



Welcome to Outsource, LLC. Our Technicians are our greatest assets and we want to ensure that you arrive home to your family in the same good health that you arrived to work.

This Technician Safety Handbook is yours to review and keep with you as a reference tool. Please sign the acknowledgement receipt located in the orientation test packet.

This covers 13 safety topics that you need to be familiar with before you report to work on a jobsite. Each of these topics has a written test to go with them. At the bottom of each test is a place to “Print” and Sign your name as well as date the form.

**Outsource Corporate Headquarters**  
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## HAZARDOUS COMMUNICATION

During the course of your work you may use chemical products. They may include products such as adhesives, caulking compounds, cleaners, solvents, battery acid and gasoline, etc. You may also work on a customer premise where chemical products are processed or used. These products have many valuable uses. But many can also present risks to health and safety if used improperly. You have the right to know about the hazards chemical products may pose.

The local hazardous substance regulations require chemical manufacturers and distributors to provide information regarding the hazards of chemicals they distribute. Materials Safety Data Sheets (MSDSs), labeling, and training are all required under the Hazardous Substance Management regulations. For more information, consult your local job-site Hazardous Substance Management program document.

### HAZARDS

- ï Health hazards result from exposure to any chemical that may produce acute or chronic effects in exposed Technicians.
  - o Acute health effects occur immediately after exposure to chemicals. Examples include irritants, asphyxiates, and corrosives.
  - o Chronic health effects are those that develop slowly over a long time period such as cancer or liver damage.  
Examples include asbestos, lead, and silica.
- ï Physical hazards include:
  - o Combustible materials with flash points at or above 100° F (38° C) but below 200° F (93° C).
  - o Flammable materials including solids, liquids, vapors, or gases that ignite easily and burn rapidly.
  - o Reactive materials that undergo chemical reaction either by themselves or with other materials resulting in rapid release of energy – examples include explosives.

### DEFINITIONS

**Exposed** – Means that a Technician is subjected to a hazardous substance in the course of employment through any route of entry.

**Hazardous Material** – A substance (gas, liquid or solid) capable of causing harm to people, the environment, and property.

**Material Safety Data Sheet (MSDS)** –The MSDS identifies the hazardous ingredients and explains the physical and health effects of hazardous substances and how to avoid harm. The MSDS also explains procedures for spills, leaks and disposal.

**Label** – Means any written, printed or graphic materials affixed to containers of hazardous chemicals. Containers in the workplace must be marked with the identity of the hazardous chemical and an appropriate hazard warning.

**Route of Entry** – The method of bodily contact with a chemical is referred to as the route of entry. The routes of entry are absorption (eye or skin contact), ingestion, and inhalation.

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## **REQUIREMENTS**

### **Written Hazardous Substance Management Program**

1. All OUTSOURCE Technicians working at facilities where they may be exposed to hazardous chemicals must have attended a written Hazardous Substance Management program.
2. The Hazardous Substance Management program requires that OUTSOURCE Technicians working with, or around, chemical products are properly instructed about the hazards of those products, practices to work safely with them, and personal protective equipment (PPE) that is required.

### **Chemical Inventory**

1. Each location must have an inventory of hazardous substances stored on-site or used by Technicians.
2. Some customers may require a list of substances/chemicals that will be brought on their premises.

### **Material Safety Data Sheets**

Manufacturers and suppliers must provide an MSDS for all hazardous substance products they sell.

1. The MSDS must be available to any Technician who works with or transports such products.

### **Labeling**

1. All products presenting a physical or health hazard must be properly identified and labeled prior to entering the workplace.
2. Materials in transport must be properly labeled, i.e. flammable, explosive, radioactive, etc.

### **Information and Training**

Every Technician who works with or around hazardous materials must be provided with certain information and training.

The information includes:

- Requirements of the standard
- Work operations where hazardous chemicals are present
- The location and availability of the written program and MSDS.

Your training will include:

- Methods to detect the presence or release of hazardous substances
- Physical and health hazards of chemicals in the workplace
- Measures to protect you from chemical hazards
- How to interpret substance/chemical labels
- How to read and interpret MSDSs.

### **Working on Customer Premises**

Technicians installing or maintaining OUTSOURCE equipment on customer premises may come across or be exposed to hazardous materials associated with the customer's operations. It is the customer's responsibility to inform OUTSOURCE personnel of chemicals used in the areas where you will work and provide you with MSDSs upon request. Before working on an industrial site, ask the customer if there are chemical hazards that you should be aware of or need to avoid.

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If you suspect you may be exposed to a hazardous material on a customer's site and have not been provided with the required information, do not proceed. Contact your Supervisor.

## OCCUPATIONAL INJURY / ILLNESS REPORTING

Safety and insurance regulations require Outsource, LLC to maintain records of occupational injuries and illnesses. These records are also used to ensure that you receive proper care in the event of a work related injury or illness.

You are required to report job-related injuries to your OUTSOURCE supervisor immediately after the incident or after emergency medical care. Job-related illnesses must be reported as soon as symptoms are identified. For both injuries and illnesses, timely reporting is necessary to ensure the information is properly recorded and that your injury or illnesses will be covered by insurance. If you do not report job-related injuries and illnesses in a timely manner, disciplinary action may be taken.

Reporting also provides an opportunity to review the cause of the injury or illness. The review provides information as to how and why an injury or illness occurred in the workplace. This information can be used to prevent future injuries and illnesses, improving safety for you and other Technicians.

### DEFINITIONS

**Occupational Injury (job-related)** – An injury such as a cut, fracture, sprain, amputation, etc. that results from a work-related incident.

**Occupational Illness** – Any acute or chronic abnormal condition or disorder other than an occupational injury, caused by exposure to environmental factors associated with employment. Examples include hearing loss, respiratory disease, or skin disorders that are due to workplace causes.

**Emergency** – A situation where the injury or illness is life threatening or so severe that immediate medical care is necessary. Examples include broken bones, cuts that cannot be treated with first aid, bleeding that won't stop, eye injuries, and head injuries.

**Work Related** – An event or exposure in the work environment either caused or contributed to the resulting injury or illness.

### IMMEDIATE ACTIONS AND REPORTING

The steps below are required immediately after a job-related injury or illness occurs. These steps will help to ensure you receive appropriate medical care and the injury or illness is properly recorded.

#### **Technicians**

If you are injured or become ill due to your job:

1. Get emergency medical attention if needed.
2. Treat injuries with first aid supplies as appropriate. Non-emergency injuries should be treated with first aid if possible.
3. Report the injury or illness to your supervisor immediately (or after emergency care, if needed).
4. Notify your supervisor if non-emergency medical care is needed.
5. Obtain professional medical care from an approved company clinic or doctor as appropriate.
6. Cooperate during the incident/accident review or investigation.

#### **Supervisor**

When a Technician reports a job-related injury or illness, do the following:

Begin filling out the Outsource, LLC "Accident/Incident Report" form, and begin a review of the incident or illness. An electronic copy of the form is available on the "O" Drive.

- If the injury occurred on customer premises notify the customer as necessary.
- If professional medical treatment is required, provide a copy of the **OUTSOURCE** form to the customer.

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Incident Report form to Corporate Safety and HR. The incident must be called in to the appropriate contact within 24 hours.

- If medical treatment is not required, complete the OUTSOURCE Incident Report and keep on file with Corporate Safety and HR in case further treatment is needed.

Notify the Corporate Safety Manager immediately if there is:

- A death;
- Any injury or illness requiring hospitalization; and/or
- Any injury or incident where there is serious property damage (exceeding \$5,000 in value, other than damage to motor vehicles).

### **FOLLOW-UP ACTIONS & NON-EMERGENCY MEDICAL CARE**

Some injuries or illnesses require non-emergency or follow-up care. The information and steps below address requirements for non-emergency or follow-up care.

#### **Technicians**

In most states in the U.S., a Workers' Compensation Insurance Administrator directs medical care. In these states, you will need to obtain authorization for medical care from your supervisor or HR. If you schedule yourself for medical care for a work-related injury or illness without approval, you could be responsible for associated expenses and it could affect your wage benefits. For all work-related non-emergency medical care or follow-up care you must:

1. Notify your supervisor if non-emergency medical care is needed.
2. Use a medical care facility approved by our Workers' Compensation Insurance Administrator in accordance with State requirements.
3. Submit records of diagnosis, prescriptions, referrals, and medical bills to HR for processing.
4. Bills resulting from non-work related injuries and illnesses are the responsibility of the Technician. Submit these bills to your benefits insurance carrier.
5. If the medical condition worsens or there are complications, notify your supervisor.
6. Follow doctor's instructions, including attending therapy appointments, consultations and work restrictions.

If you are unable to perform assigned work activities or unable to report to work due to an occupational injury/illness, do the following:

- Stay in contact with your supervisor, Corporate Safety officer and Corporate HR.
- Immediately notify your supervisor if the doctor recommends work restrictions or time off from work. Then provide a copy of the diagnosis.
- Follow doctor's instructions, including work restrictions and return to work instructions.
- Report back to work as soon as practical with a light duty or full duty release signed by the doctor treating your case.
- Follow your Supervisor's instructions regarding job changes to accommodate work restrictions.
- ï Cooperate with the insurance claim specialist during the case management process (e.g. answer questions, provide requested documents, only utilize approved medical facilities, etc.).

#### **Management & Human Resources**

After an injury has occurred, follow-up with the Technician to:

- ï Ensure that non-emergency medical care is provided by an approved facility in accordance with State and Insurance Administrator requirements.
- ï Stay in contact with the injured Technician and track the status of the injury/illness.
- ï If there is a lost time injury, maintain regular contact with the injured Technician.
- ï Facilitate the injured Technician's return-to-work by providing temporary restricted duty activities and job accommodations when necessary.

