

## **Roles and Responsibilities**

### **Table of Contents**

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents.....	3
5.	Abbreviations, Acronyms, and Definitions .....	3
6.	Procedure.....	3
6.1.	Training Requirements .....	3
6.2.	Regional/District Management Responsibilities.....	3
6.3.	Branch/Location Manager Responsibilities .....	3
6.4.	Safety Champion Responsibilities .....	4
6.5.	Safety Committee Responsibilities .....	5
7.	Records.....	5
8.	Approvals .....	6

## 1. Objective

1.1. United Rentals, Inc. (hereafter referred to as “UR”) personnel are committed to a policy of safeguarding employees and equipment by the application of a comprehensive Injury and Illness Prevention Program (IIPP). Supervisors are expected to develop a proficient and effective workforce by utilizing sound training practices and worksite evaluation. The goal is the prevention of incidents by the continuous application of sound practices. UR recognizes its responsibility for the safety of the individual and will utilize every means possible to create a safe environment. Safety and health are paramount functions at each level in our organization. UR considers that each person has an inherent responsibility for his/her own personal safety and that of his/her coworker. Supervisors will ensure their employees are instructed in and carry out the applicable safety and health precautions and controls for their work environments.

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

3.1.1. Each Branch Manager is required to establish and maintain an occupational safety and health program tailored to the needs of the Branch but, in conformance with corporate policies and procedures.

3.1.2. The Division or Region Safety Director at United Rentals, Inc. (DSD/RSD) is responsible for oversight of the Division/Region occupational safety and health program tailored to the needs of the Region/Division but, in conformance with Corporate policies and procedures.

3.1.3. The Risk Department provides direction for treatment of injured employees and handles liability and workers compensation issues.

3.1.4. The Director, Fleet Risk Management, provides direction on road safety guidelines and classification of vehicle incidents.

3.1.5. The Corporate Director, Health and Safety provides strategy and leadership towards the goal of incident prevention and the promotion of an effective HSES program.

#### 4. Reference Documents

OHSAS 18001 current edition

#### 5. Abbreviations, Acronyms, and Definitions

IIPP	Injury Illness Prevention Program
HSES	Health, Safety, Environmental and Sustainability

#### 6. Procedure

##### 6.1. Training Requirements

- 6.1.1. Live to Change required for all designated management.
- 6.1.2. Safety Champion Workshop recommended for branch management and required for all safety champions.
- 6.1.3. Lead Start is recommended for all new and existing branch managers.

##### 6.2. Regional/District Management Responsibilities

- 6.2.1. The Regional/District Management is responsible for the oversight and implementation of the Injury and Illness Prevention Program.

##### 6.3. Branch/Location Manager Responsibilities (Includes Area General Managers and Operation Managers)

- 6.3.1. The Branch/Location Manager is responsible for implementation of the Injury and Illness Prevention Program.
- 6.3.2. Responsible for maintaining safe and healthy practices and preventing incidents in their respective areas to include daily safety huddles as required by Meeting Requirements, HSES 4A 02. Shall appoint a Branch Safety Champion in writing. Prior to assigning responsibilities, ensure that the Safety Champion is oriented regarding safety duties, current policies, regulations, and incident reporting procedures. Initial training will be the "Safety Champion Workshop".
- 6.3.3. Ensure that all employees understand and comply with published safety and health SOPs and the use of personal protective equipment (PPE). Reinforce understanding by conducting monthly inspections at the shop level and coordinating annual inspection by the Division/Region Safety Director or Manager.
- 6.3.4. Ensure that workplace safety is included as a critical element in the performance appraisal system for personnel.
- 6.3.5. Ensure that the weekly and monthly HSES inspections are completed at the branch either by the Safety Champion or designee. Branch manager must sign off on all monthly inspections

**6.3.6.** Ensure prompt reporting of injuries and incidents. Ensure corporate procedures are implemented to notify the Division/Region Safety Director of all fatalities, injuries, near misses, motor vehicle incidents and all property damage that may be a potential hazard or could result in injury to personnel.

**6.3.7.** Ensure that monthly safety training meetings are completed and properly documented.

**6.3.8.** Ensure that monthly safety committee meetings are held and properly documented.

**6.3.9.** Ensure that corrective actions are recorded, completed and are effective solutions.

**6.3.10.** Responsible for reporting injuries and incidents in URSS, and the Incident Intervention System. May designate the Safety Champion to assist.

**6.3.11.** Serve as Co-Chair of the Branch Safety Committee.

#### **6.4. Safety Champion Responsibilities**

**6.4.1.** The Safety Champion assists the Location/Branch Manager in the implementation of the Injury and Illness Prevention Program as directed by the Location/Branch Manager and in conjunction with the Regional/ Division Safety Director or the Division Safety Manager.

**6.4.2.** A minimum of one Safety Champion will be appointed for each UR Branch.

**6.4.3.** Responsible to the Branch Manager for the safety program within the organization and for the promotion and supervision of the Branch Manager's safety program.

**6.4.4.** Maintains current safety programs, policies, and Bulletins (PPB's) and Standard Operating Procedures (SOP)'s in an easily accessible location which includes electronically.

**6.4.5.** Investigate all incidents involving Branch personnel, equipment, or activities as directed by the Branch Manager. Prepare and maintain complete reports as required by company policies. Recommend and enter corrective actions to reduce or eliminate future incidents. Track corrective actions, near miss and injury reports to closure and ensure that solutions are effective.

**6.4.6.** Provide input on safety matters to the Branch Manager, Operations Manager, and supervisors.

**6.4.7.** Conducts monthly branch HSES inspections.

**6.4.8.** Assists or conducts with monthly safety training meetings and daily safety huddles

**6.4.9.** Serves as co-chair of the Branch Safety Committee. Ensures meetings are held monthly and minutes posted.

**6.5. Safety Committee Responsibilities**

**6.5.1.** The Safety Committee's responsibilities are outlined in HSES 4A.04, Safety Committee. The safety committee will meet at least monthly. Minutes will be taken and posted.

**6.6. Division/Region Safety Director Responsibilities**

6.6.1. Conducts periodic and HSES inspections, surveys, job hazard analyses designed to abate workplace hazards.

6.6.2. Conducts incident investigations to determine the causal factors to prevent recurrence. Prepares and submits required periodic reports to Senior Management.

6.6.3. Takes direction and supports the Corporate HSES department strategies and goals and objectives.

6.6.4. Coordinates with United Academy and other corporate and division departments to provide required training for occupational safety and health programs.

6.6.5. Gathers and analyzes safety and incident data. Maintains and reports trends on a periodic basis utilizing systems such as United Rentals Safety System (URSS), Fleetsuite, Peoplesoft, United Academy technological aids.

6.6.6. Keeps Senior Leadership informed of any concerns discovered while conducting safety and incident prevention programs. Submits reports of safety conditions, system status and recommended corrective actions as required.

**6.7. Division Safety Manager**

**6.7.1.** Assists with duties of the Division Safety Director referenced in 6.6.

**7. Records**

Record	Location	Retained for	Maintained By

## 8. Approvals

### *Approvals on File*

_____	_____	_____
Name	Position	Date
_____	_____	_____
Name	Position	Date
_____	_____	_____
Name	Position	Date
_____	_____	_____
Name	Position	Date

### Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
E	4/20/17	Candace Chudzik	NA	Complete rewrite to reflect new structure and duties for safety system
D	4/1/13	NA	NA	Revised to new format. Renumbered from SOP #2.
C	6/1/12	NA	NA	Renamed from Introduction to the IIPP to Roles and Responsibilities, Moved F01 & F02 to new SOP #56, moved access to medical records to new SOP #57, Access to Medical Records. Moved hazard identification and corrective action information to new SOP #58. Added Regional/District Management, RSD responsibilities.
B	12/1/11	NA	NA	Minor changes throughout, added scope, revised footer, removed details of disciplinary process, cleaned up all reference materials, added Employee Safety Training Record as F01, added F02 Employee Training Meeting Roster
A	12/1/10	NA	N/A	New format, minor content changes

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

---

**UNITED RENTALS, INC. INTERNAL USE ONLY**

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

## Hazard Identification & Control

### Table of Contents

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents.....	2
5.	Abbreviations, Acronyms, and Definitions .....	3
6.	Procedure.....	3
6.1.	Training Requirements .....	3
6.2.	Overview .....	3
6.3.	Summary of Hazard Identification Methodologies .....	3
6.3.1.	HSES 6A.02 Regulatory Inspections & Notices:.....	3
6.3.2.	HSES 3A.01: Safe Work Practices & Life Safety Rules: .....	3
6.3.3.	HSES 3A.03 Personal Protective Equipment: .....	3
6.3.4.	HSES 3F.01 Emergency Planning & Prevention: .....	3
6.3.5.	HSES 4A.04 Safety Committees: .....	3
6.3.6.	HSES 5A.02Planned Inspections & Housekeeping: .....	4
6.3.7.	HSES 3C.03 Industrial Hygiene: .....	4
6.3.8.	HSES 6A.01 Incident Investigation:.....	4
6.3.9.	HSES 2A.02 Job Hazard Analysis:.....	4
6.3.10.	HSES 3A.02 STOP Work Authority: .....	4
6.3.11.	HSES 4A.02 HSES Meeting Requirements:.....	4
6.3.12.	(Various SOPs) Pre-Use Inspections: .....	4
6.4.	Hazard Control Methods .....	4
6.4.2.	Elimination (including substitution): .....	4
6.4.3.	Engineering Controls: .....	5
6.4.4.	Administrative Controls:.....	5
6.4.5.	Personal Protective Equipment: .....	5
7.	Records.....	5
8.	Approvals .....	6

## 1. Objective

1.1. To outline the processes for identification of hazards and to define the corrective action process to ensure all reported issues are evaluated and corrected as necessary to reduce safety risks. The goal of this procedure is to list the various hazard identification processes and define the corrective action process for known issues.

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1.1. Location Manager

3.1.1.1. Ensure hazards are properly reported and corrective actions are tracked to closure.

### 3.1.2. Employees

3.1.2.1. Report identified hazards to your supervisor.

3.1.2.2. Correct hazards as they are discovered if you are authorized.

## 4. Reference Documents

Document Number	Document Description
<a href="#">HSES 1A.01</a>	Roles and Responsibilities
<a href="#">HSES 3A.02</a>	Job Hazard Analysis
<a href="#">HSES 3A.01</a>	Safe Work Practices & Life Safety Rules
<a href="#">HSES 3A.02</a>	STOP Work Authority
<a href="#">HSES 3A.03</a>	Personal Protective Equipment
<a href="#">HSES 3C.03</a>	Industrial Hygiene
<a href="#">HSES 3F.01</a>	Emergency Planning and Prevention
<a href="#">HSES 4A.02</a>	HSES Meeting Requirements
<a href="#">HSES 4A.04</a>	Safety Committees
<a href="#">HSES 5A.01</a>	Corrective Action Tracking
<a href="#">HSES 5A.02</a>	Planned Inspections and Housekeeping
<a href="#">HSES 6A.01</a>	Incident investigation
<a href="#">HSES 6A.02</a>	Regulatory Inspections & Notices



---

## 5. Abbreviations, Acronyms, and Definitions

JHA/FLHA	Job Hazard Assessment/Field Level Hazard Assessment
URSS	United Rentals Safety System
HSES	Health, Safety, Environmental and Sustainability

## 6. Procedure

### 6.1. Training Requirements

6.1.1. Every employee is required to complete the 360 E-Learning. .

### 6.2. Overview

6.2.1. Every employee is expected to continually evaluate their work area and ensure precautions are taken to avoid hazards being created. If a hazard is identified by the employee, they should use their Stop Work Authority and correct the hazard, if authorized and report it to appropriate person. This SOP further defines the process if the hazard cannot be solved by the individual employee, is beyond the authority of the employee to correct, or the employee is unsure of how to correct the hazard.

### 6.3. Summary of Hazard Identification Methodologies

#### 6.3.1. HSES 6A.02 Regulatory Inspections & Notices:

6.3.1.1. If a regulatory agency conducts an inspection of United Rentals, Inc. this process shall be followed. Any corrective actions identified shall be tracked using HSES 5A.01, Corrective Action Tracking.

#### 6.3.2. HSES 3A.01 Safe Work Practices & Life Safety Rules:

6.3.2.1. If an employee complaint involves an HSE matter that needs to be tracked as deemed necessary by the Safety Champion, Safety Committee or the Branch Management, HSES 5A.01, Corrective Action Tracking shall be followed.

#### 6.3.3. HSES 3A.03 Personal Protective Equipment:

6.3.3.1. The PPE Hazard Assessment may reveal additional PPE that is recommended/required. If new/revised PPE needs to be evaluated, HSES 5A.01, Corrective Action Tracking shall be followed as needed to track changes in PPE.

#### 6.3.4. HSES 3F.01 Emergency Planning & Prevention:

6.3.4.1. If an emergency (actual or drill) reveals deficiencies in the emergency plans, HSES 5A.01, Corrective Action Tracking shall be followed.

#### 6.3.5. HSES 4A.04 Safety Committees:

6.3.5.1. Safety Committee meeting minutes will be utilized, but HSES 5A.01, Corrective Action Tracking may be followed if desired by the committee.

**6.3.6. HSES 5A.02 Planned Inspections & Housekeeping:**

6.3.6.1. This is the primary hazard identification process. Corrective actions can be tracked to closure on the inspection forms or transferred to URSS, Corrective Actions for tracking.

**6.3.7. HSES 3C.03 Industrial Hygiene:**

6.3.7.1. If any IH monitoring reveals an over exposure, the corrective actions shall follow HSES 5A.01, Corrective Action Tracking.

**6.3.8. HSES 6A.01 Incident Investigation:**

6.3.8.1. HSES 6A.01 has its own corrective action process that shall be followed.

**6.3.9. HSES 2A.02 Job Hazard Analysis:**

6.3.9.1. Hazard identification and correction shall be documented on the JHA/FLHA forms as they are corrected. If issues cannot be resolved, then enter the corrective action into URSS.

**6.3.10. HSES 3A.02 STOP Work Authority:**

6.3.10.1. Any STOP Work Authority is reported electronically in URSS.

**6.3.11. HSES 4A.02 HSES Meeting Requirements:**

6.3.11.1. The meeting leader for any communication identified in HSES 4A.02, HSES Meeting Requirements may initiate a corrective action in URSS. if the question/suggestion cannot be resolved during the meeting.

**6.3.12. (Various SOPs) Pre-Use Inspections:**

6.3.12.1. Many SOPs exist to ensure equipment is functional and safe for use. Documented pre-use inspections have corrective action process built into the forms. If an issue is discovered during any pre-use inspection, it may be necessary to enter the corrective action in to URSS. The Safety Champion, Safety Committee or the Branch Management can initiate this process.

**6.4. Hazard Control Methods**

**6.4.1.** United Rentals, Inc. follows the hierarchy of control and every potential hazard should be assessed in this order:

**6.4.2. Elimination (including substitution):**

6.4.2.1. Elimination is the process of removing the hazard from the workplace. It is the most effective way to control a risk because the hazard is no longer present. It is the preferred way to control a hazard and should be used whenever possible. Examples include but are not limited to:

6.4.2.1.1. Refuse the work

6.4.2.1.2. Substitute a non-hazardous chemical for a hazardous chemical.

**6.4.3. Engineering Controls:**

6.4.3.1. Engineering controls are methods that are built into the design of a branch, equipment or process to minimize the hazard. Engineering controls are a very reliable way to control worker exposures as long as the controls are designed, used and maintained properly. Examples include but are not limited to:

6.4.3.1.1. Includes design or modifications to branches, equipment, ventilation systems, and processes that reduce the source of exposure.

**6.4.4. Administrative Controls:**

6.4.4.1. If elimination or engineering controls are impractical or unfeasible, administrative controls will be used.

6.4.4.2. Administrative controls limit workers' exposures by scheduling shorter work times in contaminant areas or by implementing other "rules". These control measures have many limitations because the hazard itself is not actually removed or reduced. Administrative controls are not generally favored because they can be difficult to implement, maintain and are not a reliable way to reduce exposure.

Examples include but are not limited to:

6.4.4.2.1. Training

6.4.4.2.2. Scheduling maintenance and other high exposure operations for times when few workers are present (such as evenings, weekends).

6.4.4.2.3. Using job-rotation schedules that limit the amount of time an individual worker is exposed to a substance.

6.4.4.2.4. Using a work-rest schedule that limits the length of time a worker is exposed to a hazard.

**6.4.5. Personal Protective Equipment:**

6.4.5.1. If engineering controls alone, or in combination with administrative controls, cannot adequately minimize the hazard, appropriate personal protective equipment shall be used in accordance with HSES 3A.03, Personal Protective Equipment. Examples include but are not limited to:

6.4.5.1.1. Fall Protection

6.4.5.1.2. Safety Glasses

6.4.5.1.3. Safety Boots

**7. Records**

Record	Location	Retained for	Maintained By



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Hazard Identification & Control

Reserved  
Doc number: HSES 2A.01  
Issue: C  
Date: 10/12/17  
Page: 6 of 6

## 8. Approvals

*Approvals on File*

_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date

## Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
C	10/12/17	Jack Watson	NA	Minor changes and eliminated management of change as new procedure has been adopted.
B	4/1/13	Streamline Team	NA	Revised to new format. Re-numbered from SOP #58. Moved Corrective Action section to HSES 5A.01
A	6/1/12	NA	N/A	Moved information from SOP #2 to create new SOP and refine corrective action process. Added SOP #58_F01 from SOP #31_F01

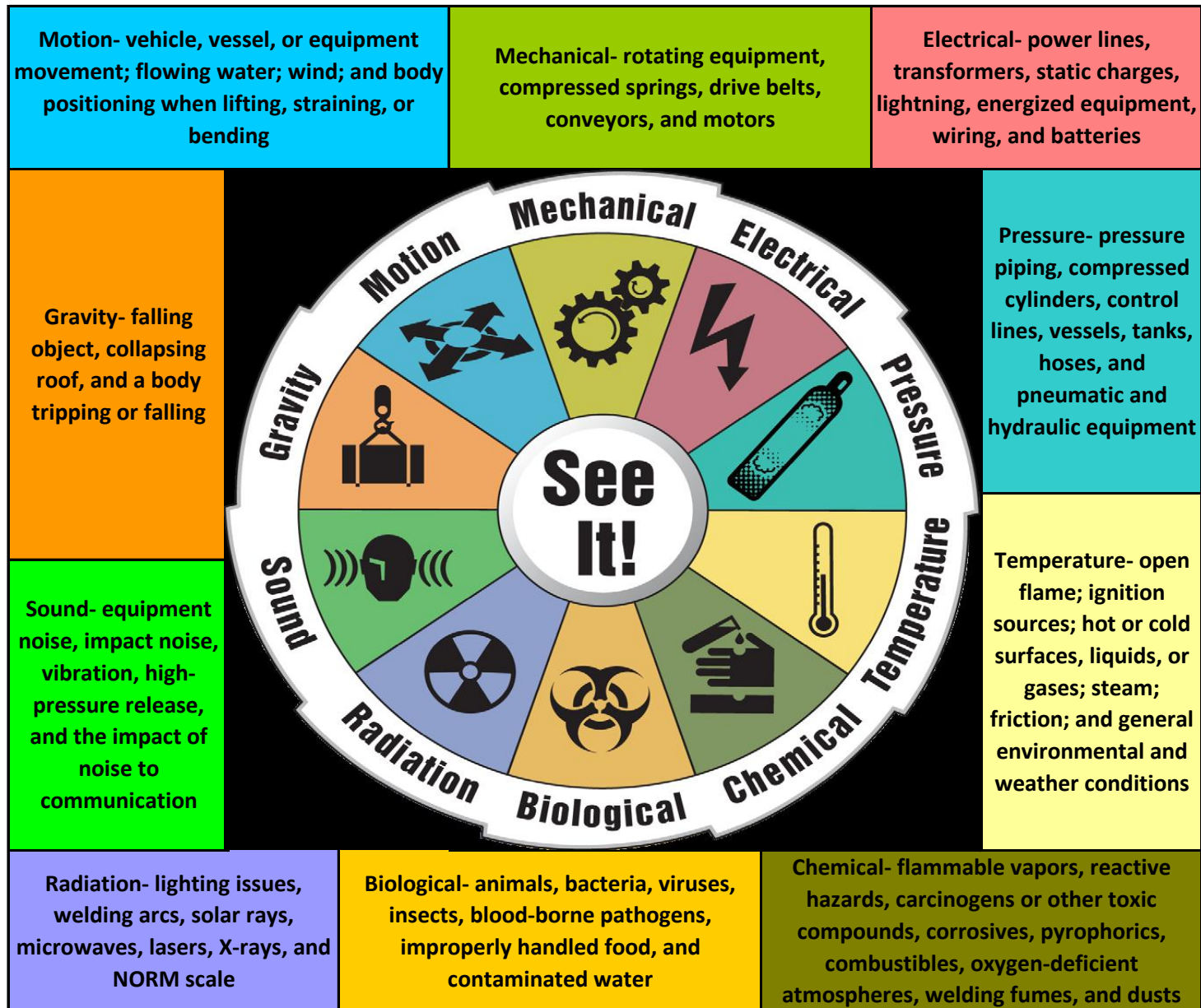
Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

## UNITED RENTALS, INC. INTERNAL USE ONLY

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

## Job Hazard Analysis (JHA) Preparation for Injury Free Work



# Job Hazard Analysis Worksheet (JHA)



Page 1 of \_\_\_\_\_

<b>Branch:</b>		<b>Process/Task:</b>	
Analysis By:		Date:	Task ID:
Reviewed By:		Frequency of Task:	
Approved By:		Severity:	Probability:

## Preparation For Injury Free Work

Required PPE:
---------------


(Keep a running track of the dates- describe who, what, when, where, how. Use additional forms if necessary.)

