

Chapter 9 WORKSTATION OPERATION PROCEDURAL GUIDES

Power tools and equipment are a necessary part of manufacturing and installation at Sign Designs. Each piece of equipment has its own unique risks during operation. It is our goal to mitigate these risks.

Training - Sign Designs shall permit only those employees qualified by training or experience to operate equipment and machinery. A responsible person shall train employees on each piece of equipment and tools. The trained employee's name will be posted on each piece of equipment as an authorized user. If an employee's name does not appear on the authorized list of a piece of equipment, then that employee is prohibited from operating the machinery, whether trained or not.

Condition of Tools - All hand and power tools and similar equipment, whether furnished by the employer or the employee, shall be maintained in a safe condition. Any equipment that is not in proper operating condition shall be removed from service immediately. Defective tools and equipment shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from its place of operation.

Lockout/Tagout – Proper lockout/tagout procedures must be followed when maintaining any tools or equipment. This applies to changing of blade, bits, wheels, etc., as well as maintenance of the equipment.

Guarding - When power operated tools are designed to accommodate guards, they shall be equipped with such guards when in use. Belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating or moving parts of equipment shall be guarded if such parts are exposed to contact by employees or otherwise create a hazard.

Personal Protective Equipment - Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dusts, fumes, mists, vapors, or gases shall be provided with the particular personal protective equipment necessary to protect them from the hazard.

Switches - All hand-held powered platen sanders, grinders with wheels 2-inch diameter or less, routers, planers, laminate trimmers, nibblers, shears, scroll saws, and jigsaws with blade shanks one-fourth of an inch wide or less may be equipped with only a positive "on-off" control.

All hand-held powered drills, tappers, fastener drivers, horizontal, vertical, and angle grinders with wheels greater than 2 inches in diameter, disc sanders, belt sanders, reciprocating saws, saber saws, and other similar operating powered tools shall be equipped with a momentary contact "on-off" control and may have a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on.

All other hand-held powered tools, such as circular saws, chain saws, and percussion tools without positive accessory holding means, shall be equipped with a constant pressure switch that will shut off the power when the pressure is released.

Following is a list of equipment used at Sign Designs:

WORKSTATION / OPERATION PROCEDURAL GUIDE
BUILDING, PREMISES & STORAGE DEPARTMENT

WORKSTATION: BUILDINGS, PREMISES & STORAGE DEPARTMENT

DESCRIPTION: General premises and place of working operation

****See attached "Potential Hazards Inspection List"

WORKSTATION / OPERATION PROCEDURAL GUIDE
SHEET METAL / WOOD DEPARTMENT

WORKSTATION: POWER BREAK

DESCRIPTION: Hydraulic break - Press used for bending aluminum and sheet metal

LOCKOUT: Release hydraulic line affix plug lockout and tag. Release hydraulic pressure prior to maintenance

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Amputation	Direct contact fingers	Do not reach between die stroke area
Foot Injury	Dropping Material	Stay alert during loading of machine
Eye Injury	Fragments from broken die	Check die stroke before using. Do not roll over cams
Back Strain	Improper lifting	Wear gloves and get help while removing material
Lacerations	Sharp material	Stay alert when handling finished goods

WORKSTATION: EXTRUSION SAW

DESCRIPTION: Radial arm saw used for cutting extrusions

LOCKOUT: Unplug and affix plug lockout and tab. Block blade prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Flying debris-fragments	Safety glasses-face shield

Amputation Contact with blade Keep hands and fingers clear of blade, stay clear of table

Hearing Loss Improper ear protection Wear ear plugs/muffs

WORKSTATION: MITER SAW

DESCRIPTION: Used for cutting aluminum square tube

LOCKOUT: Unplug and affix plug lockout and tag. Block blade prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Flying debris-fragments	Safety glasses-face shield
Laceration	Contact with blade	Keep hands and fingers clear of blade, stay clear of table
Amputation	Contact with blade	Do not wear loose clothes, gloves or jewelry near machinery
Respiratory Damage	Substrate dust	Wear particle dust mask

WORKSTATION: POWER SHEAR

DESCRIPTION: Hydraulic shear used for cutting sheets of aluminum, sheet metal

LOCKOUT: Remove hydraulic line and affix plug lockout and tag. Release hydraulic pressure prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Back Strain	Improper lifting	Bend your knees, use a forklift, get help
Laceration	Sharp material	Slow down-hold away from body
Amputation	Direct contact with shears	Keep away from throat of machine
Foot Injury	Dropping material	Stay alert during loading of machine

WORKSTATION: HAND SHEAR

DESCRIPTION: Used for cutting sheets of aluminum, sheet metal.