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i Consult with your Corporate Safety Officer and Corporate HR as needed. They can review the case and provide assistance.

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## PERSONAL PROTECTIVE EQUIPMENT (Hard Hats)

Preventing head injuries is an important part of OUTSOURCE's safety program. Head injuries are caused by falling or flying objects, or by bumping the head against a fixed object. Elimination or control of a hazard leading to an injury should be the first consideration. Many accidents leading to head injuries are difficult to anticipate and control. Where these conditions exist, personal protective equipment (PPE), which includes head protection, must be worn to prevent injury.

### HAZARDS

- ï Being struck by falling objects
- ï Striking head on building structures
- ï Striking head on electrical sources
- ï Being struck by mechanical equipment

### WHEN ARE HARD HATS REQUIRED?

You must use your hard hat when:

- ï Working in areas where there is a reasonable probability of head injury from impact, falling or flying objects, or from electrical shock.
- ï Working aloft on ladders where there is a possibility of head injury (hard hats may not be required in some situations).
- ï Working on an aerial lift or platform.
- ï When overhead work is going on.
- ï Working in trenches or water pits.
- ï When entering, exiting, or working in a manhole.
- ï When working under the opening of a manhole.
- ï Worksites where building construction is in progress.
- ï Working with, or in the vicinity of, construction equipment (example: derricks, cranes, booms, earth boring machines, tractors, trenchers, cable plows, winches, take-up reels, etc.).
- ï Working in an area where headroom is limited (example: attics, crawl spaces, tunnels, pipe chases, etc.).
- ï When required on customer premises.

### HARD HATS

When hard hats are required, they must meet local or regulatory guidelines and be company approved. Head protection, in the form of hard hats, must resist penetration, absorb the shock of a blow or impact and protect against electrical shock.

**NOTE: Metal hard hats are NOT allowed.**

### INSPECTION

ï You must visually inspect your hard hat before each use. A hard hat must also be inspected if it has been subjected to a severe blow or impact. An inspection of a hard hat should include:

1. Checking the hard hats and attachments for physical damage, wear, holes and cracks.
  2. Checking suspension for proper fit.
- ï Semi-annually, your hard hats must have a flex test conducted. The flex test should be performed at room temperature. To conduct a flex test:
1. Hold the hard hat in both hands.
  2. Compress the sides of the hard hat inward about 1 inch.
  3. Release quickly.
  4. The hard hat should spring back exhibiting a degree of flexibility.

**NOTE: If your hard hat does not respond appropriately, or cracks appear due to brittleness, replace the hard hat.**

**PROPER FIT**

You must wear your hard hat with the brim forward. Each hard hat consists essentially of a shell and suspension. Ventilation is provided by a space between the headband and the shell. Proper fitting of hard hats is imperative to provide adequate protection. Use the following guidelines to ensure a proper fit:

- ï When the headband is adjusted to the right size, it provides you with sufficient clearance between the shell and the headband.
- ï The removable or replaceable type of sweatband should cover at least the forehead portion of the headband.
- ï The shell should be of one-piece seamless construction and designed to resist the impact of a blow from falling material.

**NOTE: Do not store items in the clearance between the shell and the suspension.**

**MAINTENANCE**

- ï Your hard hats should be kept clean.
- ï Dirt and grease may hide small cracks, holes or other damage.
- ï You should be able to identify the type of helmet by looking inside the shell for the manufacturer and local approved designation and class.
- ï Hard hats are date stamped by the manufacturer and should be replaced no later than the date recommended by the manufacturer.
- ï Your hard hats should be maintained free of unauthorized decals, artwork, etc.
- ï Using paints, thinners or other chemicals on your hard hat may damage the shell and reduce protection by weakening it or negating electrical resistance.

**STORAGE**

- ï Store your hard hats carefully to prevent damage from other tools or equipment.
- ï Your hard hats should be stored away from direct sunlight.

Outsource, LLC is responsible for providing Technicians with the appropriate head protection. Hard hats without the OUTSOURCE logo will be purchased from an approved vendor by the local office. Only OUTSOURCE authorized hard hats may be purchased and worn on the job.

## PERSONAL PROTECTIVE EQUIPMENT (Eye Protection)

Your eyes are precious. To protect them, Technicians are required to wear eye protection where there is a reasonable probability of injury to the eye. Eye protection must meet local guidelines and be company approved. Eye protection must fit properly and include both front and side protection. Depending upon the work operation being performed, the company may require team members to use either approved safety glasses, goggles, or face shields. Contact lenses are NOT permitted in work environments where there is the potential for exposure to liquid chemicals, gases, vapors, or dusts. See your Supervisor to obtain the proper eye protection.

### **HAZARDS**

- ï Glasses that do not meet the local standard and therefore don't provide proper protection from impact and penetration
- ï Not wearing glasses because "they are uncomfortable" or "the job is quick"
- ï Not wearing safety glasses when using power tools such as a drill
- ï Using safety glasses when goggles are needed; for example when handling battery acid or other hazardous chemicals, or working overhead for long periods of time
- ï Windy environments and flying particles

### **SAFETY GLASSES**

Safety glasses are commonly used to provide protection from impact. Safety glasses are required when performing any activity where there is a reasonable probability of injury to the eyes. This includes, but is not limited to:

- ï Cutting or stripping wire.
- ï Using hand or power tools, especially drills.
- ï Working in areas where there are obstructions, dust, and protruding objects such as above ceilings and in crawlspaces.
- ï Working on customer premises where machinery or chemicals may present a hazard.

### **GOGGLES**

Technicians are required to wear goggles when safety glasses cannot provide adequate protection from certain types of work operations. Some examples are but not limited to:

- ï Handling or maintaining large battery cells.
- ï When prolonged work is performed above eye level and dirt or debris is likely to be disturbed such as drilling in ceilings, placing or removing acoustical ceiling tiles, placing or removing wires or cables, etc.
- Working in environments where chemicals exist
- When working in
- ï When required on customer premises

### **Face-shields**

Technicians may be required to wear face shields when performing or working in certain environments when required on customer premises.

### **Proper Fit**

Proper fit of safety glasses is an important factor in protecting your eyes.

- ï Loose fitting eyewear cannot provide adequate protection.
- ï Too much gap around the eyes or wearing safety glasses down on your nose significantly reduces the protection level.

### **Pre use Inspection**

Technicians must visually inspect their eyewear before each use. It is essential that lenses are kept clean. Continuous vision through dirty or pitted lenses can cause eyestrain and be a source of reduced vision, which could potentially cause an accident. When inspecting safety eyewear, ensure:

- ï Lenses are clean
- ï Lenses are free of scratches and pitting
- ï Frames or goggles straps are taut and not stretched out.

### **Maintenance and Storage**

Safety eyewear must be maintained and stored properly.

- ï Clean eye protection by washing with soap and water
  - ï All defective eye protection must be discarded and replaced
  - ï Store the eye protection in the appropriate case or in an area where damage will not occur.
- Do not hang goggles by their strap. It stretches the strap and the lens accumulates dust and dirt.  
Keep safety glasses with you on the job. You can't wear them if you don't have them.

### **PURCHASE OF SAFETY EYEWEAR**

OUTSOURCE is responsible for providing appropriate safety eyewear. Non-prescription safety glasses, goggles and face shields will be provided to Technicians by the local office as needed. Technicians who require prescription eyeglasses will be provided either prescription safety glasses or eye protection that can be worn over prescription lenses.

### **CUSTOMER PREMISES**

Eye protection is often required on a customer's site. If required, it must be worn. It is a good practice to get into the habit of wearing eye protection when visiting or working on customer premises. Before beginning work at an industrial site, make note of the nearest emergency eyewash station.

### **VISITORS**

Appropriate eye protection must be made available for all visitors who will enter areas where eye protection is required.

## NOISE AND HEARING CONSERVATION

Noise or unwanted sound is one of the most pervasive occupational health problems. The prevention of noise induced hearing loss is therefore an important aspect of any occupational safety and health program.

Loud noise can damage your hearing by damaging the delicate hair cells in the inner ear. A short intense sound (e.g. an explosion) may cause immediate hearing loss. Most of the time this damage happens gradually when prolonged exposure to loud sounds exhausts these hair cells. Hair cells don't repair themselves. So when enough hair cells are damaged hearing loss results. Too much noise exposure can cause temporary changes to your hearing. This can result in a feeling of stuffed up ears or ringing in your ears, referred to as tinnitus. These short-term problems usually go away after the exposure stops. However, repeated exposures to loud noise can lead to permanent incurable hearing loss. It is therefore important that we take steps to remove hazardous noise from the workplace, and when that is not possible, that you utilize hearing protectors.

### HAZARDS

- ï Use of powder actuated tools
- ï Work in high noise areas on customer premises
- ï Use of noisy power equipment

### DEFINITIONS

**Audiometric testing** – Hearing acuity tests that are administered by medical professionals so hearing loss can be identified and dealt with properly.

**Decibel (dB)** – The unit of measurement used for sound.

**Impulse noise** – Noise composed of temporary “beats” that occur on and off, in a repeating manner. Powder actuated tools, jackhammers, pile drivers, and power presses are examples of tools that cause impulse noise.