List of Basic Steps	Potential Hazards/Weight	Steps to Eliminate Hazards	Responsible Person
Step_____			
Step_____			
Step_____			
Step_____			
Step_____			
Step_____			
Step_____			

# Job Hazard Analysis Worksheet (JHA)

<b>Branch:</b>		<b>Process/Task:</b>	
Task ID:	Notes:		
Page ____ of ____			

List of Basic Steps	Potential Hazards/Weight	Steps to Eliminate Hazards	Responsible Person
Step____			
Step____			
Step____			
Step____			
Step____			
Step____			
Step____			
Step____			

	<b>Job Hazard Analysis Worksheet (JHA)</b>	Document Number
		Date

#### Potential Hazards

<input type="checkbox"/>	Chemical Exposure	<input type="checkbox"/>	Ignition Sources	<input type="checkbox"/>	Fire Explosion
<input type="checkbox"/>	Hazardous Atmosphere	<input type="checkbox"/>	Pressure	<input type="checkbox"/>	Spills
<input type="checkbox"/>	Confined Spaces	<input type="checkbox"/>	Lifting	<input type="checkbox"/>	Slips/Trips
<input type="checkbox"/>	Noise	<input type="checkbox"/>	Overhead	<input type="checkbox"/>	Chips/Slivers
<input type="checkbox"/>	Working/Walking Surface	<input type="checkbox"/>	Falls	<input type="checkbox"/>	Pinch Points
<input type="checkbox"/>	Environment Weather	<input type="checkbox"/>	Machinery	<input type="checkbox"/>	Hot Surface
<input type="checkbox"/>	Arc/Flash	<input type="checkbox"/>	Heat Stress	<input type="checkbox"/>	Simultaneous Operations
<input type="checkbox"/>	Open Hole	<input type="checkbox"/>	Drop Bar	<input type="checkbox"/>	Intrepid Gate
<input type="checkbox"/>	Chain Gate	<input type="checkbox"/>	Other: _____	<input type="checkbox"/>	Other: _____

#### Hazard Controls and Emergency / Contingency Plans

<input type="checkbox"/>	Personal Protective Equipment	<input type="checkbox"/>	Spill Control/ Contingency Plan
<input type="checkbox"/>	Physical Barriers	<input type="checkbox"/>	Fire Fighting ( Fire Watch )
<input type="checkbox"/>	Safety Equipment	<input type="checkbox"/>	Emergency Evacuation Procedures
<input type="checkbox"/>	Ignition Source Controls	<input type="checkbox"/>	Eye wash / Safety Shower Location
<input type="checkbox"/>	Lockout & Tag out	<input type="checkbox"/>	Fall Rescue Plan
<input type="checkbox"/>	Hot work Permit(s)	<input type="checkbox"/>	Material Safety Data Sheets (MSDS)
<input type="checkbox"/>	Fall Protection	<input type="checkbox"/>	Simultaneous Operations Communication
<input type="checkbox"/>	Flag/Bypass/Monitoring	<input type="checkbox"/>	Hot Work
<input type="checkbox"/>	Confined Space Plan and Permit(s)	<input type="checkbox"/>	Short Service Crewmember- Identify Worker
<input type="checkbox"/>	Other: _____	<input type="checkbox"/>	Other: _____

#### Safety Equipment Required

<input type="checkbox"/>	Hard Hat	<input type="checkbox"/>	Work Vest / Life Jacket	<input type="checkbox"/>	Respirator
<input type="checkbox"/>	Safety Glasses	<input type="checkbox"/>	Full Body Harness	<input type="checkbox"/>	Fire Extinguisher
<input type="checkbox"/>	Safety Shoe/ Boot	<input type="checkbox"/>	Double Lanyard With Shock Absorber	<input type="checkbox"/>	Fire Retardant Tarp
<input type="checkbox"/>	Face Shield	<input type="checkbox"/>	Life Line	<input type="checkbox"/>	Lockout/Tag out
<input type="checkbox"/>	Goggles	<input type="checkbox"/>	Safety Cable	<input type="checkbox"/>	Air Quality Monitor
<input type="checkbox"/>	Cotton Gloves	<input type="checkbox"/>	Safety Barricade	<input type="checkbox"/>	Hearing Protection
<input type="checkbox"/>	Leather Gloves	<input type="checkbox"/>	Caution/ Warning / Danger Tape	<input type="checkbox"/>	Oil Pads/Booms
<input type="checkbox"/>	Mechanic Gloves	<input type="checkbox"/>	Clothing	<input type="checkbox"/>	Containment Pans
<input type="checkbox"/>	Rubber/ Chemical Gloves	<input type="checkbox"/>	Work Permit	<input type="checkbox"/>	Proper tools
<input type="checkbox"/>	Chemical Apron	<input type="checkbox"/>	Other: _____	<input type="checkbox"/>	Floor Dry





## Hand Hazard Analysis

Hazard	Yes	No	N/A	How did you mitigate the hazard?
Have rings and loose clothes been removed?				
Are there any pinch points?				
Are guards and shields in place?				
Is equipment in good condition?				
Is equipment locked and tagged out before working on it?				
Have you selected the proper tools for the job?				
Are tools in good condition?				
Are tools designed to keep wrists straight to help avoid repetitive motion problems?				
Are you wearing the proper personnel protective equipment for the task?				
Do the gloves fit properly and are they rated for the task?				
Any other hazards to the hands?				
Are there any hot, cold, or corrosive hazards?				

Person(s) completing checklist: \_\_\_\_\_

**\*Note: Check list to be completed along with all personnel involved in the job.**



## Job Hazard Analysis Participant Sign in Sheet (JHA)

(Identify SSE worker by placing SSE near printed name and signature)

Document Number:

[illegible]

**Remember - Conduct a Hazard 360 before every task**

<div> <div>Field Level Hazard Assessment</div>  </div>		Personal Protective Equipment Available and Inspected for Use	Y	N	N/A		Tools Required	Y	N	N/A
		Safety Footwear					Bearing Separator			
Rental/Sale/Service Number:		Nomex Coveralls					Bolt/Rod Cutter			
Date/Time Work performed: ____/____/____ ____:____		FR Rain Gear					Chisel/Pick/Punch			
Worker(s) Name & Signature		Hand Protection					Clamp			
1.		Eye Protection					Code Scanner			
2.		Ear Protection					Diagnostic Speciality Tool			
3.		Respiratory Protection					Electronic Measuring Tool			
4.		Head Protection (Hardhat)					Feeler Gauge			
Supervisor/Reviewed Name & Signature		Harness					Filter Wrench			
		Lanyard					Fluid Transfer Pump			
Near Miss or Incidents to Report Y N		Reflective Clothing					Gauges And/Or Tachometer			
Emergency Assembly Area:		Reflective Pylons/Triangles					Gear Puller			
Emergency Meeting Point:		Other:					Grease Gun			
Location of Work Performed:		Documentation					Hacksaw			
Workplace free of Harassment Y N		Equipment Operator Training Valid					Hand Brush			
General Weather Conditions:		Equipment Tag(s)					Jack - Hydraulic			
Weather Temperature:		Condition Report					Jack - Stand			
Ground Conditions:		Preventative Maintenance Form					Knife and/or Scraper			
For each category, Ask the Questions:		Environmental					Measuring Tool			
1. Are the existing safeguards adequate		Spill Control/Containment					Power Brush			
		Waste Fluids Disposal					Pry Bar			
		Containers Required					Rivet Gun & Rivet			
2. If the answer is <b>NO</b> , Take Immediate Corrective Action.		Other:				Screwdriver				
		All Items Inspected & Ready					Shackles			
		Emergency Preparedness					Slings			
3. Assess and Document the <u>Task</u> , <u>Hazards</u> and <u>Elimination/Controls</u> on Reverse Side		Fire Extinguisher					Socket & Ratchet			
		WHMIS Labels/SDS Sheets					Striking Tool			
		Eye Wash					Threading Tool			
		Communication Devices					Tools - Electric			
		Accident Kit					Tools - Pneumatic			
		Bloodborne Pathogens Kit					Torque Wrench			
This form to be completed for all non-routine tasks or where required by regulation or customer requirements		Other:					Transport - Bungee Cords			
		All Items Inspected & Ready					Transport - Chains			
		Working Conditions					Transport - Chain Binders			
		Adequate Lighting					Transport - Ratchet Tie-Down Straps			
		Ground Obstructions/Holes					Wheel Chocks			
		Electrical Obstructions/Overhead					Wire Strippers & Cutter			
		Slip/Trip/Fall Hazards					Wrench(s)			
		Other Personnel in working area					Pliers			
		Dust/Mist/Fume/Exhaust					Other:			
		Set-Up Checked					Other:			
		Ground Stability for Equipment					All Items Inspected & Ready			

## Job Hazard Analysis

### Table of Contents

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents.....	2
5.	Abbreviations, Acronyms, and Definitions .....	3
6.	Procedure.....	3
6.1.	Training Requirements .....	3
6.2.	Safety and Environmental Precautions .....	3
6.3.	Types of JHA's .....	3
6.4.	Classification/Mitigation of Hazards.....	3
6.5.	JHA Technique - Formal .....	4
6.6.	Field Level Hazard Assessment (FLHA) - Informal .....	4
6.7.	JHA Technique – Hazard 360° .....	5
7.	Records.....	5
8.	Approvals .....	6
9.	Appendix A – Training Leader sheet for Job Hazard Analysis .....	7

## 1. Objective

1.1. To provide a method for identifying and managing hazards during any work activity. To ensure that all hazards are identified and appropriate steps taken to protect employees and customers.

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1.1. Location Managers

- 3.1.1.1. Ensure hazard analyzes are conducted as required.
- 3.1.1.2. Ensure employees are trained on hazard analysis techniques.
- 3.1.1.3. Review the workplace often and engage employees in hazard analysis conversations to ensure they are working safely
- 3.1.1.4. Employees
- 3.1.1.5. Ensure every task has a formal or informal hazard analysis conducted prior to beginning work.
- 3.1.1.6. Maintain the work envelope to ensure all hazards are controlled.

### 3.1.2. Regional Safety Directors

- 3.1.2.1. Conduct or review formal Job Hazard Analysis as required.
- 3.1.2.2. Share best practices across the corporation as needed.

## 4. Reference Documents

Document Number	Document Description
<a href="#">HSES 2A.02_F01</a>	Job Hazard Analysis Form
<a href="#">HSES 2A.02_F02</a>	Field Level Hazard Analysis

---

## 5. Abbreviations, Acronyms, and Definitions

Field Level Hazard Assessment (FLHA)	A formal hazard assessment that employees can complete for each job they perform.
Hazard 360°	Informal analysis of hazards that must be conducted prior to each job task and continually monitoring conditions and hazards of the work area.
HSES	Health, Safety, Environmental and Sustainability
Job Hazard Analysis (JHA)	A hazard identification process that defines work tasks, hazards associated with those tasks and safeguards for each hazard identified. Normally completed with assistance or direction from Safety Department.

## 6. Procedure

### 6.1. Training Requirements

6.1.1. If training is required: Training will be in accordance with HSES 4A.01 Competency Assurance Program.

6.1.2. See Appendix A for Leader Sheet on Job Hazard Analysis.

### 6.2. Safety and Environmental Precautions

6.2.1. All employees are expected to do an ongoing assessment of the risk associated with each task. The depth of assessment will be determined by the type of task.

### 6.3. Types of JHA's

6.3.1. There are 3 levels of Job Hazard Analysis used within United Rentals:

6.3.1.1. A [formal JHA](#) will be conducted when the job is complex (routine and non-routine), the risk for injury is high, changes to operations, new processes, or employees are new to the task. It will also be conducted where required based on customer site requirements or regulations.

6.3.1.2. A [Field Level Hazard Assessment](#) (FLHA) may be conducted for operation conducted inside or outside of the branch. Some customers may require this level of JHA be conducted prior to working on customer property or where required by regulation.

6.3.1.3. An [informal JHA](#) (worksite inspection) must be conducted prior to each task. This includes a visual inspection of the work area and equipment, discussion of safe work procedures, etc. This is also known as a Hazard 360°.

### 6.4. Classification/Mitigation of Hazards

6.4.1. Hazards are to be classified/prioritized and addressed based on the risk associated with the task – including a risk analysis matrix outlining severity and probability.

**6.4.2.** Hazards identified during the JHA process must be addressed before work may continue. This will be documented on the JHA/FLHA form. If the hazard may have ramifications for other locations, HSES shall be contacted so that the hazard mitigation/program implementation may be shared.

## **6.5. JHA Technique - Formal**

**6.5.1.** Formal JHA – employees/contractors must be actively involved in the hazard identification process. This type review is normally conducted by the Regional Safety Director or they need to approve them at a minimum. Hazards identified will be reviewed with all employees concerned. Formal JHA will include the following steps:

- 6.5.1.1. Determine the scope of the job.
- 6.5.1.2. Break the job down by tasks.
- 6.5.1.3. List the tasks in the left hand column of the JHA form.
- 6.5.1.4. Identify the hazards involved in each task.
- 6.5.1.5. List these in the center column of the JHA form.
- 6.5.1.6. Determine appropriate controls for each hazard.
- 6.5.1.7. Eliminate the hazards where possible.
- 6.5.1.8. Use physical barrier or distance to limit accessibility to the hazard.
- 6.5.1.9. Use proper Personal Protective Equipment.
- 6.5.1.10. If none of these techniques will fully control the hazard, STOP WORK and contact supervisor.
- 6.5.1.11. Review the JHA with all personnel involved.

**6.5.2.** If conditions affecting safety change during the job, the work must be stopped and the JHA reviewed/updated.

**6.5.3.** HSES 2A.02\_F01 – Job Hazard Analysis Form is a template that could be used to document the Hazard Assessment. Alternative, equivalent formats may be utilized as long as similar information is collected and analyzed.

## **6.6. Field Level Hazard Assessment (FLHA) - Informal**

**6.6.1.** A FLHA is a process that can be used to document work occurring in the field or shop to ensure safe work practices are identified.

**6.6.2.** If a formal JHA is completed, a FLHA is not required.

**6.6.3.** Each branch can determine when a FLHA is to be conducted.

**6.6.4.** Some customers may require a FLHA be conducted when working on their site(s)

**6.6.5.** The following steps shall be taken:

- 6.6.5.1. Front Page

6.6.5.1.1. Complete the available information on the left side of the form.

6.6.5.1.2. Identify what PPE is required for the task in the center column

6.6.5.1.3. Identify the tool(s) that will be utilized to complete the work

6.6.5.2. Back Page

6.6.5.2.1. Check the Job Description

6.6.5.2.2. List specific tasks to be completed

6.6.5.2.3. List the hazards associated with each task

6.6.5.2.4. List the controls that are in place to eliminate or reduce the hazards

## **6.7. JHA Technique – Hazard 360°**

**6.7.1.** For each job task that does not meet the requirements of a formal JHA or informal FLHA, a Hazard 360° worksite inspection shall take place.

**6.7.2.** Every task requires employees to conduct a Hazard 360° prior to starting a task and continually monitoring their work area to identify changes that could introduce hazards to their work area.

**6.7.3.** Training on Hazard 360° (eLearning Course ID SAFETY00071) is mandatory for all employees and can be found in the eLearning catalog.

**6.7.4.** This process is typically used when delivering/picking up or servicing equipment at a customer location. Hazards to review include, but are not limited to:

6.7.4.1. Drop offs

6.7.4.2. Holes

6.7.4.3. Bumps

6.7.4.4. Overhead obstructions

6.7.4.5. Ground obstructions

6.7.4.6. Electrical hazards

6.7.4.7. Weather, etc.

**6.7.5.** Hazard 360° does not require documentation, but if desired, could utilize the FLHA form.

## **7. Records**

Record	Location	Retained for	Maintained By
Job Hazard Analysis – JHA	Branch/Database	2 years	RSD
FLHA	Branch	1 year	Branch





LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Job Hazard Analysis

Reserved  
Doc number: HSES 2A.02  
Issue: C  
Date: 4/1/03  
Page: 6 of 7

## 8. Approvals

*Approvals on File*

_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date

## Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
C	4/1/13	Streamline Team	NA	Revised to new format. Re-numbered from SOP #29.
B	11/1/11	NA	NA	Added scope, revised footer, corrected form link, added FLHA form, changed name from JHA to JHA
A	12/1/10	NA	N/A	New format, minor content changes

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

## UNITED RENTALS, INC. INTERNAL USE ONLY

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Job Hazard Analysis

Reserved  
Doc number: HSES 2A.02  
Issue: C  
Date: 4/1/03  
Page: 7 of 7

---

## 9. Appendix A – Training Leader sheet for Job Hazard Analysis

Training on Hazard 360° (eLearning Course ID SAFETY00071) is mandatory for all employees and can be found in the eLearning catalog.

Field Level Hazard Awareness training is available from the Safety Training Department.

Employees will be trained in the hazard identification process including the use and care of proper PPE. Training will consist of a review of this procedure and all existing/pertinent JHA's, as well as the Certification of Hazard Assessment form outlining proper PPE per task.

<b>Energy Control Procedure No. 3</b> <b>Cord and Plug Equipment</b> (grinders, welders, ceiling fans, ventilation fans, wall mounted heating & air conditioning units, etc.)	
Scope	Use this procedure for all servicing and / or maintenance operations performed on any electrical equipment energized by a cord and plug.
Types & Magnitude of Hazardous Energy	<ul style="list-style-type: none"> <li>• <u>Mechanical Energy</u>: Moving parts have potential to cause injury by direct contact to a body part or by causing tools or other materials to be thrown.</li> <li>• <u>Electrical Energy</u>: Direct or indirect contact with electrical energy has potential to result in electrical shock injury.</li> </ul>
Energy Control Techniques	<ol style="list-style-type: none"> <li>1. Notify Affected Employees that the equipment is being locked and tagged for maintenance.</li> <li>2. Shut the equipment down by unplugging it from the electrical receptacle.</li> <li>3. Place a locking device on the end of the cord's plug.</li> <li>4. Dissipate or block any secondary energy. Use plug and cap kit, as necessary. (e.g., pneumatic, hydraulic, capacitors, etc.)</li> <li>5. Legibly complete a tag and attach it to the plug locking device.</li> <li>6. Verify that the equipment has been de-energized by attempting to start and / or operate it. After isolation is verified, return the machine or equipment to the off position.</li> </ol> <p>Note: If an Authorized Employee is called away from the process while applying lockout and tagout, a thorough recheck of the steps previously taken is mandatory upon returning. This will prevent inadvertently missing important steps to de-energize a machine or piece of equipment.</p>
Reactivating for Testing	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools from the area</li> <li>2. Ensure all persons are clear of the potential danger area</li> <li>3. Install any guards or covers which were removed during work activities</li> <li>4. Remove the locking devices and perform the testing</li> <li>5. Avoid any contact with moving parts or energy sources while testing</li> <li>6. Upon completion of testing, reattach the locking devices prior to continuing</li> </ol>
Returning to normal operations	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools and other items from the area</li> <li>2. Ensure everyone is clear of the area</li> <li>3. Install any guards or covers which were removed</li> <li>4. Remove the lockout and tagout devices. Coordinate removal with others if a group procedure is used</li> <li>5. Re-energize the equipment to normal operating condition</li> <li>6. Notify all Affected and Authorized Employees that the energy control procedure is complete</li> </ol>

<b>Energy Control Procedure No. 6</b> <b>Powered Industrial Trucks</b>	
Scope	Use this procedure for all servicing and / or maintenance operations performed on forklifts.
Types & Magnitude of Hazardous Energy	<ul style="list-style-type: none"> <li>• <u>Gravitational Energy</u>: Gravity can cause the vehicle to roll or the forks to drop.</li> <li>• <u>Mechanical Energy</u>: Moving parts of the forklift have potential to cause injury by direct contact to a body part or by causing tools or other materials to be thrown.</li> <li>• <u>Thermal Energy</u>: Contact with hot engine and exhaust parts has potential to result in burns. Contact with LPG will result in the potential for cold burns.</li> <li>• <u>Electrical Energy</u>: Short circuits have potential to cause electric shock. Arcing from a short circuit has potential to cause burns or fire.</li> </ul>
Energy Control Techniques	<ol style="list-style-type: none"> <li>1. Notify Affected Employees that the equipment is being locked and tagged for maintenance.</li> <li>2. Shut engine off, place gearshift in neutral, and apply parking brakes.</li> <li>3. Disengage the LPG bottle from the fuel line.</li> <li>4. Remove ignition key and maintain exclusive control over the key to isolate the vehicle from its energy source (unless group lockout applies).</li> <li>5. Legibly complete a tag and attach it to the steering wheel as close to the ignition cylinder and starter button as possible.</li> <li>6. Take these actions to control the vehicle's stored energy: <ul style="list-style-type: none"> <li>– Place wheel chocks in front and behind at least one non-drive wheel.</li> <li>– Engage the battery shut off switch and apply the lock securing it into the off position. If that is not an option, detach negative cable at the battery terminal and lock it into an enclosure.</li> <li>– Lower forks to their lowest position.</li> <li>– Let engine and attached parts cool.</li> </ul> </li> <li>7. Verify that vehicle has been isolated from all energy sources by attempting to operate it.</li> <li>8. After isolation is verified, return the machine or equipment to the off position.</li> </ol> <p>Note: If an Authorized Employee is called away from the process while applying lockout and tagout, a thorough recheck of the steps previously taken is mandatory upon returning. This will prevent inadvertently missing important steps to de-energize a machine or piece of equipment.</p>
Reactivating for Testing	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools from the area</li> <li>2. Ensure all persons are clear of the potential danger area</li> <li>3. Install any guards or covers which were removed during work activities</li> </ol>

	<ol style="list-style-type: none"> <li>4. Remove the locking devices and perform the testing</li> <li>5. Avoid any contact with moving parts or energy sources while testing</li> <li>6. Upon completion of testing reattach the locking devices prior to continuing</li> </ol>
Returning to normal operations	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools and other items from the area</li> <li>2. Ensure everyone is clear of the area</li> <li>3. Install any guards or covers which were removed</li> <li>4. Remove the lockout and tagout devices. Coordinate removal with others if a group procedure is used</li> <li>5. Re-energize the equipment to normal operating condition</li> <li>6. Notify all Affected and Authorized Employees that the energy control procedure is complete</li> </ol>

## Safe Work Practices and Life Safety Rules

### Table of Contents

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents.....	2
5.	Abbreviations, Acronyms, and Definitions .....	3
6.	Procedure.....	3
6.1.	Training Requirements .....	3
6.2.	Life Safety Rules .....	3
6.3.	Safe Work Practices.....	3
6.4.	Substance Abuse .....	5
6.5.	Tobacco Use .....	5
6.6.	Fitness for Duty .....	5
6.7.	Employee Safety Concerns/Suggestions .....	6
7.	Records.....	6
8.	Approvals .....	6
9.	Appendix A for Leader Sheet on Safe Work Practices and Life Safety Rules .....	7

## 1. Objective

1.1. Safe work practices are established to help both employees and management to operate safely. Utilize the IIPP for reference and for a more comprehensive explanation of the requirements.

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1. Location Management

3.1.1. Management will take necessary internal and external measures to ensure the personal safety of employees, visitors, and guests.

3.1.2. Management is responsible for enforcement of all applicable regulations and policies.

### 3.2. Employees

3.2.1. Employees will take necessary internal and external measures to ensure the personal safety of employees, visitors, and guests.