LOCKOUT: Block foot pedal and affix tag.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Laceration	Sharp material	Slow down-hold away from body
Back Strain	Improper lifting	Bend your knees, use a forklift, get help
Pinching	Contact with foot pad	Keep away from throat of machine

WORKSTATION: SLOT SAW

LOCKOUT: Unplug and affix plug lockout and tag. Block blade prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Flying debris-fragments	Safety glasses-face shield
Amputation	Contact with blade	Keep hands and fingers clear of blade, stay clear of table
Hearing Loss	Improper ear protection	Wear ear plugs/muffs

WORKSTATION: TUBE BENDER

DESCRIPTION: Air piston aluminum tube bender

LOCKOUT: Remove pneumatic air line and affix plug lockout and tag. Bleed off all system air prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Substrate fragments	Safety glasses-face shield

Laceration Substrate fragments Handle pieces with gloves
 Pinched Fingers Contact with die pins Keep clear of piston mechanism

WORKSTATION: WIRE WELDER

DESCRIPTION: Used for aluminum welding

LOCKOUT: Unplug and affix plug lockout and tag. Discharge capacitors prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Light rays	Always wear proper welding hoods
Respiratory Damage	Welding Fumes	Weld in well ventilated area, wear charcoal respirator
Burns	Light rays/hot parts	Cover all exposed skin from arc, wear welding gloves
Poisoning	Aluminum vapors/residue	Weld in well ventilated area, wear gloves when handling parts

WORKSTATION: STICK WELDER

DESCRIPTION: Used for steel welding

LOCKOUT: Unplug and affix plug lockout and tag. Discharge capacitors prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Light rays	Always wear proper welding hoods
Respiratory Damage	Welding fumes	Weld in well ventilated area, wear charcoal respirator
Burns	Hot parts	Wear gloves when handling cutoff pieces

WORKSTATION: BANDSAW

DESCRIPTION: Table for cutting free form objects

LOCKOUT: Pull power lever on box to the off position. Affix shackle lock to lever and affix a tag. Block pulleys prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
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Eye injury	Broken blade fragments	Safety glasses-face shield
Laceration	Contact with blade	Keep hands and fingers clear of blade, stay clear of table
Abrasions	Sharp edges	Stay alert when handling finished goods

WORKSTATION: HAND & BENCH GRINDER

DESCRIPTION: For dressing welding and joints

LOCKOUT: Unplug and affix plug lockout and tag.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Broken blade fragments	Always wear a face shield
Laceration	Contact with wheel	Keep hands & fingers clear of wheels
Abrasions	Contact with wheel	Do not stop wheel with hands
Respiratory	Substrate / wheel dust	Wear particle dust mask

WORKSTATION: DRILL PRESS & HAND DRILL

DESCRIPTION: Used to drill various holes

LOCKOUT: Unplug and affix plug lockout and tag.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Flying debris-broken bits	Safety glasses - goggles
Laceration	Contact with bit	Keep hands and fingers clear of bit - do not force cutting operation
Puncture Wounds	Contact with bit	Do not force cutting operation. Take bit out of chuck immediately after use

WORKSTATION: ROUTER

DESCRIPTION: Free form of table mounted trimming, cutting

LOCKOUT: Unplug and affix plug lockout and tag.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
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Eye Injury	Flying debris - fragments	Safety glasses - face shield
Laceration	Contact with bit	Keep hands and fingers clear of bit always cut into direction of bit
Amputation	Lodged clothing, etc.	Do not wear loose clothes, gloves or jewelry while operating
Puncture Wounds	Plunge bit contact	Always lower bit to minimal depth needed- do not leave bit unattended

WORKSTATION: IRON WORKER

DESCRIPTION: Hydraulic cutting tool for steel

LOCKOUT: Remove hydraulic line and affix plug lockout and tag. Release hydraulic pressure prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Amputation	Direct contact with die shears	Keep clear of machine
Laceration	Contact with blade / Sharp edges	Keep clear of machine
Eye Injury	Flying fragments	Wear safety glasses / face shield

WORKSTATION: CUTTING TORCH

DESCRIPTION: Acetylene torch for cutting steel

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Light rays from torch	Wear proper cutting goggles
Burns	Contact with torch / Hot cutoffs	Stay alert
Lacerations	Sharp Edges	Stay alert when handling finished goods
Respiratory Damage	Cutting slag fumes	Use torch in well ventilated area

