cylinders using substantial racks, or use chains so they will not fall or be knocked over. Always replace valve caps when moving or storing cylinders. **EXCEPTION:** When it is not practicable to convey cylinders in hand trucks, or to transport racks to the point of operation, (as in some construction work) cylinders may be carried in a properly secured manner to prevent their falling over.
11. Handle gas cylinders transported by crane, hoist, or derrick in

suitable cradles, nets, or skip boxes. Never lift these cylinders using a magnet, rope, or chain slings.

12. Do not place cylinders where they might form a part of any electric circuit. This could occur if the cylinder is placed too close to an electrical panel or other source of electricity. A spark or arc could cause the cylinder to act as a ground. This can be avoided by respecting the required clearances involving electrical panels and by storing cylinder away front electrical panels or outlets.
13. Never transfer acetylene from one cylinder to another, or attempt to mix gases in a cylinder.
14. Never use leaking equipment.
15. Never use oxygen from a system without a pressure regulation device.
16. Locate cylinders out of range of sparks and hot slag from welding and cutting.
17. Always leave valve stem wrenches in place while cylinders are in use.
18. If unsure about the safe handling or use of pressurized cylinders, ask your supervisor.

Pressure Regulators

The use of regulators or automatic pressure-reducing valves shall be limited to the pressure and the types of gases for which they were designed.

Hoses

1. Fuel gas hose and oxygen hose shall be easily distinguished from each other.
2. A single hose having more than one gas passage shall not be permitted as a connection between torch and gas outlet, if a wall failure would permit the flow of one gas into the other passage.
3. Hoses used for liquefied petroleum gas, such as butane or propane, shall be made of, or lined with, materials that are resistant to the action of LP–Gas. They shall be designed for a bursting pressure of at least 1,250 psi, and shall be marked every five feet with the letters LPG.
4. No device permitting mixture of air or oxygen with combustible gases shall be allowed unless approved for this purpose. (Exceptions would be at the burner, in a standard torch or blowpipe)

XI. EQUIPMENT MAINTENANCE REQUIREMENTS

Specific Electric Safety and Precautions and Heavy Equipment

Many areas of electrical safety factors are similar. However, the present day use of electronics in crane drives, heavy equipment controls, vehicle ignitions, and so forth necessitates the need for further specific safety measures treated in a separate category in itself.

1. Integrity of energized high voltage circuits should not be broken except when absolutely necessary and then only by qualified personnel.
2. Extreme caution should be taken prior to working on or near de-

energized circuits which employ large capacitor or pulse forming networks. A suitable grounding or shorting bar shall be used to short circuit all terminals and contact to ground or after this equipment has been de-energized. Some pulse forming networks are capable of retaining their charge several hours after the equipment is secured and all power disconnected.

3. The chassis and frames of all power supplies and high voltage units removed for servicing shall be grounded and all circuits which are normally grounded in operation shall be grounded prior to applying power to the unit.
4. Safety devices on electronic equipment such as interlocks, overload relays, and fuses, shall not be altered, disconnected, or modified without specific authority.
6. No employee shall, even during trouble shooting and repair, reach within or enter energized electronic equipment enclosures for the purpose of servicing or adjusting, except when prescribed by official applicable instruction books, and then only with immediate presence and assistance of another person capable of rendering aid in an emergency.
7. Caution shall be exercised when reaching into the enclosure of equipment having high voltage points. The metal shields or shells of some capacitors and other components are at high potential above ground. Maintenance personnel shall be cautioned prior to servicing equipment which contains such components.
8. Avoid exposing eyes to electric arcs.
9. Breathing fumes from a shorted selenium rectifier shall be avoided; selenium is **very poisonous.** As soon as the burning odor is noticed, the circuit shall be shut off. Leave the vicinity immediately and allow the fumes to disperse.

Mobile Cranes/Cargo Cranes/Stackers/Rigging Hand Signals/Truck Cranes

MOBILE CRANE SAFETY 29 CFR 1910.180

Periodic Inspections

Items to be inspected:

- Deformed, cracked or corroded members
- Loose bolts or rivets
- Cracked or worn sheaves and drums
- Worn, cracked or distorted parts such as bearings, gears, rollers, etc.
- Excessive wear on brake system parts
- Inaccuracies in load, wind and other indicators
- Electric or fossil-fuel motors
- Excessive wear of chain drive sprockets and chain
- Deteriorated electrical components such as pushbuttons, limit switches or contactors

Maintenance Requirements

A preventive maintenance program based on the crane manufacturer's recommendations must be implemented. If any deteriorated components or unsafe conditions are detected during the required inspections, they must be completed before the crane is allowed to be used. Only designated personnel may perform the required maintenance and repairs. The requirements of 29 CFR 1910.147, The Control of Hazardous Energy or lockout/tag out, should be used to de-energize the crane.

Operation

The manufacturer's instructions must be followed when operating the crane. Attach the load to the block hook by means of slings or other approved devices, making sure the sling is clear of all obstacles. Once the load is properly secured and balanced in the untwisted sling, slowly raise the load. Horizontal movement must also begin slowly to prevent the load from swinging or coming into contact with other obstacles.

The crane warning signal or horn must be sounded when the load or hook comes near or over personnel. Carrying loads over personnel is against OSHA regulations. A load should not be left suspended without an operator in control of the crane.

Audible and discernible voice communication should be kept with the operator at all times. If this cannot be accomplished, a signal system should be used. Standard signals as shown on the next page (see illustrations); however, it may be necessary to create special signals in certain circumstances. In these circumstances, the signals must be understood and agreed upon by all individuals using the crane.

Handy Signals (illustration)

Handy Signals

rigging handbook

Duties of the signaler:
- Only one person shall be designated as a signaler.
- The signaler and operator must be familiar with the hand signals being used.
- The signaler must be able to observe the load and other workers at all times.
- The signaler must always be in plain view of the crane operator.

The signaler must always:
- Be in clear view of the crane operator.
- Have a clear view of the load and equipment at all times.
- Keep people outside the load travel path.
- Ensure the load does not pass above people.
- Keep the crane away from power lines.
- Watch for other overhead hazards that could endanger the load or people nearby.

Multiple signalers:
- There should be only one designated signaler at a time — more than one will only confuse the operator.
- If signalers are changing frequently, the one in charge should be clearly visible as the person with signaling authority.
- Wearing a bright vest or different colored hard hat will help the crane operator quickly identify who is currently in charge of signaling.

Common Signals

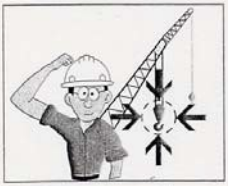
The following are the most commonly used hand signals for directing mobile crane lifting operations.

Hoist the Load
Extend the right arm straight out and raise the forearm to vertical, forefinger pointing up, then move hand in small horizontal circle.

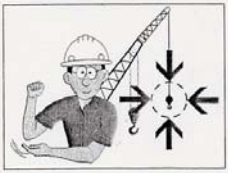
Lower the Load
Extend the right arm downward, forefinger pointing down, then move hand in small horizontal circle.

Slowly Raise the Load

Slowly Lower the Load



Use Main Hoist
Tap fist on head, then use regular signals.



Use Whip Line
Tap elbow with one hand, then use regular signals.

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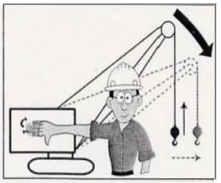
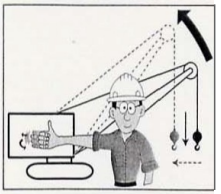
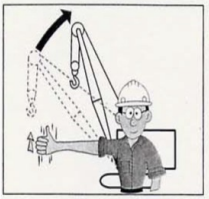


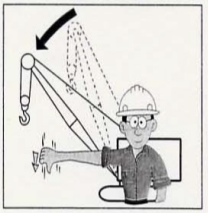
Lower Boom and Raise Load
Extend right arm with thumb pointing down, then flex fingers in and out as long as load movement is desired.



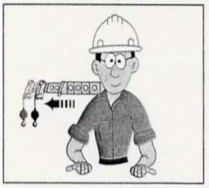
Raise Boom and Lower Load
Extend right arm with thumb pointing up, then flex fingers in and out as long as load movement is desired.



Raise Boom
Extend right arm straight out. fingers closed and thumb pointing upward.

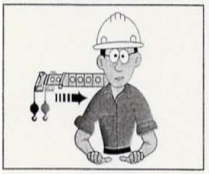


Lower Boom
Extend right arm straight out, fingers closed and thumb pointing downward.



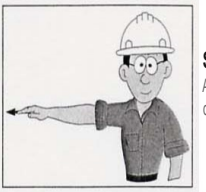
Extend Boom
Both fists in front of body with thumbs pointing outward.

One-Handed Extend Boom
One fist in front of chest with thumb tapping chest.



Retract Boom
Both fists in front of body with thumbs pointing toward each other.

One-Handed Retract Boom
One fist in front of chest, thumb pointing outward and heel of fist tapping chest.



Swing
Arm extended, point with finger the direction of swing of boom.

Travel -Both Tracks
Use both fists in front of body, making circular motion about each other, indicating direction of travel, forward or backward.