**Noise** – Unwanted or unpleasant sound.

**Hearing protectors** – Personal protective equipment designed to reduce the level of noise entering your ear. They fall into three categories as follows:

- ï **Ear Plugs** – Fit in the ear canal. They can be formable (i.e., plugs that fit all ears) and are disposable or pre-molded (made for specific individuals) that are reusable.
- ï **Ear Muffs** – Fit over the entire ear to seal out noise. They are composed of three basic parts: cups, cushions and headbands.
- ï **Canal Caps** – Seal the external edge of the ear canal to seal out noise.

### PERMISSIBLE NOISE EXPOSURES

Protection against the effects of noise is needed when sound levels exceed those shown in the following table:

duration per day, hours	Sound level dB <sub>A</sub>
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

Impulse or Impact noise should not exceed 140 dB<sub>A</sub> peak sound pressure level.

### **HEARING CONSERVATION PROGRAM**

Few jobs require you to be in a hearing conservation program. However, if your noise exposure level is routinely expected to equal or exceed an 8-hour time-weighted average of 85 decibels (dB ), you must be included in a hearing conservation program. Check your local jurisdiction, which must have an 85 dB exam for 8-hour logorhythmic scan. A hearing conservation program includes, noise monitoring, baseline audiometric examinations, annual follow-up examinations, training in the selection and use of hearing protection devices, and recordkeeping.

### **USE OF HEARING PROTECTION**

Hearing protection is required when you use certain tools, or work in identified high noise areas. Examples of operations where hearing protectors are to be used include but are not limited to the following:

- ï Working in power generating areas
- ï Operating power saws
- ï Using powder-actuated/power-explosive tools
- ï Operating an air hammer
- ï Working in areas posted with “High Noise Area” warning signs or labels.

### **OUTSOURCE LOCATIONS**

If a source of significant noise is identified, and you have routine exposure, contact your supervisor. Your supervisor can work with the Corporate Safety Officer or local management to arrange to have the noise levels in the suspect area(s) evaluated and determine if your exposure level exceeds local regulatory guidelines. Work areas that may be sources of high noise include:

- ï Mechanical rooms
- ï Power generating areas

In cases when high noise areas are identified in OUTSOURCE facilities, efforts will be made to reduce noise levels using engineering controls. When engineering controls are not feasible, administrative controls (e.g. limiting duration of exposure) and/or ear protection shall be utilized.

### **CUSTOMER LOCATIONS**

When working on customer premises, a customer representative should inform you of locations that require hearing protection. However, sometimes you may not be informed, so you should be aware of the following indications that hearing protection may be required:

- ï Posted warning signs or labels
- ï Observation of other workers wearing hearing protection
- ï Difficulty communicating with others due to high noise levels.

If any of the above conditions are noted, you should contact your supervisor. Your supervisor will contact the building owner or their representative and ask if hearing protection is required. If hearing protection is required, supervisors shall assure that proper hearing protection is provided and used.

### **MAINTENANCE AND CARE OF HEARING PROTECTION**

You are responsible for maintaining your hearing protectors. They should be used, cleaned, maintained, and stored according to manufacturers’ recommendations.

### **EQUIPMENT AVAILABILITY**

All service and installation specialists should be issued several pairs of disposable earplugs as part of their personal protective equipment. Replacement earplugs will be provided as needed. Earmuffs should be made available if a Technician cannot wear earplugs. Earmuffs can also be used along with earplugs to offer greater protection from noise.

Hearing protection can be purchased from approved suppliers or can be obtained locally through vendors that carry NIOSH (National Institute for Occupational Safety & Health) certified hearing protection equipment,

## **PERSONAL PROTECTIVE EQUIPMENT (Footwear)**

As Outsource, LLC Technician, you must wear the appropriate footwear to prevent personal injury and protect yourself from potential hazards associated with the work being performed.

### **HAZARDS**

- ï Falling objects hitting the foot
- ï Stepping on sharp objects
- ï Objects rolling over onto the foot
- ï Slips, trips and falls
- ï Customer sites or work locations where material handling, construction, or debris could cause foot injury

### **APPROPRIATE FOOTWEAR**

If you perform installation, service, or maintenance work you must wear boots or shoes constructed of heavy leather, have ankle support and a block heel that is at least ½", but not more than 1 ½". The heel helps to prevent Technicians from slipping, especially on ladder rungs.

**NOTE: Sneakers shall not to be worn on the job by installation, service, and maintenance team members.**

### **Protective Safety Footwear**

All protective safety footwear must meet the American National Standards Institute (ANSI) Z41 guidelines. You must wear protective safety footwear, such as steel toes, when required by the job. Environments where protective safety footwear may be required include customer industrial sites, construction sites, maintenance, warehouses, shipping and receiving, and other locations where foot hazards exist. Protective safety footwear features may include:

- ï Puncture resistant soles
- ï Toe protection
- ï Electrical insulation
- ï Chemical protection

### **Specialty Protective Safety Footwear**

This would apply to footwear such as: Steel toed rubber boots or safety boots that have metatarsal guards or toe caps. If you require specialty protective safety footwear the procedures for purchasing such equipment will be determined locally. As a minimum, special protective safety footwear must meet ANSI Z41 Guidelines.

### **PRE-USE INSPECTION**

Your foot protection must be maintained in good condition. You should inspect your safety footwear regularly and prior to each use. Check for the following:

- ï Badly worn soles
- ï Run-down heels
- ï Laces of extensive length (should be cut or tucked in boot to prevent tripping)

### **PURCHASING SAFETY FOOTWEAR**

Outsource, LLC Technicians are responsible for the purchase of steel toed boots where required on specific projects.

## PERSONAL PROTECTIVE EQUIPMENT (Hand & Arm)

As Outsource, LLC Technician, you must wear the appropriate hand and arm protection to prevent personal injury and protect yourself from potential hazards associated with the work being performed. Wearing proper hand and arm protection is an effective measure you can take to prevent incidents and reduce the severity of a hand or arm injury.

### **HAZARDS**

- ï Pulling cable that can result in cuts, abrasions, and blisters
- ï Handling and installing equipment with sharp corners and edges
- ï Pinching fingers/hands when handling equipment
- ï Absorbing chemicals such as solvents through the skin
- ï Chemical burns resulting from handling or maintaining acid in batteries

**NOTE: Jewelry in the workplace can also be a hazard that is often overlooked. Rings, bracelets, and chains can be the cause of hand related injury. Use common sense when wearing jewelry. The best choice is to keep your jewelry at home.**

### **MINIMUM HAND & ARM PROTECTION**

Technicians performing installation or service duties must wear the appropriate hand and arm protection.

#### **Arm Protection**

Wear suitable clothing for the type of work you will be performing. Proper clothing is effective in preventing incidents and lessening the severity of injury to the arms.

- ï Long sleeve uniform work shirts and jackets are recommended for installation and service duties but may not be practical in hot climates.
- ï Shirts and jackets with long sleeves provide protection from bumps, cuts, scrapes and splinters. They also protect against contact with poisonous plants.
- ï Cotton fabric provides the best protection against accidental burns.
- ï Proper fit is necessary. Loose clothing is a potential hazard for getting your arm caught in equipment.

#### **Leather or Fabric Gloves**

Leather gloves should be worn to absorb impact and cushion blows to the hand. They also provide you with protection from blisters, cuts, abrasions and splinters. Leather gloves are required when handling sharp or heavy equipment and when pulling long runs of cable. In some cases fabric gloves may also be used.

**NOTE: Gloves should NOT be worn when working with rotating equipment such as bench grinders or when they present a greater hazard than wearing no gloves at all.**

### **SPECIAL PROTECTIVE GLOVES**

Special protective gloves may be required when you work on premises with unique hazards (examples: back-up battery power plants, chemical plants, hot or cold situations). If unique hazards are present on customer premises the customer may specify the hand protection you will need. Contact your supervisor or Safety Coordinator as needed for assistance.

Special types of hand protection include:

#### **Chemical Resistant Gloves**

Select the right glove for the job. The glove you select must be resistant to the chemical you will be handling. Otherwise the chemical may 'break-through' resulting in exposure. Chemical resistant gloves may be required, but not limited to, working with:

- ï Caustics
- ï Acids
- ï Solvents
- ï Petroleum products

#### **Thermal Protective Gloves**

Provides additional protection against extreme or harmful temperatures. For protection from high heat, you should select multi-layer gloves that provide a large degree of thermalinsulation.

Examples include:

- ï Fabric gloves
- ï Knit fabric gloves
- ï Leather gloves
- ï Aluminized gloves

#### **SELECTING THE RIGHT GLOVE**

The glove you select should be based on hazards present in your work environment. If unique or unusual hazards are present, contact your supervisor or Safety Coordinator for assistance.

#### **Hand Function & Proper Fit**

Gloves can be bulky and difficult to work with and reduce the ability to feel and handle small objects. Tradeoffs are often made between protection and hand functionality. You should select the best glove that offers protection while minimizing loss of hand functionality.

Proper glove fit is essential to provide adequate protection. U.S. glove sizes typically range from small to double-extra-large. Sometimes numbers are used from 7 (small) to 11 (double extra large). Actual glove size varies depending upon the manufacturer. This means that you will need to experiment to find the right fit.

#### **PRE-USE INSPECTION**

Inspect your gloves prior to each use. Technicians should check for:

- ï Cuts
- ï Slits
- ï Excessive wear

Chemical resistant and some insulated gloves can be inspected by filling them with air, twisting the cuff, and listening/feeling for air leaks. If leaks are detected, discard or replace the gloves.

#### **STORAGE & MAINTENANCE**

Your gloves should be:

- ï Kept clean
- ï Stored carefully to prevent damage from other tools or equipment
- ï Stored away from direct sunlight

#### **PURCHASING OF GLOVES**

Outsource, LLC is responsible for providing you with appropriate protective gloves. The local office can purchase gloves from approved vendors.