WORKSTATION: AIR STAPLER

DESCRIPTION: Table for attaching aluminum together

LOCKOUT: Unplug and affix plug lockout and tag.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
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Back Strain	Improper lifting	Bend your knees, use a forklift, get help
Eye Injury	Flying staples	Safety glasses / face shield
Puncture Wound	Direct contact with stapler head	Keep hands away from stapler post

WORKSTATION: CHOP SAW

DESCRIPTION: Abrasion wheel used to cut steel angle

LOCKOUT: Unplug and affix plug lockout and tag. Block blade prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Abrasion	Contact with wheel	Keep hands away from wheel during use
Laceration	Sharp edges	Do not wear loose clothes, gloves or jewelry near machinery
Eye Injury	Flying debris-fragments	Wear safety glasses / face shield
Burns	Hot cutoffs	Wear gloves when handling cutoff pieces

WORKSTATION: SPOT WELDER

DESCRIPTION: Table used to attach sheet metal together

LOCKOUT: Unplug and affix plug lockout and tag. Discharge capacitors prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Light rays from weld flash	Do not look at arch-can cause retina damage / wear safety glasses
Back Strain	Improper lift or bend	Get help with large items
Burns	Hot weld points	Do not touch welded areas
Abrasions	Sharp edges	Wear gloves and get help while moving material around
Lacerations	Sharp edges	Stay alert when handling finished goods

WORKSTATION: AIR TOOLS

DESCRIPTION: Various finishing needs

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Flying debris	Safety glasses-goggles
Lacerations	Contact w/ tool head	Keep hands & fingers clear of tool head when in operation, do not force operation
Respiratory Damage	Substrate dust	Particle dust mask

WORKSTATION: RADIAL ARM SAW

DESCRIPTION: Used for cutting wood

LOCKOUT: Unplug and affix plug lockout and tag. Block blade prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Splintering- dust	Safety Glasses-face shield
Laceration	Contact with blade	Keep clear of blade when in operation
Amputation	Lodged clothing, etc.	Do not wear loose clothes, gloves or jewelry while operating

Respiratory Substrate dust Particle dust mask

WORKSTATION: TABLE SAW

DESCRIPTION: Used for cutting wood

LOCKOUT: Unplug and affix plug lockout and tag. Block blade prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Hand Injury	Not using guard, not using pusher drive device, material too large for one person	Proper guard use, use device to push material rather than hand when close to blade, get help
Laceration	Contact with blade	Keep clear of blade when in operation
Amputation	Lodged clothing, etc.	Do not wear loose clothes, gloves or jewelry while operating
Eye Injury	Splintering - dust	Wear safety glasses / face shield

WORKSTATION / OPERATION PROCEDURAL GUIDE

PLASTIC DEPARTMENT

WORKSTATION: PANEL SAW

DESCRIPTION: Vertical table saw used for cutting plastic sheets

LOCKOUT: Pull power lever on box to the off position. Affix shackle lock to lever and affix a tag. Block pulleys prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Splintering - dust	Safety glasses - face shield
Laceration	Contact with blade	Keep clear of blade when in operation
Back Strain	Improper lifting	Do not lift sheets without help
Foot Injury	Dropping materials	Wear hard safety shoes, slow down when loading table
Respiratory	Substrate dust	Particle dust mask

WORKSTATION: BAND SAW

DESCRIPTION: Table for cutting free form objects

LOCKOUT: Pull power lever on box to the off position. Affix shackle lock to lever and affix a tag. Block pulleys prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Broken blade fragments	Safety glasses- face shield
Laceration	Contact with blade	Keep hands and fingers clear of blade when in operation, lower guide completely
Amputation	Lodged clothing	Do not wear loose clothing, gloves or jewelry while operating

WORKSTATION: ROUTER

DESCRIPTION: Free form table and table mounted trimming and cutting

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Flying debris- fragments	Safety glasses-face shield
Laceration	Contact with bit	Keep hands and fingers clear of bit when in operation, always cut in direction of bit
Amputation	Lodged clothing, etc.	Do not wear loose clothes, gloves or jewelry while operating
Puncture Wounds	Plunge bit contact	Always lower bit to minimal depth needed, do not leave bit unattended loaded in chuck
Respiratory Damage	Substrate dust	Particle dust mask