Travel -One Track
lock the track on the side indicated by raised fist. Travel opposite track indirection indicated by circular motion of fist.

Dog Everything
Clasp hands in front of the body

Stop
Right arm extended, palm down and open, move arm back and forth horizontally.

Emergency Stop
Both arms extended, palms down and open, move arms back and forth horizontally, while shouting "all stop: ALL emergency stop signals must be accepted from any person [illegible]

Definitions

Cranes: a machine for lifting and lowering a load and moving it horizontally, with the hoisting mechanism an integral part of the machine.

Types of cranes are: Cantilever gantry, floor operated, gantry, semi-gantry, overhead, automatic, wall mounted, jib and boom. These cranes can be operated from a cab, pulpit, floor, or remotely.

Mobile cranes: cranes which are mounted on a truck, crawler or trailer, that are capable of moving from one location to another.

Slings: adapters used in conjunction with cranes or hoists to facilitate the movement of materials. They can be made from steel chain, wire rope, metal mesh, and natural or synthetic fibers.

Operator: a person qualified on the operation and use of the crane, hoist and slings being used.

Applications

Truck crane

Winches (mobile or stationary) Hoists

Hazards

• Suspended loads could fall on personnel or equipment

• Wire ropes, chains or slings under tension could fail, striking personnel or equipment

• Crane or hoist could be overloaded and fail

• Crane frame/cables or winch poles/cables could touch overhead electrical power lines.

General Information

Cranes, winches and slings used to lift loads should only be operated by:

• Qualified operators designated by the employer.

• A trainee under the supervision of a qualified operator.

• Maintenance, test personnel and inspectors, while performing their duties.

Any new, modified or repaired lifting device (i.e. crane, hoist, crane framework, trolley or lifting sling, etc.) should be proof loaded prior to use. The proof load documents should be kept and available for examination. Inspections of all lifting devices should be performed immediately prior to use.

Additionally, periodic inspections and if necessary load tests performed and documented on all lifting devices, according to the manufacturer's recommendations, and/or 29 CFR 1910.179 - .184, depending upon the frequency of use.

Guidelines

General (For all types hoists, cranes, slings)

- Personnel should stand clear of the load, and never be between the load and another object, or beneath the load.
- A suspended load should never be moved above personnel in the working area.
- Loads should be centered under the load line, when possible.
- Lift the load a few inches to observe the balance and reset slings to balance load.

- Make every effort to ensure that the load is balanced prior to the lift.
- Never wrap the hoist line around the load, use slings instead.
- Ensure chains or slings are placed properly on the hook.
- Keep clear of overhead power lines; clearance should be at least 10 feet from the crane or any object protruding or suspended from it.
- Leather palm gloves should be used when working with wire rope lines.
- Use standard crane hand signal system on all lifting operations.
- Only one person should be designated as the signal person to the operator.
- Movement of the load should not occur until the signal person is within sight.
- Use radio communication in addition to hand signals, if applicable.
- A portable weight indicator can be used on the load line to determine the unknown weight of a load.
- When a lift is in progress, the operator should neither perform any other work or leave the controls until the load has been safely landed.
- Use tag lines for guiding loads whenever possible.
- All hooks used should be self-closing. When lifting personnel, lock type lifting devices with keeper pins must be used.
- No one should ride on loads, buckets or hooks suspended from crane, boom, winch, or derrick.
- Evaluate safety considerations during outdoor lifting operations when wind speeds are excessive.
- Do not stretch cables across a road, wharf or street without roadblocks.
- If working under crane, make sure to block off work area so no one can transit area (barricades, caution tape, etc.)

Slings and Lifting Devices

- Select a sling with a rating capacity equal to or greater than the intended load weight.
- When lifting an object, proper hoisting device(s) and rigging procedures should be followed.
- Inspect slings prior to use, examining it for damage, frayed or worn areas.
- Protect the sling from any sharp corners which could damage, crimp or cut it.
- Avoid kinks, loops, or twists in the legs of the sling.
- Keep hands, fingers, feet and body parts in general, from between the load line or sling and the load.
- When possible, start the lift slowly to avoid unnecessarily stressing or shocking the sling or lifting device.

- Block up the load to allow space to remove the sling/chain. Do not pull slings or chains from under a load when the load is resting on the sling/chain.
- Do not shorten a sling by knotting, by wire rope clips or any other means.
- Do not inspect a wire sling by passing bare hands over the sling.
- Keep wire rope slings well lubricated to prevent corrosion. Use the manufacturers recommended lubricants.
- Synthetic slings that do not meet standard requirements (29 CFR 1910.184) should not be used until repaired by a sling manufacturer or equivalent entity. If not repairable, destroy them.

Truck Crane

- Establish the size of the load to ensure that it does not overload the truck.
- Do not stretch winch cables across a road or street without roadblocks.
- Attach slings to loads so that the angle between the sling and the load will not be less than 45°.
- Secure the load before moving the truck. Minimize the distance that suspended loads are carried.
- Stand clear and keep fingers clear whenever tension is being applied to a winch line.
- Slowly take up slack in the winch line.
- Never let the winch line pass or slide through your hands.
- Spool the line evenly on the winch line drum to prevent line tangles on the drum.
- Lift the load a few inches to observe the balance and reset slings to balance load.
- Carefully release load binders (boomers). Stand to the side of the binder handle when releasing the tension.
- Secure the winch line and disengage the winch line drum drive when not in use.

Cranes

- All cranes should have load charts and boom angle indicators located at the operator's position.
- Mobile cranes should be placed on a firm, level foundation and properly secured in place before being operated.
- An appropriate fire extinguisher should be located in the cab of a mobile crane, or in the area near an overhead crane operation.
- Rest the mobile crane boom in its cradle when the crane is not in use, in case of a cable or hydraulic failure.

References
29 CFR 1910.179 Cranes
29 CFR 1910.180 Crawler and Truck Cranes
29 CFR 1910.184 Slings
29 CFR 1910.306 (b) Specific Electric Requirements for Cranes
ANSI B20.2.0-67 Safety Code for Overhead Cranes
ANSI B20.5-68 Safety Code for Crawler, Truck Cranes
ASTM A 391-65 (ANSI G61.1-1968) Steel Alloy Chain

Cranes
Note: This section applies to any self-contained equipment having its own power generating source, other than terminal facilities or buildings.

It is recognized that troubleshooting of crane electronic drive systems requires the circuits to be energized under most conditions, and that voltages of up to 4800 volts may be present in these systems. Approval is granted by this manual to work on these energized systems provided the guidelines for work on energized systems in previous pages are followed and the Foreman is informed.

Any electrical system on cranes or equipment containing voltages in excess of 600 volts shall be tagged/locked out prior to entry by any employee or contractor. These systems may be worked while energized only upon specific permission of the foreman

Battery Charging Operations
1. The charging current shall be de-energized before making any repairs to terminal connections or before batteries are connected or disconnected from the charging line.
2. Battery charging produces hydrogen (H2) gas, which is explosive in high concentrations. Extreme care shall be exercised to avoid striking sparks and open flames in the vicinity of batteries while being charged.
3. Charging shall not be started until it has been ascertained that the battery and charging area is adequately ventilated. Battery charging facilities are considered to be adequately ventilated when the hydrogen concentration at distances greater than six (6) inches above the cells is maintained below three (3) percent.

Wet Cell Batteries
1. General Precautions
   a) Battery charging installations shall be located in areas designated for that purpose.
   b) Flames, sparks or other ignition sources shall be kept away from batteries, charging areas and battery compartments.
      Smoking shall be prohibited.

c) Care shall be exercised not to short circuit battery terminals when using tools around batteries. Only tools with insulated handles shall be used for removing and replacing batteries. Tools and other metallic objects shall be kept away from the top of uncovered batteries.
d) Batteries shall never be opened except in well ventilated spaces and only in extreme emergencies if the compartment temperature is above 125 degrees Fahrenheit. Battery compartment temperatures should be kept below 95 degrees Fahrenheit.
e) Battery compartments which have been sealed shall be well ventilated before turning on lights, making or breaking electrical connections, or performing any type of work in the compartments.
f) Eye protection shall be worn by all personnel handling, changing or servicing batteries.
g) Whenever practicable, maintenance and service facilities for lead-acid batteries shall be separated from those for nickel-iron-alkaline batteries and from all dissimilar work operations.
h) When racks are used for support of batteries, they should be made of materials nonconductive to spark generation or be coated to achieve this objective.
i) Facilities shall be provided for flushing and neutralizing spilled electrolyte, for fire protection, for protecting charging apparatus from damage by truck, and for adequate ventilation for disposal of fumes from gassing batteries.

2. Charging
a) Charging should not commence until the safe charging rate has been verified.
b) Beware of burns and shocks when charging batteries. Use rubber gloves.
c) Vent caps should be replaced before attaching or detaching charger cable: fumes arising from batteries in the recharging line are flammable. Care shall be taken to ensure that vent caps are functioning. The battery cover shall be open to dissipate heat, except on factory sealed, non-serviceable batteries.
d) Be sure that connections to batteries are properly made and secured.
e) Care shall be used in handling battery acids. When preparing electrolyte, the acid shall always be poured into the water. Water shall not be poured into acid.
f) De-energizing Circuit: the charging circuit shall be de-energized before making any repairs or adjustments to terminal connections, or before batteries are connected to or disconnected from the charging line.

