Airswift Holdings Ltd.

HSE Management System
Lockout/Tagout
(Control of Hazardous Energy Sources)

Prepared	Reviewed	Approved	Effective Date	Issue Number
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Important Notice:

1. This procedure is a Controlled Document and shall not be amended without the authority of the Operations Manager – North America.
2. Any queries or feedback concerning the contents of this Procedure should be addressed to the Operations Manager – North America.

3. Document Control – Revisions and Amendments

Version Number	Effective Date	Author	Amendments	Reasons for Amendments
6	03.20.2023	Kellie Tetley	Annual Review	Update retraining requirements
5	07.31.2021	Carol Stallworth	Review	Update
4	03.22.2018	Julia Arevalo		
3	07.25.2016	Julia Arevalo		

Contents

1.0 PURPOSE

Lockout/Tag out is preferred for isolating machinery or other equipment to ensure isolation from all potentially hazardous energy sources. Locks, tags and other items as needed shall be used before contractors perform set-ups, service, maintenance or other activities where unexpected energizing or release of stored energy could cause an injury.

2.0 SCOPE

AIRSWIFT will ensure all Contractor meet basic awareness training requirements for lockout/tagout within the client facility prior to starting the project. Site specific training will be conducted by the Client's Responsible Person as evaluated by work task risks in the Client Risk Assessment in the project scope of work or by agreed upon terms in the Master Service Agreement.

3.0 RESPONSIBILITY

Where the Client is responsible for control and supervision of the worksite, it shall be the Client's responsibility to provide site specific lockout/tag out training, locks tags and other items as needed for the Lockout'Tag Out Program. The Client will ensure all supplies meet Federal Standards as they pertain to the devices used for intended purposes.
The Operations Director – North America has responsibility for all facets of this program and has full authority to make necessary decisions to ensure success of the program. The Operations Director-North America will develop written detailed instructions with the Safety Specialist to cover each of the basic elements in this program for training purposes to ensure a safe work environment.

A. **Client HSE Supervisor or Lead** will be responsible for implementing the lockout/tagout program and training contractor on proper procedures for the worksite.
B. **Client HSE Supervisor or Lead** are responsible for enforcing the program and insuring compliance with the procedures in their departments.The machine or equipment shall be turned off or shutdown using the procedures established for the machine or equipment.
C. **Client HSE Supervisor or Lead** is responsible for monitoring the compliance of this procedure and will conduct the annual inspection and certification of the authorized employees.

D. **Authorized employees** are responsible for following established lockout/tagout procedures.
E. **Affected employees** are responsible for insuring they do not attempt to restart or re-energize machines or equipment which are locked out or tagged out.

4.0 WRITTEN PROGRAM

AIRSWIFT Safety Specialist will review and evaluate the Client's program on an annual basis, or when changes occur to the program or to 29 CFR 1910.147, that prompt revision of this document, or when facility operational changes occur that require a revision of this document. Effective implementation of this program requires support from all levels of management within the company and the clients worksite. This written program will be communicated to all personnel that are affected by it. It encompasses the total workplace, regardless of the number of workers employed or the number of work shifts. It is designed to establish clear goals, and objectives.

5.0 WORKSITE EVALUATION

As Airswift does not have any worksites, it is the responsibility of the the client to evaluate their worksites to determine which machines or pieces of equipment require steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy. A complete listing of machines/equipment having procedures will be maintained using the following site specific format:

5.1 Machine/Equipment lockout/tagout listing

Figure 1
(Examples: equipment will vary from location to location)

Department	Machine Type or #/ID	Date Evaluated	Date Proc. Dev.
Site Specific	Pumps	Prior to work	See specific proc.
	Motors		
	Switch boxes		
	Breakers		
	Valves		
	Tools (all types)		
	Air handlers/compressors		

Any other energy containing device(s) that might be encountered during work activities.

6.0 LOCKOUT DEVICES

6.1 Appropriate lockout devices such as; locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners, or other hardware shall be provided for isolating, securing or blocking of machines or equipment from energy sources based on the individual machine/equipment evaluation.

6.2 Selection criteria

Lockout/tagout devices shall be singularly identified; shall be the only devices(s) used for controlling energy; shall not be used for other purposes; and shall meet the following requirements:

6.2.1 Selected lockout and tagout devices shall be capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected.

6.2.2 Selected tagout devices shall be constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible.

6.2.3 Tags shall not deteriorate when used in corrosive environments such as areas where acid and alkali chemicals are handled and stored.

6.2.4 Standardization within the facility. Lockout and tagout devices shall be standardized within the facility in at least one of the following criteria: Color; shape; or size; and additionally, in the case of tagout devices, print and format shall be standardized.