3.2.2. Employees will be trained and qualified before completing any assigned tasks, or will ask for the training.

## 4. Reference Documents

Document Number	Document Description
<a href="#">HSES 1A.01</a>	Roles and Responsibilities
<a href="#">HSES 3A.06</a>	Material Handling and Ergonomics
<a href="#">HSES 4A.02</a>	HSES Meeting Requirements
<a href="#">HSES 6A.01</a>	Incident Investigation
<a href="#">PPB 2E.004</a>	Tobacco Use in the Workplace
<a href="#">PPB 2E.007</a>	Driving on Company Business
<a href="#">PPB 3H.001</a>	Driver Qualifications
<a href="#">PPB 3H.003</a>	Daily Vehicle Inspection Report
<a href="#">PPB 3J.009-A</a>	Non-DOT Drugs and Alcohol: US
<a href="#">PPB 3J.009-B</a>	Drugs and Alcohol: U.S.CDL Drivers
<a href="#">PPB 3J.026</a>	Employee Rules and Regulations

Document Number	Document Description
<a href="#">PPB 3J.054</a>	Drug & Alcohol Policy: Canada
<a href="#">PPB 3H 010</a>	Driver Qualification Canada
<a href="#">HSES 4A 01</a>	Competency Assurance

## 5. Abbreviations, Acronyms, and Definitions

HSES	Health, Safety, Environmental and Sustainability
------	--

## 6. Procedure

### 6.1. Training Requirements

**6.1.1.** If training is required: Training will be in accordance with HSES 4A.01, Competency Assurance Program.

**6.1.2.** See Appendix A for Leader Sheet on Safe Work Practices and Life Safety Rules.

### 6.2. Life Safety Rules

**6.2.1.** Always perform a Hazard 360° assessment and correct any unsafe behaviors or conditions

**6.2.2.** Always wear appropriate PPE for every job task.

**6.2.3.** Always wear personal fall protection when operating Aerial Equipment.

**6.2.4.** Recognize and report all incident including Near Miss and Stop Work immediately.

**6.2.5.** Always operate vehicles and equipment safely.

**6.2.6.** Always use hands-free devices while operating vehicles.

**6.2.7.** If the vehicle or equipment is equipped with seat belts they must be worn.

**6.2.8.** Complete the steps to LOTO where required.

**6.2.9.** Protect the environment and the communities we live in.

**6.2.10.** You see it, you own it!

### 6.3. Safe Work Practices

**6.3.1.** Report all unsafe conditions or practices to the location manager.

**6.3.2.** Read and obey all warning signs.

**6.3.3.** Immediately notify the location manager if fatigue, illness, medication or other causes may impair your ability to work safely.

**6.3.4.** If you do not know the safe way to perform a job or if in doubt, STOP Work. Obtain directions or clarification from the Location Manager or Supervisor.



**6.3.5.** Worksite (branch and job) inspections shall be conducted on a frequent and regular basis by a competent person.

**6.3.6.** Through available training each employee will be instructed in the recognition and avoidance of unsafe conditions.

**6.3.7.** Only employees who are qualified by training and/or experience except where certification is required shall operate any equipment.

**6.3.8.** Horseplay in the work environment is prohibited.

**6.3.9.** No physical lifting over 45 pounds. Routine lifting tasks for materials over this weight will require handling devices (such as dollies or lifting tables) or a two-person lift. Anything non-routine will require review with the location manager. See HSES 3A.06, Material Handling and Ergonomics for details

**6.3.10.** Never distract another employee using equipment or in a position that could produce an incident if startled.

**6.3.11.** Work areas shall be kept in a clean and orderly manner.

**6.3.12.** Dispose of all waste materials in the appropriate receptacle.

**6.3.13.** Never block any exit, aisle, fire extinguisher, eye wash / shower station, first aid cabinet, or electrical panel with materials or equipment.

**6.3.14.** Workplace chemical information for exposure and first aid is available in the SDS binders and/or through the online Intranet application.

**6.3.15.** Weapons are prohibited per PPB 3J.026 Employee Rules and Regulations

**6.3.16.** Ensure beacon lights are installed on company vehicles where required by governmental regulations.

**6.3.17.** A backup alarm is mandatory on any vehicle or seated equipment with an obstructed view to the rear.

**6.3.18.** When securing equipment for transport, employees shall use chain and/or straps with ratchet binders. Cheater bars are not authorized under any circumstances.

**6.3.19.** Bracelets, rings and/or watches are not allowed at any time while operating or working on equipment.

6.3.19.1. Any other jewelry capable of entanglement shall be removed before using or working on equipment; including but not limited to: earrings, necklaces, piercings

**6.3.20.** When working around equipment, long hair shall be pulled back and secured to prevent entanglement.

**6.3.21.** Loose clothing where there is a danger of entanglement is prohibited around moving/rotating equipment.

**6.3.22.** Headphones, ear pieces, cell phones are prohibited in the shop, yard and while operating equipment.

**6.3.23.** Remove keys from all vehicles and yard equipment nightly.

**6.3.24.** All vehicles and equipment shall be inspected and defects corrected prior to use. As per PPB 2E.007 Driving on Company Business, PPB 3H.001 Driver Qualifications, PPB 3H 010, Driver Qualification Canada and PPB 3H.003, Daily Vehicle Inspection Report.

**6.3.25.** Operators shall not leave unattended or in a suspended position any machine or any part of a machine unless the machine or part has been (a) immobilized and secured against accidental movements; or (b) enclosed by a safeguard to prevent access by any other worker to the machine or part.

**6.3.26.** When lifting or supporting equipment or vehicles, employees shall ensure that any type of lifting platform has proper capacity ratings for the work being performed.

**6.3.27.** Passengers shall not be permitted on machinery or equipment, except where it is equipped to accommodate passengers safely.

**6.3.28.** Always maintain a three point contact when entering and exiting vehicles, machinery, and equipment.

**6.3.29.** Machinery and equipment shall not be operated unless all guards and safety mechanisms or applicable rpm governors are in place.

**6.3.30.** Tampering with safeguards is strictly prohibited.

**6.3.31.** The speed limit for all United Rentals yards shall be 5 mph/8 kph.

#### **6.4. Substance Abuse**

**6.4.1.** Company policy (PPB 3J.009 A&B) prohibits substance abuse.

#### **6.5. Tobacco Use**

**6.5.1.** The use of tobacco use is allowed in designated areas per PPB 2E.004

#### **6.6. Fitness for Duty**

**6.6.1.** Employees are responsible for ensuring they are physically and mentally fit to perform their job functions safely.

**6.6.2.** Employees must take responsibility for their own safety, and must not report to work in a condition as to endanger the safety of their fellow workers or customers.

**6.6.3.** Supervisors must monitor employee's activities and behaviors to determine if employee should be removed from the work site.

**6.6.4.** Employees must report workplace use of ALL medications (prescription or over the counter) they are taking that may affect their ability to perform any function of their position.

**6.6.5.** United Rentals provides for an Employee Assistance Program in both the US & Canada. Utilize the Human Resources website for country specific guidelines.

**6.6.6.** Employees must be trained on the Fitness for Duty requirements.

## 6.7. Employee Safety Concerns/Suggestions

**6.7.1.** Employees have multiple avenues of communication if they identify a safety or environmental concern or have a suggestion, they include:

6.7.1.1. The Safety Champion, safety committee or location manager

6.7.1.2. The Division or Region Safety Director or Division Safety Manager, District Manager

6.7.1.3. The HSES Department at [safety@ur.com](mailto:safety@ur.com)

6.7.1.4. For confidential reporting, there is a third party company available through Global Compliance Services at 1-877-435-7874 or [help-uri@ur.com](mailto:help-uri@ur.com)

## 7. Records

Record	Location	Retained for	Maintained By

## 8. Approvals

*Approvals on File*

Name	Position	Date
Name	Position	Date
Name	Position	Date
Name	Position	Date

## Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
E	4/24/2017	Candace Chudzik	NA	Minor Changes
D	4/1/2012	Streamline Team	NA	Revised to new format. Re-numbered from SOP #4. Created Life Safety Rules
C	6/1/2012	NA	BA	Added reference to new SOP #56; corrected

### UNITED RENTALS, INC. INTERNAL USE ONLY

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Safe Work Practices and Life Safety Rules

Reserved  
Doc number: HSES 3A.01  
Issue: E  
Date: 4/24/17  
Page: 7 of 7

Issue	Date	Revised By	Ref. #	Description of Revision
				Fitness for Duty #3 to be in better alignment with HR Policy.
B	12/1/2011	NA	NA	Minor changes throughout document, added scope, revised footer, moved dock requirements to SOP #33
A	12/1/2010	NA	N/A	New format, minor content changes

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

## 9. Appendix A for Leader Sheet on Safe Work Practices and Life Safety Rules

Review and Discuss Life Safety Rules

Review relevant Safe Work Practices

Review Fitness for Duty requirements

Review methods for reporting HSES concerns

**UNITED RENTALS, INC. INTERNAL USE ONLY**

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

# Stop Work Authority

Every employee and contractor has the authority necessary to **STOP** a job!

To properly recognize and control workplace hazards, it is important that every employee not only feels a part of the process, but also feels comfortable taking action. This has been previously communicated; however, we want to ensure that all employees understand they have this authority. The Stop Work Authority Program offers a formal program that further empowers employees to take action.

Why should you exercise this authority?

- YOU have an obligation to take action when you observe unnecessary risks
- YOU have an obligation to actively contribute to the safe environment in your workplace

When should you exercise this authority?

- When there is a lack of clear and established work procedures that creates a risk
- When you are concerned that proper controls have not been put in place to control the risk

Steps to follow:

- STOP** – initiate the stop work order in a positive and non-threatening manner. If you are on a customer jobsite and not personally familiar with the individual, introduce yourself and use the phrase: “I am using my stop work authority because ...”
- NOTIFY** – the affected personnel as well as the supervisor of the stop work order.
- CORRECT** – the unsafe condition, act, error, omission or lack of understanding prior to resuming work. If the issue cannot be immediately resolved, work should be suspended until a proper resolution is achieved.
- RESUME** – work can resume after all concerns and issues have been adequately addressed

Positive feedback should be given to all affected employees regarding resolution of the stop work issue.

All “stop work” interventions exercised under the authority of this program shall be documented as a near miss utilizing existing reporting protocols. Fields have been added to the online near miss reporting system that include a check-box for STOP Work Authority. Be sure to spell-out “STOP WORK” at the beginning of the incident description. Under no circumstances should retribution be directed at any person(s) who issue a Stop Work Order in good faith and follow the procedures as outlined in this program.

## STOP Work Authority

### Table of Contents

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents.....	2
5.	Abbreviations, Acronyms, and Definitions .....	2
6.	Procedure.....	3
6.1.	Training Requirements .....	3
6.2.	Overview .....	3
6.3.	Protocol Instructions.....	3
6.4.	Reporting.....	4
7.	Records.....	4
8.	Approvals .....	5
9.	Appendix A – Leader Sheet for Stop Work Authority .....	6

## 1. Objective

1.1. The objective of this program is to prevent incidents and injuries by granting full authority to stop the progress of a job due to known or potential risks.

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1.1. Location Manager

3.1.1.1. Responsible to create a culture where Stop Work Authority is exercised freely, honor requests for 'stop work', work to resolve issues before operations resume, recognize proactive participation and ensure that all "stop work" actions are properly reported with required follow-up completed.

### 3.1.2. Employees

3.1.2.1. Responsible to initiate a "stop work" intervention when warranted, support the intervention of others and properly report all "stop work" actions.

### 3.1.3. HSES

3.1.3.1. In support of operations, is responsible for monitoring compliance with the requirements of this program, maintenance of associated documents, processes and training materials, identification of trends, and sharing of Lessons Learned.

## 4. Reference Documents

Document Number	Document Description
<a href="#">HSES 3A.02_R01</a>	STOP Work Authority Employee Handout
<a href="#">HSES 4A.03</a>	New Hire Orientation
<a href="#">HSES 6A.01</a>	Incident Investigation

## 5. Abbreviations, Acronyms, and Definitions

HSES	Health, Safety, Environmental and Sustainability
SWA	STOP Work Authority

## 6. Procedure

### 6.1. Training Requirements

**6.1.1.** If training is required: Training will be in accordance with HSES 4A.01 Competency Assurance Program.

**6.1.2.** See Appendix A for Leader Sheet on STOP Work Authority.

### 6.2. Overview

**6.2.1.** This procedure is necessary to create a safety culture where the ability to stop the work activity is freely exercised. A workforce that clearly understands how to initiate, receive, and respond to a 'stop work' intervention is more likely to participate.

**6.2.2.** In common terms; when a job or project runs into a situation where the safety of the individual or team is at risk, or there is no clearly defined procedure, the job must be halted and no work will resume until all stop work issues and concerns have been adequately addressed.

**6.2.3.** All employees and its contractors have the authority and obligation to stop any task or operation where concerns or questions regarding the control of HSE risk exist.

**6.2.4.** Any form of retribution or intimidation directed at any individual or company for exercising their authority as outlined in this program will not be tolerated.

### 6.3. Protocol Instructions

**6.3.1.** Though situations may differ, the following steps should be the framework for all stop work interventions:

6.3.1.1. When a person identifies a perceived unsafe condition, act, error, omission, or lack of understanding that could result in an undesirable event, a "stop work" intervention shall be immediately initiated with the person(s) potentially at risk.

6.3.1.2. "Stop work" interventions should be initiated in a positive and non-threatening manner by briefly introducing yourself and starting a conversation with the phrase "I am using my stop work authority because I have a concern for your safety...". Using this phrase will clarify the user's intent and set expectations as detailed in this procedure.

6.3.1.3. Notify all affected personnel and supervision of the stop work issue. If necessary, stop associated work activities, remove person(s) from the area, stabilize the situation and make the area as safe as possible.

6.3.1.4. All parties shall discuss the safe manner in which to proceed.

**6.3.2.** If the stop work issue cannot be resolved immediately, work shall be suspended until proper resolution is achieved. When opinions differ regarding the validity of the stop work issue or adequacy of the resolution actions, the location's "person in charge" shall make the final determination. Details regarding differences of opinion and resolution actions should be included in the documented report.



**6.3.3.** Under no circumstances should retribution be directed at any person(s) who exercise in good faith their stop work authority as detailed in this program.

#### **6.4. Reporting**

**6.4.1.** All “stop work” interventions exercised under the authority of this program shall be documented as a near miss utilizing the URSS (United Rentals Safety System). The near miss report shall be designated as a Stop Work Authority in the dropdown list.

6.4.1.1. “STOP WORK” reports shall be reviewed by line supervision in order to:

6.4.1.2. Determine quality of interventions and follow-up

6.4.1.3. Facilitate sharing of “Lessons Learned”

6.4.1.4. Feed recognition opportunities

#### **7. Records**

Record	Location	Retained for	Maintained By
STOP Work (Near Miss Report)	Online	3 years	system



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: STOP Work Authority

Reserved  
Doc number: HSES 3A.02  
Issue: E  
Date: April 26, 2017  
Page: 5 of 6

## 8. Approvals

*Approvals on File*

_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date

## Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
E	4/26/17	Candace Chudzik	NA	Updated links
D	11/13/15	PPP Team	NA	Minor edits added URSS for reporting
C	4/1/13	Streamline Team	NA	Revised to new format. Re-numbered from SOP #54.
B	12/1/11	NA	NA	Added scope, revised footer, minor changes throughout
A	3/1/11	NA	N/A	New Program

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

## UNITED RENTALS, INC. INTERNAL USE ONLY

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: STOP Work Authority

Reserved

Doc number: HSES 3A.02

Issue: E

Date: April 26, 2017

Page: 6 of 6

---

## 9. Appendix A – Leader Sheet for Stop Work Authority

Training for SWA is included in the new employee process.

Review the handout for SWA which can be found at HSES 3A.02\_R01\_Issue\_A, Stop Work Authority Employee Handout.

Discuss - STOP Work Authority - establishes the 'authority and obligation' of any individual to suspend a single work task or group operation when the control of HSES risk is not clearly established or understood.

Discuss giving and receiving feedback. In general, the SWA process involves a STOP, notify, correct, and resume approach for the resolution of a perceived unsafe condition, act, error, omission, or lack of understanding that could result in an undesirable event.

Examples include a UR employee performing a task at a customer jobsite with other contractors that is not perceived as safe or properly coordinated. Another example would be perceived risk while performing new component changes where the procedures are not written or reviewed prior to work commencement.

Discuss specific SWAs at your location.



## Certification of Hazard Assessment Aerial and General Rental

Location \_\_\_\_\_

Personal Protective Equipment Required (Review HSES 3A.03 - PPE)	Specific Locations / Activities Evaluated																				
	Yard	Shop	Wash bay power washing	Welding Area	Grinder	Battery Charging	Propane Handling	Fueling Equip	Aerial Equip	Ride-on Equip	Equip. Maint	Jobsite	Service and Delivery Trucks	Solvent Tank	Paint Booth	Sandblast Area	Tire Changer	Batch Plant	Pump Trucks	Sewer snake/ pump handling	Sewer snake/ pump disinfect
Hard Hat												X	X						X		
Safety Glasses	X	X	X		X			X	X	X	X	X	X				X		X	X	
Safety Goggles						X	X							X				X			X
Welding Goggles				X																	
Welding Helmet				X																	
Sandblast Hood																X					
Full Face Resp/SAR <sup>1</sup>															X						
Dust Mask																					
Face Shield			X		X	X	X							X							X
Ear Plugs																					
Ear Muffs																					
Welding Apron				X																	
Welding Jacket				X																	
Rubber Apron						X								X							X
Plastic Apron																				X	
High Visible Reflective Clothing <sup>2</sup>	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Nitrile Gloves <sup>3</sup>																				X	
Neoprene Gloves (unsupported)							X														
Welding Gloves				X																	
Leather Gloves												X	X			X	X	X	X		
Mechanic Gloves <sup>4</sup>					X						X		X						X		
Rubber Gloves						X								X					X		
Full Body Harness													X								
Lanyard													X								
Seat Belt													X						X		
Safety Boots	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Welding Curtain				X																	
Ice Cleats <sup>5</sup>	X		X									X									
Other _____																					

1 - Contact Risk Management if you have a Paint Booth

2 - Reflective Clothing shall be worn in above assigned areas, meet jobsites requirements, and in accordance to all state and federal regulations

3 - Nitrile Gloves must be "case hardened" and at least 11 ml thickness such as Ansel Edmont Sol-vex or North LA 132G

4 - Gloves must be cut and abrasion resistant based on task being performed

5 - Ice cleats must be used when ice and/or snow accumulate at the yard and/or jobsite. Pre-plan to ensure availability to eliminate potential slips, trips, and falls while working in ice and/or snow packed areas.

This is to certify that a job hazard assessment has been performed in the above listed locations for the purpose of determining hazards which necessitate the use of personal protective equipment.

This hazard assessment outlines the personal protective equipment that is mandatory at this United Rentals facility.

Failure to comply with the mandatory personal protective equipment requirements may result in verbal or written disciplinary procedures, up to and including termination.


When using a chemical substance, refer to the MSDS sheet for any additional PPE requirements.

In addition, United Rentals Employee's must wear all required Personal Protective Equipment in compliance with our customers and jobsites.

Date of Assessment: \_\_\_\_\_ Completed By: \_\_\_\_\_

(Up Dated)

(Name and Title)

		<b>Certification Of Hazard Assessment - Trench Safety</b>										Branch: _____		
<b>Personal Protective Equipment Required</b> (Review HSES 3A.03 - PPE)		<b>Specific Locations/Activities Evaluated</b>												
		Yard/Maint Bays Wash bay / Power Washing Welding Gas System - Cutting Bench or Portable Grinder Propane Tank Handling Service Tank Filling Trucks Cleaning Pipe Plugs Parts Washer Jobsite Install Advisor Filling / Emptying Hand Pumps												
Hard Hat		X	X			X	X	X	X	X	X	X	X	X
Safety Glasses		X	X	X	X	X	X		X		X	X	X	X
Safety Goggles								X		X				
Face Shield			X			X		X		X				
Gas System Face Shield					X									
Welding Face Shield				X										
Welding Leather Apron/ Chaps/ Boot Covers/Jacket				X	X									
Rubber Apron										X				
High Visible Reflective Clothing		X	X			X	X	X	X	X	X	X	X	X
Welding Gloves				X	X									
Gloves <sup>2</sup> - See Glove Selection Chart		X	X			X	X		X			X	X	
Rubber/PVC/Neoprene Gloves								X		X	X			X
Safety Boots with Metatarsal Protection <sup>1</sup>		Equipment Associates, Drivers, Welders and anyone performing duties normally associated with these titles.												
Safety Toe Boots		X	X	X	X	X	X	X	X	X	X	X	X	X
Welding Curtains						As Needed								
Hearing Protection (Ear Plugs or Muffs)		As needed/desired based on duration of task and personal preference												
Ice Cleats <sup>3</sup>		X										X		
Other _____														

1 - Temporary metatarsal guards on safety toe boots acceptable for temporary employees and other job titles performing duties normally associated with EAs, Drivers, Welders.

2 - Review and Follow HSES\_3A\_03\_R02 - Glove Selection Chart.

3 - Ice cleats must be used when ice and/or snow accumulate at the yard and/or jobsite. Pre-plan to ensure availability to eliminate potential slips, trips, and falls while working in ice and/or snow packed areas.

This is to certify that a job hazard assessment has been performed in the above listed locations for the purpose of determining hazards which necessitate the use of personal protective equipment.


This hazard assessment outlines the personal protective equipment that is mandatory at this United Rentals facility.

Failure to comply with the mandatory personal protective equipment requirements may result in verbal or written disciplinary procedures, up to and including termination.

When using a chemical substance, refer to the MSDS sheet for any additional PPE requirements.

In addition, United Rentals Employee's must wear all required Personal Protective Equipment in compliance with our customers and jobsites.

**Date of Assessment:** \_\_\_\_\_ **Completed By:** \_\_\_\_\_  
 (Up Dated) (Name and Title)

		Certification Of Hazard Assessment - Power-HVAC															Location _____			
<b>Personal Protective Equipment Required</b> <small>(Review HSES 3A.03 - PPE)</small>	Specific Locations/Activities Evaluated																			
	Yard	Maintenance Bays	Wash bay / area power washing	Welding Area	Gas System - Cutting	Brazing	Bench or Portable Grinder	Propane Handling/Fueling	Fueling Equip	Ride-on Equip	Handling of Power Cable	Power Equip. Maint	Generator Testing / Load Bank	Chiller /A/C Test Area	Cable Repair Area	Refrigerant Area	Service and Delivery Trucks	Loading and Unloading of Trucks	Servicing Tops of Generators and Chillers	Jobsite
Hard Hat																	X			X
Safety Glasses	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
Safety Goggles								X												
Gas System Faceshield					X	X														
Welding Face Shield				X																
Face Shield			X				X	X								X				
Ear Muffs- Double													X							
Ear Muffs- Regular														X						
Welding Leather Apron/ Chaps/ Boot Covers				X	X															
Welding Leather Jacket				X	X	X														
Rubber Apron																				
High Visible Reflective Clothing <sup>1</sup>	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X
Nitrile Gloves <sup>2</sup>																	X			
Neoprene Gloves (unsupported)								X								X				
Welding Gloves				X	X	X														
Dorsal Kevlar/ Leather Gloves							X			X		X			X		X	X	X	X
Rubber Gloves																				
Linemen's Gloves <sup>3</sup>													X	X			X			
Seat Belt										X							X			
Safety Boots	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Welding Curtain				X	X															
Full Body Harness																			X	
Overhead Life Line																			X	
Lanyard																			X	
Ice Cleats <sup>4</sup>	X																			X
Other _____																				

1 - Reflective Clothing shall be worn in above assigned areas, meet jobsites requirements, and in accordance to all state and federal regulations

2 - Nitrile Gloves must be "case hardened" and at least 11 ml thickness such as Ansel Edmont Sol-vex or North LA 132G.