3. Handling Electrolytes
    a) Protective clothing: personnel shall wear approved eye protection/ face shields for chemical splash hazards, and chemically resistant gloves.
    b) Handling: containers of electrolyte or acid shall be handled with extreme care to prevent dropping, spilling or other action which may cause acid contact with the body. In case of spillage or splashing on the body, the area shall be flushed with large amount of water using a water hose or safety shower. Medical attention shall be obtained.
    c) Eyewash fountains shall be provided in the immediate vicinity of all battery maintenance and electrolyte handling operations. They shall be tested weekly to ensure they are maintained in good operating condition.

Dry Cell Batteries

1. Dry cells can cause fatal shock.
2. Discharging dry cells beyond 0.9 volts may cause hydrogen gas generation and explosion.
3. Dry cell batteries shall not be discarded in trash to be burned. Batteries shall be disposed of as hazardous waste. Batteries shall not be subjected to excessive heat. They may explode and are highly toxic.
4. Accidentally shorting mercury batteries may cause an explosion.

Lithium Batteries

1. Lithium batteries of devices containing lithium batteries shall be specifically identified. This exemption does not authorize the transportation of cells containing lithium metal which have been discharged to the extent that the open circuit voltage is less than two volts, or batteries containing one or more such cells.
2. Disposal of lithium batteries as prescribed on the packaging is as follows:
    a) Cells and batteries must be packed in strong inner fiberboard containers limited to a maximum of 500 grams of lithium in one inner container. No cell containing more than 12 grams of lithium may be shipped under this exemption.
    b) When drums are used, the inner containers must be separated from each other and all inner surfaces of the drum by at least one-inch thickness of vermiculite or other equivalent non-combustible cushioning material.
    c) Inside boxes must be further over-packed,
    d) Packages must be marked as prescribed in subpart “d” of 49 CFR Part 172. Packages must be labeled with the **FLAMMABLE SOLID** label shown in 49 CFR 172.420.

e) Each cell and battery must be equipped with an effective means of preventing external short circuits.
f) Each cell and battery must incorporate a safety venting device or be designed to preclude a violent rupture under any condition incident to transportation such as "dead short" or involvement in a fire. Batteries containing cell or series of cells connected in parallel must be equipped with diodes to prevent reverse current flow.
g) Contact Equipment Maintenance for proper disposal.

General Crane Safety Guidelines

Only personnel designated as qualified by the Equipment Manager shall be permitted to work on or operate the cranes. Crane Technicians and Operators shall:

1. Follow established start-up procedures.
2. See that the crane is working properly by testing it without a load on the hook/spreader.
3. Report any defects to the Crane Tech III, Foreman or Supervisor on the job, who shall act promptly in correcting any defect in the gear or machinery or unsafe working condition.
4. Operate the crane only on clearly understood signals unless the operation is under complete control of the operator.
5. At all times operate the crane in a safe manner, keeping the load under complete control.
6. See that when it is necessary to hold loads, they are held over or landed on the deck or dock and not suspended over the heads of men working under the hook/spreader. Never leave the crane controls with a suspended load.
7. When leaving the crane, see that all shut down procedures are followed, including positioning all master controls are in neutral.
8. Use both hands when going up or down ladders. Articles which are too large to go into pockets or belts should be lifted to or lowered from cranes by hand lines or installed winches.
9. If the crane loses power, immediately throw all controls to the "off" position until the power is again available.
10. Pay special attention to the relative position of the blocks to avoid unnecessarily tripping the limit switch.
11. Observe all applicable winch driver and hatch tender duties.
12. Shall not hoist sling loads which are improperly slung.
13. Adhere to manufacturer's operating procedures and applicable load ratings.
14. Operator will not side-load crane booms.
15. See that neither the boom or swing loads strike fixed objects.
16. Determine the capacity of the crane under the conditions of use and the weight of the loads to be hoisted. Do not overload crane.
17. During cargo operations, temporarily guard by ropes or other

suitable means, any accessible areas within the swing radius of the outermost part of the body of a revolving crane so as to prevent an employee being in a position to be caught between the body of the crane and fixed parts of the crane itself.

18. Adhere to all established wind warnings and crane securing procedures.

Crane Elevator Safety rules

1. No smoking except in authorized areas.
2. Approved hard hats shall be worn in designated areas.
3. Know the location and proper operation of fire and other emergency equipment immediately.
4. Very loose or ragged clothing must not be worn on the job, as it might be caught in machinery or equipment.
5. Excessively long hair (past the collar) shall be tied back or placed under a hat.
6. Know where all exits are in the elevator. Keep the immediate area around all exits clear and free from obstacles.
7. Each employee is responsible for the care and safe operation of elevator equipment provided for his use.

Requirements for Lockout/Tag-out

1) You must use a lockout program whenever Jaxport employees engage in service or maintenance operations on machines that are capable of being locked out and that expose them to hazardous energy from unexpected energization, startup, or release of stored energy.

   The primary way to prevent the release of hazardous energy during service and maintenance activities is by using energy-isolating devices such as manually operated circuit breakers, disconnect switches, line valves and safety blocks. Lockout requires use of a lock or other lockout device to hold the energy-isolating device in a safe position to prevent machinery from becoming reenergized. Lockout also requires employees to follow an established procedure to ensure that machinery will not be reenergized until the same employee who placed the lockout device on the energy-isolating device removes it or a manager verifies the work is completed if the person that locked the device out has gone for the day. If the Lock-out/Tag-out is not removed by individual performing the Lockout/ Tag-out during his or her shift, then it must be recorded in Lockout/ Tag-out log maintained by managers.

Establishing a Zero-Energy State and Lockout/Tag-out Procedure

An electrically safe condition is a condition where the technician has proven, using approved test instruments, which no electrical energy remains in the equipment and lockout/tag-out is performed. This is referred to as a zero-energy state.

The following steps should accomplish this as a minimum before work commences:

1. Determine all possible sources of electrical supply to the specific equipment by checking all applicable up-to-date drawings, diagrams, and identification tags.
2. Wear the required PPE before exposing any electrical components above 50V.
3. The technician shall position themselves off to the side as much as possible and avoid standing directly in front of the circuit breaker before opening if applicable.
4. Open disconnecting device(s) and apply lockout/tag-out to the equipment.
5. Test the meter against a known good electrical source to ascertain the meter is operable.
6. Use the meter to check the identified points for the absence of voltage.
7. Test the meter against the same known good electrical source to ascertain the meter is still operable.
8. Where the possibility of induced voltages or stored electrical energy exists, ground the phase conductors or circuit parts before touching. Where it could be reasonably anticipated that the conductors or circuit part being de-energized could contact other exposed energized conductors or circuits parts, apply ground connecting devices rated for the available fault duty. Initiate and complete work.
9. Ensure all personnel are clear and equipment is safe for power.
10. Remove Lockout/Tag-out devices.
11. The technician shall position themselves off to the side as much as possible and avoid standing directly in front of the circuit breaker before closing; if applicable.
12. Close disconnecting device(s).

Lock-out/Tag out Procedures
OSHA regulation: 29 CFR Part 1910.147, the Control of Hazardous Energy (Lock-Out /Tag Out) Standard Covers the servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machines or equipment could cause injury to employees.

All machinery or moving equipment being repaired or adjusted shall be locked out until such repairs have been completed. Locking out equipment shall be the responsibility of the senior member of the crew. In the event more than one crew is required, each crew will have its own lock attached. Locks will be removed only by person who locked out the controls, or his supervisor, after making sure it is safe to do so.

According to OSHA, an energy source is any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy.

The Lock-Out/Tag-Out rule requires the employer to establish an energy control program that includes:

- Documented energy control procedures.
- An employee training program.
- Periodic inspections of the procedures.

Refer to the Division's Lock-Out/Tag-Out Energy Control Procedure Program for specifics.

The Energy Control Plan must include:

1. A specific statement of the intended use of the procedure.
2. A specific statement to ensure that machines and equipment are isolated and inoperative before any employee performs service or maintenance where the unexpected energization, start-up, or release of stored energy could occur and cause injury:
3. Specific procedural steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy.
4. Specific requirements for testing a machine or equipment to determine and verify the effectiveness of lock-out energy control measures.

An employee having the need to secure an energy source shall:

1. Conduct periodic inspections. These inspections shall be conducted by the employee and an authorized employee other than the ones utilizing the energy control procedure.
2. Utilize tags legible and understandable by all authorized employees.
3. Utilize lock-nut devices substantial enough to prevent accidental

removal and the use of excessive force or unusual techniques, such as the use of bolt cutters or other metal cutting tools.

4. Utilize lock-out and tag-out devices that indicate the identity of the employee applying the device.
5. Utilize specific procedures during shift or personnel changes to ensure the continuity of lock-out or tag-out protection.

Before lock-out/tag-out devices are removed and energy is restored to the machine or equipment, employees shall ensure the following:

1. The work area shall be inspected to ensure non-essential items have been removed and to ensure machines or equipment components are operationally intact.
2. The work area shall be checked to ensure all employees have been safely positioned or removed.
3. Each lock-out/tag-out device shall be removed from each energy isolating device by the employee who applied the device.
4. Blocking the flow of energy from the power source and placing a tag or lock to prevent others front turning the power on is one way to prevent accidental startup of electrical equipment.