WORKSTATION: TRIMCAP TABLE

DESCRIPTION: Used to glue trimcap to plastic

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Nail Fragments	Safety glasses
Laceration	Xacto knives	Slow down-cut away from body
Puncture	Xacto knives - nails	Stay alert-don't force knife
Poisoning	Glue bottle-wounds	Re-cap all bottles immediately after use

Respiratory Damage Fumes from glue Use a charcoal respirator

WORKSTATION: NOTCHER

DESCRIPTION: Used to notch and flange channel letter returns

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
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Back Strain	Lifting letter coil rolls	Use proper lifting technique. Get assistance
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Laceration	Letter coil edges	Use proper protective gloves
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WORKSTATION: LETTER BENDER

DESCRIPTION: Used to bend and form channel letter returns

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
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Eye Injury	Letter coil movement	Safety glasses
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Laceration	Letter coil edges	Use proper protective gloves
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Pinching	Moving parts	Stay alert-don't place hands within bending area.
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WORKSTATION: HAND DRILLS & DRILL PRESS

DESCRIPTION: Various holes

LOCKOUT: Unplug and affix plug lockout and tag. Block blade prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
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Eye Injury	Flying debris - broken bits	Safety glasses - goggles
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Laceration	Contact with bit	Keep hands and fingers clear of bit when in operation, do not force cutting operation
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Puncture Wounds	Contact with bit	Do not force cutting operation, take bit out of chuck immediately after use
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WORKSTATION: TABLE SAW

DESCRIPTION: Used for cutting wood, plastic, aluminum

LOCKOUT: Unplug and affix plug lockout and tag. Block blade prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Splintering dust	Safety glasses-face shield
Laceration	Contact with blade	Keep clear of blade when in operation
Amputation	Lodged clothing, etc.	Do not wear loose clothes, gloves or jewelry while operating
Respiratory	Substrate dust	Particle dust mask

WORKSTATION: ENGRAVING MACHINE

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Flying debris- fragments	Safety glasses-face shield
Laceration	Contact with bit	Keep hands and fingers clear of bit when in operation, always cut in direction of bit
Amputation	Lodged clothing, etc.	Do not wear loose clothes, gloves or jewelry while operating
Puncture Wounds	Plunge bit contact	Always lower bit to minimal depth needed, do not leave bit unattended loaded in chuck
Respiratory Damage	Substrate dust	Particle dust mask

WORKSTATION / OPERATIONS PROCEDURAL GUIDE

FLEX FACE DEPARTMENT

WORKSTATION: HEAT TRANSFER MACHINE

DESCRIPTION: Transfers colored sheets to substrate

LOCKOUT: Unplug and affix plug lockout and tag. Block blade prior to maintenance.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Respiratory Damage	Fumes from eradicator	Keep ventilation hood on and use a charcoal respirator
Foot Injury	Dropping materials	Stay alert during loading of machine
Eye Injury	Fragments from broken lights	Do not lift light bank without safety glasses on
Back strain	Improper lifting	Get help while moving material

Laceration Xacto blades Stay alert when handling xacto knives

WORKSTATION / OPERATION PROCEDURAL GUIDE

PAINT DEPARTMENT

WORKSTATION: **SPRAYING**

DESCRIPTION: Parts finishing

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Contact with solvent	Safety glasses
Laceration	Xacto knives / screws / Sharp edges	Slow down-cut away from body
Puncture wounds	Xacto knives / nails	Stay alert-don't force knife
Poisoning	Hazardous materials	Know what materials you are using and the proper way to handle them
Respiratory	Fumes from overspray	Use a charcoal respirator-spray in the booth with fan and new filters in place

WORKSTATION / OPERATION PROCEDURAL GUIDE

NEON DEPARTMENT

WORKSTATION: **BURNERS**

DESCRIPTION: Used for bending neon/argon tubes

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Low light levels	Turn lights up on regular intervals to relieve eye strain
Respiratory Damage	Gas Leaks	Check all gas connections at your workstation daily
Burns	Hot Glass	Stay alert, watch for glowing tube ends
Poisoning	Repairing mercury tubes	Never repair used argon tubes that have been pumped with mercury
Lacerations	Splinters, broken glass	Stay alert when handling broken tubes

Fire Earthquake, leak, knocked over Secure burners, identify and turn off master shut off valve identified by color red and sign