7.0 REMOVAL REQUIREMENTS

7.1 Lockout devices

Lockout devices shall be substantial enough to prevent removal without the use of excessive force or unusual techniques, such as with the use of bolt cutters or other metal cutting tools.

7.2 Tagout devices

a) Tagout devices, including and their means of attachment, shall be substantial enough to prevent inadvertent or accidental removal.

b) Tagout device attachment means shall be of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all-environment-tolerant nylon cable tie.

7.3 Identification requirements

7.3.1 Lockout/tagout devices shall indicate the identity of the employee applying the device(s).

7.3.2 Tagout devices shall warn against hazardous conditions if the machine or equipment is energized and shall include a legend such as the following: Do Not Start, Do Not Open, Do Not Close, Do Not Energize, Do Not Operate, etc.

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9.0 PERIODIC INSPECTIONS AND CERTIFICATIONS

9.1 AIRSWIFT will ensure the client conducts a periodic inspection of the energy control procedure for each machine or piece of equipment at least annually to ensure that the procedure and the requirements of this instruction are being followed.

9.1.1 The periodic inspection shall be performed by an authorized client work site representative and/or company employee other than the ones(s) utilizing the energy control procedure being inspected.

9.1.2 The periodic inspection shall be conducted to correct any deviations or inadequacies identified.

9.1.3 Lockout inspections. Where lockout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized employee, of that employee's responsibilities under the energy control procedure being inspected.

9.1.4 Tagout inspections. Where tagout is used for energy control, the periodic inspection shall include a review, between the inspector and each

authorized and affected employee, of that employee's responsibilities under the energy control procedure being inspected.

9.2 Certifications. This employer shall certify that the periodic inspections have been performed by the client for each respective facility. The certification shall as a minimum identify:

9.2.1 The machine or equipment on which the energy control procedure was being utilized.
9.2.2 The date of the inspection.
9.2.3 The employees included in the inspection.
9.2.4 The person performing the inspection.

10.0 PROCEDURES

The ensuing items are to be followed to ensure both compliance with the OSHA Control of Hazardous Energy Standard and the safety of our employees.

The machine or equipment shall be turned off or shutdown using the procedures established for the machine or equipment. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees as a result of the equipment stoppage.

All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s).

Following the application of lockout/tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained or otherwise rendered safe. If there is a possibility of re-accumulation of stored energy, verification of isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.

a. **Preparation for Lockout or Tagout**
Employees who are required to utilize the lockout/tagout procedure must be knowledgeable of the different energy sources and the proper sequence of shutting off or disconnecting energy means. The four types of energy sources are:

1. electrical (most common form);
2. hydraulic or pneumatic;
3. fluids and gases; and
4. mechanical (including gravity).

More than one energy source may be utilized on some equipment and the proper procedure must be followed in order to identify energy sources and lockout/tagout accordingly. See Attachment F for specific procedure format.

b. Electrical

1. Shut off power at machine and disconnect.
2. Disconnecting means must be locked or tagged.
3. Press start button to see that correct systems are locked out.
4. All controls must be returned to their safest position.
5. Points to remember:

    I. If a machine or piece of equipment contains capacitors, they must be drained of stored energy.
    II. Possible disconnecting means include the power cord, power panels (look for primary and secondary voltage), breakers, the operator's station, motor circuit, relays, limit switches, and electrical interlocks.
    III. Some equipment may have a motor isolating shut-off and a control isolating shut-off.
    IV. If the electrical energy is disconnected by simply unplugging the power cord, the cord must be kept under the control of the authorized employee or the plug end of the cord must be locked out or tagged out.

c. Hydraulic/Pneumatic

1. Shut off all energy sources (pumps and compressors). If the pumps and compressors supply energy to more than one piece of equipment, lockout or tagout the valve supplying energy to the piece of equipment being serviced.
2. Stored pressure from hydraulic/pneumatic lines shall be drained/bled when release of stored energy could cause injury to employees.
3. Make sure controls are returned to their safest position (off, stop, standby, inch, jog, etc.).

d. **Fluids and Gases**

1. Identify the type of fluid or gas and the necessary personal protective equipment.
2. Close valves to prevent flow, and lockout/tagout.
3. Determine the isolating device, then close and lockout/tagout.
4. Drain and bleed lines to zero energy state.

5. Some systems may have electrically controlled valves. If so, they must be shut off and locked/tagged out.
6. Check for zero energy state at the equipment.

e. Mechanical Energy

Mechanical energy includes gravity activation, energy stored in springs, etc.