Lock Out / Tag Out Samples

Chains and Slings

Slings
29 CFR-1910.184 Slings

Scope
This section applies to slings used in conjunction with other material handling equipment for the movement of material by hoisting, in employments covered by this part. The types of slings covered are those made from alloy steel chain, wire rope, metal mesh, natural or synthetic fiber rope (conventional three strand construction), and synthetic web (nylon, polyester, and polypropylene).

Safe operating practices Whenever any sling is used, the following practices shall be observed:
1910.184(c)(1)
Slings that are damaged or defective shall not be used.
1910.184(c)(2)
Slings shall not be shortened with knots or bolts or other makeshift devices.
1910.184(c)(3)
Sling legs shall not be kinked.
1910.184(c)(4)
Slings shall not be loaded in excess of their rated capacities.
..1910.184(c)(5)
1910.184(c)(5)
Slings used in a basket hitch shall have the loads balanced to prevent slippage.

1910.184(c)(6)
Slings shall be securely attached to their loads.
1910.184(c)(7)
Slings shall be padded or protected from the sharp edges of their loads.
1910.184(c)(8)
Suspended loads shall be kept clear of all obstructions.
1910.184(c)(9)
All employees shall be kept clear of loads about to be lifted and of suspended loads.
1910.184(c)(10)
Hands or fingers shall not be placed between the sling and its load while the sling is being tightened around the load.
1910.184(c)(11)
Shock loading is prohibited.
1910.184(c)(12)
A sling shall not be pulled from under a load when the load is resting on the sling.
1910.184(d)
1910.184(d)
Inspections Each day before being used, the sling and all fastenings and attachments shall be inspected for damage or defects by a competent person designated by the employer. Additional inspections shall be performed during sling use, where service conditions warrant. Damaged or defective slings shall be immediately removed from service.
1910.184(e)
Alloy steel chain slings.
1910.184(e)(1)
Sling identification Alloy steel chain slings shall have permanently affixed durable identification stating size, grade, rated capacity, and reach.
1910.184(e)(2)
Attachments
1910.184(e)(2)(i)
Hooks, rings, oblong links, pear shaped links, welded or mechanical coupling links or other attachments shall have a rated capacity at least equal to that of the alloy steel chain with which they are used or the sling shall not be used in excess of the rated capacity of the weakest component.
1910.184(e)(2)(ii)
Makeshift links or fasteners formed from bolts or rods, or other such attachments, shall not be used.
1910.184(e)(3)
Inspections
1910.184(e)(3)(i)
In addition to the inspection required by paragraph (d) of this section, a thorough periodic inspection of alloy steel chain slings in use shall be made on a regular basis, to be determined on the basis of (A) frequency of sling

use; (B) severity of service conditions; (C) nature of lifts being made; and (D) experience gained on the service life of slings used in similar circumstances. Such inspections shall in no event be at intervals greater than once every 12 months.

1910.184(e)(3)(ii)
1910.184(e)(3)(ii)
The employer shall make and maintain a record of the most recent month in which each alloy steel chain sling was thoroughly inspected, and shall make such record available for examination.
1910.184(e)(3)(iii)
The thorough inspection of alloy steel chain slings shall be performed by a competent person designated by the employer, and shall include a thorough inspection for wear, defective welds, deformation and increase in length. Where such defects or deterioration are present, the sling shall be immediately removed from service.
1910.184(e)(4)
Proof testing The employer shall ensure that before use, each new, repaired, or reconditioned alloy steel chain sling, including all welded components in the sling assembly, shall be proof tested by the sling manufacturer or equivalent entity, in accordance with paragraph 5.2 of the American Society of Testing and Materials Specification A391-65, which is incorporated by reference as specified in Sec. 1910.6 (ANSI G61.1-1968). The employer shall retain a certificate of the proof test and shall make it available for examination.
1910.184(e)(5)
Sling use Alloy steel chain slings shall not be used with loads in excess of the rated capacities prescribed in Table N-184-1. Slings not included in this table shall be used only in accordance with the manufacturer's recommendations.
1910.184(e)(6)
1910.184(e)(6)
Safe operating temperatures Alloy steel chain slings shall be permanently removed from service if they are heated above 1000 deg. F. When exposed to service temperatures in excess of 600 deg. F, maximum working load limits permitted in Table N-184-1 shall be reduced in accordance with the chain or sling manufacturer's recommendations.
1910.184(e)(7)
Repairing and reconditioning alloy steel chain slings
1910.184(e)(7)(i)
Worn or damaged alloy steel chain slings or attachments shall not be used until repaired. When welding or heat testing is performed, slings shall not be used unless repaired, reconditioned and proof tested by the sling manufacturer or an equivalent entity.
1910.184(e)(7)(ii)

Mechanical coupling links or low carbon steel repair links shall not be used to repair broken lengths of chain.

1910.184(e)(8)

Effects of wear If the chain size at any point of any link is less than that stated, the sling shall be removed from service.

1910.184(e)(9)

Deformed attachments

1910.184(e)(9)(i)

Alloy steel chain slings with cracked or deformed master links, coupling links or other components shall be removed from service.

Fall Protection

When work is performed on elevated surfaces such as roofs, or during construction activities, protection against falls frequently must be considered. Fall arresting systems, which include lifelines, body harnesses, and other associated equipment, are often used when fall hazards cannot be controlled by railings, floors, nets, and other means. These systems are designed to stop a free fall of up to six feet while limiting the forces imposed on the wearer. Fall protection is required for most construction activities by the Occupational Safety and Health Administration (OSHA) whenever the work is performed in an area that is six feet higher than its surroundings. Exceptions to this rule include work done from scaffolds, ladders and stairways, derricks and cranes, and work involving electrical transmission and distribution. Fall protection is required whenever work is performed in an area six feet above its surroundings and can generally be provided through the use of guardrail systems, safety net systems, or personal fall arrest systems. Where it can be clearly demonstrated that the use of these systems is infeasible or creates a greater hazard, a fall protection program that provides for alternative fall protection measures may be implemented.

Fall Protection Systems

A variety of systems may be chosen from when providing fall protection. These systems include:

- **Guardrails:** Standard guardrails consist of a top rail, located 42 inches above the floor, and a mid-rail. Screens and mesh may be used to replace the mid-rail, so long as they extend from the top rail to the floor.
- **Personal Fall Arresting Systems:** Components of a personal fall arresting system include a body harness, lanyard, lifeline, connector, and an anchorage point capable of supporting at least 5000 pounds.
- **Positioning Device Systems:** Positioning device systems consist of a body belt or harness rigged to allow work on a vertical surface, such as a wall, with both hands free.
- **Safety Monitoring:** This system allows a trained person to monitor others as they work on elevated surfaces and warn them of any fall hazards.

- **Safety Net Systems:** These systems consist of nets installed as close as possible under the work area.
- **Warning Line Systems:** Warning line systems are made up of lines or ropes installed around a work area on a roof. These act as a barrier to prevent those working on the roof from approaching the edges.
- **Covers:** Covers are fastened over holes in the working surface to prevent falls.

Additional Precautions
Protection should also be provided from falling objects. Work surfaces should be kept clear of material and debris by removal at regular intervals. Toe-boards should be used to prevent objects from being inadvertently kicked to a lower level. When necessary, canopies should be provided.

PROHIBITED DEVICES
Body harnesses are required for use with all personal fall arresting systems. Body belt use is prohibited, except under certain specific circumstances. Also, only locking-type snap-hooks may be used as part of a fall arresting system.

Confined Space Entry
JAXPORT may outsource confined space work to a certified third party. Note: Only JAXPORT personnel who have been trained and certified to work within confined spaces will be allowed to enter a confined space area.

XII. FACILITY MAINTENANCE REQUIREMENTS

Forklifts

1. Only licensed personnel may drive forklifts.
2. Know rated capacity of the forklift truck and never exceeds its rating. Overloading is dangerous.
3. Report evidence of faulty forklift truck performance.
4. On any incline or ramp, an unloaded forklift shall be driven with the forks upgrade, regardless of the direction of the travel. A loaded forklift shall be driven with the load upgrade, regardless of the direction of travel.
5. Watch overhead clearances.
6. Avoid sudden stops.
7. Only the driver should ride on the forklift truck, unless an additional seat is available.
8. Watch rear end swing; others may not expect it.
9. When forward view is obstructed, the driver will be required to travel with the load trailing or get assistance.
10. Do not travel with improperly stacked loads.
11. Travel with forks or load as close to ground as possible.
12. Do not hang your feet, arms or legs outside of truck when moving.