WORKSTATION: **PUMPING STATION**

DESCRIPTION: Used to fill tubes with gas

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Light rays	Wear approved tinted safety glasses
Laceration	Splinters, broken glass	Stay alert when handling broken tubes
Burns	Hot glass	Stay alert, watch for glowing tubes
Poisoning	Mercury	Never re-pump mercury filled tubes, keep syringe put away and keep table free from spillage
Respiratory	Mercury Vapors	Never re-pump mercury filled tubes. Do not over heat tubes past recommended temperatures
Electrical Shock	Too close to high voltage cables	Stay clear / safe distance, know when power is on (indicator light) spring loaded switch

WORKSTATION: **WORK TABLE / BURNERS**

DESCRIPTION: Standing at workstations

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Back Strain	Improper bending	Bending your knees, not your back whenever possible
Leg Strain	Pulled hamstring	Keep one foot perched on table ledge to relieve pressure
Stiff Neck	Prolonged bowing	Move around periodically-go tag your glass
Finger Cramps	Repeated movements	Vary your bends as much as possible

WORKSTATION / OPERATION PROCEDURAL GUIDE

ELECTRICAL TOOLS / EQUIPMENT DEPARTMENT

WORKSTATION: **ELECTRICAL TOOLS / EQUIPMENT**

DESCRIPTION: Miscellaneous tools and equipment operating with electricity

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Electrical Shock	No ground, improperly grounded moisture plugs, line in poor maintenance	Properly grounded, no moisture, good maintenance

WORKSTATION / OPERATION PROCEDURAL GUIDE

MATERIAL HANDLING DEPARTMENT

WORKSTATION: **MATERIAL HANDLING**

DESCRIPTION: The moving of material manually or with mobile equipment

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
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Back Injury

Falling With Helper

Foot-Body Injury

Lacerations

Not lifting correctly, lifting too much weight, twisting body with load

No pre-plan

Not properly holding material / not sufficient clearance to lift

Sharp material

Bend legs, back straight, obtain help, do not twist back when lifting, move legs

Discuss procedures to follow

Plan ahead, check sufficient clearance

Stay alert, check material surfaces

WORKSTATION / OPERATION PROCEDURAL GUIDE

COMPRESSED GAS AND CYLINDERS DEPARTMENT

WORKSTATION: **COMPRESSED GAS AND CYLINDERS**

DESCRIPTION: Tanks used to hold acetylene gas, oxygen and other

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Tanks Fall on Persons or Material	Not properly secured	All tanks and vessels should be secured
Contents Leak / Health	Tanks not identified, Using wrong materials	Use color codes and properly identify
Broken Valve	Valve protector not in	Always use valve protectors when not connected or in use
Contents Leak	Valves not closed when not in use	Always close valves when cylinder not in use / end of day

WORKSTATION / OPERATION PROCEDURAL GUIDE

FORKLIFT DEPARTMENT

WORKSTATION: **FORKLIFTS**

DESCRIPTION: A mobile, industrial truck used to lift, move, and load materials

LOCKOUT: Maintenance only by qualified service

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Bodily Injury to Driver and Others		
Running Into another Person		
Backing Into People / Property		
Tip over, too much weight lifted, moving with load in air		
Too fast, poor visibility, inattention		
Too fast, Poor visibility, Inattention		
Know load and leverage capabilities. Do not move lift with load too far off ground		
Don't go where you can't see. Don't go faster than conditions allow. Pay attention. Use warning lights, horn.		

Don't go where you can't see. Don't go faster than conditions allow. Pay attention. Use warning lights, horn. lights,

* * * Note: Post operating rules for forklifts.

WORKSTATION / OPERATION PROCEDURAL GUIDE

CHEMICAL DEPARTMENT

WORKSTATION: **CHEMICALS IN THE WORK PLACE**

DESCRIPTION: Any chemical capable of injury posing a threat to the injury / health of employees and/or public.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Eye Injury	Contact with material Vapor	Wear protective glasses goggles
Burns / Skin Damage	Contact with material Vapor	Wear proper gloves, long sleeves, clothing. Use proper breathing masks.
Contamination	Contact, spills, disposal	Proper containers, storage, labeling disposal & emergency plan.
Explosion, Fire, Unexpected Reaction	Wrong chemical use, Mixing	Proper labels & instructions.

* * * Material Safety Data Sheets (MSDS supplied by supplier) must be maintained and communicated to employees. Have employees sign and date annual training.