## ELECTRICAL SAFETY

Safe work practices are required whenever a Outsource, LLC Technician works with or around electrical equipment or wiring. Contact with electric current is a significant hazard. Electrocution is one of the leading causes of work related deaths in both industrial and residential settings. This document provides policies and procedures that must be followed by all Technicians who work on or around electrical equipment or wiring.

### HAZARDS

The primary hazards of electricity and its use are:

- ï Shock
- ï Burns
- ï Arc-blast
- ï Explosions
- ï Fire

**Shock** – Occurs when part of a person's body becomes part of an electric circuit. An electric current enters the person's body at one point and exits the body at another location.

The severity of the shock depends upon how much electric current flows through the body, what path the current takes through the body, and how much time elapses while the body is part of the electric circuit. Currents as low as 100 to 200 milliamps can be lethal depending upon the pathway taken through the body.

**Burns** – Can result from shocks, arc-blasts, explosions, or electrical fires. Burns frequently occur at the site where current enters and exits the body after a serious electric shock.

**Arc-Blast** – A blast that occurs from high-amperage currents arcing through air from one conductor to another. Basic examples are sparks due to opening or closing of circuits and static discharges. More serious arc blasts occur due to significant power surges, equipment failure, and also from initiating contact with high amperage circuits, especially between two energized points.

Temperatures as high as 35,000 °F (19,427 °C) have been recorded in arc-blast research.



**Explosions** – May occur when electricity provides a source of ignition for an explosive mixture in the atmosphere.

**Fires** – Electricity is one of the most common causes of fire in both the home and the workplace. Defective electrical equipment can build up heat intense enough to start a fire.

### **TRAINING**

**Qualified Workers** – A qualified worker is someone who is authorized to perform work on electrical components and has specialized training in electrical safety and avoiding the electrical hazards of working on or near exposed energized electrical parts. In general, Outsource, LLC Technicians are not qualified to work on exposed energized electrical parts. Specialists or other Technicians who work on exposed energized equipment require additional training and experience including:

- ï The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment.
- ï The skills and techniques necessary to determine the nominal voltage of exposed live parts, and
- ï The skills and techniques necessary to determine clearance distances needed to work with voltages to which the qualified person will be exposed.

**Unqualified Workers** – Unqualified workers do not have authorization or specialized training to perform electrical work on exposed energized parts. In most cases, Outsource, LLC Technicians are unqualified electrical workers. Outsource, LLC Specialists and other Technicians who work around electricity are required to be trained in general electrical safety precautions, to be aware of electrical hazards and avoid them.

### **RESPONSIBILITIES**

**Supervisors** – Supervisors have the responsibility to assure Technicians who work on or near electrical equipment have the proper training to perform such work. The supervisor must authorize qualified workers to perform work on exposed energized electrical equipment.

**Qualified Workers** – Only works on exposed energized electrical equipment when properly trained in hazards associated with this type of work and are authorized to do so.

**Unqualified Workers** – Do not work on exposed energized electrical equipment. They refuse any job that requires work on exposed energized electrical equipment.

### **GENERAL REQUIREMENTS**

- ï All energized parts of more than 50 volts must be de-energized and controlled by lockout/tag out.
  - o An exception may be made when de-energizing introduces increased additional hazards such as deactivation of emergency alarm systems in critical situations. In this instance, a qualified worker may perform work on the energized circuit.

ï Portable ladders shall be made only of non-conductive material. **NO METAL LADDERS ARE ALLOWED.**

ï Metal objects and jewelry shall NOT be worn when there is a potential to come in contact with energized parts.

ï Areas of electrical circuitry must have sufficient clearance for safe working conditions. Circuit breaker boxes at OUTSOURCE locations must have at least 3 feet of clearance in front of the working side of the box.

ï Lighting must be sufficient to see clearly all labels and warnings.

ï Any part of electrical equipment that produces arcs, sparks, or flames shall be enclosed or separated from all material with a flashpoint of <100 ° F or <38 ° C (Class I Division I flammables).

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ï Equipment used or mounted in potentially explosive environments must be of the right class and rating for the environment. Electrical equipment for explosive environments is typically identified as “intrinsically safe.” Discuss with your Supervisor and the customer if there may be an explosion hazard.

ï Technicians shall wear non-conductive head protection wherever there is a danger of head injury from electric shock or burns due to contact with exposed energized parts. Situations where electrical hazards may be present include attics, crawlspaces, and working near or around the electrical supply to equipment, especially when overhead.

ï Ropes and hand-lines used near exposed energized parts shall be nonconductive.

### **Circuit Interrupters**

ï All cord and plug connected equipment used outside or in a wet environment shall be grounded and equipped with a GFCI (Ground Fault Circuit Interrupter). For example: hand- held motor-operated tools, appliances used outside, drills, or any other electrical tools.

D Tools and appliances labeled or marked as being protected by a system of double insulation or its equivalent need not be grounded. GFCI protection is still required.

ï GFCIs must be tested by depressing the test-breaker prior to beginning work. Portable cord type GFCIs that do not operate properly shall have the plug cut off and be discarded.

### **Signs and Labels**

ï Technicians must look for the following signs and labels so dangerous situations can be avoided. These signs and labels are required at Outsource, LLC locations to protect unqualified Technicians:

- Entrances to rooms and other guarded locations containing exposed energized parts shall be marked with conspicuous warning signs forbidding unqualified persons to enter. If the power panels or circuits are exposed to vehicular traffic, physical protection of these circuits must be provided.
  
- All voltage panels containing more than 600 volts must be labeled “HIGH VOLTAGE.”

ï Electrical equipment shall have on the machine or individual device, the manufacturers name, trademark or other descriptive marking to identify the organization or company responsible for the product.

### **Electrical Cords**

ï All flexible power cords and extension cords:

- Must be protected from accidental damage from pedestrians, doorways, other pinch points, and rolling equipment.
- Must not be used as a substitute for fixed wiring of a structure, run through walls, ceilings or floors.
- Must be used in continuous lengths without splice or tape repairs.
- Must not be rigged with a gang-box type of plug receptacle.

ï All extension cords shall:

- Be used to provide power on a temporary basis normally not to exceed the time required to perform the task.
- Be visually inspected prior to use. No nicks, scrapes, missing grounding terminals, shall be allowed on the cords. Cut up and discard damaged cords.

ï Multiple outlet power surge protectors are permitted for the protection of electronic

equipment such as in office applications. These types of protectors are **NOT** to be used in field operations. Surge protectors shall also not be used in series (daisy chained) with one plugged into another.

### Overhead Power Lines

ï When work is to be performed near overhead lines, use the following safe work distances:

<b>50 kV or less</b>	<b>10 feet</b>
<b>Over 50 kV</b>	<b>10 feet + 4 inches for every 10 kV over 50 kV</b>

ï Most electrical supply lines that run from the utility pole to a residence or business are less than 50 kV. Be cautious and ask questions if near major supply lines that are part of the power grid or on industrial sites.

ï When these safe work distances cannot be met, arrangements shall be made with the person or organization who operates or controls the electrical circuits to de-energize before work can begin.

ï These safe working distances also apply to vehicular and mechanical equipment that could come into contact with overhead power lines.

### Illumination

ï Outsource, LLC Technicians may NOT:

- o Enter spaces containing energized parts unless illumination is provided that enables Technicians to perform the work safely.
- o Perform tasks near exposed energized parts where there is lack of illumination or an obstruction that hinders observation of work to be performed. Technicians shall not reach blindly into areas that may contain energized parts.

### **SAFE WORK PRACTICES & PROCEDURES**

Electrical accidents can happen suddenly and cause damage and injury instantly – without warning. The following practices and procedures apply whenever working with or around electricity:

ï Inspect your electrical equipment daily and ensure the insulation is intact and in good condition.

ï Before work begins:

- o Inspect job areas for overhead power lines to ensure proper clearance.
- o Remove metal objects or jewelry.
- o Inspect all work areas for proper lighting and illumination.
- o Be sure machine guards are in place.
- o Test and/or inspect all GFCIs and electrical protective devices.
- o Visually review the intended pathway for cable and wiring. Ensure there are no exposed wires, open j-boxes, or improperly terminated wires that could result in electric shock.
- o Be sure to use 3-prong plugs, double-insulated or heavy-duty tools or proper grounding, and GFCIs. Listed or labeled portable tools and appliances, protected by an approved (UL or equivalent) system of double insulation or its equivalent, need not be grounded or earthed. GFCI protection must still be used.
- o Verify plugs have a good tight connection and 3-prong plugs are intact and properly plugged into a 3-prong outlet. NEVER remove the 3rd (grounding) prong to fit into a 2-prong outlet. The grounding path from circuits, equipment and enclosures must be continuous and permanent. Do not cut off earth terminal or ground prongs on tools.



- ï Be careful to ensure that glow rods or other extenders used to feed wire and cable stay within the reviewed intended pathway to avoid electrical hazards that are unseen.
- ï All cord and plug connected equipment used on the job shall be grounded and equipped with a ground fault circuit interrupter (GFCI), e.g. sump pumps, hand-held motor operated tools and electrical tools likely to be used in a wet environment. Do not touch water, ungrounded metal, and bare wires unless known to be de-energized. Avoid working in damp areas if possible. Ensure GFCI's are used!
- ï Use extension cords only when necessary.
- ï Keep electric cable and cords cleaned and free from kinks.
- ï Do not make electrical repairs yourself unless you are "qualified" to do so.