3 - Lineman's gloves shall be worn when the possibility of electric shock is possible.

4 - Ice cleats must be used when ice and/or snow accumulate at the yard and/or jobsite. Pre-plan to ensure availability to eliminate potential slips, trips, and falls while working in

This is to certify that a job hazard assessment has been performed in the above listed locations for the purpose of determining hazards which necessitate the use of personal protective e

This hazard assessment outlines the personal protective equipment that is mandatory at this United Rentals facility.

Failure to comply with the mandatory personal protective equipment requirements may result in verbal or written disciplinary procedures, up to and including termination.

When using a chemical substance, refer to the MSDS sheet for any additional PPE requirements.

In addition, United Rentals Employee's must wear all required Personal Protective Equipment in compliance with our customers and jobsites.

**Date of Assessment:** \_\_\_\_\_ **Completed By:** \_\_\_\_\_

(Up Dated)

(Name and Title)

# **Fall Protection Inspection Form**

Damaged, defective or expired PPE shall not be used and replaced immediately. If any part of the equipment does not pass the inspection it must be removed from service.

Employee Name: \_\_\_\_\_ Employee Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## **Fall Protection – Full Body Harness and Lanyard**


Inspection Requirements	Harness	Lanyard
Proper fit	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Cuts	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Burns	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Chemical Contamination	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Excessive Abrasions	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Broken Stitching	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
UV Degradation	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Excessive wear	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Hardware cracks	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Hardware deformation	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Hardware discoloration	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Hardware improper functioning	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Dents	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Corrosion	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Length of lanyard according to label	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Self locking snap hooks	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Stored in clean, dry location, not exposed to sunlight	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Equipment meets or exceeds CSA/ANSI standards	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
All Manufacturers labels are present and legible	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

### **Reminder: A visual inspection of PPE is to be conducted before use each day**

When referring to proper fit, harness is snug but not too tight to restrict full range of motion. D-ring in center of back between shoulder blades, Chest strap 6 inches below collar bone and prevents shoulder straps from coming off body, no twists or knots, leg straps snug enough to allow hand to slide through flat but not allow hand to slide through when making a fist. No objects in pockets.

When loading and unloading or driving up and down ramps in a boom lift, employee shall use travel restraint consisting of a full body harness and a 4 foot lanyard.

When at a height on a working/walking surface where a fall of 6ft or greater could occur fall protection must be used.

<div><div></div><div><b>United Rentals®</b></div></div> <div>PUMP SOLUTIONS™</div>	<b>Certification of Hazard Assessment - Pump Solutions</b>																Location: _____										
Personal Protective Equipment Required <small>(Review HSES 3A.03-PPE)</small>	Specific Locations/Activities Evaluated																										
	Yard	Shop	Maintenance Bays	Wash bay/area power washing	Welders	Welding/Cutting/Brazing	Assemblers/Fabricators	Bench or Portable Grinder	Plasma Cutting	Fueling Equip.	Ride-on Equip.	Aerial Equip.	Equip. Maintenance	Service and Delivery Trucks	Loading and Unloading of Trucks	Handling Solvents/Chemicals Filling / Emptying Hand Pumps	Mezzanine Loft	Battery Changing	Chainsaw/Chopsaw	Material Handling	First-Aid	Paint Booth	Sandblast Area	Sewer bypass/pump disinfect	Jobsites/Tasks as required	See Notes	Other
Hard Hat																											
Safety Glasses	x	x	x	x			x	x		x	x	x	x	x	x		x	x	x	x	x			x	x	7	
Safety Goggles																x			x						x		
Face Shield				x		x		x	x															x	x		
Safety Goggle/Face Shield Combo				x				x								x			x						x		
Safety Glasses/Foam Seal																						x			x		
Welding Hood					x	x																	x		x		
Welding/Cutting/Brazing Glasses or Goggles with Filter Lens Shade					x	x			x																x	9	
Ear Plugs (If 85dB or Greater)		x			x		x	x	x				x										x		x		
Double Hearing Protection (If 95dB or Greater)																									x	8	
Welding Leather covering Neck, Chest to Knees and Arms <small>(Review HSES 3B.04)</small>					x	x			x																x		
Welding Curtains					x	x			x																x		
Metatarsal Boots or Guards					x		x																		x	10	
Sandblast Hood																							x		x		
Chaps																			x						x		
Respirator																						x	x		x	12	
Nuisance Dust Mask																									x		
High Visible Reflective Clothing	x	x	x	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	2	
Welding Gloves					x	x			x																x		
Leather Gloves																							x		x		
Mechanic Gloves																									x		
Linemen's Gloves																									x		
Blue Latex/Nitrile Gloves																					x				x		
See Glove Chart as applicable	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x		
Fall Protection (Full Body Harness and 4ft Lanyard)												x													x		
Fall Protection (Full Body Harness and 4ft Lanyard with Overhead Life Line)																	x								x		
Safety Boots	x	x	x		x	x	x	x	x	x	x	x	x	x	x		x	x	x	x		x	x		x		
Steel Toe Rubber Boots/Rubber Apron/Rubber Gloves				x												x								x			
Ice Cleats																									x	5	
Flame Retardant Clothing						x																			*	11	
Tyvek with Hood and Booties																						x			x		
Specialty Tools/Equipment Operating Manuals PPE as required		x	x																						x		
Other _____																											
Other _____																											
Other _____																											
Other _____																											

- \* - **Notes**
- 1 - Contact your RSD if you have a Paint Booth.
- 2 - Reflective Clothing shall be worn in above assigned areas, meet jobsites requirements, and in accordance to all state and federal regulations.
- 3 - Nitrile Gloves must be "case hardened" and at least 11ml thickness such as Ansel Edmont Sol-vex or North LA 132G.
- 4 - Lineman's gloves shall be worn when the possibility of electric shock is possible.
- 5 - Ice cleats must be used when ice and/or snow accumulate at the yard and/or jobsite. Pre-plan to ensure availability to eliminate potential slips, trips, and falls while working in ice and/or snow packed areas.
- 6 - Gloves must be cut and abrasion resistant based on task being performed.
- 7 - Branches must provide "over-the-glass" Safety Glasses for prescription lens wearers/visitors without sideshields and impact lenses.
- 8 - Double Hearing Protection: Ear plugs plus ear muffs required if noise exceeds 95dB.
- 9 - For Plasma Cutting, use Shade 5 Filter Lens (Refer to Table E-2 in HSES 3B.04)
- 10 - Met Guards required effective Jan. 1, 2015
- 11 - FRC: Client Required or Process Safety Covered Areas
- 12 - Medical Certificaiton, Fit Test and Training are required prior to Respirator use.

This is to certify that a job hazard assessment has been performed in the above listed locations for the purpose of determining hazards which necessitate the use of Personal Protective Equipment.

This hazard assessment outlines the Personal Protective Equipment that is mandatory at this United Rentals facility.

Failure to comply with the mandatory Personal Protective Equipment requirements may result in verbal or written disciplinary procedures, up to and including termination.

When using a chemical substance, refer to the MSDS sheet for any additional PPE requirements.

In addition, United Rentals Employees must wear all required Personal Protective Equipment in compliance with our customers and jobsites.

This list is not all inclusive. Personnel should upgrade PPE as required by procedure, operating manual, risk level, comfort level or any other instance warranted.

Notify your RSD of task changes, PPE requirements, upgrades, etc.

\*Branch Managers: Review and post no later than January 30th of each year.

Date of Assessment: \_\_\_\_\_ Completed By: \_\_\_\_\_  
(Name and Title)



## Personal Protective Equipment (including Fall, Hearing and Respiratory Protection)

### Table of Contents

#### Table of Contents

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents .....	3
5.	Abbreviations, Acronyms, and Definitions .....	4
6.	Procedure.....	5
6.1.	Training Requirements .....	5
6.2.	Safety and Environmental Precautions.....	5
6.3.	Hazard Assessment .....	5
6.4.	Fall Protection .....	5
6.5.	Head Protection.....	8
6.6.	Foot Protection .....	8
6.7.	Leg Protection .....	8
6.8.	Body Protection .....	9
6.9.	Hand Protection.....	9
6.10.	Eye and Face Protection .....	9
6.11.	Hearing Protection.....	9
6.12.	Respiratory Protection .....	10
6.14.	Reimbursement Procedure.....	13
7.	Records.....	13
8.	Approvals .....	14
9.	Appendix A – Fall Protection Training .....	16
10.	Appendix B - Respiratory Training.....	17
11.	Appendix C - Hand Protection Training .....	18
12.	Appendix D – Hearing Protection Training .....	18

## 1. Objective

1.1. The first line of defense for workforce safety is elimination, substitution then engineering practices and administrative controls which are provided to eliminate a potential hazard. Unfortunately, all hazards cannot be removed and alternate means must be incorporated. Therefore, personal protective equipment (PPE) provides an additional level of safety to an employee(s) in these circumstances

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, off-site, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1. Location Manager, Management

3.1.1. The Location Manager must certify annually, by signing the appropriate PPE Hazard Assessment, that a workplace hazard assessment has been performed. If new equipment or processes are introduced to the workplace that are not addressed by the hazard assessment, contact the Division/Region Safety Director or Division Safety Manager for directions.

3.1.2. The Location Manager will assess the workplace and determine if hazards that require the use of personal protective equipment are present or are likely to be present.

3.1.3. The Location Manager will ensure that employees use properly fitted personal protective equipment, suitable for protection against all hazards.

3.1.4. The Location Manager will establish a process for the replacement of damaged or worn out PPE and communicate the process to all employees.

### 3.2. Safety Champion and Safety Committee

3.2.1. Assist the Location Manager where directed or required.

### 3.3. Employees

3.3.1. Follow all personal protection equipment requirements, including inspection and wearing of all appropriate PPE in accordance with the certification of hazard assessment.

### 3.4. Division/Region Safety Directors

3.4.1. The administrator of the respiratory program shall be the Division/Region Safety Director who has full responsibility for its development and coordination. The Onsite Supervisor shall be the local program administrator and have responsibility for onsite implementation.

---

#### 4. Reference Documents

Document Number	Document Description
ANSI Z87.10	Personal Eye and Face Protection Devices
ANSI Z89.1	Safety Requirements for Industrial Head Protection
ASTM 2413-5	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
OHS Code Part 9	Fall Protection
OHS Code Part 16	Noise Exposure
OHS Code Part 18	Personal Protective Equipment
CAN/CSA Z1007	Control of Exposure to Noise
CAN/CSA Z94	Respiratory Protection
CAN/CSA Z96	High-Visibility Safety Apparel
CAN/CSA Z195	Protective Footwear
CAN/CSA Z259	Fall Protection
HSES 3A.03_F01	Certificate of Hazard Assessment Aerial and General Rental
<a href="#">HSES 3A.03_F02</a>	Certificate of Hazard Assessment Trench Safety
<a href="#">HSES 3A.03_F03</a>	Certificate of Hazard Assessment Power-HVAC
<a href="#">HSES 3A.03_F04</a>	Fall Protection Inspection Form
<a href="#">HSES 3A.03_F05</a>	Certificate of Hazard Assessment Pump Solutions
<a href="#">HSES 3A.03_R01</a>	Fall Protection Plan Template
<a href="#">HSES 3A.03_R02</a>	Glove Selection Chart
<a href="#">HSES 3B.04</a>	Welding, Cutting & Hot Work
<a href="#">HSES 3C.03</a>	Industrial Hygiene
<a href="#">PPB 3J.013</a>	Personal Protective Equipment (Purchasing)
OSHA 1910 Subpart I	Personal Protective Equipment
<a href="#">OSHA 1910.134 App D</a>	Information for Employees Using Respirators When not Required Under Standard
OHS Code 2009 Part 9	Fall Protection
OHS Code 2009 Part 16	Noise Exposure
OHS Code 2009 Part 18	Personal Protective Equipment

---

## 5. Abbreviations, Acronyms, and Definitions

Action Level	An 8-hour time-weighted average of 85 decibels measured on the A-scale, slow response (US) 85 dBA Lex for Canada.
Air Purifying Respirator	A respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.
Anchor point	A secure point of attachment for lifelines, lanyards, or deceleration devices that must be capable of supporting at least 3,600 pounds (1,633 kilograms) per person.
Dust mask (Filtering Face Piece)	A flexible pad held over the nose and mouth by elastic or rubber straps to protect against dusts encountered during construction or cleaning activities, such as dusts from drywall, concrete, wood, fiberglass, silica (from ceramic or glass production), or sweeping.
Escape-only respirator	A respirator intended to be used only for emergency exit.
Fall arrest system	A system that, when connected to a fixed support, is capable of arresting an occupant's fall. A fall arrest system shall consist of a full body harness and a personal self-retracting lifeline (SRL) and the designed anchor point.
Fire Retardant Clothing (FRC)	Clothing designed and tested to self-extinguish upon the removal of an ignition source. FRC is tested and rated to defined hazards.
Full body harness	A system that is secured about the occupant in a manner that will distribute the arrest / restraint forces over the thighs, waist, chest, and shoulders while connected to an arresting or restraining device.
IDLH	Immediate Danger to Life and Health.
Lanyard	A flexible strap that has a connector at each end for connecting the body harness and an anchorage point.
MSHA	Mine Safety and Health Administration.
NIOSH	National Institutes of Occupational Safety and Health.
Personal Protective Equipment	Protective clothing, helmets, goggles, or other garment designed to protect the wearer's body from injury by blunt impacts, electrical hazards, heat, chemicals, and infection etc.
PPE Hazard Assessment	The process of matching protective devices to provide protection against head, foot, eye, hand, face, and body part hazards existing in the occupational process.
Qualified Person	One who, by possession of a recognized degree, certificate, or professional standing, or by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.
Self-retracting lifeline/lanyard (SRL)	A deceleration device containing a drum-wound line capable of slow extraction from, or retraction onto the drum, under slight tension during normal employee movement, and which after onset of a fall, automatically locks the drum and arrests the fall or unwanted ejection from a work-basket.

## 6. Procedure

### 6.1. Training Requirements

**6.1.1.** If training is required: Training will be in accordance with HSES 4A.01, Competency Assurance Program.

**6.1.2.** See Appendix A for Leader Sheets on the different types of Personal Protective Equipment.

### 6.2. Safety and Environmental Precautions

**6.2.1.** Employees shall ensure that PPE is used and maintained in a sanitary and reliable condition.

**6.2.2.** All required PPE shall be provided to employees at no cost.

**6.2.3.** Defective or damaged personal protective equipment shall not be used. Worn out, damaged, or defective PPE will be returned to the Location Manager for inspection, repair or replacement. Items lost, stolen, damaged from abuse or worn out significantly ahead of projected life cycle will be replaced.

**6.2.4.** Employees working off-site shall wear the personal protective equipment required at that job site or what is required by United Rentals, whichever provides the highest level of protection. Off-site employees will be provided with any personal protective equipment necessary to protect them from the exposures they will incur while on a job site.

### 6.3. Hazard Assessment

**6.3.1.** A PPE Hazard Assessment Form is developed by the HSES Department to provide requirements for employees to follow. It is comprised of a listing of the tasks performed at the company and the proper PPE for employees to wear when performing the task.

**6.3.2.** The branch must annually review the PPE hazard assessment form by conducting a survey of branch hazards and required PPE.

**6.3.3.** The form must be posted in various areas of a branch as a reminder to the employees of the requirement.

**6.3.4.** The PPE Hazard Assessment provides for specific requirements for each Region or Business Unit.

**6.3.5.** Employee owned PPE is not allowed.

### 6.4. Fall Protection

**6.4.1.** United Rentals requires fall protection be utilized while operating any aerial equipment regardless of height.

**Note:** When renting aerial equipment, we recommend using a self-retracting lanyard (SRL). The reason for the recommendation is the likelihood that aerial lifts will be used at heights of less than 15 feet, and fall arrest (shock absorbing) lanyards may not prevent someone from hitting the ground.

We will continue to stock and sell shock absorbing lanyards for those customers

---

using this equipment in a variety of other situations that require fall arrest protection.

**6.4.2.** When a fall protection system (or any other fall-related personal protective equipment) is required, the following guidelines must be followed:

6.4.2.1. A full body harness will be properly worn and secured at all times by the occupant

6.4.2.2. All lanyards will have double locking snap-hooks

6.4.2.3. Each occupant will inspect the equipment prior to each use See 6.4.7

**6.4.3.** Aerial Lifts, including boom lifts and scissor lifts (ABL/AWP): All employees must properly wear a full body harness and SRL while occupying (operating) any type of boom lift (towable, manual, AWP, self-propelled or truck mounted boom). The SRL must be approved for use in an aerial lift.

6.4.3.1. Use of a static lanyard may be considered if it is a customer requirement. Contact must be made with the Division or Region Safety Director or Division Safety Manager if a SRL can't be used.

**6.4.4.** Slab style scissors shall not be occupied and driven up ramps, loading docks or trailer dovetails. Use the appropriate trailer mounted winch or a forklift, utilizing the scissor lift's fork lift pockets for loading slab style scissor lifts.

**6.4.5.** Rough terrain scissors will be occupied and driven up ramps, loading docks and trailer dovetails.

**6.4.6.** When at a height on a working/walking surface where a fall of 6 feet or greater could occur, fall protection must be used.

**6.4.7.** Fall Protection Plan

6.4.7.1. If a fall protection plan is required for a specified job or unique fall hazards (mezzanine exposures, roof work, etc.), the plan must be prepared by a qualified person and approved by the Division/Region Safety Director or the Division Safety Manager. HSES 3A.03\_R01, Fall Protection Plan Template, may be used to document the specific fall protection plan and is a requirement in some Provinces.

**6.4.8.** Inspection criteria

6.4.8.1. Follow manufacturers' recommendations for inspection of SRL/Harness/Lanyard.

6.4.8.2. Prior to being worn, an inspection of the full body harness and lanyard/SRL will include the following:

6.4.8.2.1. Verification that there are no torn, frayed or broken fibers, pulled stitches, frayed edges, kinks, knots, burns, etc. anywhere on the harness or lanyard

6.4.8.2.2. Examination of the D-Ring for excessive wear

6.4.8.2.3. Examination of buckles and snap-hooks for cracks, deformation, etc.

6.4.8.2.4. Examination of carabineer for excessive wear, distortion, or lock

---

operation.

6.4.8.2.5. Inspection of shock absorber, if present, for any signs of damage

6.4.8.2.6. Verification that the harness has not been altered in any way

6.4.8.2.7. Examination of harness fit after donned. Harness must fit snug around employees chest and lower extremities

6.4.8.2.8. All rivets should be tight, not deformed

6.4.8.2.9. Examination of tongue and straps for excessive wear

6.4.8.2.10. Examination of the SRL in accordance with manufacturer's requirements

6.4.8.3. HSES 3A.03\_F04, Fall Protection Inspection Form can be used as desired to document the inspection if required by region or regulatory requirement.

#### **6.4.9. Storage and Maintenance of Fall Arrest Protective Equipment**

6.4.9.1. Follow manufacturers' recommendations for storage and maintenance

6.4.9.2. Equipment should be hung in a dry place so that it retains its shape and is not subject to damage from tools and equipment

6.4.9.3. Clean with a mild, non-abrasive soap and hang to dry

6.4.9.4. Never store the equipment near chemicals, heat, moisture or sunlight

6.4.9.5. Fall protection equipment is for personal use only – and is not to be used for equipment lifting, hoisting, towing, etc.

6.4.9.6. Repairs and alterations are to be made by the manufacturer only

6.4.9.7. Once exposed to a fall, remove the equipment from service immediately, mark unusable, and throw away the equipment

6.4.9.8. All harnesses and lanyards involved in a fall, soiled with oils, show frays in the material or similar damage during inspection shall be thrown away or given back to the distributor/manufacturer for potential discounted replacement.

#### **6.4.10. Rescue Procedures**

6.4.10.1. Each location that utilizes a fall arrest system must determine appropriate rescue procedures in the event of an arrested fall.

6.4.10.2. Typically, the options will be:

6.4.10.2.1. Call in local emergency services for assistance

6.4.10.2.2. Co-workers assistance in low level and travel scenarios

6.4.10.2.3. Utilize the ground controls on the body of the lift

6.4.10.2.4. Utilize an additional aerial lift to rescue the employee

6.4.10.3. In the event of a fall, the On-site Supervisor must be notified immediately to coordinate rescue services. The Division/Region Safety Director or Division Safety Manager must then be notified. After the rescue, the employee must receive a medical



---

evaluation.

6.4.10.4. An incident investigation must be conducted in accordance with HSES 6A.01, Incident Investigation.

## **6.5. Head Protection**

**6.5.1.** Hard hats used by employees must meet ANSI Z89.1 or CAN/CSA-Z94.1-05 standards.

6.5.1.1. Employees must wear head protection when working in areas where the PPE hazard assessment has indicated the need for head protection.

6.5.1.2. Employees must wear head protection on job sites that require head protection.

**6.5.2.** Anyone visiting an area where head protection is required shall have the necessary head protection required by this procedure.

## **6.6. Foot Protection**

**6.6.1.** Employees must wear protective footwear that meets the ASTM 2413-05 or CSA Standard Z195-02 standards while in the shop, in the yard or delivering equipment/materials. In addition, safety boots shall be:

6.6.1.1. 6 inch high-top, lace up (no slip on allowed, see 6.6.1.6)

6.6.1.2. Safety Toe (Steel or Tech)

6.6.1.3. Puncture Resistant

6.6.1.4. Non-slip or grip soles

6.6.1.5. Leather or other manufacturer approved material

6.6.1.6. Safety toe dress shoes or loafers are allowed for all personnel covered by PPB 2E.005, Dress Code Policy, unless the employee will be climbing on, servicing or operating equipment.

**6.6.2.** Employees working off-site shall wear the foot protection required at that site, if the requirement is more restrictive than company policy.

**6.6.3.** Anyone visiting an area where foot protection is required shall have the necessary foot protection required by this procedure.

## **6.7. Leg Protection**

**6.7.1.** Employees must wear equipment to protect the legs ("chaps") where there is danger of severe injury to the legs, such as when using or demonstrating use of a chain saw, chop saw, etc.