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SCAFFOLD DEPARTMENT

WORKSTATION: **SCAFFOLDS**

DESCRIPTION: A temporary wood or metal framework for supporting worker and material during erecting or repairing.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Slipping / falling and causing great	Improper components / erection	Inspect scaffolds prior to each use by Install. Supervisor. Inspect Top rail, mid

bodily harm

rail and toe boards provided on open sides of all scaffolding over ten feet in height; Approved scaffold planking used secured; scaffolds containing proper components, erected and moved under supervision of a qualified

person. Defective scaffold parts are to be tagged with a red and black danger tag. All defective parts are to be repaired by a qualified service or disposed and replaced. Sign Designs does not allow modification of any scaffold parts. Employees who modify scaffold parts put themselves and others in extreme danger, and are subject to disciplinary action or termination. All employees who performs work while on a scaffold must be trained by a the Install Supervisor in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training shall include the following areas, as applicable:

1. The nature of any electrical hazards, fall hazards and falling object hazards in the work area.
2. The correct procedures for dealing with electrical hazards and for erecting, maintaining and disassembling the fall protection systems and falling objects protection systems being used.
3. The proper use of the scaffold, and the proper handling of materials on the scaffold.
4. The maximum intended load and the load-carrying capacities of the scaffolds used.
5. Any other pertinent safety requirements.

Each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold shall be trained by the Install Supervisor to recognize any hazards associated with the work in question. The training shall include the following:

1. The nature of scaffold hazards
2. The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold used.
3. The design criteria, maximum intended load-carrying capacity and intended use of the scaffold.

If the Install Supervisor has reason to believe that an employee lacks the skill or understanding needed for safe scaffold work, or when conditions change in the work area, then that employee must be retrained in all areas prior to working with scaffolds.

WORKSTATION / OPERATION PROCEDURAL

PORTABLE LADDER DEPARTMENT

WORKSTATION: PORTABLE LADDERS

DESCRIPTION: A device used to climb to a higher location

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Severe Bodily Injury Potential from fall	Fall or slip from ladder	Maintain, in good condition; Provide non- slip safety feet; Provide non- slip safety feet on metal or rung of ladder, keep rung and steps free of grease and

oil, never place a ladder in front of doors opening toward the ladder except when door is blocked open, locked or guarded; never place ladder on boxes or unstable objects; always face ladder when ascending or descending; do not use a ladder not in excellent condition; never use top step of ladder; when using portable run ladders to access elevated platforms, when working above 6' ladder must be tied off with approved fall protection; straight ladders must be secured at the top or bottom or held while in use; make sure that ladder exceeds at least three feet above elevated surface; always place the ladder 1/4 of the height away from the structure so base will not slip- secure the base, mark all ladders "caution around electrical equipment"; never use ladder for other than intended purpose; only adjust extension ladder while standing at base (not while standing on the ladder or from position above the ladder) ; be sure rungs of the ladder are uniformly spaced at 12', center to center; on extension ladders, be sure positive lock provided

WORKSTATION / OPERATION PROCEDURAL GUIDE

MOBILE CRANE & LADDER DEPARTMENT

WORKSTATION: **MOBILE CRANES & LADDERS**

DESCRIPTION: Mobile cranes & ladders used to lift people and materials

LOCKOUT: Maintenance only by qualified service

This section is summary only. Refer to the Crane Safety Manual for complete information

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
The Potential for Great Bodily Harm & Property Damage	Improper inspections	Daily inspections
	Improper maintenance	Proper routine maintenance
Potential for Bodily Harm to & Property Damage to Employees & Others	Improper operation	Proper operation
	Not properly using outriggers	Fully extend all out-riggers on solid surface, use solid platform under outriggers
	Lifting more weight than	Know weight of material; use scale;

unit designed for	observe load, weight, radius chart
Not placing boom in proper place for lift	Do not lift from front or around front of vehicle unless designed for such use
Truck moving during lift	Use wheel blocks, set brakes
Load shifts from cable wind, third party	Center cable over load, use tag lines
Rigging failure	Crane operator responsible for safe load. Don't use defective rigging. Use safety clip on hooks.
Contact with electrical power/other property	Stay 10' minimum from wires. Communicate with proper hand signals, 2-way radio. Everyone know operation plan in advance.
Other people enter	Use pylons, safety tape to secure total work area. Provide alternate path for pedestrians and traffic. Do not move load over anyone.
Not using safety belt on ladder, bucket, sling	Use proper safety gear when required on ladders, buckets, and slings