1. Block out or use die ram safety chain.
2. Lockout or tagout safety device.
3. Shut off, lockout or tagout electrical system.
4. Check for zero energy state.
5. Return controls to safest position.

f. Release from Lockout/Tagout

1. Inspection: Make certain the work is completed and inventory the tools and equipment that were used.
2. Clean-up: Remove all towels, rags, work-aids, etc.
3. Replace guards: Replace all guards possible. Sometimes a particular guard may have to be left off until the start sequence is over due to possible adjustments. However, all other guards should be put back into place.
4. Check controls: All controls should be in their safest position.
5. The work area shall be checked to ensure that all employees have been safely positioned or removed and notified that the lockout/tagout devices are being removed.
6. Remove locks/tags. Remove only your lock or tag.
7. Prior to starting work on machines or equipment that have been locked or tagged out, the authorized employee shall verify that isolation & deenergization of the machine or equipment have been accomplished.

11.0 SERVICE OR MAINTENANCE INVOLVING MORE THAN ONE PERSON

When servicing and/or maintenance is performed by more than one person, each authorized employee shall place his own lock or tag on the energy isolating source. This shall be done by utilizing a multiple lock scissors clamp if the equipment is capable of being locked out. If the equipment cannot be locked out, then each authorized employee must place his tag on the equipment.

12.0 REMOVAL OF AN AUTHORIZED EMPLOYEE'S LOCKOUT/TAGOUT BY THE COMPANY

Each location must develop written emergency procedures that comply with 1910.147(e)(3) to be utilized at that location. Emergency procedures for removing lockout/tagout should include the following:

1. Verification by employer that the authorized employee who applied the device is not in the facility.
2. Make reasonable efforts to advise the employee that his/her device has been removed. (This can be done when he/she returns to the facility).
3. Ensure that the authorized employee has this knowledge before he/she resumes work at the facility.

13.0 SHIFT OR PERSONNEL CHANGES

Each facility must develop written procedures based on specific needs and capabilities. Each procedure must specify how the continuity of lockout or tagout protection will be ensured at all times based on the individual .

14.0 PROCEDURES FOR OUTSIDE PERSONNEL/CONTRACTORS

Outside personnel/contractors shall be advised that the company has and enforces the use of lockout/tagout procedures. They will be informed of the use of locks and tags and notified about the prohibition of attempts to restart or re-energize machines or equipment that are locked out or tagged out.

1. The company will obtain information from the outside personnel/contractor about their lockout/tagout procedures and advise affected employees of this information.
2. The outside personnel/contractor will be required to sign a certification form. If outside personnel/contractor has previously signed a certification that is on file, additional signed certification is not necessary.

15.0 TRAINING AND COMMUNICATION

Each authorized employee who will be utilizing the lockout/tagout procedure will be trained in the recognition of applicable hazardous energy sources, type and magnitude of energy available in the work place, and the methods and means necessary for energy isolation and control.

1. Each affected employee (all employees other than authorized employees utilizing the lockout/tagout procedure) shall be instructed in the purpose and use of the

lockout/tagout procedure, and the prohibition of attempts to restart or re-energize machines or equipment that are locked out or tagged out.

2. Training will be certified using Attachment B (Authorized Personnel) or Attachment C (Affected Personnel). The certifications will be retained in the employee personnel files.
3. Retraining shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures. Additional retraining shall also be conducted whenever a periodic inspection reveals, or whenever the employer has reason to believe that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures.

16.0 PERIODIC INSPECTION

A periodic inspection (at least annually) will be conducted of each authorized employee under the lockout/tagout procedure. This inspection shall be performed by the ***(Responsible person)***. If ***(Responsible person)*** is also using the energy control procedure being inspected, then the inspection shall be performed by another party.

The inspection will include a review between the inspector and each authorized employee of that employee's responsibilities under the energy control (lockout/tagout) procedure. The inspection will also consist of a physical inspection of the authorized employee while performing work under the procedures.

The ***(Responsible person)*** shall certify in writing that the inspection has been performed. The written certification (Attachment D) shall be retained in the individual's personnel file.

17.0 TESTING OF MACHINES, EQUIPMENT, OR COMPONENTS

17.1 Testing or positioning of machines, equipment or components thereof. In situations in which lockout or tagout devices must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the machine, equipment or component thereof, the following sequence of actions shall be followed:

17.1.1 Clear the machine or equipment of tools and materials.
17.1.2 Remove employees from the machine or equipment area.
17.1.3 Remove the lockout or tagout devices as specified as part of the individual machine procedures.
17.1.4 Energize and proceed with testing or positioning.

17.1.5 Deenergize all systems and reapply energy control measures in accordance with machine procedures and continue the servicing and/or maintenance.

18.0 GROUP LOCKOUT OR TAGOUT

18.1 When servicing and/or maintenance is performed by a crew, craft, department or other group, they shall utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device.