**6.7.2.** Leg protection must meet ASTM F 1897-98 performance standards as well as ASTM F 1414-92A Testing Standards. Such chaps will list the Underwriters Laboratory certification on the label.



## **6.8. Body Protection**

**6.8.1.** Employees must wear body protection made of flame resistant material when working in process safety facilities. Such garments consist of client approved Nomex and similar products.

**6.8.2.** Employees must wear body protection made of leather covering the neck/chest to the knees and the arms prior to conducting hot work such as welding or gas cutting. Protection from the radiant energy produced by the arc when welding will burn exposed skin.

**6.8.3.** Employees must wear a reflective vest or approved reflective clothing while in the shop, yard and delivering equipment/materials.

## **6.9. Hand Protection**

**6.9.1.** Gloves are required at all times when handling, loading/unloading and maintaining equipment, supplies and hazardous materials and equipment,

**6.9.2.** When a task is being performed that requires a high degree of dexterity, fingerless (framers) gloves may be worn for that particular part of the task. When that part of task is completed, fingerless gloves must come off and be replaced with gloves specified for the task.

**6.9.3.** Gloves are task specific - reference the Gloves Selection Chart at HSES 3A.03\_R02 for the appropriate type.

## **6.10. Eye and Face Protection**

**6.10.1.** Eye protection must be worn by everyone while in the shop or yard.

**6.10.2.** Employees shall use the proper eye protection for the task as outlined in the Certification of Hazard Assessment.

**6.10.3.** Use of non-prescription safety glasses or goggles by employees is restricted to eye protection devices meeting ANSI Z87/CSA Z94 standards. Only clear or Indoor/Outdoor type lenses are allowed in the shop.

**6.10.4.** Prescription safety glasses must have attached side shields.

**6.10.5.** Transition lenses may be worn as per PPB 3J.013. However, these lenses must properly transition to clear when indoors and must not pose a safety hazard when working indoors.

**6.10.6.** At any welding apparatus, eye protection is to be worn. This also applies to employees who are working around it and are exposed to the arc. Welding screens/curtains are required for all welding operations, filter lenses are required. See HSES 3B.04, Welding, Cutting & Hot Work for specific requirements.

## **6.11. Hearing Protection**

**6.11.1.** Where it is established that the action level is met or exceeded, the following hearing conservation program shall be implemented. The Location Manager will conduct and coordinate implementation.

- 
- 6.11.1.1. Noise monitoring will be conducted to determine employee exposure levels. This monitoring will be coordinated by the HSES Department and in compliance with HSES 3C.03, Industrial Hygiene.
- 6.11.1.2. Audiometric testing program will be implemented as required. This includes baseline (within 6 months of the first exposure) and annual testing thereafter. The baseline audiogram shall be preceded by a minimum of 14 hours without exposure to workplace noise.
- 6.11.1.2.1. Accurate records of all employee exposure and audiometric measurements shall be maintained as required by the regulation in the employee's files.
- 6.11.1.3. At least annually after obtaining the baseline audiogram, each employee included in the program will undergo a new audiogram. Each employee's annual audiogram shall be compared to their baseline audiogram to determine if a standard threshold shift has occurred.
- 6.11.1.4. If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift:
- 6.11.1.4.1. The employee shall be informed of this fact in writing, within 21 days of the determination.
- 6.11.1.4.2. Hearing protection shall be re-evaluated and/or refitted and, if necessary, a medical evaluation may be required.
- 6.11.1.4.3. OSHA recordability will be determined and recorded if determined to be work related.
- 6.11.1.5. Hearing protectors shall be worn by any employee who is exposed to an 8-hour time-weighted average of 85 decibels/85 dBA Lex or greater. In addition, employees will wear hearing protection when working around loud equipment as described in Safety and Environmental Precautions and in posted areas while working at a customer facility.
- 6.11.1.6. Employees will be able to choose from various types of hearing protection such as various types of plugs or ear muffs. Hearing protection must be appropriate to reduce employee exposure to acceptable levels (less than 90 dBA over an 8 hour time weighted average/less than 85 for employees who have experienced a threshold shift).
- 6.11.2.** A good rule of thumb is the "three foot rule" - if it is not possible to have a conversation at normal voice level from three feet apart due to ambient noise, hearing protection is recommended.
- 6.11.3.** Employees working off-site shall wear hearing protection required at that site, if the requirement is more restrictive than company policy.

## **6.12. Respiratory Protection**

- 6.12.1.** All employees who are exposed to respiratory hazards in excess of established standard shall be provided with respiratory protection.

---

**6.12.2.** Where half or full face air purifying respiratory protective equipment has been shown to be necessary, the Region/Division Safety Director/Manager shall be contacted to ensure full OSHA/OHS compliance. For example, employees who use air purifying respirators must be:

- 6.12.2.1. Medically cleared to do so
- 6.12.2.2. Fit tested on that air purifying respirator
- 6.12.2.3. Trained to wear, use, store and maintain the respirator
- 6.12.2.4. Clean shaven where the face piece of the respirator seals to the skin of the face.

**6.12.3.** United Rentals location management shall provide means for cleaning all respiratory protective equipment or may provide disposable equipment. Employees should be provided an area to store the respiratory equipment.

**6.12.4.** Respiratory equipment should not be passed on from one person to another until it has been cleaned and sanitized.

**6.12.5.** Employees should leave the contaminated area to wash, change cartridges or if they detect break-through or resistance.

**6.12.6.** Respiratory Protection may be required in the following situations:

- 6.12.6.1. Employee exposures to airborne toxic chemicals exceeding levels established in OSHA 1910, Subpart Z, and CAN/CSA Z94.4-11 Only NIOSH/MSHA approved equipment may be used.
- 6.12.6.2. Routine and non-routine operations in which employees are briefly exposed to variable concentrations of airborne contaminants judged to be at potentially hazardous concentrations.
- 6.12.6.3. During Spray Painting operations,
- 6.12.6.4. During Welding and Cutting operations
- 6.12.6.5. At customer locations requiring "escape only" respirators
- 6.12.6.6. At customer locations requiring respirators beyond "escape only" such use should be reviewed by the Division or Region Safety Director.

**6.12.7.** Ensure before using respiratory protection, to fully read chemical SDS sheet regarding required PPE.

**6.12.8.** All respirators shall be inspected before use and during cleaning.

**6.12.9.** Employees will not enter areas where the atmosphere is Immediately Dangerous to Life and Health (IDLH). If an area becomes IDLH, employees should immediately evacuate.

**6.12.10.** Medical Screening

- 6.12.10.1. All employees who wear respirators in the course of their duties are required to complete an Initial Respirator Medical Evaluation to obtain medical clearance for respirator use. (Exception: Escape only; mouthpiece respirators do NOT require

---

medical screening.)

6.12.10.2. The medical examination shall be confidential, during normal working hours, convenient, understandable, and the employee given a chance to discuss the results with the physician or other licensed health care professional.

6.12.10.3. Respirator wearer's status will be reviewed annually.

6.12.10.4. After an employee has received medical clearance and begun to wear his or her respirator, additional medical evaluations will be provided under the following circumstances:

6.12.10.5. Employee reports signs and/or symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing.

6.12.10.6. The medical clinic physician or supervisor informs the Program Administrator that the employee needs to be reevaluated;

6.12.10.7. Information from this program, including observations made during fit testing and program evaluation, indicates a need for re-evaluation;

6.12.10.8. A change occurs in workplace conditions that may result in an increased physiological burden.

#### **6.12.11. Evaluating Program Effectiveness**

6.12.11.1. An evaluation of the workplace is required to ensure that the written respiratory protection program is being properly implemented and to consult employees to ensure they are using respirators properly.

6.12.11.2. Evaluations of the workplace should be performed annually to ensure that the procedures in this Respiratory Protection Program are being followed. Employees shall be consulted to assess their views on the effectiveness of the Respiratory Protection Program.

6.12.11.3. The evaluation will be performed by the Division/Regional Safety Director, Division Safety Manager, in conjunction with the Location Manager, or Safety Champion.

6.12.11.4. The following factors will be assessed during the program evaluation:

6.12.11.4.1. Respirator fit including the ability to use respirators without interfering with workplace performance;

6.12.11.4.2. Appropriate respirator selection for the hazards to which employees are exposed;

6.12.11.4.3. Proper respirator use under the workplace conditions encountered by employees; and Proper respirator maintenance .

#### **6.13. Dust Mask**

**6.13.1.** Employers are not required to include in a written respiratory protection program those employees whose only use of respirators involves the voluntary use of filtering face pieces (dust masks).

**6.13.2.** Dust masks are a cheaper, lighter, and possibly more comfortable alternative to respirators, but may not provide as much protection, and may be more susceptible to misuse or poor fit.

**6.13.3.** Dust masks do not carry all the standards of a respirator by not requiring a fit test, medical evaluation, and don't follow 29 CFR 1910.134.

**6.13.4.** Provide a copy of Attachment A – OSHA Appendix D (for US branches only, Canadian branches may provide if desired).

#### **6.14. Reimbursement Procedure**

**6.14.1.** There is a reimbursement procedure in place to reimburse employees for the purchase of steel-toe safety shoes and prescription safety glasses. (Refer to Policy and Procedure Bulletin 3J.013, Forms.)

## **7. Records**

<b>Record</b>	<b>Location</b>	<b>Retained for</b>	<b>Maintained By</b>
HSES 4A.02_F01-Employee Training Records	Branch Employee Safety Files	3 years	Safety Champion
HSES 4A.02_F02-Employee Training Meeting Roster	Branch Safety Files	3 years	Safety Champion
HSES 3C.01_F01 - Hazardous Material Roster	Branch SDS binder	Current	Safety Champion
Employee training, fit test records for Respiratory Requirements	Branch Employee Safety Files	Current	Safety Champion
Medical documents for Respirator	Employee Personnel File	Current	Branch Manager
Noise Monitoring Records (2 years)	Branch Safety Files	2 Years	Branch Manager
Audiometric Test Records	Employee Personnel File	2 Years	Branch Manager



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Personal Protective Equipment

Reserved  
Doc number: HSES 3A.03  
Issue: G  
Date: 2/15/19  
Page: 14 of 18

---

## 8. Approvals

*Approvals on File*

_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date

---

**UNITED RENTALS, INC. INTERNAL USE ONLY**

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

---

**Revision History**

Issue	Date	Revised By	Ref. #	Description of Revision
G	2/15/19	Teresa Kee, Candace Chudzik	NA	Minor changes and typos corrected
F	2/2/18	Russ Jeansonne	NA	Changes to head protection, fall protection and minor changes throughout. Only SRL are allowed to be used by employees, eliminated 4 ft static lanyards.
E	11/7/16	Candace Chudzik	NA	Added 6.4.6 to require fall protection any time the height is over 6 feet. Added 6.12.2.4 to ensure that employees who use respirators with required respirator to skin seal are clean shaven. Revised 6.12.6 to update. Added 6.12.7 to clarify that employees should not enter IDLH atmospheres.
D	7/23/13	Kurt Southerland	NA	Added 6.2.2 to state that PPE is provided at no cost to employees. Clarified audiometric testing records requirements and STS requirements. Revised 6.4 to include customer note and clarify requirements for ABL/AWP fall restraint requirements.
C	4/1/13	Streamline Team	NA	Revised to new format. Re-numbered from SOP #5. Combined SOP #'s 5, 18, 19, & 20
B	12/1/11	NA	NA	Minor changes throughout, added scope, revised footer, added WHMIS to better cover Canada regulations, moved information to relevant documents (Fire Prevention, Compressed Gas Safety, Propane Safety)
A	12/1/2010	NA	N/A	New format, minor content changes

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

## 9. Appendix A – Fall Protection Training

The goal of this policy and a restraint system is to keep the occupant inside the perimeter of the basket upon a bouncing or uncontrollable event risking occupant ejection.

- Before performing work requiring the use of fall protection equipment, employees must successfully comprehend the Job Specific Training and “Fall Protection Safety Training – Documentation of Understanding.”
- Training must include:
  - ✓ Recognize and eliminate the hazards of their job relating to fall restraint
  - ✓ Work safely at heights by utilizing appropriate fall restraint/protection
  - ✓ Properly inspect, use and maintain their fall restraint/protection equipment. Know to ask when unsure of proper fall restraint/protection to use.
  - ✓ Refresher training for employees using fall restraint/protection will be conducted annually or sooner, if necessary.
  - ✓ When at a height on a working/walking surface where a fall of 6 feet or greater could occur fall protection must be used.
- Re-training reasons may include:
  - ✓ 1) Deficiencies in training.
  - ✓ 2) Work place changes.
  - ✓ 3) Fall restraint/protection systems or equipment changes that render previous training obsolete.

Training for employees will also cover an inspection of the full body harness and lanyard prior to being worn

- Fall protection personal protective equipment must be utilized by the occupant with the exception of direct entry or exit of the platform or basket.
- An occupant must also face the ladder access using three points of contact upon entry and exit of a platform or piece of equipment.
- Each location that utilizes a fall arrest system must determine appropriate rescue procedures in the event of an arrested fall. Typically, the options will be:
  - Co-workers assistance in low level and travel scenarios
  - Utilize the ground controls on the body of the lift
  - Utilize an additional aerial lift to rescue the employee
  - If available, utilize self-rescue equipment (if lanyard is equipped)
  - Call in local emergency services for assistance



## 10. Appendix B - Respiratory Training

Respirator users and employees responsible for issuance and maintenance of respiratory protection equipment must receive training in the proper use of the required equipment. Employees must demonstrate an adequate understanding of the information provided in the training.

Documentation of understanding ensures operator competence.

All employees required to wear respirators must receive training prior to assignment to an area where respiratory protection is required. Training must be conducted upon initial assignment, when there are major changes in the process, and annually.

Respirator users must receive training, prior to respirator use in the workplace, in the following elements:

- ✓ Regulations on respirator use and the contents of this Respiratory Protection Program;
- ✓ The nature, extent, and effects of the respiratory hazard to which the employee may be exposed and the need for respiratory protection;
- ✓ Respirator selection to match specific hazards, capabilities and limitations of respirators;
- ✓ Adjusting the respirator for proper fit and comfort; training must be trainer led for fit testing;
- ✓ Recognizing and responding to emergency respiratory hazard situations as well as how to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions;
- ✓ How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators (i.e., dizziness, shortness of breath, wheezing).

## 11. Appendix C - Hand Protection Training

Employees must also use appropriate hand protection when:

- ✓ Hands are exposed to absorption of harmful substances, as when moving cylinders or other equipment or during fueling operations, etc.
- ✓ Handling equipment which could result in punctures.
- ✓ Hands are exposed to possible chemical or thermal burns, as when welding.
- ✓ Hands are exposed to temperature extremes.
- ✓ Hands are exposed to contusions.

## 12. Appendix D – Hearing Protection Training

The training program shall include, at a minimum:

- ✓ The effects of noise on hearing.
- ✓ The purpose of hearing protection; proper use, fitting and care.
- ✓ The purpose and explanation of audiometric testing.
- ✓ Access to information and training records.
- ✓ OSHA Standard 1910.95/CSA Z94.2-02/CSA Z1007/OHS 2009 Part 16 as appropriate based on location.

# United Rentals Inc.

Address

Address

## Fall Protection and Rescue Plan

Business Description: Rental and Maintenance of Lifting and Moving Equipment

Work Area: Describe Area

Task:

Equipment / Surface Height:

Type of Fall Protection: Fall restraint

Fall arrest

### PURPOSE

To protect workers from injury due to falls from elevated work areas through proper fall protection use. Working from heights is a high-risk activity. Risks can be associated with use of ladders, personnel lifts, lifting heavy equipment, and working near overhead electrical power lines, and working on scaffolding. Protective measures shall be taken before any work commences at elevated heights. This Procedure outlines the requirements of choice, use and maintenance of the personal protective equipment used for working at heights.

### SCOPE

This Standard applies to:

- All URI employees, contractors, suppliers, vendors and visitors
- All work areas and work activities where a worker may sustain injury due to a fall from an elevated height.
- Rescue personnel may be exempt from this section due to alternate equipment use and practices.

The Procedure describes a systematic approach to be used by all employees, contractors and subcontractors to protect employees from falls when they are working at elevated positions or are exposed to potential fall hazards.

This Procedure is not a stand-alone document, and it is recommended that this Procedure be read and applied in conjunction with applicable sections of the Alberta's OH&S Act, Regulation and Code, CSA Standards, US OSHA Standards and reference of United Rentals Procedure, SOP #18, Fall Restraint.

## REFERENCES

- Alberta Occupational Health and Safety Act, Regulation and Code (Part 9) 2004;
- CSA Standard CAN/CSA Z259.10-M90 (R1998), Full Body Harness;
- CSA Standard CAN/CSA Z259.1-95 (R 1999), Safety Belts and Lanyards;
- CSA Standard CAN/CSA Z259.11-M92 (R 1998), Shock Absorbers for Personal Fall-Arrest Systems;
- CSA Standard CAN/CSA Z259.12-01, Connecting Components for Personal Fall Arrest Systems;
- CSA Standard CAN/CSA Z259.2.1-98, Fall Arresters, Vertical Lifelines, and Rails;
- CSA Standard CAN/CSA Z259.2.2-98, Self-Retracting Devices for Personal Fall-Arrest Systems;
- CSA Standard CAN/CSA Z259.2.3-99, Descent Control Devices;
- CSA Standard CAN/CSA Z259.13-04, Flexible Horizontal Lifeline Systems;
- CSA Standard CAN/CSA Z259.14-01, Fall Restrict Equipment for Wood Pole Climbing;
- CSA Standard CAN/CSA Z259.16-04 Design of Active Fall Protection Systems;
- CSA Standard CAN/CSA Z259.3-M1978 (R2001), Lineman's Body Belt and Lineman's Safety Strap;
- 29 CFR 1926 Subpart L & M

## DEFINITIONS

**Personal Fall Arrest System** is an active protective system, only coming into service when a fall occurs. It consists, at least, of an anchorage, connecting subsystem and harness and may include lanyard, shock absorbers, horizontal lifelines, vertical lifelines or a combination of these.

The fall arrest system must be tailored to limit the workers' free fall distance to 2.0 meters (CAN) or 6 feet (US) (or the limit specified in the manufacturer's specifications, whichever is less) and a competent worker who has training in evaluating fall hazards and protective systems will identify anchor points.

**Reference document: *A Guide to Fall Protection CSA Plus 5000***

**Anchor Point** is a secure point of attachments for lifelines, lanyards, or deceleration devices. An anchor point is often a beam, girder, column, or floor. Travel restraint and fall arrest systems and devices (i.e.: static lines, retractable lanyards and safety nets) must have adequate anchorage points. A worker must attach the lanyard to a structural member (I-beams or concrete beams) or other fixed point (such as a welded supports or decking). The lanyard or safety strap must be secured to an anchor point no lower than the worker's shoulder height unless a shoulder height anchor point is unavailable, in which case the lanyard or safety strap must be secured to an anchor point as high as reasonably practicable. Handrails and pipes are not to be used as anchorage points. Manufacturers and engineers must design anchorage systems to meet safety standards. Travel restraint anchor systems shall meet the requirements for anchor systems for fall arrest. The commonly regulated minimum strength for a vertical personal anchorage point is 22.2 kilonewtons (KN) or 5,000 pounds. (For perspective, envision a car suspended from the anchorage point). The minimum strength for a horizontal anchor point varies depending on the type of system. Follow manufacturers or engineers design requirements. The anchor points to which a personal fall arrest system is attached are not part of an anchor used to support or suspend a platform.

**Anchorage Connectors** are the components or subsystems specifically intended for coupling the personal fall arrest system to an anchorage. Some examples of anchorage connectors are load-rated eyebolts, steel cable slings, tripods or davit arms. **Caution:** Eyebolts of small diameters can cause a roll-out of the snap hook. Connecting the lanyard around an anchorage point and back on itself with its snap hook is not acceptable.

**Fall Protection System** is a personal fall arrest system, a travel restraint system, a safety net, a control zone, or another system approved by the Director of Inspection, Alberta Workplace Health and Safety.

**Fall Arrest Equipment** is worker's personal protective equipment that stops the worker's fall and does not allow the worker to fall farther.

### **Connecting Subsystems and Personal Protective Equipment**

The following components make up the remainder of fall restraint and arrest systems.

a. Snap Hook

This self-locking connector consists of a hook-shaped body with a normally closed gate or similar arrangement that may be opened to receive an object. When released, it automatically closes and locks to retain the object. A snap hook shall have a self-locking keeper that remains closed and locked until intentionally unlocked and opened for disconnection only by at least two consecutive manual actions. All connecting components of a fall arrest system must meet the requirements of CSA Standard Z259.12-01.

b. Carabineer

A connector component usually trapezoidal or oval shaped, with a normally closed gate or similar arrangement. The gate may be opened to permit the body to receive an object and, when released, automatically closed to retain the object. A carabineer shall have a self-locking keeper that remains closed and locked until intentionally unlocked and opened for disconnection only by at least two consecutive manual actions. All connecting components of a fall arrest system must meet the requirements of CSA Standard Z259.12-01.

c. Cable / Rope Grab

A mechanical fall arrest device attached to a vertical cable lifeline that locks itself if a fall occurs.

d. Lanyards

This flexible line of rope, wire rope or strap generally has a connector at each end for connecting the body harness to a fall restraint or arresting device, shock absorber, anchorage connector or anchorage. All lanyards must be equipped with a shock absorber. Lanyards must be approved under CSA Standard CAN/CSA-Z259.1-95 (R1999).

e. Shock Absorbers (Deceleration Devices)

This component's primary function is to dissipate energy and limit deceleration forces that the system imposes on the human body and anchor during fall arrest. Such devices may employ various principles such as deformation, friction, tearing of materials or breaking of stitches to accomplish energy absorption. The worker must attach a shock absorber between the full body harness D ring and the vertical anchorage point. It must meet the requirements of CSA Standard CAN/CSA Z259.11-M92 (R1998).

f. Energy Absorbers

This component's primary function is to dissipate energy and limit deceleration forces that vertical or horizontal lifeline systems impose on the number of human bodies and the anchorage for which it is designed during fall arrest. Such devices may employ various principles such as deformation, friction, tearing of materials or breaking of stitches to accomplish energy absorption. It must meet the requirements of CSA Standard Z259.11-M92.

g. Full Body Safety Harness

Workers must wear a full body harness as part of a personal fall arrest system. This device, made primarily out of straps, covers the torso and pelvic area (and optionally, the waist area). Manufacturers design a harness to support the user during work activities or during and after the arrest of an accidental fall, depending on the harness. Various types of harnesses are available for special operations such as confined entry and rescue operations. Safety harnesses must meet CSA Standard CAN/CSA-Z259.10-M90 (R1998).