WORKSTATION / OPERATION PROCEDURAL GUIDE

MOBILE CRANE & LADDER DEPARTMENT

WORKSTATION: **MOBILE CRANES & LADDERS**

DESCRIPTION: Mobile cranes & ladders used to lift people and materials

SAFETY RISKS PROBABLE CAUSE PREVENTATIVE MEASURES

Not using other PPE	Use proper Personal Protective Equipment while on a job site. Hard Hats, Orange Vests (orange shirts are not acceptable), Gloves, Safety Shoes (tennis shoes are not acceptable unless they are safety rated), long pants (no shorts), Proper Eye Protection, Proper Ear Protection when necessary.
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SEE OPERATING MANUAL FOR EACH SPECIFIC CRANE & "EMPLOYEE EQUIPMENT & FACILITY SAFETY RECOMMENDATIONS FOR THE ELECTRIC SIGN INDUSTRY"

WORKSTATION/OPERATION PROCEDURAL GUIDE

RIGGING AND WIRE ROPE DEPARTMENT

WORKSTATION: RIGGING AND WIRE ROPE

DESCRIPTION: Rope, wire rope, cabling used as rigging to lift materials

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Dropping Load Causing Bodily Injury/Property Damage	Fatigue-wire break is transverse-either straight across or Z shape-broken ends will appear graining	Check for rope bent around too small a radius, vibration or whipping, wobbly sheaves, rollers too small, reverse bends, bent shafts, tight grooves, corrosion, small drums & sheaves, incorrect rope construction, improper installation, poor end terminations. (In the absence of other modes of degradation, all rope will eventually fail in fatigue.)
	Tension-wire break reveals a mixture of cup and cone fracture and shear breaks	Check for overloads; sticky, grabby clutches; jerky conditions; loose bearing on drum; fast starts, fast stops; broken sheave flange; wrong rope size & grade; poor end terminations. Check for too great a strain on rope after factors of degradation have weakened it.
	Abrasion-wire break mainly displays outer wires worn smooth to knife edge thinness. Wire broken by abrasion in combination with another factor will show a combination break.	Check for change in rope or sheave size; change in load; overburden change; frozen or stuck sheaves; soft rollers, sheaves or drums; excessive fleet angle; misalignment of sheaves; kinks; improperly attached fittings; grit & sand; objects imbedded in rope; improper grooving.
	Abrasion plus fatigue reduced cross-section broken off square thereby producing a chisel shape	A long term condition normal to the operating process

WORKSTATION: RIGGING AND WIRE ROPE (CONTINUED)

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
	Abrasion plus tension reduced cross-section is necked down as in a cup and cone configuration . Tensile break produces a chisel shape.	A long term condition normal to the operating process
	Cut or gouged or rough wire - wire ends are pinched down, mashed and/or cut in a rough diagonal shear-like manner.	Check on all the above conditions for mechanical abuse, or either abnormal or accidental forces during installation
	Torsion or twisting wire ends show evidence of twist and/or cork-screw effect	Check on all the above conditions for mechanical abuse, or either abnormal or accidental forces during installation
	Mashing-wires are flattened and spread at broken ends	Check on all the above conditions for mechanical abuse, or either abnormal or accidental forces during installation. (This is a common occurrence on the drum.)
	Corrosion-wire surfaces are pitted with break showing evidence either of fatigue tension or abrasion	Indicates improper lubrication or storage, or a corrosive environment

WORKSTATION/OPERATION PROCEDURAL GUIDE
VEHICLE DEPARTMENT

WORKSTATION: VEHICLES
DESCRIPTION: A vehicle or truck used to transport passengers, equipment and materials.

SAFETY RISKS	PROBABLE CAUSE	PREVENTATIVE MEASURES
Rear-ending Another Vehicle	Driving too fast / in- attention	Never exceed speed limit, allow plenty of distance and pay attention
Backing into People/Property	Not visually inspecting behind you/poor visi- bility/bad mirrors/ blind spots	Never back vehicle unless you know it is safe
Sideswiping People/Property	Speeding/unsafe dis- tance/inattention/ unsafe lane change/ not signaling	Never change lanes unless you know it is safe
Turning Left/ Right & Causing Bodily Injury/ Property Damage	No signal/improper signal/ not visually checking for other people/ speeding/inattention	Never turn unless you know it is safe to do so
Being hit by Another Party	Not practicing good defensive driving	Always drive “defensively” and expect the unexpected
Vehicle Mech- anical Failure	Improper vehicle maintenance	Follow proper vehicle maintenance schedules, always inspect and know your vehicle
Vehicle Roll Over	Speeding/inattention/ mechanical defect	Drive speed limit or less if conditions warrant, be alert, always wear safety belt

EMPLOYEE AGREEMENT:

You agree that you have read and understood the provisions of our Injury and Illness Prevention Program and that you agree to all of it's provisions.