13. Do not operate (gasoline driven) forklift truck for a long period of time in areas not adequately ventilated.
14. Before entering a boxcar, trailer or truck, ensure that the brakes of these vehicles are engaged, the wheels are chocked and that the floor will support the weight of the loaded lift truck. Inspect the flooring for weak areas or holes and check for possible hazardous or toxic material. Use the trailer nose support and never trust the landing support. If questionable conditions exist, notify the Foreman before proceeding.
15. Horn shall be sounded before going through doorways or around blind corners.
16. Set forks at maximum possible spread for the load to be carried or lifted.
17. Hands and arms shall not be put through mast area.
18. No modifications to forklift trucks shall be made without approval of the supervisor.
19. Whenever a forklift is parked or left unattended, the operator shall lower the forks to the ground, neutralize the controls, set the parking brake and turn the key off. Operators shall not leave their position at the forklift controls, for any reason, without setting the parking brake, neutralizing all controls and lowering any suspended load to the ground. The forklift should be shut down if you will be 25 feet or more away, even if it is in plain view.
20. If operating forklift truck without overhead guard, hard hats shall be worn.

Landscaping Equipment

When working with any landscape equipment, the following procedures should be observed:

1. Read the manufacturer's manual for each piece of equipment.
2. Follow the recommended operation procedures at all times.
3. Check and inspect machinery for defects.
4. Use proper fueling method.
5. Inspect equipment for all proper safety features – Do not override safety devices.
6. Dress for safety – wear all necessary personal protective equipment (PPE)

Weed Cutters

1. Check shield for cracks.
2. Use the correct shield for the blade in use. Plastic nylon line – use plastic shield; metal blades – use metal shields.
3. Utilize the proper length of nylon cord.
4. Make sure lock handle is in place.
5. Throttle must operate freely.

6. Know where debris goes; curved shaft models throw debris in a clockwise direction, straight shaft models throw debris in a counter clockwise direction.
7. Use the safety harness to distribute the weight of the machine.
8. Avoid hazards; be aware of pedestrians, wire fences and hidden objects.
9. When using metal blades, use the "bull horn" handle which keeps the operator away from the blade.
10. Store safely; let machine cool before storage.

Riding Mower

Before riding, do the following:

1. Check the machine for defects.
2. Check for all safety devices.
3. Make sure the instruction decals are in good condition, easily readable, and understandable.
4. Make sure the deflector chute or back chute is clear.
5. Make sure all guards are in place.
6. Make sure the parking brake is in good operational order.
7. Check and clear the area. It should be free from pets, children, and debris. All debris must be cleaned up before starting.
8. **DO NOT OVERRIDE SEAT SAFETY SWITCHES!**
9. Use blade disengagement lever when not in a mowing situation.
10. When cutting on a slope, go up and down the slope to avoid tipping over.
11. Passengers are not allowed on the mower at any time.

When dislodging anything caught in the blade or chute:

1. Turn off the engine.
2. Take the key with you.
3. Disengage spark plug wire.
4. Then remove debris.

When transporting mower:

1. Carriage should be raised as high as possible.
2. Parking brake should be engaged.

Chain Saws

1. Plan the work. Ensure that there is an obstacle-free work area and, in the case of felling, an escape from the falling tree.
2. Remove all obstructions from the path of the saw.
3. Secure a good footing.
4. Grip the handle firmly; the thumbs and fingers should encircle the handle.
5. Chain saws should be started up on the ground and not in the cuts.

6. Never operate a chain saw that is damaged, improperly adjusted, or not complete or securely assembled.
7. When cutting, avoid reaching above shoulder height. Never adjust the guide bar or saw chain when the engine is operating.
8. Never carry a chain saw with its engine running (idling). Cut the engine and carry the chain saw with the guide bar pointing to the rear and with the muffler away from the body.
9. Be sure that the saw chain stops moving when the throttle control trigger is released.
10. Before servicing, fueling or transporting, switch off engine.
11. Never force a chain saw or cut with the top of the bar.

Hedge Trimmers

1. The use of any hedge trimmer may be hazardous. If the cutting tool comes in contact with your body, it will cut you.
2. Striking solid foreign objects such as stones, fence wire or metal could damage the cutting attachment and may cause the blades to crack, chip, or break.
3. Bystanders should not be allowed in the area where a hedge trimmer is in use. The operator is responsible for avoiding injury of third parties and damage to their property.
4. Never run the hedge trimmer unattended.
5. Hedge trimmer operation can cause serious injury to eyes, ears and person. Always wear properly fitting protective eyewear with top and side protection. It is also recommended that a face shield or screen guard be worn over the safety eye protection.
6. Ear plugs or mufflers should be worn to protect hearing.
7. Wear proper protective clothing. Clothing must be sturdy and snug fitting, but allow complete freedom of movement. Avoid loose-fitting jackets, jewelry, flared or cuffed pants, unconfined long hair, shirt tails hanging or anything that can get caught on branches, bush or moving parts of the unit. Wear long pants of heavy material to protect your legs.
8. Protect your hands with gloves when handling the hedge trimmer and the cutting tool. Heavy-duty non-slip gloves improve your grip and protect your hands.
9. Good footing is most important. Wear sturdy boots with non-slip soles.
10. Never carry or transport the hedge trimmer with the cutter blades running.
11. Carry the hedge trimmer in the normal upright position. Grip the front handle and keep the cutter blades behind you.
12. Always switch off the engine and fit the scabbard over the cutter blades before transporting the hedge trimmer over long distances.

13. Always check the hedge trimmer for proper condition and operation before starting. The throttle trigger must move freely and always spring back to the idle position. Inspect for loose parts (nuts, screws,) and for cracked, bent, warped, or damaged blades. Regularly check the condition and tightness of the cutter blades with the engine stopped. Always keep blades sharp and keep the handle dry and clean at all times.
14. Removal of safety devices can lead to serious injury. Spray the cutter blades with a spray resin solvent with the engine off.
15. The hedge trimmer uses a gas-oil mixture for fuel. Gas is extremely flammable. It can cause a fire and serious burn injury. Do not
smoke near the fuel.
16. Fuel in well ventilated areas, preferably outdoors. Gasoline vapor pressure may build up inside the gas tank. In order to reduce the risk of burns or other personal injury from escaping gas vapor and fumes, remove the fuel filler cap on the hedge trimmer to allow any pressure build up in the tank to release slowly. Never remove the fuel filler cap while the engine is running.
17. Check for fuel leakage while refueling and during operation. If fuel leakage is found, do not start or run the engine until the leak is fixed and the spilled fuel has been wiped away.
18. Unit vibration can cause improperly tightened fuel cap to loosen or come off and spill fuel. To reduce the risk of fuel spillage and fire, tighten the fuel cap by hand with as much force as possible.
19. The hedge trimmer is a 1-person machine. Start and operate the machine without assistance.
20. To reduce the risk of injury from blade contact, do not attempt to "drop start" the machine. Do not wrap the started rope around your hand. Do not allow the grip to snap back.
21. Never attempt to operate the machine using (1) hand.
22. Never work on a ladder, in a tree or any other insecure support.
23. Never use it above shoulder height.

Grass Edgers

1. Always wear eye protection - safety glasses.
2. Always operate with both hands firmly gripping the machine.
3. When operating with a blade, make sure the handle is positioned to provide you with maximum protection from contacting the blade.
4. Keep away from the rotating trimming line or blades at all times and never lift a moving attachment above the waist.
5. Always make sure the appropriate footwear (non-skid boots or shoes): do not wear open-toed shoes or sandals. Never work barefooted.
6. Keep a proper footing and do not over reach - maintain your balance at all times during operation.

7. Wear close-fitting clothes to protect legs and arms. Gloves offer protection and are strongly recommended. Do not wear clothing or jewelry that could get caught in machinery or under brush. Never wear shorts while operating a grass edger.

Miscellaneous Tool Safety Tips

1. Carry all sharp tools in a sheath or holster or an appropriate container.
2. When handing a tool to another person, direct sharp points and cutting edges away from yourself and the other person.
3. Do not use tools that are bent, cracked, or have loose or broken handles.
4. Be familiar with the operation of any tool you use.
5. When using knives, shears or other cutting tools, cut in a direction away from your body.
6. Do not perform "make-shift" repairs to tools.
7. Do not use tools if your hands are oily, greasy or wet.

Scaffolds

1. Scaffolds shall not be erected, moved, dismantled, or altered except under supervision.
2. The footing or anchorage for scaffolds must be sound, rigid, and capable of carrying the maximum intended load without settling or moving.
3. Unstable objects such as barrels, boxes, loose brick, or concrete blocks must not be used to support scaffolds or planks.
4. An access ladder or equivalent safe access must be provided.
5. Scaffolding more than 10 feet above the ground or floor must have guardrails and toe-boards installed at all open sides and ends.
6. Guardrails must be made of not less than 2 x 4 lumber or other material providing equal protection. Guardrails must be approximately 42 inches high.
7. Guardrails must have a mid-rail of at least 1 x 6 lumber or other material giving equal protection.
8. Toe-boards must be a minimum of four inches in height.
9. Where persons are required to work or pass under a scaffold, a wire mesh screen must be installed between the toe-board and the rail.
10. Scaffolds four to ten feet high, having a minimum horizontal dimension in either direction of less than 45 inches, must have standard guardrails installed on all open sides and ends of the platform.
11. Extend scaffold planks over their end supports six to twelve inches.

Tubular welded frame scaffolding

1. Scaffold legs must be set on adjustable or plain bases placed on mud sills or other foundations adequate to support the maximum load.
2. Properly brace scaffolds by cross bracing or using diagonal braces, or both, for securing vertical members together laterally. Cross braces must be long enough so they will automatically square and align vertical members. In this way, erected scaffolds will always be plumb, square, and rigid.