#### h. Horizontal Lifelines

These are flexible lines anchored to stretch horizontally. The horizontal lifeline connects other components of a personal fall arresting system to the anchorage and must meet CSA Standard Z259.2-M1979. Temporary horizontal lifelines must be a wire rope with a diameter of at least 12 mm and a nominal breaking load specified by the manufacturer of at least 89 kilonewtons. The connecting hardware (shackles and turnbuckles) must have an ultimate tensile strength of at least 71 kilonewtons; end anchors must have an ultimate load capacity of not less than 71 kilonewtons. The span must be not less than 6 meters and not more than 18 meters with the elevation of the line of at least 2 meters above the working surface.

#### i. Vertical Lifelines

These are flexible lines anchored to hang vertically. Care must be taken to ensure that there is no chance of impact with obstructions due to a pendulum like swing after a fall occurs. The vertical lifeline must be secured to an anchor point that is not used to support anything else, must have a nominal breaking load specified by the manufacturer of not less than 27 kilonewtons and must extend downward to within 1.2 meters of ground level or another safe lower surface. The vertical lifeline connects other components of a personal fall arresting system to the anchorage and must meet CSA Standard Z259.2-M1979.

#### j. Retractable Lifelines

A retractable lifeline is a device containing a drum wound line that may be slowly extracted from, or retracted onto, the drum under slight tension during normal movement by the user. The line can attach to the fall arrest attachment on the body support. If the user falls, the device automatically locks the drum and arrests the fall. The device may have an integral means for energy absorption. All retractable lifelines must meet CSA Standard Z259.2-1979.

#### k. Travel Restraint Anchors

Temporary travel restraint anchors must have an ultimate load capacity of at least 3.5 kilonewtons in any direction in which the load may be applied and must be installed, used and removed in accordance with the manufacturer's specifications. Temporary travel restraint anchors must be permanently marked as such and must be removed at the earliest of either the date the work is completed or the time specified by the manufacturer.

Permanent travel restraint anchors must have an ultimate load capacity of at least 22.2 kilonewtons in any direction in which the load may be applied and are to be installed and used in accordance to the manufacturer's specifications.

#### **Free Fall Distances**

Using a personal fall arrest system without a shock absorber, the workers free fall limit is 1.2 meters whereas with a shock absorber the workers free fall limit is 2 meters or the limit specified in the manufacturer's specifications (or whichever is less). Using a temporary horizontal lifeline, a workers free fall distance must be limited to 1.2 meters

**Guardrails** around the work area if there is a possibility for the worker to fall a vertical distance of more than 1.2 meters and less than 3 meters in accordance with the Alberta Occupational Health and Safety Code Part 22, Section 315

**Temporary work platforms** as per the Alberta Occupational Health and Safety Code Part 23

**Safety nets** as per Alberta Occupational Health and Safety Code Part 22, Section 320 or US OSHA 29 CFR 1926.502

**Oil Sands Safety Association (OSSA)** is a safety training cooperative founded for the development and establishment of accredited safety training programs for the oil sands region

**Alberta Occupational Health and Safety Code**

Legislation developed under the *Occupational Health & Safety Act* (1980, Chapter O-2, as amended) that sets minimum health and safety standard and enforces regulations for specific areas of occupational health and safety, including fall protection equipment.

**Alberta Occupational Health & Safety Act (1980, as amended) (OH&S Act)**

Provincial statute that defines rights obligations and penalties for occupational health and safety. The *Act* allows for the creation of regulations.

**American National Standards Institute (ANSI)**

An American institute that promotes the development of standards. This institute does not develop standard but does provide accreditation. ANSI accredited standards are often applied by manufacturers or required by US and Canadian occupational health and safety legislation.

**Canadian Standards Association (CSA)** A Canadian association that provides certification services for manufacturers. These manufacturers, under license from CSA, can use the appropriate registered CSA marks on products they manufacture to show the product conforms to a CSA standard.

**OSHA** – Regulations developed under the Occupational Health and Safety Act of the US government.

**RESPONSIBILITIES**

**Workers** on the United Rental Site and on Customers site are responsible to:

- Use a fall protection system appropriate for the job being performed.
- Report any deficiencies promptly to their supervisor to ensure action is taken to rectify problems or replace the equipment.

**Supervisors** are responsible to:

- Analyze all tasks at elevated levels for fall protection needs to ensure adequate fall protection systems are provided.
- Ensure that workers using fall protection systems are trained in its proper use.
- Instruct workers on the specifics of the fall protection measures to be used and to give toolbox talks to each person assigned to work in elevated areas.
- Ensure that all fall protection equipment is maintained in accordance with manufacturer's recommendations.

**Contractors** are responsible to:

- Ensure that workers use fall protection system in compliance with this Procedure.
- Have in place an action plan for rescuing personnel in the event that he/she falls and is suspended from a lanyard.

**GENERAL****1 Safety Requirements**

In the design, installation and construction of new or replacement structures, buildings and equipment, that elevated work platforms, scaffolds or temporary work platforms will be used to limit the height at which workers work.

1.1 Anchor points shall be identified and installed at appropriate locations on vessels, towers, cokers, modules, etc., which will permit anchoring fall protection devices. Anchor points to which a personal fall arrest system is attached must have an ultimate load capacity of at least 22.2kN (5000 lbs.) per worker attached. Whenever possible, an engineered fall protection systems will be utilized. Engineered systems include accommodation for fixed anchorage points and/or systems for horizontal and vertical lifelines

1.2 Area or Contractor Supervisor will refer to the detail engineering design and ensure there are provisions in the design for "tie-off points", perimeter barricading, column length and other appropriate measures to provide for safe installation of fall protection.

1.3 A fall protection system (lifeline, shock absorbing lanyard, and safety harness) shall be used at a temporary or permanent work area if a worker may fall 3 meters (10 feet) or there is an unusual possibility of injury if a worker falls less than 3 meters (10 feet) into any substance or material, or onto any operating machinery. Fall protection needs will be identified for all work following the hazard assessment of each particular task and will be communicated to each worker.

1.4 Where a worker may fall a vertical distance of more than 1.2 meters and less than 3 meters, permanent work area shall be provided with guardrails to protect a worker from falling. A fall protection plan will be developed for a work site if a worker may fall more than 3 meters or where workers are not protected by guardrails. This plan must specify the fall hazards at the work site, the fall protection systems to be used, the procedures used to assemble, maintain, inspect, use and disassemble the fall protection system, and the rescue procedures to be used in the event of a fall (OH&S Code Part 9, section 143).

1.5 If procedures are not in place for work over 3 meters, the Job Hazard Analysis (JHA) process shall be utilized to develop the fall protection and rescue plans. All protection systems to be used as part of the plan shall be listed in the procedure or JHA.

1.6 Primary fall protection systems such as scaffolds, aerial lifts (articulating, scissors, etc.) and other approved personnel hoisting device, shall be equipped with complete working/walking surfaces free of floor openings, with standard guardrail systems on all open sides and with closure apparatus for ladder openings or other points of access when required.

1.7 In situations where a fall could result in impalement or other injury (i.e., working over a hot process or operating equipment), fall protection equipment shall be utilized regardless of the potential falling distance.

1.8 Safety belts used as fall protection are prohibited.

1.9 Where primary fall protection systems are inadequate and fall exposures exist, secondary fall protection shall be used (see section 8.0 of this Procedure for definitions of primary and secondary fall protection systems).

1.10 Personnel travelling or working in elevated areas more than 3 meters (10 feet) above ground level or adjacent surface, where a fall exposure exists, shall make use of secondary fall protection in securing their safety lanyard at all times to a structure, lifeline or approved fall arresting device.

1.11 Personnel working from or travelling in powered work platforms, or lifting/hoisting devices, shall also properly secure their safety lanyards to the engineered tie off point.

1.12 Fall protection devices (lifelines, safety harnesses/lanyards, etc.), and fall arrest equipment and/or systems shall be inspected by workers for damage and/or deterioration prior to each use. Defective equipment shall be removed from service and destroyed or returned for repairs.

1.13 Fall protection devices subjected to shock loading imposed during fall arresting shall be removed from service and destroyed.



1.14 Fall protection devices and systems shall be used only for safeguarding employees.

## 2 Training

2.1 Workers shall be trained in fall hazard recognition, proper application and use of the fall protection equipment as per their specific needs assessment fall hazard equipment prior to any work in an area where a fall protection system must be used, and company procedures as per Oil Sands Safety Association Fall Protection Safety Training Standard.

2.2 Workers shall be retrained when the training program has been changed, fall protection equipment has changed, or the worker exhibits inadequacies in knowledge of fall protection or exhibits inadequacies in equipment use.

2.3. All contracted employees will follow the guidelines set in accordance to the Oil Sands Safety Association (OSSA) Fall Protection Safety Training Certification. (ref: <http://www.ossa-wb.ca> )

## Maintenance and Inspection

3.1 Management of the Business Units shall ensure suitable inspection and maintenance procedures are established for all engineered systems and fall protection systems equipment.

3.2 All workers will conduct visual inspections prior to using fall protection systems or equipment.

### 3.3 Adherence to Standards

Management of the Business Units shall ensure:

3.3.1 That tasks are analyzed to ensure methods are put into place for the elimination or control of fall hazards.

3.3.2 Through the use of a field level risk assessment (FLHA), a fall protection plan is developed with regard to activities that may expose workers to a fall hazard.

3.3.3 That adequate escape and rescue plans are in place for the work involving fall protection systems.

3.3.4 Monitor compliance with fall protection standards during their routine walkabouts, loss control tours and planned inspections with formal evaluations conducted periodically.

### 3.4 Inspection and Maintenance

Management of the Business Units shall ensure:

3.4.1 That all fall protection equipment is inspected by the worker before it is used on each shift.

3.4.2 Equipment is kept free from substances and conditions that could contribute to deterioration of the equipment

3.4.3 Re-certified as specified by the manufacturer (or replacement if more cost effective).

3.4.4 Any equipment that has been used as part of a fall protection system must be removed from service and either returned to the manufacturer or destroyed if it is defective.

3.4.5 Any equipment that, after stopping a fall, is removed from service and destroyed.

3.4.6 Once removed from service, is not returned to service unless a professional engineer or the manufacturer certifies that system to be safe.

## **FALL PROTECTION SYSTEMS**

### **1 Primary System**

1.1 Standard guard rail system is used to guard open sides of floors, platforms and walkways in elevated areas, and consists of at least:

- Top rail of 38 mm X 89 mm (2" x 4") lumber or equivalent material installed between 920mm (36") and 1070mm (42") above the walking or working surface;
- Mid-rail at approximately the mid-point between the top rail and the walking or working surface;
- Toe Board 20mm X 140mm (1" x 6") mounted at the walking/working surface;
- Upright support post spacing must not exceed 3 meters (10 feet);
- The entire system must be capable of supporting 90 kg (200 lbs.) force in any direction with minimum deflection;

1.2 Floor opening/hole covers shall be used to close openings and holes in floors, platforms and walkways. The covers must be capable of supporting the maximum potential load to which they may be subjected. The cover must completely cover the opening/hole, be secured against accidental displacement, and must be marked "HOLE COVER – DO NOT REMOVE".

### **2 Secondary Systems**

2.1 These systems must be worn and used as a backup to primary fall protection systems or in the absence of primary systems (horizontal and vertical lifelines, retractable lifelines, safety harnesses and lanyards, safety nets).

2.2 The fall protection lanyard equipped with shock absorber shall be attached to the D-ring located in the middle back of the safety harness (Type 'A' harness Arrest).

2.3 D-rings located at the waist may only be used for positioning and with rail type ladder climbing devices.

2.4 A work positioning system requires the use of a harness that has two D-rings located on each side of the workers waist (for example a Pole climber). A fall arrest system must be used in conjunction with a work positioning system.

### **3 Lifelines**

3.1 Lifelines may be mounted either vertically or horizontally and are generally intended to provide mobility to personnel working at elevated areas.

3.2 Priority shall be given to lifeline placement as structures are erected.

3.3 Lifelines shall be used only for fall protection.

3.4 Lifelines shall be installed and maintained by trained and competent personnel, knowledgeable in the rigging practices necessary to safely install and maintain the system.

3.5 Lifelines shall be inspected before each use by a trained and competent person. Inspection tags shall be placed on each end of a lifeline. A record of inspection and maintenance will be kept up to date, complete with inspector's signature/initial.

3.6 All horizontal lifelines placed in skeleton steel structures (e.g., pipe racks, etc.) must be designed, installed and used in accordance with the manufacturer's specifications or in accordance with specifications certified by a professional engineer.

3.7 A horizontal lifeline must be positioned so it does not impede the safe movement of all workers secured to it and all workers in the vicinity.

3.8 Personnel installing lifelines shall be protected from falls at all times.

3.9 Vertical lifelines are used for personnel fall protection when vertical mobility is required and may be comprised of static lifelines made of synthetic fiber rope or cable equipped with approved rope grabs, or consist of self-retracting reel type lanyard/lifelines attached directly to a safety harness.

#### 4 Temporary Work Platforms / Walkways

4.1 Every effort shall be made to ensure all temporary platforms / walkways, scaffolds, etc., are equipped with solid decks free of openings and provided with standard guardrail systems regardless of height.

4.2 Personnel working from or traveling on temporary work platforms or catwalks shall be required to wear an approved safety harness and lanyard at all times, when primary fall protection is not provided.

4.3 Personnel who must lean through or over a protective railing shall be required to wear an approved safety harness and lanyard which must be secured to a suitable anchor point.

#### 5 Skeleton Steel / Open Structures

5.1 Personnel working or traveling (either vertically or horizontally) on elevated skeleton steel/open structures more than 3 meters (10 feet) above ground level or an adjacent completed surface shall wear an approved safety harness and secure their lanyards to a suitable anchor point at all times to achieve 100 percent tie-off.

5.2 Personnel working or travelling on skeleton steel/open structures may be required to have two safety lanyards at all times in order to achieve 100 percent tie-off. If so, one of the lanyards must be secured at all times when personnel are more than 3 meters (10 feet) above ground level or an adjacent complete surface if no other form of fall protection is available.

5.3 Personnel trained and competent in the necessary rigging practices shall be responsible for installation and maintenance of these lifelines.

5.4 Vertical travel in these structures shall consist of properly placed and secured access ladders.

#### 6 Structural Steel Erections

6.1 Personnel erecting structural steel shall achieve 100 percent tie-off through the use of safety harness/lanyards, retractable lifelines, connectors' toggles, scaffolding and aerial lifts.

6.2 The use of ladders and personnel hoists/lifts shall be maximized as the safe method of vertical travel in structural steel elevations

#### 7 Rigging / Crane Assembly / Dismantling

7.1 Fall protection shall be provided during these operations through the use of retractable lifelines, safety harnesses/lanyards, and minimizing movement in elevated areas by using ladders, and in some cases personnel lifts.

7.2 Walking of chords and lacings of crane booms without continuous fall protection such as horizontal lifelines is prohibited.

7.3 When working on crane cabs / superstructure, retracting lifelines shall be attached by the first person (that should be protected) up and be used by all persons working on the elevation. Other means of fall protection can be used so long as they provide mobility and continuous safety.

## Equipment Inspection

Item	Comment/defect	Date
Full body harness		
Lanyard		
Vertical life lines		
Anchor points		
Guardrail		
Toe board		
First aid attendant		
Safety headgear		
Barricades		
CSA safety footwear		
CSA safety eyewear		
CSA safety Headwear		

LAYOUTS

# of Pages

**FALL HAZARDS:**

Fall from \_\_\_\_\_ height (\_\_\_\_"/ \_\_\_\_\_ cm) of personnel and objects

Potential hazard to be stricken by falling objects and/or people.

Potential of slipping on painted floor.

**FALL PROTECTION SYSTEM TO BE USED:**

Guardrail

Travel restraint,

Fall restraint,

Full body harness, shock absorber/lanyard

**PROCEDURES**

Record monthly inspections of harnesses

All individuals working in area suitably trained.

FLHA performed prior to task. (Check off list in \_\_\_\_\_)

Perform harness inspection before use

Position spotter on ground level

Signs stating "fall protection must be worn"

Rescue plan: Stop work around potential hazard, first aiders on sight, and two way radios

Worker sign off sheet: By signing below, I acknowledge that I have reviewed the fall protection requirements and procedures for this site with my supervisor and understand my responsibilities, specifically the requirement to use personal fall protection.





























































[illegible]



Worker sign off sheet: By signing below, I acknowledge that I have reviewed the fall protection requirements and procedures for this site with my supervisor and understand my responsibilities, specifically the requirement to use personal fall protection.

[illegible]



Activity	Hazard			Gloves	
General Mechanical Repairs	Cut	Puncture	Abrasion		
<b>Medium to Heavy Duty:</b> <ul style="list-style-type: none"><li>Torque is applied in tight and narrow areas</li><li>Refurbishments, major rebuilds, major repair</li><li>Work near sharp parts or edges</li></ul>					09-9083-10 ANSI cut level 3 with dorsal protection, fully Kevlar lined
<ul style="list-style-type: none"><li>Sledge hammer use, wrenching above ½ inch diameter</li></ul>					05-3080-70 ANSI cut level 3, fully Kevlar lined
<ul style="list-style-type: none"><li>Non-slip palm and fingers good for major rebuilds, major repair</li></ul>					03-3060-80 All purpose, abrasion resistance
<b>Light Duty:</b> <ul style="list-style-type: none"><li>Light mechanic’s work not involving sharp edges, corners or parts</li></ul>					06-3020-60 Minimum cut resistance
<ul style="list-style-type: none"><li><b>Light duty, high dexterity, fingerless framer’s glove – only to be used when repairing control boxes or working on other small electrical or machines ops</b></li></ul>					86700 3x2 with open fingers
<b>Slippery/Sharp Objects</b>					
<b>Light to Medium Duty:</b> <ul style="list-style-type: none"><li>Light to medium work; Nitrile coating, medium duty where parts may be slippery and cuts or abrasions may occur</li></ul>					713SNTPRG ANSI cut level 2 with back hand protection
<b>Light Duty:</b> <ul style="list-style-type: none"><li>Nitrile coating, light duty where parts may be slippery and cuts or abrasion may occur</li></ul>					705CGNF ANSI cut level 3
<ul style="list-style-type: none"><li>HPPE fiber shell, gray polyurethane coating can be used on cutting applications</li></ul>					720DGU ANSI cut level 2
<b>Load Securement/Driving/Yard</b>					
<ul style="list-style-type: none"><li>Loading/unloading, securing equipment</li><li>Driving equipment</li><li>Sheet metal work</li></ul>					500DP Double palm leather
<ul style="list-style-type: none"><li>Driving equipment <u>only</u></li><li>Pre-use inspections</li></ul>					990K Cowhide driver glove
<b>Winter Gloves</b>					
<ul style="list-style-type: none"><li>Grips in wet and dry conditions and increases durability</li><li>Inner membrane keeps hands warm and dry</li></ul>					03-3450-80 ANSI cut level 2, waterproof, wind-proof, durable, flexible non-slip palm reinforcement
<ul style="list-style-type: none"><li>Insulating micro-fleece liner for insulation</li></ul>					08-3085-80 Palm exceeds ANSI cut level 3, waterproof, wind-proof, Kevlar lined
<b>Specialty Gloves<sup>2</sup></b>					
	Cut	Caustic	Heat	Abrasion	
<ul style="list-style-type: none"><li>Battery charging and refill, wash bay, handling oils and caustic materials</li></ul>					1027 PVC coated
<ul style="list-style-type: none"><li>Gloves to be worn when working with power (leather outer glove protects inner glove)</li></ul>					E011B WHSLS gloves, Lineman Size 10 (Vendor: Grainger – not in DC)
<ul style="list-style-type: none"><li>Welding, cutting, heating, hand-held grinders, equipment</li></ul>					945 Welding glove

**Any deviation from this chart needs to be approved by your respective Regional Safety Director and must meet the minimum requirements suggested above.**

<sup>1</sup> To use this matrix, assess the activities and hazards to make an appropriate glove selection.

<sup>2</sup> Please note: Nitrile (blue latex) gloves may be used for first aid only.

## Jobsite Safety/Working Alone

### Table of Contents

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents.....	3
5.	Abbreviations, Acronyms, and Definitions .....	3
6.	Procedure.....	3
6.1.	Training Requirements .....	3
6.2.	Customer Locations .....	3
6.3.	Remote Locations, After Hours and Working Alone .....	4
6.4.	Refinery and Oil Field Preparation .....	5
6.5.	Pre-Qualification .....	7
6.6.	Directions and Deliveries.....	7
6.7.	Process Safety Management .....	7
7.	Records.....	8
8.	Approvals .....	8
9.	Appendix A for Leader Sheet on Jobsite Safety/Working Alone.....	10

## 1. Objective

1.1. The purpose of this procedure is to:

1.1.1. To provide jobsite safety rules intending to eliminate incidents.

1.1.2. Ensure communication is maintained with employees working after hours, at remote locations, and/or working alone to ensure their safety and to provide rapid assistance, if necessary.

1.1.3. To outline the requirements for employees working at Process Safety Management regulated customers and to prevent or minimize consequences of catastrophic releases of toxic, reactive, flammable or explosive chemicals.

1.1.4. To outline the requirements for work at refineries and oil field locations.

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1.1. Location Manager

3.1.1.1. Ensure only fully qualified employees who meet all customer training and PPE requirements are sent to customer sites.

3.1.1.2. Ensure a process is in place for Working Alone and After Hours Work for your location and everyone understands and follows the process.

3.1.1.3. Submit Pre-Qualification forms from customers to appropriate departments for completion.

### 3.1.2. Employees

3.1.2.1. Employees will inform the Location Manager if customers require additional training courses or the use of new PPE for accessing the customer's jobsite.

3.1.2.2. Employees will ensure they have the proper PPE prior to going to customer jobsite. They will obey United Rentals rules or the rules of the customer if they are more stringent.

3.1.2.3. Employees must inform supervisor when they know that they will be working alone.

#### 4. Reference Documents

Document Number	Document Description
<a href="#">HSES 2A.02</a>	Job Hazard Analysis
<a href="#">HSES 3A.03</a>	Personal Protective Equipment
<a href="#">HSES 6A.01</a>	Incident Investigation
OSHA 1910.119	OSHA Process Safety Management

#### 5. Abbreviations, Acronyms, and Definitions

HSES	Health, Safety, Environmental and Sustainability
PSM	Process Safety Management
Working Alone	To work at a worksite as the only worker of the employer or contractor at that worksite, in circumstances where assistance is not readily available to the worker in the event of injury, ill health or emergency.

#### 6. Procedure

##### 6.1. Training Requirements

**6.1.1.** If training is required: Training will be in accordance with HSES 4A.01 Competency Assurance Program.

**6.1.2.** See Appendix A for Leader Sheet on Jobsite Safety/Working Alone.

##### 6.2. Customer Locations

**6.2.1.** All work on customer jobsites is to be conducted in a professional, courteous and safe manner; in accordance with all occupational health and safety rules and regulations, policies and procedures of United Rentals; manufacturer's recommendations, and any specific requirements of the customer.