## TOOLS: HAND AND POWER

Using tools is a necessary part of many Outsource, LLC Technician job functions. The safe use of hand and power tools demands that you only use tools that are in good condition, that tools are used for the purpose intended, and the tools are used properly. Some tools also require the use of personal protective equipment (PPE) such as protective eyewear, gloves, and hearing protection

### HAZARDS

- ï Cuts, abrasions, amputations and punctures if tool is designed to cut or move metal or wood
- ï Repetitive motion injuries from using the tool in the same way all day long day after day
- ï Injury from continuous vibration
- ï Eye injuries from flying chips of wood or metal
- ï Broken bones and bruises from tools that slip, fall from height or are thrown
- ï Burns from tools that have hot parts
- ï Electrical shock from ungrounded or un-insulated power tools

### BASIC TOOL SAFETY TIPS

- ï Select appropriate tools for the work operation (e.g., don't use a wrench as a hammer).
- ï Inspect tools when received and before use each day.
- ï Use tools as they were designed. Never bypass or disable guards or safety devices.
- ï When using tools:
  - Keep your wrists straight.
  - Avoid movements that require holding a tool the same way for long periods of time.
  - Use only enough force to control the tool.
  - Use your whole hand to grasp the tool. Avoid using just your thumb and index finger.
  - Rest your hands. Alternate easy and hard jobs, or switch hands as you work.
- ï Store tools properly when not in use.
- ï Do not carry tools in the passenger compartment of your vehicle.
- ï Ensure that defective tools are replaced, repaired or returned for maintenance as required.
- ï Keep close track of tools when working at height. A falling tool can seriously injure a fellow Technician or by-stander.
- ï Never carry sharp or pointed tools in your pockets.
- ï Wear personal protective equipment appropriate for the job.

### SAFETY TIPS FOR COMMON INSTALLATION TOOLS

#### **Diagonal Pliers**

- ï Inspect
  - Cutting edge for deep nicks
  - Space between cutters
  - Alignment of jaws
- ï Handles should be straight, unbroken and move freely.
- ï Cut the wire or cable in the direction away from the body.

#### **Flameless Soldering Iron**

The flameless soldering iron uses pressurized, flammable butane gas to operate. Comply with the manufacturer's instructions when using the soldering iron. Use the following guidelines:

- ï Do not leave the flameless soldering iron in direct sunlight.
- ï Do not store the iron where the temperature is likely to exceed 120 degrees F (49°C).
- ï Point the iron away from you when lighting the catalytic unit.

- ï Do not use the iron near flammable or combustible materials including paper, cloth, wood shavings, solvents or gases.

- ï Be sure the iron is turned off and is cold before examining or replacing the soldering tip.

- ï Refer to the manufacturer's instructions when filling, lighting, adjusting and performing maintenance on the soldering iron.

- ï Use the lowest flame setting possible that will melt the solder and achieve desired results.

### **Hammers**

- ï Inspect:

- Handle for cracks, splinters or tape
- Head for fractured or mushroomed edge
- Assure the head is securely fastened to the handle

- ï Grip the handle tightly.

- ï Strike the object squarely.

- ï Keep your free hand away from the striking operation.

### **Hand Drills**

Shaft should rotate freely, be properly lubricated and show no excessive wear.

- ï Drill bits should be sharp and held tightly in the drill chuck.

- ï Keep fingers away from the drill point when in use.

- ï Place one hand on grip and apply even pressure.

- ï Remove bits from chuck and properly store when not in use.

- ï Always wear eye protection when using.

### **Masonry Drill**

- ï Inspect:

- Drill holder for mushrooming or signs of cracking
- Drill for sharp cutting edges and straightness

- ï Apply light hammer blows and turn the drill slightly between blows.

- ï Keep fingers away from the drill point when in use. Place one hand on grip and apply even pressure. Remove bits from chuck and store properly when not in use.

- ï Always use eye protection.

### **Utility Knives**

- ï Inspect:

- Blades for sharpness, burrs, nicks and deformity
- Handle for tightness and wear

- ï Wear appropriate gloves.

- ï Keep free hand away from direction in which force is applied.

- ï Do not use on items between knees or legs.

### **Long Nose Pliers**

- ï Inspect:

- Jaws for straightness
- Broken nose ends
- Alignment and gripping serrations

- ï Handle should be straight, unbroken and move freely.

- ï Direction of pull should be away from the body, especially the face.

- ï Head level should be above the pulling effort.

### **Saws**

- ï Inspect

- Blade for sharpness and missing teeth
- Handle for cracks

- Assure the blade is securely fastened to the handle
- ï Maintain firm footing and apply pressure on the forward stroke when using.
  
- ï Keep free hand away from the saw teeth.
- ï Protect the saw teeth when stored.

### **Scissors and Shears**

- ï Inspect:
  - Blades for excessive side play
  - Handles for ease of operation, cracks or fractures
- ï Cut at right angles, keeping freehand away from cutting edge.
- ï Protect cutting edges when stored.

### **Screwdrivers**

- ï Inspect for:
  - Broken, split or rough handle
  - Bent shank
  - Broken, chipped or bent blade, rounded edges or comers
- ï Keep the shank in line with the screw.
- ï Keep the blade squarely against the bottom of the screw slot.
- ï Keep the free hand away from the tip of the blade when exerting pressure.

### **Wire Installation Tools**

- ï Wire installation tools, such as snakes, glow rods, gopher poles, etc. must be used with care to prevent breakage or the dislodging of existing utility services.
- ï Non-conductive types should be used whenever feasible.
- ï Check the path for electrical or other hazards before placing wire.
- ï Never use excessive force when pulling wires within walls.

### **Wrenches**

- ï Inspect:
  - For wear and burrs and moving parts for ease of operation
  - Grips for straightness and burrs
- ï Position adjustable wrench tightly on the nut or head of fastener so the pulling force is applied to the stationary object.
- ï When possible use a pulling motion, not a pushing motion, when using a wrench.

### **Powder-Actuated and Explosive-Powered Hand Tools**

Powder-actuated, or explosive-powered, hand tools are designed to fire nails or fastening devices into material not easily penetrated such as concrete, steel or masonry. Only qualified Technicians who have been trained can use a powder-actuated tool.

- ï Powder-actuated and explosive-powered tools must be tested and inspected each day prior to use to assure safety devices and the tool itself is in good working order. Remove defective tools from service immediately.
- ï Never point the device at anyone.
- ï Never load the device until it is ready to be used for fastening.
- ï Always wear proper personal protective equipment including eye protection and hearing protection.
- ï Do not use where flammable or combustible atmospheres may be present.
- ï When operating a powder-actuated tool, press the tool firmly against the surface into which the fastening device is to be driven. This will prevent the fastener from glancing off the surface.
- ï Do not drive the fastener into easily penetrated material unless that material is backed by an object that will prevent the fastener from passing completely through.

## Portable Power Tools

OUTSOURCE Technicians commonly use portable power tools, such as drills. These tools are powerful and sometimes sharp instruments that require some caution and common sense. In addition, basic electrical safety precautions need to be taken for all power tools. **Make sure you review the manufacturer's instructions.**

In addition to inspecting tools when received and prior to each use, corded power tools must be tested after repair or maintenance overhaul as follows using an ohmmeter or buzzer:

- ï Switch open –
  - Test ground continuity between the case of the tool and the ground prong.
  - Test between each connector prong and the case to ensure that no continuity exists.
- ï Switch closed –
  - Test ground continuity between the case of the tool and the ground prong.
  - Test between each connector prong and the case to ensure that no continuity exists.
  - Check double-insulated tools for cracks in the housing and damaged cords.

## Grounding Power Tools

Corded portable electrical equipment that is not double insulated must be grounded. A three conductor cord and a plug with a grounding prong must be used with all power tools that are not double-insulated to protect the user from shock and possible death by providing a low-resistance path to ground from the case of the tool.

Ground a three-conductor tool in a non-grounded outlet as follows:

- ï Test the outlet box for ground.
- ï Insert an approved grounding adapter in the two-conductor receptacle and ground to the box using the cover plate screw.
- ï If the outlet box is not grounded, connect a grounding cord from a ground source such as a radiator, metal water pipe or metal conduit to the grounded terminal of the adapter.
- ï If the tool cannot be grounded, use a double insulated tool.

## Repairing Power Tools

- ï Disconnect power by pulling the plug out of the outlet.
- ï Only use a tool with a good plug.
- ï If the ground prong on an electrical plug is missing or cut off, tag as defective and have the tool repaired.
- ï Remove or disconnect the battery pack when repairing a battery-powered tool.
- ï Major repairs must be completed only by qualified personnel or by the tool manufacturer.

## Ground Fault Circuit Interrupters (GFCIs)

The use of ground fault circuit interrupters (GFCIs) is required when using power provided at all construction job sites and in wet or damp environments.

Use the following procedures to test GFCIs prior to each use:

- ï Push black test button. Red reset button should pop out from inner surface.
- ï During test, power should be off at all outlets protected by GFCI. Verify by plugging test lamp, power tool, etc. into outlets.
- ï If reset button does not pop out or test lamp, power tool, etc. remains on, do not use outlets on the circuit. Turn the equipment in to your supervisor. Call a qualified electrician.
- ï If the GFCI tests okay, restore power by pushing the reset button.
- ï If the GFCI trips by itself at any time, reset and perform the tests procedures.

## Extension Cords

- ï Use only extension cords that have the proper amperage rating for the tool.
- ï All extension cords must be equipped with a grounded plug.
- ï Inspect insulation for cuts, burns, worn places, tears or frays.