3. All brace connections must be secure.

In-shop Maintenance Rules

General

1. There is no smoking permitted in any JAXPORT shop area.
2. No smoking around oxygen or acetylene bottles or while working on vehicles.
3. Do not use gasoline for cleaning.
4. Always wear protective goggles or shields when grinding or cutting, a protective hood when welding and other protective equipment and apparel as necessary.
5. Keep shop area neat and orderly. Clean up spills immediately and dispose of combustible materials, such as rags and wiper towels.

Machinery and Equipment

1. Clean and maintain all machinery and equipment on a regular basis per the manufacturer's instructions.
2. Inspect all machinery and equipment prior to use.
3. Do not operate machinery and equipment unless you are authorized to do so.
4. Operate all machinery and equipment according to the manufacturer's directions and in accordance with your supervisor's instructions.
5. Do not use machinery or equipment with defective parts which create a hazard. Report such hazards to your supervisor.
6. Welding equipment and torch hoses shall be inspected frequently to ensure against possible sparks or fire from defective equipment. If found to be defective, such equipment shall be repaired or replaced.
7. Wear appropriate personal protective equipment. If you are unsure what is appropriate, ask your supervisor. See section on personal protective equipment.
8. Leave all safety equipment such as guards, limit switches, noise abating covers, etc., in place. DO NOT modify machinery or equipment for special purposes.

Safety with Tools

The following guidelines should be followed for all types of tools:

1. Employees must be made aware of the proper tool for each job being performed.
2. Cutting edges shall be kept sharp and shall be carried in a suitable sheath or holster.
3. Defective tools shall be promptly reported to the supervisor for repair or replacement.
4. Handles shall be kept free from splinters, burrs, etc. Make sure handles are tight on the head and not weakened by cracks or splits.

5. Impact tools such as hammers, chisels, punches or steel stakes that have burred heads shall not be used. The head should be dressed to remove burrs and chipped edges.
6. Only tools designed with the proper tensile strength shall be used for prying and leverage functions.
7. When handing a tool to another person, sharp points and cutting edges shall be pointed away from both the person grasping it and the person offering it.
8. All tools shall be placed in their proper container when not in use.
9. When working above ground level or above an excavation, tools, equipment and debris shall be secured whenever possible to prevent them from falling on personnel below. Place barricades or warning devices to route pedestrian traffic around any potential drop zone.
10. Only properly insulated tools shall be used when working around energized electrical circuits or equipment.
11. All employees shall avoid using metal measuring tapes, fabric tapes containing woven metal strands, rope with wire core, or other tools and equipment containing metal around energized electrical circuits or equipment.
12. Appropriate personal protective equipment shall be worn when using tools that create hazards from flying particles, bodily contact with sharp cutting edges, etc.
13. Suitable handles shall be used on all files and tools with pointed ends or projected points.

Portable Power Tools

The chief hazards involved in the use of electrically powered tools are:

1. Electric shock from a short circuit.
2. Cuts, lacerations, etc. from cutting edges.
3. Burns from bits or blades heated by friction.
4. Being struck by chips, shavings and other debris during operation.

The safety procedures established for these potential hazards are:

1. All portable/fixed electric tools used in Port operations shall be grounded by connecting a 3-wire cord with polarized 3-prong plug, to a properly grounded 3-hole receptacle. The only exception to this will be the use of double insulated electric tools which are impressed or embossed “double insulation” and are approved, tested and listed by Underwriters Laboratories, Inc.
2. Extension cords used with portable electric tools must be of the 3-conductor type with matching plug and receptacle. All 2-wire cords may be used with double insulated tools.
3. Tools that have cords and extension cords shall be protected from contamination by oil or acid solutions.

4. Cords shall be protected from damage to wire conductors or terminal connections by excessive tension (pulling), kinks, pinching, etc.
5. Electrical hand tools shall be visually inspected each time they are used for damaged cords and ground connections. The most common defects occur at the points where the cord is attached to the tool or where the cord is attached to the plug. Be sure to check for a secure connection as well as for a lack of proper insulation at these points.
6. Defective portable electric equipment shall be repaired only by qualified maintenance personnel.
7. Adjusting keys or wrenches shall be removed before starting.
8. If it is necessary to use electric equipment in a wet location, only low voltage equipment shall be used and rubber boots and rubber gloves must be worn.
9. Equipment should never be overloaded.
10. Tools should never be operated without the guards that have been provided.
11. Portable electric tools shall not be carried for any extended distance while plugged in.
12. The flange that cuts circular blades, grinding wheels or abrasive cutting wheels shall be frequently inspected for damage. Nicks or chips that cause the blade or wheel to be mounted off center can cause vibration, and possible disintegration of abrasive cutting wheels could occur.
13. The maximum distance between the grinding wheel and the tongue at the top guard opening will at no time exceed ¼ inch.
14. The work rest for a grinding wheel shall be securely fixed in position as close as possible to the wheel, and in no case more than1/8 inch from the wheel.
15. Each new grinding wheel shall be visually inspected before installation to ensure that the rated speed of the wheel is not exceeded. The allowable speed in RPMs will be indicated on the wheel.

Gasoline-Powered Tools

The chief hazards involved in using gasoline powered portable tools are:

1. Fire from flammable fuels.
2. Cuts, lacerations, etc. from cutting edge.
3. Burns from hot engines.
4. Being struck by chips, shavings, flying objects, and other debris.

The following safety procedures are established:

1. The clutch shall be disengaged before starting. Never start under a load.

2. Employees shall always shut off the engine, wait for the machine to stop, and disconnect the spark plug wire before making adjustments or clearing jammed objects.
3. The machine should never be operated without the guards provided for it.
4. Suitable personal protective clothing and equipment shall be worn when operating the machine.
5. Pruning equipment shall not be left unattended.
6. Do not refuel running engines or hot engines.
7. Smoking while refueling is prohibited.

Portable Compressed Power Tools

One of the chief hazards of using air hammers for chipping and drilling is noise exposure. All persons on a crew working in close proximity to an air hammer or compressor are exposed to sound levels which can cause some permanent hearing loss. It is essential, therefore, that hearing protection such as ear muffs be worn.

Other hazards involving the use of tools operated by compressed air are:

1. Strains from improper lifting and operation (tools are usually heavy)
2. Cuts, lacerations, etc. from cutting edge.
3. Being struck by chips, shavings and other debris propelled by the tool during operation, or propelled by leaking air under considerable pressure.
4. Being struck by whipping air lines that break or disconnect under pressure.

The following safety rules are established:

1. Air hoses shall be securely coupled before charging with air pressure.
2. Hoses and couplings shall be inspected for damage contributing to air leaks before using.
3. The pressure-relief valve shall be inspected every time the compressor unit is placed in use. Have the unit checked by qualified maintenance personnel if the pressure relief valve appears to be defective.
4. The pressure regulator shall be inspected frequently during operation. If the air pressure exceeds the maximum pressure stated for normal operation, the unit should be turned in for repair.
5. The air should be turned off and the air pressure released before disconnecting. Air pressure should not be released if personnel are standing in front of, or over the outlet.

Power Actuated Tools

Most of these tools have a ram function to drive into compact substances with tremendous force. The hazards involved are:

1. Explosion of improperly stored charges.
2. Accidental discharge.
3. Force of the ram deflected due to improperly setting the tool.
4. Flying particles propelled by shock when the charge is set off.

Bystanders and other workers must be kept a safe distance from the point of operation when setting the charge and exploding. The following safety rules are established:

1. This equipment shall be operated only by authorized personnel properly trained in this area.
2. Powder charges shall be kept secure from unauthorized handling and stored in accordance with the manufacturer's recommendation.
3. Never expose powder charges to heat, chemicals, impact, or dampness.
4. All types of powder charges in common use should be easily identifiable. A charge that is unfamiliar should not be used without adequate instruction in its safe use.
5. Suitable personal protective clothing and equipment shall be worn when using powder-actuated tools.

All Power Tools

Most of these tools can inflict severe damage to soft body tissue. Most of them do not stop immediately when the power source is cut off. They coast until the momentum dies. Most of them are actuated by a so-called "dead man" switch. (The actuating switch is a part of the grip and when the grip is released, the switch disconnects.) This is a very important safety feature that should always be maintained.

1. The actuating switch should never be locked in the "ON" position.
2. Hands, feet, and other parts of the body shall be kept out of the line of operation.
3. A well-balanced stance on arm footing should be assumed when using power tools.
4. An employee should use only the power tools which he/she has been authorized and trained to use safely.
5. Power tools shall not be operated without the guards that have been provided.
6. Suitable personal protective clothing and equipment shall be worn when operating power tools for protection of the head, eyes, hands, body, trunk, feet, etc.
7. Always use the proper tool for the job. Inspect tools for flaws, correct sizes, and cutting edges before using.

Ladder Safety

Ladders provide access to heights that cannot be reached from the ground surface or to areas where stairs and mechanical lift equipment are not practical. They are an item commonly used both at home and at work. They are generally accepted, frequently abused, and almost never regarded as a potential hazard. Consequently, many accidents occur as a result of improper ladder usage.