**6.2.2.** All customer and company required documentation shall be completed and turned in to the appropriate department.

**6.2.3.** Employees are required to complete any special training or courses required by the customer or local regulation prior to accessing the jobsite. Documentation of courses will be kept in employee training files as required in the UR Learning Management System. All customer required respirator use shall be reported to HSES and follow HSES 3A.03, Personal Protective Equipment.

**6.2.4.** Required jobsite badges must work at all times. Report missing badges to the Location Manager and the customer.

**6.2.5.** Employees are required to adhere to all designated smoking area requirements.

**6.2.6.** Employees will abide by all customer requirements related to mobile phone use.

**6.2.7.** Employees must attend any contractor safety meetings, as required by the jobsite.

**6.2.8.** Employees must check in with the customer and/or security guard prior to loading/unloading or servicing equipment. If the jobsite requires it; employees will wait until a jobsite spotter is at their location.

**6.2.9.** Employees must conduct a jobsite “Hazard 360” inspection prior to beginning work. This would include but is not limited to aerial, ground, underground, water, ice, chemical, weather related and manmade hazards. Note: required customer and company hazard assessment forms/ procedures will be used prior to work being conducted. See HSES 2A.02, Job Hazard Analysis.

**6.2.10.** Frequent and regular inspections of jobsites materials and equipment, where appropriate, will be made by a competent person designated by branch management.

**6.2.11.** Special procedures may be in place for the loading and unloading of equipment and communicating with the customer.

**6.2.12.** If an unsafe condition exists that prohibits an employee from completing the assigned task in a safe manner, all work must cease and the Employee utilize his Stop Work Authority as set forth in HSES 3A.02. The employee must report the unsafe condition to the customer and to the Location Manager. Corrective action to ensure the condition has been corrected must be taken before the employee returns to complete the task.

**6.2.13.** All incidents that occur on the jobsite must be reported to the Location Manager immediately per HSES 6A.01, Incident Investigation. Reporting and other actions may also be required to the customer, as per contract requirements. The Location Manager is responsible to adhere to customer reporting requirements.

### **6.3. Remote Locations, After Hours and Working Alone**

**6.3.1.** On occasion, employees of United Rentals are required to drive, deliver or maintain equipment outside of normal business hours or work alone. For the safety of such employees, the following procedure will be followed:

6.3.1.1. Management shall identify the risks arising from the conditions and circumstances of the worker’s work, or the isolation of the workplace.

6.3.1.2. Based on the risk assessment, limits may be placed on the employee’s duties by management and certain activities prohibited such as lockout/tagout and other high hazard activities.

6.3.1.3. The location of jobsite(s) and order of delivery and or service shall be known to branch management prior to employee leaving company location.

6.3.1.4. Unless cell phone use is not allowed on jobsite, employees will carry cellular phones while outside their vehicles. Employees will remain in contact with the customer if phone usage is not allowed.

6.3.1.5. Employee is required to call in to his or her supervisor every hour until completion of the job. In addition, Employee must contact his supervisor when he leaves the job site.

6.3.1.6. Supervisor is required to be available via phone or radio until employee has completed the job and returned home. If employee is working on an industrial, petroleum extraction or process safety management (PSM) jobsite, the supervisor will have the jobsite emergency contact information immediately available.

6.3.1.7. If the location of the job causes the employee to lose cell phone or radio reception, the Supervisor is required to estimate the time necessary to complete the job. If the Employee has not called in within a reasonable period of time (allowing time to complete the job and travel to where reception resumes), steps must be taken to locate the employee. Under no circumstances, shall an employee work at a remote location or after-hours without continual contact with another individual until completion of the job.

6.3.1.8. Employee will communicate to the customer whenever a Lock Out Tag Out procedure has been conducted and the employee must leave the equipment unattended.

6.3.1.9. Employee will communicate and coordinate with the customer prior to any hot-work being completed while on the jobsite. All appropriate PPE shall be worn and customer hot work plan shall be instituted. In absence of customer hot work plan, company plan shall be used see Hot Work and Welding HSES 3B 04.

6.3.1.10. Employees who work alone shall be fully qualified for the tasks assigned.

6.3.1.11. Worker's shall be provided with emergency supplies for use in traveling under conditions of extreme cold, or other inclement weather conditions as deemed necessary based on geographical location.

6.3.1.12. If an employee misses a call in the following steps should be taken: 1) Supervisor should attempt call and text employee's mobile device. 2) If employee does not answer supervisor should attempt call to customer location number for an employee search. 3) If there is no success in contacting customer, supervisor should contact emergency services (police, fire) in the area employee is working to check on employee's well- being.

#### **6.4. Refinery and Oil Field Preparation**

**6.4.1.** While working within a refinery, the oil fields, or a customer falling within process safety management (PSM) system; all rules and regulations of that specific company must be complied with. Be prepared to fulfill contractor/vendor specific training requirements needed for entry to the facility.

**6.4.2.** The Employee must check in at the guard shack, security office, or entrance gate at the facility.

**6.4.3.** The following personal protective equipment, at a minimum, is required while performing work activities inside a refinery, the oil fields, or PSM facility that does not already specify their own rules concerning PPE:



6.4.3.1. ANSI/CSA-approved hard hats, safety glasses with side shields, safety toe full-leather boots, leather gloves, and long-sleeved fire retardant coveralls are required.

6.4.3.2. Clear lenses must be worn at night.

6.4.3.3. Appropriate work gloves are to be worn when working in the operating and maintenance areas.

6.4.3.4. Hearing protection must be worn in areas designated by the site.

6.4.3.5. Respiratory protection is typically assigned or checked prior to entry to the facility if it is required. Due to this the following is mandatory:

6.4.3.5.1. Facial hair in the respirator seal area is not permitted in operating areas of refineries. This is due to the potential for having to don a rescue-style respirator for evacuation from the facility or to a safe muster point designated during your site specific orientation and training.

6.4.3.5.2. Respiratory protection may have to be worn if the potential concentration of harmful airborne contaminants may rise above the threshold limit value (TLV) or permissible exposure limit (PEL) as prescribed by the site. Full adherence to HSES 3A.03, Personal Protective Equipment must be followed if the work activities require the use of a respirator.

6.4.3.5.3. Contact your Region/Division Safety Director or Division Safety Manager for assistance if required.

#### **6.4.4. Training**

6.4.4.1. Generalized Safety training is typically required such as Industrial Safety Training Council (ISTC) or Safe Land. These are examples of eight-hour to three-day courses that meet the requirements set forth by one or many customers. Upon completion of this course(s) a site-specific training supplement may be required specific to the customer's properties you will enter. Be sure to provide the training provider all the names of the customers you plan to work for. Make sure to contact the customer representative to obtain the information for these courses prior to delivery or service.

6.4.4.1.1. Ensure all training completions are filed in employee training file and submitted to the Safety Training Department to ensure that PeopleSoft reflects all employee training.

#### **6.4.5. Areas of Restriction**

6.4.5.1. There are areas of restriction at each plant in order to maintain the safety, security, and sometimes proprietary of the area. If you see any signs of "restricted access" discuss it with the site representative assigned to UR prior to entering. You may have to be given an orientation of the hazards or have an additional access badge provided at the unit control room. Ask – don't take a chance. Get this information prior to departure from the branch.

## **6.5. Pre-Qualification**

### **6.5.1. Pre-Qualification Forms (PQF)**

6.5.1.1. Most customers require an annual or job-specific pre-qualification packet to be completed prior to offering a bid or continuation of services. The PQF is a lot of information pertaining to general business, liability and legal, quality, and safety. Each section must be fully completed and pertains to the company as a whole.

6.5.1.2. If you are provided a PQF by a customer, forward it to legal at [legaldepartmentbids@ur.com](mailto:legaldepartmentbids@ur.com) for completion. For many of our primary customers this process is annual and the Legal and HSES departments are fully prepared to perform this function for you. Allow designated personnel to provide this information.

6.5.1.3. If a Certificate of Insurance is required by the customer, utilize the Risk Department website for requesting certificates: [Certificates of Insurance](#)

## **6.6. Directions and Deliveries**

6.6.1.1. It is vital to create a communication loop in order to provide for the safety and well-being of the worker plus maintain production demands. The following list will be helpful when delivering to these locations:

6.6.1.1.1. Make sure to call the customer to obtain the current road conditions in and out of the property.

6.6.1.1.2. Communicate a drop-off point if the roads are impassable.

6.6.1.1.3. Send out a scout to drive the area prior to sending the equipment through to the customer site.

6.6.1.1.4. Provide the phone number of the representative at the site in case something changes at the last minute.

6.6.1.1.5. Make sure to know the surroundings and check the ground prior to stepping out of the vehicle.

6.6.1.1.6. Obtain a site map or a visitor guide if available.

6.6.1.1.7. If your location is in a remote area, be sure to have water in case you must sit for a while prior to offloading or loading.

## **6.7. Process Safety Management**

**6.7.1.** As an equipment rental company, United Rentals personnel are not involved in Process Safety Management work activity except in the capacity of delivering, repairing and maintaining non-process equipment inside a process area.

**6.7.2.** As an equipment rental company which coordinates and supervises employees involved in maintenance, repair, delivery of non-process equipment which are on or near covered processes, United Rentals has a responsibility under 29 CFR 1910.119, which defines contractor obligations to perform the following functions:

6.7.2.1. Ensure all employees and contractors are thoroughly trained to perform their jobs safely.

6.7.2.2. Document that employees have received and understood their training in PSM.

6.7.2.3. Ensure that all employees and contractors will be instructed in the hazards related to their jobs and potential fire, explosive or toxic release hazards.

6.7.2.4. Ensure that employees and contractors follow the safety rules of the facility or work site.

6.7.2.5. Advise the Customer of hazards the contract work itself poses or hazards that are identified by the contract workers.

**6.7.3.** In all circumstances, United Rentals employees and contractors shall abide by the rules and safe work practices established by the Customer. Among these are procedures involving LOTO, confined space entry, opening process equipment or piping and control over entrance to the facility.

**6.7.4.** Hot work permits shall be issued by the customer for all hot work operations conducted.

**6.7.5.** United Rentals employees and contractors shall advise the customer of any hazards found or unique hazards presented by our planned work.

**6.7.6.** United Rentals employees and contractors shall report incidents and near misses to supervision and customer contact immediately. All incidents shall be documented and investigated. The Customer shall develop and implement an emergency response plan which has contingencies for small releases as well as catastrophic releases of HHCs. All affected United Rentals employees and contractors will be trained in their specific roles and responsibilities in the execution of the plan. Customers shall make all information necessary to comply with the appropriate section of the OSHA standard to those persons responsible for compiling PSM information as required in 29 CFR Part 1910.119 (p)(1). United Rentals employees shall comply with required trade secret confidentiality agreements and not disclose the information as set forth in 29 CFR Part 1910.1200.

## 7. Records

Record	Location	Retained for	Maintained By
Customer safety training	Employee Safety Files	3 years	Branch Manager

## 8. Approvals

*Approvals on File*



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Jobsite Safety/Working Alone

Reserved  
Doc number: HSES 3A.04  
Issue: E  
Date: 3/30/2017  
Page: 9 of 10

_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date

### Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
E	3/30/2017	Candace Chudzik	NA	Minor changes throughout.
D	4/1/2013	Streamline Team	NA	Revised to new format. Re-numbered from SOP #40. Combined SOP #25, Process Safety Management and SOP #46, Refinery and Oil Field Preparation
C	5/1/2012	NA	NA	Added reference to SOP #29, minor changes throughout.
B	9/1/2011	NA	NA	Added scope, added Canadian regulatory reference, modified working alone procedures
A	12/1/10	NA	N/A	New format, minor content changes

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

### UNITED RENTALS, INC. INTERNAL USE ONLY

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

## 9. Appendix A for Leader Sheet on Jobsite Safety/Working Alone

### Jobsite Safety

- Review HSES 3A.04 requirements

- Discuss specific customer requirements for your location

- Review PPE requirements for customers for your location

- Discuss unique delivery issues in your area

- If servicing Refinery, Oil & Gas, or other similar industry, review 6.4 and any specific customer requirements in your area.

- Process Safety Management – If you have customers that are covered by the PSM standard in the US, ensure proper training for the customers you service.

### Working Alone

- Review the generic working alone process in this procedure

- Develop more detailed plans/process as needed based on your location

- Discuss local process for check-in and when required based on location, customers, cell phone availability, etc...

- Time frame for check-ins and when required

- Use of FAST System for monitoring activity

- Review items on delivery/service trucks for working in remote locations

- Discuss unique remote locations in your area

- Discuss cell phone/radio coverage in your area and develop plan if needed

## Equipment Isolation and Lockout/Tagout

### Table of Contents

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents.....	3
5.	Abbreviations, Acronyms, and Definitions .....	3
6.	Procedure.....	4
6.1.	Training Requirements .....	4
6.2.	General .....	5
6.3.	Required Equipment.....	5
6.4.	Essential Tasks of Equipment Isolation – General Procedure.....	6
6.5.	Returning Equipment to Operation .....	7
6.6.	Group Lockout or Tagout .....	7
6.7.	Equipment Control and Disable.....	8
6.8.	Make Ready/ Ready to Rent .....	8
6.9.	Interim Testing – Procedure for Testing or Position Machines, Equipment or Components.....	8
6.10.	Audit .....	9
6.11.	Removal of a Personal Lock.....	10
6.12.	Energy Control Procedure (ECP) .....	10
7.	Records.....	11
8.	Approvals .....	11
9.	Appendix A - Leader Sheet on Equipment Isolation and Lockout-Tagout .....	12
10.	Appendix B - Energy Control Procedure - Blank Template .....	13

## 1. Objective

1.1. The purpose of this procedure is to establish minimum safety requirements to ensure control of hazardous energy prior to service and maintenance of machines and equipment where the unexpected release of stored energy associated with the equipment could result in injury to personnel.

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1.1. Division/Region Safety Director

3.1.1.1. Assist Branch Manager/Maintenance staff with Control of Hazardous Energy - Annual Inspections.

3.1.1.2. Recommend modifications to location procedures based on inspection results.

### 3.1.2. Location Managers/Onsite Supervisors

3.1.2.1. Ensure that all employees have received training on Control of Hazardous Energy procedures applicable to their work prior to utilizing locks and tags.

3.1.2.2. Maintain adequate lockout, tagout, and block out supplies and make available to all employees.

3.1.2.3. Inform contractors working at your location of all applicable Control of Hazardous Energy procedures and ensure their compliance prior to beginning work activities.

### 3.1.3. Employees

3.1.3.1. Observe proper procedures and manufacturers' warning decals when working on or near equipment, machinery, or vehicles which are locked, tagged, or blocked out.

3.1.3.2. STOP any work activity when observed not conforming to this procedure or the manufacturer's maintenance and repair instructions. Do not continue work activities until brought to a safe and compliant condition.

3.1.3.3. Follow procedures in the appropriate Energy Control Procedure when servicing or performing maintenance operations on equipment, machinery, or vehicles. Training documents must be maintained in each Authorized Employee's training file or electronically within the system of record.

### 3.1.4. Contractors

3.1.4.1. Submit energy control procedures to the operations / service manager before working on anything that requires Control of Hazardous Energy procedures.

3.1.4.2. Receive training in control of hazardous energy from their employer and present verification to the operations / service manager.

3.1.4.3. Follow procedures in the appropriate Energy Control Procedure when servicing or performing maintenance operations on equipment, machinery, or vehicles.

#### 4. Reference Documents

Document Number	Document Description
OSHA 1910 147	The Control of Hazardous Energy
OHS Code 2009 – Part 15	Managing the Control of Hazardous Energy
CAN/CSA Z460-05	Control of Hazardous Energy – Lockout and Other Methods
<a href="#">HSES 3A.05 F01</a>	LOTO Annual Inspection Form
<a href="#">HSES 3A.05 R01</a>	Energy Control Procedure #1 (General)
<a href="#">HSES 3A.05 R02</a>	Energy Control Procedure #2 (Power Vehicles)
<a href="#">HSES 3A.05 R03</a>	Energy Control Procedure #3 (Cord and Plug Equipment)
<a href="#">HSES 3A.05 R04</a>	Energy Control Procedure #4 (Truck Washing Machines & Steam Cleaners)
<a href="#">HSES 3A.05 R05</a>	Energy Control Procedure #5 (Air Compressors)
<a href="#">HSES 3A.05 R06</a>	Energy Control Procedure #6 (Powered Industrial Trucks)
<a href="#">HSES 3A.05 R07</a>	Energy Control Procedure #7 (Portable Air Compressors)
<a href="#">HSES 3A.05 R08</a>	Energy Control Procedure #8 (Gas Fired Portable Equipment)
<a href="#">HSES 3A 06 F02</a>	LOTO Decision map
<a href="#">HSES 3A 06 F03</a>	LOTO Process map

#### 5. Abbreviations, Acronyms, and Definitions

Affected Employee	Any employee working with or near equipment, machinery, or vehicles being serviced or maintained requiring Energy Control Procedures to be utilized.
Authorized Employee	Any employee trained and authorized to lock out, block out, or tag out machinery or equipment for service or maintenance.
Block Out	Blocks, pins, chocks, or jack stands used to control movement such as sliding, rolling, falling, or pressure release of equipment, machinery, and vehicles as it pertains to this procedure.
Capable of Being Locked Out	An energy isolation device is considered capable of being locked out if it is designed to accept a lock out device.
Energy Isolation	A mechanical device that physically prevents the transmission or release of



Device	energy, including but not limited to the following: wheel chocks, plug locking devices, vehicle lockout kit, manually operated electrical circuit breaker or disconnect switch, block, wedge, and bar.
Hazardous Energy	<p>Hazardous energy is energy or potential energy in equipment or machinery that has the potential to cause harm to operators or nearby persons as a result of its uncontrolled release. The most common types of hazardous energy are:</p> <ul style="list-style-type: none"><li>o electrical,</li><li>o mechanical,</li><li>o hydraulic (liquid pressure),</li><li>o pneumatic (air pressure),</li><li>o chemical,</li><li>o thermal,</li><li>o gravitational, and</li><li>o stored (i.e. spring tension).</li></ul>
HSES	Health, Safety, Environmental and Sustainability
Lockout Devices	Standard lockouts include metal chains and cables, cable ties, locks, hasps, tags. Plastic chain is unacceptable. Locks and tags designated for Lockout/Tagout (LOTO) may not be used for other purposes.
Maintenance	A process of repairing or servicing equipment that has the potential to expose employees to hazardous energy.
Make Ready	A process of inspecting equipment to ensure it is ready for rental. This process does not require any lockout/tagout unless a defect is found and actual maintenance is needed to complete the make ready inspection.
Personal Locks and Tags	Must clearly identify the name of the employee and United Rentals.
Plug and Cap Kit	Kit used to plug or cap hydraulic lines when disconnecting is necessary.
Preventive Maintenance	Maintenance is the proactive execution of inspections, adjustments, lubrication, and service of equipment.
Tagout Devices	Attached tags alerting employees that Energy Control Procedures are in effect to control the hazardous energy in equipment, machinery, or vehicles. Tagout procedures must be used with lockout devices.
Zero Energy	Equipment has been rendered inoperable, emptied of its contents, flushed clean and/or purged and mechanical controls have been implemented to ensure residual or stored energy has been dissipated and cannot re-accumulate.

## 6. Procedure

### 6.1. Training Requirements

**6.1.1.** If training is required: Training will be in accordance with HSES 4A.01 Competency Assurance Program.

**6.1.2.** See Appendix A for Leader Sheet on Equipment Isolation and Lockout-Tagout.

## **6.2. General**

**6.2.1.** This procedure describes procedures, techniques, and equipment necessary to safely control hazardous energy.

**6.2.2.** All machinery or equipment capable of movement is required to be de-energized, disengaged and blocked, or locked and tagged out during service and maintenance activities.

**6.2.3.** Lockout and tagout procedures will be applied any time an Authorized Employee(s) installs, services, maintains, or otherwise performs work on equipment that could cause harm if the energy is unexpectedly turned on.

**6.2.4.** Energy must be isolated, pressure dissipated, and positively controlled as a safety measure.

**6.2.5.** Lockout/tagout is required to prevent injury when the task requires placing any body part(s) into equipment having potential to be hot (Thermal), rotating, pinching/crushing, has pressure, could drop, or could release from its position while in repair.

6.2.5.1. Some examples are working on or around belts, chains, shafts, boom sections, engine components, hydraulics, pressure systems, wheels, tires/tracks, electric systems, etc.

**6.2.6.** The employee servicing equipment is responsible for ensuring zero energy has been attained and will be maintained for the duration of the maintenance/servicing activities. This includes:

6.2.6.1. Knowledge of the type of potential energy sources associated with the equipment and the methods to achieve a zero energy state.

6.2.6.2. Use of the available isolation device(s) to effectively achieve and maintain a zero hazardous energy state for the duration of the maintenance.

**6.2.7.** The requirements of this Section do not apply to work on cord and plug connected electrical equipment when

6.2.7.1. It is controlled by unplugging the equipment and

6.2.7.2. The plug is under the exclusive control (in sight and within reach) of the worker performing the servicing or maintenance.

### **6.3. Required Equipment**

#### **6.3.1. Lockout, block out, and tagout equipment:**

6.3.1.1. Lockout devices must 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

6.3.1.2. Tagout devices, including their attachment means, shall be substantial enough to prevent inadvertent removal.

6.3.1.3. Must be durable, and cannot be used for any purpose other than the control of hazardous energy.

6.3.1.4. Remain legible and not deteriorate if exposed to adverse weather conditions or wet and damp locations.

6.3.1.5. Not deteriorate if used in corrosive environments

6.3.1.6. Standardized: Only red "American" brand Locks of the 1105 series may be used by UR for Lockout.

**6.3.2.** There will only be one key per lock assignment available. This will prevent the risk of energizing while the Authorized Employee is working on the equipment.

**6.3.3.** Maintain an adequate supply of devices needed for the control of hazardous energy, based on the equipment, machinery, and vehicles at your location. Every employee must have access to lockout, tagout, and block out devices.

### **6.4. Essential Tasks of Equipment Isolation – General Procedure**

**6.4.1.** This is a general lock out procedure. Equipment specific procedural examples are found in the appendices of this document.

6.4.1.1. Authorized employee announces the shutdown

6.4.1.1.1. Inform Affected and other employees and anyone in the general area that the maintenance will be performed and the piece of equipment will be shutdown.

6.4.1.2. Shut down the equipment using normal procedures- as per operators manual and equipment specific procedures.

6.4.1.3. Disconnect all energy sources (electrical, pneumatic, hydraulic)

6.4.1.3.1. After shutting down a piece of equipment, run the controls through their motions to release any residual / stored energy. Ensure all booms, masts, and attachments are lowered to the ground or supported with an approved blocking device. Ensure all manufacturer safety bars and locks (devices) are in place before performing any service to the unit.