- ï Bare wire should not show through the inner conductor insulation.
- ï Use of tape to patch worn extension cords is not permitted.

### **Test Meters**

Meters should be inspected before each use.

- ï Inspect for loose connections, frayed insulation, damaged probes and tight connections.
- ï Inspect for steady reading while moving test leads.

### **Power Machines**

ï Obtain from the manufacturer, supplier or other specialist providers information on the hazards of new plant or equipment and the risk controls that have been provided and/or recommended to eliminate or reduce these hazards, e.g. necessary guards, safe-operating procedures.

ï Environmental factors should be considered, e.g. noise, dust, spillage, heat/cold, waste disposal, energy usage.

ï Plant and equipment should be installed in a clear, uncluttered, working area with easy access.

ï SWPs should be developed to ensure the H&S of employees and contractors.

Consideration should be given to:

- Introduction of new hazards, e.g. manual handling; noise, fumes, dust; lock out/tag out requirements
- Maintenance and repair schedules
- Emergency procedures, eg. first aid and evacuation
- Personal protective equipment (PPE)

ï Inspections must be carried out to ensure risks are monitored during installation, erection, and commissioning of new plant, equipment and processes, and during the manufacture and installation of new products.

ï Steps must be taken to control any risks associated with installation, commissioning, and use of the new plant, equipment, product or processes.

ï Technicians required to manage or operate new plant, equipment or processes, or involved in the manufacture and installation of new products, must be trained and provided with information and instruction on the following items:

- The nature of the hazards and systems of work associated with the plant, equipment, processes and products
- The processes of hazard identification, risk assessment, risk control and review
- Engineering controls
- Safe working procedures (SWPs)
- Use of PPE.

## LADDERS – PORTABLE

This document contains requirements necessary to ensure your safety when working with portable ladders. Portable ladders covered by this policy include step, extension, combination, and single piece ladders. This document includes: ladder specification requirements, hazards to be aware of, pre-use inspections to be completed, proper ladder maintenance procedures, safe use and storage provisions, and Technician training requirements.

Portable ladders are a very useful tool in completing overhead work. Although they are used everyday, ladders can be dangerous. Falls from ladders are one of the highest causes of workplace injury. You are required to follow these ladder safety policies when using a portable ladder.

### **HAZARDS**

- ï Using a ladder with a duty rating too low for the weight load necessary for the job.
- ï Using a ladder with missing or broken parts.
- ï **Using a ladder that is too short for the job**, causing you to stand too high on the ladder.
- ï Working near electrical wires.
- ï Reaching too far from the ladder.
- ï Setting the ladder in front of swinging or overhead doors or at the wrong angle.
- ï Dropping objects from the ladder, possibly striking bystanders or stationary objects.
- ï Not carrying a ladder properly, possibly injuring the back or possibly striking bystanders or stationary objects.
- ï Setting up ladders in high traffic areas where there are forklifts, conveyors, or moving machinery.

### **LADDER SPECIFICATIONS**

#### **Ladder Design**

Only ladders constructed of fiberglass or wood are permitted to be used by OUTSOURCE Technicians.

**Metal ladders are NOT allowed.**

#### **Weight Ratings**

All ladders are required to be labeled with their maximum duty rating or weight limit. If your ladder is not labeled with a duty rating or you and all your equipment exceed the ladder's rating, do not use the ladder.

Portable ladders may be divided into different classes, with each class having a maximum duty rating. Refer to local regulatory guidelines for ladder rating.

#### **Ladder Height Requirements**

The higher you work on a ladder, the greater your risk of an injury due to a fall. Adhere to the following ladder height requirements when selecting the proper ladder for your job. The following ladders are not permitted for use:

- ï Single ladders greater than 30 feet (9 meters)
- ï Step ladders greater than 20 feet (6 meters)
- ï Extension ladders greater than 60 feet (18 meters).

### **INSPECTION OF LADDER**

You must inspect your ladders when received, prior to use each day, annually, and if the ladder is ever dropped. You must document the annual inspections using the OUTSOURCE Ladder Safety Inspection Checklist. Completed checklists must be turned in to your supervisor. When inspecting ladders each day, you should look for the following:

- ï Side rails – for cracks, splits, splinters, decay, protruding or loose nails or rivets
- ï Rungs – for cracks, splits, splinters, decay, looseness or wear
- ï Hardware – for broken, worn or defective spurs, rubber pads, guide irons, and pulleys
- ï Rope (extension ladders) – for broken fibers, cuts, extreme softness, decay, or burns.

### **LADDER MAINTENANCE**

Your ladders must be maintained in proper and safe working condition. Some maintenance can be done by Technicians, which may include:

- ï Tightening rivets
- ï Replacing the rope
- ï Oiling the locks, springs, pulleys, or step ladder spreader support bars
- ï Rotating or replacing the spurs and replacing rubber feet
- ï Spraying side rails of fiberglass ladder with protective coating.

NOTE: Remove ladder from service and notify your manager if maintenance cannot be completed.

### **REMOVING LADDERS FROM SERVICE**

- ï Remove ladders that are defective or damaged from service and tag with the words “Do Not Use” or similar language.
- ï Ladder must be repaired by the ladder supplier, manufacturer, or a reputable repair shop. Field or “in-house” repairs are not allowed.
- ï Destroy and discard ladders that cannot be repaired, so they cannot be reused.

### **REMOVING A LADDER FROM A VEHICLE**

Before you remove a ladder from your vehicle, perform the following operations:

- ï Survey the work area for hazards that may interfere with the safe transportation of the ladder, such as building or equipment obstructions, holes, ice, bushes, clotheslines, overhead wires, fences, pets, uneven terrain, overhead wires, etc.

To safely remove the ladder from your vehicle:

- ï Lower base of ladder onto the ground.
- ï Assume a position at the side facing the base, bend your knees slightly and fit the side rail snugly against your shoulder.
- ï Lift the ladder by straightening your knees and re-adjust ladder until the exact point of balance is obtained.

## **USING THE LADDER**

The following are the rules you need to comply with:

- ï Use only OUTSOURCE owned ladders. Using customers' ladders is NOT allowed.
- ï Never climb a ladder if you are prone to dizziness or fainting, or taking medication that could cause dizziness.
- ï Never lean a stepladder against the wall and climb on it without the spreader support bars locked into place.

To prevent injuries and damage, ladders must be handled properly using the following methods:

### **Carrying a Ladder**

The ladder should be carried on the shoulder in a balanced position with the base downward and to the front. Follow these suggestions:

- ï Do not put your arms between the side rails.
- ï Carry the ladder on your shoulder with rubber feet down and forward.
- ï Have someone direct traffic and assist if conditions warrant, such as carrying around difficult corners and obstructions.

### **Setting Up a Portable Ladder**

- ï Do not place ladder in front of a door that may be opened unless locked, watched, coned/warning taped, or barricaded.
- ï Examine surface to ensure it is even. Ensure that all feet are on the same level.
- ï When using a stepladder, stand the ladder upright and open the spreader support bars. Lock support bars into place.
- ï Position ladder so the elevated work task can be performed with your body facing into the ladder.

### **Proper Footing**

- ï Ensure ladder feet are on the same level.
- ï Use a block, wedge or ladder foot when on uneven ground.
- ï Place a piece of plywood under the legs if used on soft uneven surfaces, such as outdoors in damp grassy areas.
- ï Lash or block the ladder when on wet or oily pavement, smooth floors, icy or metal surfaces or obtain assistance from another Technician to hold the ladder.
- ï Wear proper footwear with non-skid soles and at least a ½ inch heel.

### **Extending a Ladder (Extension Ladders)**

- ï Place the ladder upright with the fixed section close to and facing the wall.
- ï Face the ladder's fly (top) section.
- ï Check for clear access at ladder top and bottom.
- ï Stay a minimum of 10 feet below exposed electrical wires, energized crane rails, etc.
- ï Place one foot at the outside of the base on fixed section to steady the ladder, but not in a position where it could be struck by the fly section if it should drop unexpectedly.
- ï Bring the rope around the side rail and use one hand to pull the rope and the other to lift the fly section by one of the rungs.
- ï Extend the fly section one or two rungs at a time and engage the locks after each pull.
- ï Never place a free hand on a lower ladder rung while using only the rope to raise the fly section, this could result in serious injury if the fly section falls.
- ï Steady the ladder by holding the side rail of the fixed section if the ladder needs to be raised beyond the reach of the fly hand.
- ï If ladder is being used to gain access to a roof, extend the ladder at least three rungs above point of support.
- ï Place the ladder at the proper angle (4:1 ratio and secure the rope if possible after it has been extended).

Use the following method to ensure that the proper angle is obtained:

**Place toes against the base of the ladder.**

**Fully extend arms toward the side rail and parallel to the ground.**

**Test for proper positioning by grasping the side rails with the palms of your hands.**

### **Securing the Top of a Ladder (Extension, Combination, or Single Ladders)**

Your ladder must be secured at the top with a hand line or ladder strap if:

- ï You are reaching or raising heavy items from the ground while aloft.
- ï Your ladder is resting near an edge of a beam.
- ï Your ladder needs to be stabilized at the top.

#### **ï Hand line:**

- Make a slip noose about 15 feet from the free end of the rope so the noose will tighten when the free end is pulled.
- Place the slip noose over the top of one side rail. Pass the free end of the rope down behind the top rung, then toward the front of the ladder around the rail and then to a tie-off point.
  