The major hazard in using ladders is a sudden fall, while other hazards include splinters, slivers, and slips. Major causes of falls are excessive load carrying, climbing or descending too fast, jumping, and reaching out too far while working from a ladder.

Ladder types include: fixed, straight, extension, and stepladder.

Inspection Before Use

Inspect all ladders each time they are used for the following:

1. Dirt and grease which may conceal defects.
2. Proper rung- to- side rail connections. Check for corrosion inside rungs of metal ladders.
3. Damaged or missing rungs and side rails.
4. Working parts (on extension ladders)
5. Working hinges, bolts, locking mechanisms and ropes.

DO NOT USE DEFECTIVE LADDERS. TAG THEM SO NO ONE ELSE USES THEM. REPORT DEFECTIVE LADDERS TO YOUR SUPERVISOR SO THEY CAN BE REPAIRED OR DESTROYED.

Set-Up

1. Place straight ladders so the distance from the base of the wall to the base of the ladder is one quarter the length of the ladder. Make sure portable straight ladders have safety feet.
2. Extend the ladder a minimum of three feet above top point of support.
3. Make sure your work is not close to any power or utility lines.
4. Secure all ladders and tie down the ladder. If tie down is not possible then a spotter must be used to secure the ladder. Never use a step ladder as a straight ladder.
5. Set up barricades and warning devices when working in high traffic areas.
6. Do not place ladders in front of doors opening toward the ladder, unless the door is open, locked or guarded.
7. Do not place ladder against a window pane or sash.
8. Raise extension ladders before extending.
9. Place a portable ladder so that both side rails have secure footing. Provide footing on soft ground to prevent the ladder from sinking. If uncertain, have an attendant assist you.

10. Always place the ladder feet on a substantial and level base, not on movable objects. If uncertain, have an attendant assist you.
11. Never lean a ladder against insecure backing, such as loose boxes or barrels.
12. Be sure a step ladder is fully open and the metal spreader is locked before you start to climb it.
13. Never use a plank as a platform on the top step of a step ladder.
14. Do not splice or lash short ladders together.
15. Do not use ladders during a strong wind.
16. Do not use ladders in a horizontal position as platforms, runways, or scaffolds.

Climbing Up or Down Ladders

1. Be sure your shoes are not greasy, muddy or slippery before you climb.
2. Always face the ladder. Grasp side rails, not the rungs. Take one step at a time.
3. Use both hands and feet. Carry small tools in a work belt. Use a rope or hand line to haul heavy tools or other loads up or down.
4. Never slide down a ladder.
5. Do not climb higher than the third rung from the top on straight or extension ladders, or the second tread from the top on step ladders.
6. Do not use the back supports of step ladders for climbing.

DO NOT USE A METAL LADDER WHEN WORKING ON OR NEAR ELECTRICAL CIRCUITS, Mark portable metal ladders "Caution - Do not use around electrical equipment".

Working from a Ladder

1. Keep your body within side rails. Do not overreach.
2. Keep weight over both feet (both feet on ladder).
3. Allow only one person at a time—NO EXCEPTIONS.
4. Move the ladder as your work progresses. Never "bounce" a ladder (do not shift ladder position while on a ladder).

XIII. DRIVING SAFETY

General Instructions:

1. Any employee operating Port vehicles or mobile equipment must have a valid Operators or Commercial license in his/her possession. All Port employees are responsible for reporting to their supervisors any change to state driver's license, such as restriction, suspension, non-renewal, etc.
2. No vehicle or mobile equipment shall be operated if it is in defective or malfunctioning condition to an unsafe degree.
3. All employees must be familiar with and observe federal, state and local laws and regulations.

4. Be alert, careful and courteous towards pedestrians and other drivers.
5. Always fasten your seatbelt. Require your passengers to buckle up. Florida Law has been amended to specify that failure to use a seat belt when required may be considered as evidence of comparative negligence in a civil action.
6. Do not operate a vehicle with which you are not familiar.
7. Check the condition of headlights, tail lights, turn signals, brake lights, windshield wipers, brakes, horn, tires and mirrors. Report all mechanical problems promptly.
8. Be especially careful when approaching and crossing intersections.
9. Lock all vehicles when unattended.
10. **Employees must not use a hand-held smart device (cell phone) while operating a vehicle whether the vehicle is in motion or stopped at a traffic light. This includes but is not limited to, answering or making phone calls, engaging in phone conversations, and reading or responding to emails, instant messages, and text messages.** Port Authority employees shall not operate a vehicle while wearing a headset, headphone, or other listening devices, (Landscaping activities are exempt).
11. Observe all Railroad crossing with the expectation a train is crossing. Never drive around lowered gates. Never park a vehicle on or near the tracks.
12. All vehicles must be turned off when operator leaves the vehicle.

Fueling Vehicles:

1. Always turn the vehicle off before refueling.
2. Do not smoke while fueling a vehicle.
3. Do not use cell phones or other electronic devices while fueling a vehicle.
4. Wash hands with soap and water if you spill gasoline on your hands.
5. Ensure the vehicle is kept clean at all times.
6. After fueling, replace fueling nozzle and cap the gas tank securely.
7. Ensure equipment requiring oil, fuel or other chemicals are of the proper type by checking the manufacturer's operating manual in properly labeled containers.

When "jump-starting" motor vehicles:

1. Do not jump start a vehicle unless you have proper equipment available.
2. Connect positive (+) and negative (-) to the stalled or dead battery.
3. Connect the positive (+) and negative (-) to the running vehicle.

XIV. MOTOR VEHICLE SHOP SAFETY

General shop guidelines to follow are:

1. Painting, welding, and battery work is to be carried on in separate areas of the shop.

2. Shop personnel will be conscientious with regards to fire prevention and other safety standards.
3. All electrically powered machinery will be effectively guarded.
4. Flame-producing equipment will be restricted to the welding shop.
5. Grease and repair pits will have guard rails placed around them and will be equipped with steps and handrails to permit safe entrance and exit.
6. Grease and repair pits must be cleaned regularly with soap and water or a caustic solution.
7. Vehicle lifts must be equipped with safety devices to prevent accidental lowering.
8. Air-oil operated hydraulic lifts must be equipped with a lock which prevents rising by air if the oil supply is low.
9. Controls for lifts should be conveniently located near the lift; the lifts should be marked with the name of the manufacturer, lift capacity and date of installation.
10. Chassis and axle supports should be designated to transfer the load to the lift rails without putting torsion stress to the rails.
11. Mechanical devices (dollies) should be used to help mount or remove large tires.
12. When inflating tires, use guard cages. When inflating split rims (multi-piece wheels) use remote inflators or outsource to a qualified vendor.
13. Mechanics should keep their uniforms, coveralls, and other clothing free of oil and grease.
14. If clothing becomes saturated with a flammable substance, do not wear or store in clothing lockers.
15. After a vehicle has been raised by a jack, securely block it so that it cannot fall. Mechanics will not place any part of their bodies under the wheels unless the vehicle is properly jacked or blocked.
16. Gas tanks and fuel containers must be removed from vehicles, drained, purged and filled with water or otherwise made safe before welding or any other heat-producing work on the tank is performed.
17. Vehicles entering or leaving the shop will signal with their horns. Appropriate traffic signs will be posted at entrances and exits of the shops.
18. A speed limit of 5 m.p.h. will be enforced around the shop area.

XV. WHAT TO DO IN CASE OF AN AUTOMOBILE ACCIDENT

If you're in an auto accident, here's what you should do:

1. Stop your vehicle if it is clear and safe.
2. Move the vehicle out of the traveled roadway, if it is clear and safe.
3. Turn off the ignitions of the cars involved.
4. Administer First-Aid to all persons involved in the accident, if necessary.

5. Call the police informing them of the accident and if emergency medical services are needed. Report the accident to SOC at (357-3360) and the Terminal Director. (Check glove box for phone numbers).
6. Mark the scene of the accident with flares or reflective triangles if available.
7. Gather the information that is requested on the accident form located in your glove compartment. Include names of all persons in the motor vehicles and people who witnessed the accident.
8. Take photos or make a quick diagram of where the vehicle occupants were seated and indicate the vehicle's direction of travel and lane. Also note the date, time and weather conditions.
9. Ask to see the other driver's license and write down the number.
10. Exchange insurance company information. DO NOT discuss "fault" or make statements about the accident to anyone but the police. Remember JAXPORT is self-insured through the City of Jacksonville. We do not have an insurance policy number.
11. Get a copy of the police report of the accident.

XVI. SAFETY AND FACILITY INSPECTIONS

The purpose of the inspections is to identify and control hazards and unsafe work practices. Hazards and unsafe work practices found during these inspections should be reported to your immediate supervisor. A safety checklist would be a useful tool in conducting these safety inspections.

Inspections of the facilities serve two basic functions:

1. To maintain a safe work environment and to identify and control the unsafe actions of personnel.
2. To maintain operational proficiency.

Supervisors' inspections can be a good tool to measure employees' performance with regards to safety. This practice will assure that all supervisors inspect their area of responsibility to ensure that conditions remain safe and to reduce the occurrence of unsafe acts.