18.2 Group lockout or tagout devices shall be used in accordance with the procedures required by this instruction governing individual procedures which shall include, but not necessarily limited to, the following specific requirements:

18.2.1 Primary responsibility will be vested in an authorized employee for a set number of employees working under the protection of a group lockout or tagout device (such as an operations lock).

18.2.2 Provision for the authorized employee to ascertain the exposure status of individual group members with regard to the lockout or tagout of the machine or equipment will be made.

18.2.3 When more than one crew, craft, department, etc. is involved, assignment of overall job-associated lockout or tagout control responsibility will be vested to an authorized employee designated to coordinate affected work forces and ensure continuity of protection.

18.2.4 Each authorized employee shall affix a personal lockout or tagout device to the group lockout device, group lockbox, or comparable mechanism when he or she begins work, and shall remove those devices when he or she stops working on the machine or equipment being serviced or maintained.

19.0 SHIFT OR PERSONNEL CHANGES

Specific procedures shall be utilized during shift or personnel changes to ensure the continuity of lockout or tagout protection, including provision for the orderly transfer of lockout or tagout device protection between off-going and oncoming employees, to minimize exposure to hazards from the unexpected energization or start-up of the machine or equipment, or the release of stored energy.

19.1 A person must not remove a personal lock or other securing device unless the person is the worker who installed it. In an emergency, or if the worker who installed a lock or other securing device is not available, a worker designated by the employer may remove the lock or other securing device in accordance with a procedure that includes verifying that no worker will be in danger due to the removal.

19.2 An employer must ensure that securing devices are not removed until: (a) each involved worker is accounted for, (b) any personal locks placed by workers are removed, and (c) procedures are implemented to verify that no worker is in danger before a worker removes the securing devices and the machinery, equipment, powered mobile equipment, piping, pipeline, or process system is returned to operation.

Certification of Training
(Authorized Personnel)

I certify that I received training as an authorized employer under ***Company Name*** Lockout/Tagout program. I further certify that I understand the procedures and will abide by those procedures.

AUTHORIZED EMPLOYEE SIGNATURE DATE

ATTACHMENT C

Certification of Training
(Affected Personnel)

I certify that I received training as an Affected Employee under ***Company Name*** Lockout/Tagout Program. I further certify and understand that I am prohibited from attempting to restart or re-energize machines or equipment that are locked out or tagged out.

AFFECTED EMPLOYEE SIGNATURE _____ DATE _____

ATTACHMENT D

Lockout/Tagout Inspection Certification

I certify that ***Equipment*** was inspected on this date utilizing lockout/tagout procedures. The inspection was performed while working on ***Equipment*** .

AUTHORIZED EMPLOYEE SIGNATURE DATE

INSPECTOR'S SIGNATURE DATE

ATTACHMENT E

Lockout/Tagout
Energy Control Procedures
Specific To Each Machine

Preparation for Shut Down

1. Identify equipment to be shut down: _____

2. Location in facility: _____

3. Procedures to notify all **affected employees**: _____

   _____

   _____

4. Identify **all** power sources:

   a) Electrical: _____

   b) Air: _____

   c) Steam: _____

   d) Hydraulic: _____

   e) Gravity: _____

   f) Other: _____

5. Identify lockout/tagout devices to be used: _____

Shut Down

Description of the shut down procedures: _____

Isolation

Procedures for isolation of equipment from **all** power sources: _____

Lockout/Tagout Device Application

Procedure for locking out or tagging out equipment: _____

Release of Stored Energy

Procedures for the release of stored energy (where applicable): _____

_____

_____

_____

_____

Verification of Isolation

Procedures to ensure that equipment is isolated from **all** power sources: ___

_____

_____

_____

_____

Start-Up

1. Visual inspection of the machine and equipment. Ensure all tools have been removed. Return guards to place.
2. Notify all **affected employees** and **other** employees of the start up.
3. Remove all lockout/tagout devices and restore power.

20.0 DEFINITIONS

Affected employee - An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

Authorized employee - A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered under this section.

Capable of being locked out - An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.

Energized - Connected to an energy source or containing residual or stored energy.

Energy isolating device - A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following:

1. A manually operated electrical circuit breaker.
2. A disconnect switch.
3. A manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and, in addition, no pole can be operated independently.
4. A line valve; a block; and any similar device used to block or isolate energy.
5. Push buttons, selector switches and other control circuit type devices are not energy isolating devices.

Energy source - Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Hot tap - A procedure used in the repair, maintenance and services activities which involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure, in order to install connections or appurtenances. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam, and petrochemical distribution systems.

Lockout - The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

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 a machine or equipment. Included are blank flanges and bolted slip blinds.

Normal production operations - The utilization of a machine or equipment to perform its intended production function.

Servicing and/or maintenance - Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.

Setting up - Any work performed to prepare a machine or equipment to perform its normal production operation.

Tagout - The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout device - A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.