- Make two complete wraps of the tie off point, then pass the rope twice around the opposite rail below the first rung and then up behind the rung. Reverse the direction of wrapping and make two half hitches on the rail so the ladder is lashed tightly to the tie-off point.

#### **ï Ladder strap:**

- Attach the strap to the side rail below the top rung.
- Wrap the opposite end of the strap around the tie-off point and attach it to the opposite rail just below the top rung.
- Reach behind the tie-off and grasp the free end of the strap and pull snug.
- Lean the body into the ladder and tie-off while tightening.

#### **ï Metal Poles:**

Special attachments can be used to secure a ladder to a metal pole. These attachments may be available from your ladder vendor.

### **Ascending and Descending (All Portable Ladders)**

- ï Only one person is permitted on the ladder at a time.
- ï Face the ladder at all times during ascending and descending.
- ï Technicians must use a three-point contact method when ascending or descending a ladder by keeping one hand and both feet in contact with the ladder at all times, or by keeping both hands and one foot in contact with the ladder at all times. This method enables the climber to maintain body control during ascent and descent.

### **Determining the Highest Rung or Step to Use**

- ï 10<sup>th</sup> to 12<sup>th</sup> foot ladders or single ladders – 3<sup>rd</sup> rung from the top
- ï Extension or combination ladders – 4<sup>th</sup> rung from the top
- ï Stepladders – 3<sup>rd</sup> from the top
  - Never work standing on the back braces of a step ladder opposite the steps or straddling the top of the ladder.

### **Reaching**

Never lean to the side so the shoulder is more than 12 inches beyond the side rail. Keep your belt buckle between the side rails.



### **STORAGE OF LADDERS**

Properly store your ladder after the work operation is complete. Do the following:

- ï Stepladders – Break the lock of the spreader support bars and close the legs of the ladder. Be careful not to pinch your hand.
- ï Extension Ladders – Lower the ladder in reverse order of extending, one or two rungs at a time. Never let the ladder rope slip through your hands.
- ï Ensure the locking clamps of the ladder rack are in the fully opened position.
- ï Lay ladder against the fixed upright of the ladder rack assembly.
- ï Raise base of the ladder onto the rack and secure with the locking clamps.
- ï Ensure that the ladder is not protruding too far to the front or rear of the vehicle.
- ï Lock the ladder in place on the roof rack.

### **TRAINING REQUIREMENTS**

All Technicians must complete this ladder safety training course prior to performing work that requires the use of a ladder.

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## FIRE PREVENTION

Fire prevention is important for the safety of all Technicians and to ensure business continuity. Management and Technicians must take steps to minimize the risk of fire. These steps include inspections, proper housekeeping, and ensuring that electrical equipment is in good working order. Your Local Emergency Response Plan contains specific information on how to prepare for and respond to fire emergencies at your location.

### THE FIRE TRIANGLE

Three things must be present at the same time in order to produce a fire:

1. **Fuel** – Some sort of fuel or combustible material
2. **Oxygen** – Enough oxygen to sustain combustion
3. **Heat/Ignition source** – Enough heat to raise the material to its ignition temperature

The presence of oxygen, fuel, and heat/ignition source result in a chemical or exothermic reaction that is fire. Oxygen is normally present in the air. Sources of fuel and heat/ignition include:

- ï Fuel Sources – paper, wood, gasoline, paint thinner and other flammable materials.
- ï Heat or ignition sources – friction, electricity, sparks and open flames.

### FIRE PREVENTION

The following instructions must be followed to prevent fires in the workplace.

#### Housekeeping

- ï Dispose of waste promptly and properly.
- ï Keep work areas free of dust, lint, scrap paper and other combustible materials.
- ï Keep combustible materials away from lights, machinery, and electrical sources.
- ï Smoke only in designated areas.
- ï Make sure smoking materials and matches are put out and placed in proper containers.

#### Electrical Equipment

Electrical equipment failures or misuse of electrical equipment is the number one cause of workplace fires. Some preventative measures are:

- ï Maintain clearance and accessibility to all electrical panels.
- ï Replace cords and wires that are frayed or have worn insulation.
- ï Don't overload circuits, motors, fuses or outlets.
- ï Make sure you have good ground connections.
- ï Obtain approval for use of space heaters. If use of space heaters is approved, make sure cords are properly placed and safety shut-offs are working.

#### Handling Flammable Substances

- ï Identify flammable substances by checking chemical hazard information that can be found on Material Safety Data Sheets (MSDS) and labels.
- ï Store flammables in approved containers.
- ï Never store combustible materials with oxidizers (reactive chemicals such as acids).
  
- ï Clean up spills promptly and properly. Clean up should only be performed by trained individuals using personal protective equipment (PPE).
- ï Dispose of clean-up materials (rags, sand, etc.) promptly and in accordance with proper disposal methods.
- ï Ground and bond containers when transferring flammable materials to eliminate sparks.
- ï Use only approved tools and equipment when working around flammable materials.
- ï Don't use flammables around open flames.
- ï Use flammables in well-ventilated areas.

## **IDENTIFYING FIRE HAZARDS**

Inspections and Technician reports are necessary to identify and control fire hazards.

### **Inspections**

Management must ensure that periodic inspections are performed to identify and correct fire hazards. This includes inspecting electrical systems, housekeeping, and storage.

### **Reporting Fire Hazards**

Fire hazards identified by Technicians must be either corrected immediately or reported to management. Correct hazards such as obstructions that can be moved from aisles or exit routes, or electrical outlets that are overloaded. Report a hazard to management if it has been repeatedly corrected but continues to recur or the hazard requires management intervention to control it.

Hazards to consider include:

- ï Obstructed aisles, walkways, exits, and electrical panels
- ï Obstructed fire equipment (fire extinguishers, fire alarms, sprinkler heads, smoke alarms, etc.)
- ï Electrical hazards and cords
- ï Improper storage
- ï Clutter
- ï Unsafe appliances.



## FALL PROTECTION

Falls are a leading cause of fatalities in industry. They account for many work related fatalities each year and even more injuries. In recognition of these facts, many countries have developed detailed standards designed to prevent fall related accidents.

Under the standard, OUTSOURCE can select protection measures that are compatible with the work you will be performing. Protection can be provided through the use of guardrail systems, safety net systems, personal fall arrest systems, positioning systems, and warning line systems. Temporary guardrail, safety net, and warning line systems are often used on construction sites but these options may not be available on OUTSOURCE worksites. In some cases you will be required to use a personal fall arrest or fall prevention system.

If a fall arrest system (PPE) is needed, you must be trained on how to use, wear, inspect and maintain fall arrest equipment before using it.

You may encounter the following situations that require the use of fall protection equipment:

- ï Work on horizontal or vertical walking/working surfaces with an unprotected side or edge which is 6 feet or more above a lower level
- ï Work within 6 feet of the edge on roofs, parapets, or unprotected catwalks
- ï Working on personnel lifts
- ï In a bucket truck
- ï Work on customer premises where the customer requires the use of fall protection equipment (e.g. to install cameras on roof tops)
- ï Work on towers (e.g. water towers) with fixed ladders

### HAZARDS

- ï Falls from elevation due to lack of fall protection
- ï Not using appropriate protection equipment for the job
- ï Tying off to structures that can not support a fall
- ï Lanyards that are too long resulting in swing into an obstruction during a fall

### PLANNING

Proper planning for jobs that will require the use of fall protection is important. Failure to take these requirements into account can result in extra costs and delays in completing your job. The following should be done:

- ï When negotiating service or installation agreements involving rooftop or tower work, perform an assessment to determine if fall protection might be required. When affirmative determinations are made, the customer should be required to identify appropriate anchorage points. If they are unwilling or are not aware of such information, a qualified professional will need to make the determination.
- ï Once a sales or service contract is signed, relevant safety and health information should be passed on to the service or install department so they can properly prepare their respective Technicians for the job.
- ï Installation and/or service supervisors will need to ensure you are properly trained and equipped.

### PERSONAL FALL ARREST SYSTEM

A personal fall arrest system is designed to arrest a fall from an elevated level. It consists of the following:

- ï Full body harness
- ï Connectors and related equipment
- ï Anchorage points

A fall protection system may also include a lanyard, deceleration device, lifeline or combination of these.

## **FALL ARREST SYSTEM COMPONENTS**

### **Full body harness**

A full body harness is composed of straps that can be secured around the Technician in a manner that will distribute the fall arrest forces over at least the thigh, pelvis, waist, chest and shoulders. The harness must include a means for attaching it to other components of a personal fall protection system.

### **Positioning device (fall prevention)**

A harness used with a short lanyard, such as a 2 foot lanyard, that prevents the Technician from extending over an edge and falling.

### **Self-retracting lanyard (SRL)**

A self-retracting lanyard pays out a strap or cable that is attached to a full body harness. It works on a principle similar to a seat belt. It will lock if there is a sudden motion. If the anchor point for an SRL is near an unprotected edge, care must be taken to limit the amount of travel along the edge and lanyard paid out. Otherwise a fall could result in dangerous pendulum swing into an obstruction or lower landing.

### **Shock absorbing lanyard**

A shock-absorbing lanyard has a maximum fall distance of 6 feet, a maximum deceleration distance of 3½ feet and is designed to absorb up to 80% of the arresting force.

### **Proper anchorage point**

Anchorage is defined as a secure point that a lifeline, lanyard or deceleration device can be attached to and is capable of supporting 5000 pounds per person attached. If there is any doubt about the strength of the attachment point – **DO NOT ATTACH**. Search for an alternative anchor point.