Things to look FOR in a safety inspection include:

1. Any unsafe acts or behavior by employees.
2. Foreign objects on floors or stairways that may cause falls.
3. Absence of EXIT signs over doors.
4. Unclean restrooms.
5. Frayed wiring on machinery.
6. Guards on machinery not in place.
7. Smoking in undesignated areas.
8. Oil or water on floors that may cause falls.
9. Personal protective equipment not used during grinding or welding
10. Up-to-date tags on fire extinguishers.
11. Inadequate first aid supplies.

12. Any action, stationary object or other contributing factor which, as a result, would compromise the safety of employees, the public, or property.

Things to look AT during a safety inspection include:

1. Atmospheric surroundings: hazardous breathing conditions, dust, gases, fumes or sprays in air.
2. Chemical substances including any toxic liquids or solids
3. Containers: all forms of storage such as barrels, boxes, bottles and cans.
4. Electrical conductors and apparatus: wires, cables, switches, controls, transformers, lamps, batteries and fuses.
5. Engines and mowers: sources of mechanical power, steam engines and gasoline engines.
6. Firefighting equipment: all firefighting equipment, sprinkler systems, extinguishers and other devices.
7. Safeguards and safety devices: all removable and fixed guards, other devices.
8. Vehicles and carrying equipment: trucks, cars, trains, and non-motorized equipment for transporting.
9. Personal protective equipment: goggles, gloves, hard hats, shields, ear muffs, respirators.
10. Slippery surfaces.

XVII. JAXPORT EMPLOYEE SAFETY TRAINING

- **Safety training is reviewed and tracked by Terminal Operations Management. Basic safety training is received by all employees initially; various employees receive additional safety training initially and at Annual/Periodic intervals based on their position and the needs of JAXPORT.**

- **The JAXPORT Department of Human Resources office maintains the JAXPORT official Safety Training Matrix which tracks departmental focused training requirements and participation.**

XVIII. EMERGENCY PLAN FOR FIRES

In case of a fire:

1. Evacuate the building or area to the pre-designated location for head-count, and notify immediate supervisor.
2. Call 911. Give the exact location of the fire and inform them of any possible dangers (trapped people, stored chemicals, fuel tanks, etc.).
3. Remain on the line until the dispatcher tells you to hang up.

4. Make sure there is someone waiting for the emergency responders to help guide them to the fire.
5. Do not enter the fire area.
6. Notify your supervisor, manager, and Risk Management.

In case of a small fire, extinguishers may be used.

1. Evacuate the building or area.
2. Call 911 and give exact location of the fire.
3. If you can do so without endangering yourself and have notified the Fire Department, you may attempt to put out a small fire using a fire extinguisher.
4. Hold extinguisher upright, pull pin, and lift handle.
5. Stand back 8 feet and aim at base of fire.
6. Press lever and sweep side to side.
7. Step away from fire when extinguisher is empty.

What do you do in the event of an electrical/ electronic fire?

1. Immediately de-energize the circuit or equipment affected.
2. Call the Fire Department.
3. Control fire, if possible, by using appropriate fire extinguisher.

Electrical fires are Class "C" fires.

Use appropriate distinguisher as illustrated below:

Fire Extinguisher Ratings

Class A Extinguishers will put out fires in ordinary combustibles, such as wood and paper. The numerical rating for this class of fire extinguisher refers to the amount of water the fire extinguisher holds and the amount of fire it will extinguish.

Class B Extinguishers should be used on fires involving flammable liquids, such as grease, gasoline, oil, etc. The numerical rating for this class of fire extinguisher states the approximate number of square feet of a flammable liquid fire that a non-expert person can expect to extinguish.

Class C Extinguishers are suitable for use on electrically energized fires. This class of fire extinguishers does not have a numerical rating. The presence of the letter "C" indicates that the extinguishing agent is non-conductive.

Class D Extinguishers are designed for use on flammable metals and are often specific for the type of metal in question. There is no picture designator for Class D extinguishers. These extinguishers generally have no rating nor are they given a multi-purpose rating for use on other types of fires.

XIX. SECURITY

Federal and State mandated port facility security requirements are enforced and maintained by the JAXPORT Department of Public Safety. JAXPORT security operations are in effect around the clock, 365 days a year. Physical security measures, technology and patrol officers are integrated seamlessly to offer visitor and tenants a safe, secure and productive environment.
The Department of Public Safety will establish personnel access control measures that will limit and monitor personnel access in accordance with the level of security determined by the known threat or by implemented standard security protocols. The Security Operations Center (SOC) is open 24 hours per day, 7 days per week. (904) 357-3360

XX. SEVERE WEATHER SAFETY

It is important to be aware of weather conditions and to stay alert during severe weather. Weather alert radios such as AM 930 can provide immediate notification of severe weather. You should know the meanings of terms that are used during severe weather.

A WATCH is issued when weather conditions are favorable for the formation of severe weather. During a watch, keep alert to changing conditions and prepare to take protective actions.

A WARNING is issued when severe weather has been reported by spotters or is indicated by radar. During a warning, take protective actions immediately.

During severe weather:

- Go inside
- Go to an interior room or hallway on the lowest floor of the building. Put as many walls as possible between you and the outside.
- Stay away from windows and doors.

Lightning precautions:

- If you hear thunder, you are close enough to the storm to be struck by lightning. Seek shelter immediately in a building or a car.
- If no shelter is available, go to a low, open area away from trees, poles and metal objects. Squat low to the ground and try to make yourself the smallest target possible.
- If caught in a wooded area, take shelter under the shorter trees. Avoid using the telephone or electrical devices.

Severe wind/Hurricane precautions:

Stay away from windows and doors.

Tornado Danger Signs:

- Large Hail: Tornadoes are spawned from powerful thunderstorms and the most powerful thunderstorms produce large hail. Tornadoes frequently emerge from near the hail-producing portion of the storm.

- Calm before the storm: Before a tornado hits, the wind may die down and the air may become very still.
- Cloud of debris: An approaching cloud of debris can mark the location of a tornado even if a funnel is not visible.
- Funnel cloud: A visible rotating extension of the cloud base is a sign that a tornado may develop. A tornado is evident when one or more of the clouds turns greenish (a phenomenon caused by hail) and a dark funnel descends.

EverBridge:

JAXPORT employees can have their personal phone numbers registered in EverBridge, JAXPORT's mass notification system for employees, tenants and other stakeholders. To register, contact Physical.Security@JAXPORT.com.

XXI. EMERGENCY PLAN FOR FIRST AID

Minor First Aid Treatment

First-aid kits are stored throughout all JAXPORT locations. If you sustain an injury or are involved in an accident resulting in injury and requiring minor first-aid treatment:

1. Administer first-aid treatment to the injury or wound.
2. Inform your Supervisor of the incident.
3. Submit a JAXPORT Incident Investigation Form.

Precaution Summary

1. Wash exposed areas with antibacterial soap.
2. Use the required personal protective equipment.
3. Treat all human body fluids and items soiled with human body fluids as contaminated.
4. Maintain facilities in a sanitary condition at all times.
5. Pre-soak all contaminated clothing.
6. Body fluids may spill, soil or contaminate a work area, make sure to disinfect work areas post-accident.
7. Report suspected exposure to HIV/HAV/HBV to your Supervisor.

Serious Injury/Illness (Heart attacks, Severe lacerations, Broken bones, Unconsciousness)

1. Call Emergency Response 911 report problem and exact location.
2. Notify supervisor or manager, Security and Risk Management.
3. Keep the individual calm and monitor until medical attention arrives.
4. Submit a JAXPORT Incident Investigation Form.
5. Submit a first report of Injury form.

WATER RELATED FIRST AID PLAN

A U.S. Coast Guard approved 30-inch (76.2 cm) life ring, with at least 90 feet (27.43m) of line attached, shall be available at readily accessible points at each waterside work area where the employees' work exposes them to the hazard of drowning. Employees working on a structure leading to a detached vessel berthing installation shall wear U.S. Coast Guard approved personal flotation devices except where protected by railings, nets, or safety belts and lifelines. A readily available portable or permanent ladder giving access to the water shall

also be provided within 200 feet (61 m) of such work areas.

XXII. RECORD KEEPING

A copy of all records will be maintained at the Risk Management office for a minimum of three (3) years. The records include:

- **The First Report of Injury or Illness Form**: The original form will be submitted to the Director of Public Safety or to a Public Safety Manager with-in 24 hours. One copy will also be forwarded to the Risk Management Office and another should be retained for the Supervisor's records.

XXIII. Liquid Natural Gas (LNG)

LNG bunkering equipment, facilities and LNG powered vessels have detectors that monitor for potential LNG leaks or spills. Low/high temperature sensors, gas detection and flame monitors help ensure abnormal conditions are reported immediately to proper operations and safety personnel.

If there is an emergency, seek shelter inside a building, closing all windows and doors, and await instructions from emergency management personnel. Personnel on a crane will shelter inside the crane and await instruction from emergency management personnel.

If advised to evacuate, follow the emergency management personnel's instructions immediately.

JAXPORT
JACKSONVILLE PORT AUTHORITY

IMPORTANT CONTACTS

Security Operations Center
(904) 357-3360

Security – Access Control
(904) 357-3344

TWIC Information Hotline
(855) 347-8371

Port Jobs
www.jaxport.com/work-with-us/careers

Mailing Address
2831 Talleyrand Ave.
Jacksonville, FL 32206