Employee: _____ Date: _____

Witness: _____ Date: _____

Sign Designs, Inc.

Sign Designs, Inc. Yard Maintenance Checklist

ITEM	FAIR	GOOD	NEED TO REPLACED	LUBE	ADJUSTED	CHECKED BY
Drive Belts						
Safety Guards						
Gears, Shafts & Brgs.						
Extension						
Loadline						
Rotation						
Elevation						
Hydraulic System						
Reservoir						
Hoses						
Valves						
Ram						
Pump						
Crane Base Unit						
Extension Tubes						
Sheaves & Wear Blocks						
Extension Cables						
Loadline Cable						
Extension Brake						
Loadline Brake						
Rotation Gear						
Aux. Electrical System						
Generator Output System						
Generator Engine						
Cables & Junctions						
Crane Electrical						
Contactors & Points						
Power Motors						
Solenoids & Switches						
Wiring & Terminals						
Miscellaneous						
Crane TrussRods						
Outriggers						
Crane Base Mounting						
Truck						
Oil & Filter Change						
Lube						

Self-Inspection Checklist Summary

- A. Inspector Name/Signature _____
- B. Department _____
- C. Date Inspection Conducted _____
- D. Area or Scope of Inspection: _____
- E. Copy of this summary report, self-inspection checklists used and supporting documents sent as required to:
 - Supervisor
 - Safety Manager
 - Safety Committee Chairperson
 - Maintenance/Repair
 - and/or other (specify)
- F. Next Scheduled Self-Inspection:

Action Taken	Action Needed	Subject
_____	_____	___ Abrasive Wheel Equipment Grinders
_____	_____	___ Compressed Air Receivers
_____	_____	___ Compressed Gas & Cylinders
_____	_____	___ Compressors & Compressed Air
_____	_____	___ Control of Harmful Substances by Ventilation
_____	_____	___ Electrical
_____	_____	___ Elevated Surfaces
_____	_____	___ Emergency Action Plan
_____	_____	___ Employer Posting
_____	_____	___ Entering Confined Spaces
_____	_____	___ Environmental Controls
_____	_____	___ Exit Doors
_____	_____	___ Exiting or Egress
_____	_____	___ Fire Protection
_____	_____	___ Flammable & Combustible Materials
_____	_____	___ Floor & Wall Openings
_____	_____	___ Fueling
_____	_____	___ General Work Environment
_____	_____	___ Hand Tools & Equipment
_____	_____	___ Hazardous Chemical Exposures
_____	_____	___ Hazardous Substances Communication
_____	_____	___ Hoist & Auxiliary Equipment
_____	_____	___ Identification of Piping Systems
_____	_____	___ Industrial Trucks–Forklifts
_____	_____	___ Infection Control
_____	_____	___ Injury & Illness Prevention Program
_____	_____	___ Lockout Blockout Procedures
_____	_____	___ Machine Guarding
_____	_____	___ Material Handling
_____	_____	___ Medical Services & First Aid
_____	_____	___ Noise
_____	_____	___ Permit Requirements
_____	_____	___ Personal Protective Equipment & Clothing
_____	_____	___ Portable (Power Operated) Tools & Equipment

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|-------|-------|-----|---------------------------------------|
| _____ | _____ | ___ | Portable Ladders |
| _____ | _____ | ___ | Powder Actuated Tools |
| _____ | _____ | ___ | Record Keeping |
| _____ | _____ | ___ | Sanitizing Equipment & Clothing |
| _____ | _____ | ___ | Spraying Operations |
| _____ | _____ | ___ | Stairs & Stairways |
| _____ | _____ | ___ | Tire Inflation |
| _____ | _____ | ___ | Transporting Employees & Materials |
| _____ | _____ | ___ | Vehicle Inspection–Use Vehicle Safety |
| _____ | _____ | ___ | Checklist on Page 7.6-3 |
| _____ | _____ | ___ | Walkways |
| _____ | _____ | ___ | Welding, Cutting & Brazing |
| _____ | _____ | ___ | Other |
| _____ | _____ | ___ | Other |
| _____ | _____ | ___ | Other |

Other comments, suggestions or recommendations:

Attach other documentation as needed.

Note: Keep this report on file for a minimum of 3 years.