## **USING A FALL ARREST SYSTEM**

### **Bucket trucks or personnel lifts**

If you will be working in a bucket truck or on a personnel lift, use the following:

- ï Full body harness with fall arrest attachment (back D-ring) and shock absorbing lanyard

### **Rooftop work**

If you will be working on a rooftop within 6 feet of an unprotected edge, appropriate equipment includes:

- ï Full body harness with fall arrest attachment (D-ring)
- ï Shock absorbing lanyard
- ï Temporary or permanent anchor point

**Note:** Fall arrest systems are not required for work on portable ladders unless required by the customer.

### **Towers with fixed ladders**

If you will be climbing or working on towers appropriate equipment shall include:

- ï Full body harness equipped with four (4) D rings that are located: one at each hip of the wearer, one at chest level and one at the back
- ï A two-inch throated carabiner for connecting to a fall block device on the flexible cable or trolley, if so equipped, or fixed rail of ladder
- ï A positioning lanyard rated at 5000 pounds with self-locking snap hooks.

## **INSPECTING A FALL ARREST SYSTEM**

You must inspect fall arrest systems prior to each use as follows:

- ï Ensure that material is free of frays, burns and discoloration
- ï Check for:
  - Cuts, tears and abrasions
  - Mildew, wear and damage
  - Loose or damaged mountings
  - Non-functioning parts

- Distorted hooks or faulty snap hooks
- Cracked, broken or deformed D-rings and snap hooks
- Other damage or deterioration

ï Remove equipment from service immediately and destroy or return to manufacturer if defects are found.

### **WEARING A FALL ARREST SYSTEM**

Read and understand all labels and instructions attached to and packed with the fall arrest system or harness.

#### **Straightening the harness**

Pick up your harness by the fall arrest attachment and shake it to allow the straps to fall free of each other. Make sure the leg strap buckles are unbuckled at this time.

Slide the shoulder straps over your arms, as you would a shirt, and into position on the shoulder with the fall arrest attachment in the upper middle portion of your back. Check to be sure that the straps are not twisted. Attach the chest strap loosely at this time to prevent the harness from slipping off your shoulder.

#### **Leg strap attachment**

The long portion of the leg straps will be hanging down behind you. Pull this portion between the legs, adjust to length and connect to the connecting buckle of the other end of the leg strap.

Again, be sure that the leg straps are not twisted. Secure the excess strap with the elastic band. Slide the plastic keeper against the buckle after adjustment.

#### **Adjustments**

Use adjustment points on leg straps and shoulder straps to properly fit your harness. Upon completion of adjustments, ensure the fall arrest attachment is in the upper, middle portion of your back. The leg strap buckles should lie on your sides just below the hips. If the harness has work positioning D-rings, it should fit so there is one D-ring on each hip. Retrieval D-rings should be adjusted so as to be between the neck and the shoulders. The chest strap must be located across the upper chest area and be properly attached and adjusted so that the shoulder straps are properly maintained on the shoulder. All straps should be adjusted so they are snug and comfortable but not loose.

#### **Additional Information**

Ensure that the following guidelines are followed:

- ï Persons with muscular, skeletal or other physical disorders should consult a physician before using a harness (Fitness for Duty exam).
- ï Connect end of shock absorbing lanyard with rip out area only to the D-ring in middle of the back of the full body harness.
- ï Never alter equipment.
- ï Never hook two lanyards together.
- ï Do not attach tools to harness.
- ï Whenever possible, position your body directly under the anchorage point to reduce chances of a swing fall.
- ï If using overhead anchorage, place anchor as high as possible to reduce fall distance.

### **MAINTAINING A FALL ARREST SYSTEM**

Your fall arrest systems must be maintained properly. Do the following:

- ï Wash the equipment with warm water using a mild detergent; rinse thoroughly and dry at room temperature.
- ï Store in a clean area away from direct sunlight.
- ï Never alter equipment.
- ï Never tie knots in the lanyard; this reduces its strength by 50%.



• Immediately remove equipment that has been exposed to a fall from service and have it inspected, repaired or destroyed by the manufacturer.

**Equipment**

It is the responsibility of Outsource, LLC, as the employer, to provide Technicians with the appropriate fall protection equipment.



## LOCKOUT / TAGOUT

Lockout/Tagout is a means of protecting Technicians from the unexpected start-up of equipment or unexpected release of energy. Lockout/Tagout is sometimes required during installation, servicing, or maintenance of machines and equipment and may be necessary when working near equipment. Technicians are required to follow Lockout/Tagout procedures before performing work in situations where the work could result in exposure to hazardous energy.

Lockout/Tagout applies to machines or equipment both at company facilities and at customer locations. It also applies to contractors working at OUTSOURCE facilities. Lockout is a more reliable means of de-energizing equipment than Tagout and is the preferred method of controlling energy. The use of Lockout devices provides a more secure and effective means of protecting personnel.

Tags can be used when use of locks is not feasible.

### HAZARDS WHERE LOCKOUT/TAGOUT APPLIES

Lockout/Tagout is applicable in the following situations:

- ï Power overhead or swinging doors when a ladder is used in the path of door travel
- ï Installing duct detectors in ventilation mechanical areas
- ï Electrical installations, especially above 50 volts, such as swapping out hardwired fire panels
- ï Sprinkler or riser valves during fire system installations
- ï Contractor or OUTSOURCE maintenance on building chillers, emergency generators, and power or battery rooms
- ï Machinery or equipment on customer premises that is in the work area and may be dangerous during an installation or service job; examples are robotics, rotating machinery, conveyors, and pressure lines.

### DEFINITIONS

**Affected Technician** – An Technician who normally operates or uses a machine or equipment that is locked out or tagged out

**Authorized Technician** – A Technician who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment

**Energy source** – Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy

**Energy isolating device** – A mechanical device that physically prevents the transmission or release of energy (e.g. manually operated circuit breaker, disconnect switch, a line valve, etc.)

**Lockout device** – A device that utilizes a positive means such as a lock, (either key or combination type) to hold an energy isolating device in a safe position and prevent the energizing of the machine or equipment

**Tagout device** – A prominent warning device such as a tag and means of attachment that can be securely fastened to an energy-isolating device. The tag is used to indicate that the energy isolating device and associated machine or equipment being controlled, cannot be operated until the tag is removed.

### CORD AND PLUG EQUIPMENT

Many machines or pieces of equipment use a cord and plug to supply energy. If unplugging a cord can control the energy of a device, and that cord is in the Technicians view while working, then Lockout/Tagout is not required. If the equipment is “hard-wired” or is supplied by other energy then it must be controlled, then the device **must** be either locked or tagged out before installation, service, or maintenance work can be done.

### USE ON CUSTOMER PREMISES

Determine if the customer has a Lockout/Tagout program if:

- ï Work will be performed on or near a machine or equipment, and
- ï The machine or equipment could be hazardous if it is energized or stored energy is released.

#### **If the customer has a program:**

- ï You may be required to follow the customer's Lockout program and procedures. The customer may use a multi-lock hasp or allow you to use your lock by itself to Lockout/Tagout the energy source. If a multi-lock is used, place your lock on the hasp along with the customer's lock. Keep your key. Locks must not be removed until the work is complete, and it is safe to do so.

#### **If the customer does not have a program:**

- ï Follow the OUTSOURCE Lockout/Tagout Procedures below.

### OUTSOURCE Lockout/Tagout Procedures

If it is not possible to Lockout or Tagout energy sources, contact your supervisor.

#### **General Lockout/Tagout Procedure**

1. **Identify energy** – Identify all sources of energy and associated isolating devices including switches, valves, and circuit breakers. Note that there may be more than one source of energy involved. If there are multiple energy sources, an Equipment Specific Lockout Procedure should be available.
2. **Shut down** – Shut down using established procedures for the particular machine or piece of equipment.
3. **Notify** – Notify all *affected* persons when Lockout/Tagout devices are applied.
4. **Dissipate/control energy** – Dissipate or restrain stored energy by blocking, bleeding or grounding, or other means as necessary. Stored energy can be found in springs, capacitors, hydraulics, steam or water pressure systems, etc.
5. **Lock** – Affix Lockout/Tagout devices to all energy isolating devices. When using locks, use tags along with the lock. Write your name and "OUTSOURCE" on the lock and tag.
  - ï Tags are essentially warning devices and do not provide the physical restraint provided by a lock. Therefore, locks are the method of choice.
  - ï If tags alone are used they must be distinctive and easily recognized. An *authorized Technician* must place the tags on the energy isolating device(s) using a nylon cable tie.
  - ï Equipment locked and/or tagged must not be operated by anyone other than the person who applied the lock and/or tag.
  - ï Locks used for Lockout/Tagout protection must be marked with authorized employee's name and not used for any other purpose.
6. **Try to operate** – After ensuring no Technicians are exposed try to operate the machine or equipment to make sure the energy has indeed been isolated, to prevent the unexpected operation of the machine.
7. **Work** – Perform servicing or maintenance on the machine or equipment or complete work near the machine.
8. **Check** – Before removing Lockout/Tagout devices check to ensure:
  - ï Tools have been removed
  - ï All guards removed in order to perform service have been replaced.



The equipment is operationally intact and Personnel are safely positioned for the removal of the Lockout/Tagout devices.

9. **Notify** all affected personnel when Lockout/Tagout devices are removed.
10. **Inspect** – Before restoring power to the machine or equipment, make a final inspection to ensure all tools and nonessential items have been removed, the equipment is operationally intact, and personnel are safely positioned.
11. **Restore** – Restore power to machine or equipment.

I hereby certify that I have read the Outsource Safety Orientation in its entirety.

Sign \_\_\_\_\_

Date \_\_\_\_\_