#### 6.4.1.4. Apply lock-out and tagout

6.4.1.4.1. Use appropriate lock-out devices (such as steering wheel covers, battery cable/plug covers) to ensure that energy cannot be restored unexpectedly or accidentally while work is being carried out on the equipment. Locks and tags are then used to identify the authorized employee that is working on the equipment. Contact your safety professional if you need assistance on locking devices. Rental ready tags are not sufficient as a tagout device.

#### 6.4.1.5. Verify the isolation and lock-out

6.4.1.5.1. After the equipment has been turned off, residual energy has been dissipated, and the lockout/tagout devices have been applied, VERIFY that these steps have been successful. Ensure that the equipment cannot be turned on and that the controls have been isolated. When this is successfully accomplished, return all controls to neutral or an off position, if applicable.

### 6.5. Returning Equipment to Operation

6.5.1. Upon completion of maintenance/servicing, proper steps must be taken to return the equipment to safe operation.

6.5.2. Check to ensure that all tools have been removed from the equipment and that safety guards have been replaced per manufacturers' instructions.

6.5.3. Verify that all personnel are safely clear of the equipment and any possible swing zones.

6.5.4. Announce that equipment is to be started.

6.5.5. Remove locks and tags.

### 6.6. Group Lockout or Tagout

6.6.1. When servicing is performed by a crew, craft, department or other group, a procedure shall be used which provides equal protection to that of a personal lockout or tagout device. Primary responsibility for the lockout or tagout shall rest with one key person who will coordinate all affected personnel and ensure continuity of protection. Each Authorized Employee will affix their personal lockout or tagout device to the group device before beginning the work, and shall remove their own device when their work is completed.

6.6.2. If servicing lasts more than one shift, LOTO protection CANNOT be interrupted.

6.6.3. The original Authorized Employee will remove their lock and the incoming employee will place theirs on the isolating device. If the first employee leaves prior to the replacement's arrival, a supervisor may place their lock on to ensure safety. The incoming Authorized employee MUST VERIFY that ALL energy sources are locked out and their individual lock is additionally applied to the group lockout fixture prior to beginning work.

## 6.7. Equipment Control and Disable

**6.7.1.** Due to the nature of our business, it is often necessary to control and disable a piece of equipment while parked on a job site. Reasons for this consist of the following examples:

6.7.1.1. Inability to repair in the field and must be transported back to the branch.

6.7.1.2. Repairs in the field are not complete but the equipment will remain on-site for another technician to repair.

6.7.1.3. An unexpected problem arises and the technician is unable to return to the job site to complete the job.

**6.7.2.** In order to control and disable equipment, a technician will perform the following as appropriate:

6.7.2.1. Notify the customer representative the equipment is not operable and also branch dispatch.

6.7.2.2. Take the keys from the ignition

6.7.2.3. Disengage the negative wire from the battery terminal post

6.7.2.4. Place an Out of Service tag on the controls

6.7.2.5. If applicable, utilize a cap and plug for hydraulic lines when disconnecting

**6.7.3.** All of the above precautions must be taken to provide safety for personnel on the job site. Unauthorized personnel on the job site must not attempt to operate a disabled piece of equipment for their own safety and those around them.

**6.7.4.** Employees must be trained in the procedures necessary to enable equipment left in this condition in order to prepare for transport back to the branch. It is preferred that the equipment be hoisted, alleviating the need for an operator to maneuver it onto a vehicle deck. This must be taken into consideration at the job site and upon return to the branch.

## 6.8. Make Ready/ Ready to Rent

**6.8.1.** Lockout and tagout does not apply to a typical "Make Ready" preparation. **Although, should the need to conduct service or maintenance activities requiring a component to be replaced, repaired, or adjusted resulting in an exposure covered by the lockout and tagout guidelines, lockout and tagout will apply.** Therefore, all affected employees must be familiar with the guidelines presented in this lockout and tagout procedure. Equipment manufacturers' instructions must be maintained.

## 6.9. Interim Testing – Procedure for Testing or Position Machines, Equipment or Components

**6.9.1.** When a lockout or tag device must be temporarily removed and the equipment energized for testing, positioning, or hot alignment, the Authorized Employee is responsible for:

**6.9.2.** Making sure that he is properly trained and competent on the specific energy control procedure that includes how to complete the job safely.

6.9.2.1. Inspect the work area to ensure that nonessential items have been removed and to ensure that the machine, piece of equipment, or component is operationally intact.

6.9.2.1.1. Check the work area to ensure that no Members of the Workforce are within the hazard area.

6.9.2.1.2. Ensuring the equipment is clear of tools and materials to avoid equipment damage or personnel injury. Employees are not authorized to place body parts in any area where there are moving parts. Cleanup must take place after the equipment has been deenergized and the equipment has been locked out.

6.9.2.2. Notifying all affected employees that equipment is to be energized.

6.9.2.3. The appropriate personnel will remove their locks, energize the equipment, and proceed with testing. If the manufacturer states that the guard must be in place when in operation, the guard cannot be removed for testing. If the manufacturer allows for removal of the guard when testing the service/operations manager must be notified before the testing. Once the equipment is energized the employee must back away and observe the operation from a safe distance. The equipment can only be approached after it has been deenergized and lockout tagout established.

6.9.2.4. Re-apply LOTO:

6.9.2.4.1. Once testing or positioning is completed: Shut down the equipment in accordance with existing manufacturers operating instructions.

6.9.2.4.2. Isolate or block the energy sources from the machine or piece of equipment.

6.9.2.4.3. Re-apply LOTO devices.

6.9.2.4.4. Release any stored energy that may have accumulated during the testing or positioning.

6.9.2.4.5. Perform the same zero-energy verification that was performed when the device was originally locked out.

6.9.2.5. All systems will be de-energized and Lockout/Tagout restored per this procedure prior to continuing maintenance operations.

**6.9.3.** Employees are prohibited from performing maintenance on equipment that is not locked out.

## **6.10. Audit**

**6.10.1.** The location manager or designee must conduct an inspection of the Control of Hazardous Energy procedures. The inspection must:

---

### **UNITED RENTALS, INC. INTERNAL USE ONLY**

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

6.10.1.1. Occur annually (minimum),

6.10.1.2. Utilize the LOTO Annual Inspection form, and

6.10.1.3. Include a review of each employee's understanding of and ability to perform required Energy Control Procedures.

6.10.1.4. Review the lockout/tagout kit with each employee.

**6.10.2.** Correct deficiencies immediately with assistance and advice from your Division /Region Safety Director or Division Safety Manager.

### **6.11. Removal of a Personal Lock**

**6.11.1.** Only the person who applied a lock may remove it. If it is necessary to remove a lock that was inadvertently left in place, the supervisor must:

6.11.1.1. Verify that the employee who applied the lock is unavailable.

6.11.1.2. Make a reasonable effort to inform the owner of the lock that it is to be removed and check all areas of risk ensuring it is safe to disconnect.

6.11.1.3. Provide detailed written documentation of the lock removal.

6.11.1.4. Notify all Affected Employees to include any additional Authorized employees (Group LOTO) that the lock is to be removed prior to their return to work activities.

6.11.1.5. Conduct a visual check that all high-pressure lines are reconnected, if applicable.

### **6.12. Energy Control Procedure (ECP)**

**6.12.1.** Energy Control Procedures (ECP) are specific to a piece of equipment or machinery. The purpose of having ECPs is to provide guidance when creating your own procedures.

**6.12.2.** Always refer to the manufacturer's guidelines when preparing a procedure for your branch. Example ECPs are provided as guides for developing branch procedures. See the reference section for links. A blank ECP is shown in Appendix B.



## 7. Records

Record	Location	Retained for	Maintained By
Annual Inspection Form	Employee Safety Training File	2 years	Branch Manager

## 8. Approvals

### *Approvals on File*

_____	_____	_____
Name	Position	Date
_____	_____	_____
Name	Position	Date
_____	_____	_____
Name	Position	Date
_____	_____	_____
Name	Position	Date

### Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
D	12/18/17	Francois-Xavier Huneault Candace Chudzik	NA	Added flow charts minor changes throughout.
C	4/1/13	Streamline Team	NA	Revised to new format. Re-numbered from SOP #10
B	12/1/11	NA	NA	Minor changes throughout, added scope, revised footer, split out attachments into separate documents, clarified interim testing
A	12/1/10	NA	N/A	New format, revised footer

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.



## 9. Appendix A - Leader Sheet on Equipment Isolation and Lockout-Tagout

All authorized employees must be trained in the proper use of Energy Control Procedures on an annual basis and/or before working with or near any equipment, machinery, or vehicles requiring the use of Energy Control Procedures. In addition, training must take place when:

A new authorized employee is hired and annually thereafter, or

The addition of a new procedure or modification of existing procedures or

When an inspection reveals the employee does not fully understand the lockout/tagout process.

Training/Re-Training records must be documented, signed and certified.

### Affected Employees Topics

- 1) Affected vs. Authorized Employees
- 2) Lockout general process and purpose
- 3) Lockout/Tagout devices for recognition
- 4) Do not touch
- 5) Contact person who applied lockout/tagout if needed.

### Authorized Employees Topics

- 1) Affected employee information plus:
- 2) Steps to LOTO
- 3) Equipment specific processes/Energy Control Procedures
- 4) Group LOTO process
- 5) Assignment of locks/tags
- 6) Removal of Personal Lock by another person.
- 7) Exam – Take test on LOTO
- 8) Practical – Annual Inspection Form Observation

---

**10. Appendix B - Energy Control Procedure - Blank Template**

ECP No. ____	
Title ____ (Site Specific Machinery or Equipment) ____ (explanation ____)	
Scope	Use this procedure for all servicing and / or maintenance operations performed on any ____.
Types & Magnitude of Hazardous Energy	<ul style="list-style-type: none"><li>• <u>Gravitational Energy</u>: (describe) _____</li><li>• _____</li><li>• <u>Electrical Energy</u>: (describe) _____</li><li>• _____</li><li>• <u>Mechanical Energy</u>: (describe) _____</li><li>• _____</li><li>• <u>Chemical Energy</u>: (describe) _____</li><li>• _____</li><li>• <u>Thermal Energy</u>: (describe) _____</li><li>• _____</li><li>• <u>Pneumatic Energy</u>: (describe) _____</li><li>• _____</li><li>• <u>Hydraulic Energy</u>: (describe) _____</li><li>• _____</li></ul>
Energy Control Techniques	<ol style="list-style-type: none"><li>1. Notify Affected Employees that the _____ is being locked and tagged for maintenance.</li><li>2. _____</li><li>3. _____</li><li>4. _____</li><li>5. _____</li><li>6. _____</li><li>7. _____</li><li>8. Verify that vehicle has been isolated from all energy sources by attempting to operate it.</li><li>9. After isolation is verified, return the machine or equipment to the off position.</li></ol> <p>Note: If an Authorized Employee is called away from the process of</p>

	applying lockout and tagout, a thorough recheck of the steps previously taken is mandatory. This will prevent inadvertently missing important steps to de-energize a machine or piece of equipment.
Reactivating for Testing	<ol style="list-style-type: none"><li>1. Remove all non-essential tools from the area</li><li>2. Ensure all persons are clear of the potential danger area</li><li>3. Install any guards or covers which were removed during work activities</li><li>4. Remove the locking devices and perform the testing</li><li>5. Avoid any contact with moving parts or energy sources while testing</li><li>6. Upon completion of testing reattach the locking devices prior to continuing</li></ol>
Returning to normal operations	<ol style="list-style-type: none"><li>1. Remove all non-essential tools and other items from the area</li><li>2. Ensure everyone is clear of the area</li><li>3. Install any guards or covers which were removed</li><li>4. Remove the lockout and tagout devices. Coordinate removal with others if a group procedure is used</li><li>5. Re-energize the equipment to normal operating condition</li><li>6. Notify all Affected and Authorized Employees that the energy control procedure is complete</li></ol>

Branch Name		Lawson #	Equipment Type	Equipment Number	
Authorized Employee Performing LOTO Procedure			Authorized Employee Performing Inspection		Date
Time Inspection Began			Time Inspection Ends		
<b>Instructions:</b> <ul style="list-style-type: none"> <li>Inspect and validate all items listed below and fill in the appropriate Score.</li> <li>Review results with Branch Manager, Safety Officer, Develop verifiable corrective action plans.</li> <li>Inspection to be performed on all Authorized Employees annually.</li> <li>Inspection Form to be maintained in Employee Safety Training File.</li> </ul>					
No	<b>Inspection Items</b> (Enter Comments as required)				Acceptable = ✓ Unacceptable = X Not Applicable = N/A
<b>Energy Control Procedures</b>					
01	Authorized employee reviews Energy Control Procedure in its entirety for this piece of equipment, or is able to fully explain Energy Control Procedures. Comments:				
02	Notifies applicable Affected Employees and personnel that equipment is being locked out. Comments:				
03	<ul style="list-style-type: none"> <li>Shuts down the machine or equipment by the normal stopping procedure.</li> </ul>				
	<ul style="list-style-type: none"> <li>In preparation for shut down, brings components of equipment to fully lowered or retracted position as necessary.</li> </ul>				
	<ul style="list-style-type: none"> <li>Sets manufacturers braces and blocks</li> </ul>				
	<ul style="list-style-type: none"> <li>Places wheel chocks in front and behind drive wheel.</li> </ul>				
	<ul style="list-style-type: none"> <li>Drains air reservoirs on vehicles with air starters.</li> </ul>				
	<ul style="list-style-type: none"> <li>Tilts cab until safety latch engages on vehicles with tilt cabs.</li> </ul>				
	<ul style="list-style-type: none"> <li>Supports equipment on jack stands when raised.</li> </ul>				
	<ul style="list-style-type: none"> <li>Engages safety latch when equipment is on a lift.</li> </ul>				
	<ul style="list-style-type: none"> <li>Other: _____</li> </ul> Comments:				
04	Shuts off or disconnects energy sources (e.g. battery, fuel, etc). Comments:				
05	Dissipates or blocks secondary energy sources (e.g. pneumatic, hydraulic, etc). Comments				
06	Attaches Lockout device to hold the energy isolating device in the shutoff position. Comments:				
07	Fills out and signs the Tagout device and attaches to the lockout device or where appropriate. Comments				
08	Verifies that the equipment has been isolated from all energy sources prior to starting work. Attempts to start the vehicle and manipulate controls. After isolation is verified, returns equipment to the off position. Comments:				

No	Inspection Items continued (Enter Comments as required)	Acceptable = ✓ Unacceptable = X Not Applicable = N/A
<b>Reactivation for Testing</b>		
09	Removes all non-essential tools from the area. • Comments:	
10	Ensures all persons are clear of any potential danger areas. • Comments:	
11	Installs guards or covers which were removed during work activities. • Comments:	
12	Removes the locking device and performs the operational testing. • Comments:	
13	Avoids contact with moving parts and/or energy sources while testing. • Comments:	
14	Upon completion of testing, if work on equipment will continue, repeats previous Energy Control Techniques. • Comments:	
<b>Returning to Normal Operations</b>		
15	Removes all non-essential tools and other items from the area. • Comments:	
16	Ensures all persons are clear of any potential danger areas. • Comments:	
17	Installs any guards or covers which were removed during work activities. • Comments:	
18	Removes the lockout and tagout devices. Coordinates removal with others if a group procedure is used. • Comments:	
19	Re-energizes the equipment to normal operating condition. • Comments:	
20	Notifies all Affected and Authorized Employees that the Energy Control Procedure is complete. • Comments:	
<b>Additional Comments:</b>  		
<b>Authorized Employee Performing LOTO Procedure</b>  <b>Signature:</b> _____ <b>Date:</b> _____		
<b>Authorized Employee Performing Inspection:</b>  <b>Signature:</b> _____ <b>Date:</b> _____		
This document to be maintained in Employee Safety Training File in section designated for Certifications from United Rentals.		

<b>Energy Control Procedure No. 1_Issue_A</b> <b>General</b> (All equipment and machinery containing hazardous energy sources)	
Scope	Use this procedure as the general requirements of energy control when servicing equipment and machinery.
Types & Magnitude of Hazardous Energy	<ul style="list-style-type: none"> <li>• <u>Gravitational Energy</u>: Gravity could cause the vehicle to roll or cause a raised portion of vehicle (cab or hood) to fall.</li> <li>• <u>Mechanical Energy</u>: Moving parts of the engine have potential to cause injury by direct contact to a body part or by causing tools or other materials to be thrown.</li> <li>• <u>Thermal Energy</u>: Contact with hot parts or components has potential for result in burns. Improper opening of the cooling system has potential to cause scalding.</li> <li>• <u>Electrical Energy</u>: Arcing from a short circuit has potential to cause burns and may result in a fire if flammable vapors are present.</li> <li>• <u>Chemical Energy</u>: Contact with battery acid has potential to result in burns. Prolonged contact with coolant and lubricants has potential to result in skin irritation or other chemical injuries.</li> <li>• <u>Hydraulic Energy</u>: Contact with high pressure has potential to result in injury.</li> <li>• <u>Pneumatic Energy</u>: Compressed air has potential to cause injury through direct skin contact or by airborne projectiles.</li> </ul> <p>Note: Always use a safety tip on blow guns designed to reduce dead-head pressure to &lt;30 psi.</p>
Energy Control Techniques	<ol style="list-style-type: none"> <li>1. Verify that all Affected Employees understand the procedures for shutdown and isolation of machine or equipment.</li> <li>2. Notify all Affected Employees that a lockout and tagout will be used and where it will be used.</li> <li>3. Shut down the machine or equipment by the normal stopping procedure.</li> <li>4. Shut off all energy supplied to the machine or equipment at the primary power source. (e.g., battery, fuel, etc.)</li> <li>5. Dissipate or block any secondary energy. Apply cap and plug kit, if applicable. (e.g. pneumatic, hydraulic, capacitors, etc.)</li> <li>6. Operate switch, valve, or other energy isolating device to ensure that the power source is shut off from the machine or equipment.</li> <li>7. Attach the lockout device to hold the energy isolating device in the off position.</li> <li>8. Fill out the tagout device, sign it, and fasten it to the lockout device.</li> <li>9. Check to assure the machine or equipment is properly disconnected by attempting to start the machine or equipment. After isolation is verified, return the machine or equipment to the off position.</li> </ol>

	<p>Note: If an Authorized Employee is called away from the process while applying lockout and tagout, a thorough recheck of the steps previously taken is mandatory upon returning. This will prevent inadvertently missing important steps to de-energize a machine or piece of equipment.</p>
Reactivating for Testing	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools from the area</li> <li>2. Ensure all persons are clear of the potential danger area</li> <li>3. Install any guards or covers which were removed during work activities</li> <li>4. Remove the locking devices and perform the testing</li> <li>5. Avoid any contact with moving parts or energy sources while testing</li> <li>6. Upon completion of testing, reattach the locking devices prior to continuing</li> </ol>
Returning to normal operations	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools and other items from the area</li> <li>2. Ensure everyone is clear of the area</li> <li>3. Install any guards or covers which were removed</li> <li>4. Remove the lockout and tagout devices. Coordinate removal with others if a group procedure is used</li> <li>5. Re-energize the equipment to normal operating condition</li> <li>6. Notify all Affected and Authorized Employees that the energy control procedure is complete</li> </ol>

<b>Energy Control Procedure No. 2</b> <b>Power Vehicles</b> (trucks, tractors, automobiles, etc.)	
Scope	Use this procedure for all servicing and / or maintenance operations performed on any power vehicle.
Types & Magnitude of Hazardous Energy	<ul style="list-style-type: none"> <li>• <u>Gravitational Energy</u>: Gravity could cause the vehicle to roll or cause a raised portion of vehicle (cab or hood) to fall.</li> <li>• <u>Mechanical Energy</u>: Moving parts of the engine have potential to cause injury by direct contact to a body part or by causing tools or other materials to be thrown.</li> <li>• <u>Thermal Energy</u>: Contact with hot parts or components has potential for result in burns. Improper opening of the cooling system has potential to cause scalding.</li> <li>• <u>Electrical Energy</u>: Arcing from a short circuit has potential to cause burns and may result in a fire if flammable vapors are present.</li> <li>• <u>Chemical Energy</u>: Contact with battery acid has potential to result in burns. Prolonged contact with coolant and lubricants has potential to result in skin irritation or other chemical injuries.</li> </ul>
Energy Control Techniques	<ol style="list-style-type: none"> <li>1. Review Energy Control Procedure in its entirety for this piece of equipment</li> <li>2. Notify Affected Employees that the vehicle is being locked and tagged for maintenance.</li> <li>3. In preparation for shutting off engine bring all components of equipment to fully retracted or lowered position as applicable. Shut the engine off, remove keys from ignition, place gearshift in the neutral position or park for automatics, and apply the parking brakes.</li> <li>4. Place wheel chocks in front and behind at least one non-drive wheel when applicable.</li> <li>5. Let engine and attached parts cool.</li> <li>6. Drain air reservoirs on vehicles with air starters.</li> <li>7. Tilt cab until safety latch engages on vehicles with tilt cabs.</li> <li>8. Support vehicle on jack stands when vehicle is raised.</li> <li>9. Engage safety latch when vehicle is on a lift.</li> <li>10. Shut off or disconnect energy sources (e.g., battery, fuel, etc.).</li> <li>11. Dissipate or block secondary energy sources (e.g., pneumatic, hydraulic, etc.).</li> <li>12. Attach lockout devices to hold the energy isolating device in the shutoff position.</li> <li>13. Fill out the Tagout device, sign it, and fasten it to the lockout device</li> <li>14. Verify that the vehicle has been isolated from all energy sources prior to starting work. Attempt to start the vehicle and manipulate controls. After isolation is verified, return the machine or equipment to the off position.</li> </ol>



	<p>Note: If an Authorized Employee is called away from the process while applying lockout and tagout, a thorough recheck of the steps previously taken is mandatory upon returning. This will prevent inadvertently missing important steps to de-energize a machine or piece of equipment.</p>
Reactivating for Testing	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools from the area</li> <li>2. Ensure all persons are clear of the potential danger area</li> <li>3. Install any guards or covers which were removed during work activities</li> <li>4. Remove the locking devices and perform the testing</li> <li>5. Avoid any contact with moving parts or energy sources while testing</li> <li>6. Upon completion of testing, reattach the locking devices prior to continuing</li> </ol>
Returning to normal operations	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools and other items from the area</li> <li>2. Ensure everyone is clear of the area</li> <li>3. Install any guards or covers which were removed</li> <li>4. Remove the lockout and tagout devices. Coordinate removal with others if a group procedure is used</li> <li>5. Re-energize the equipment to normal operating condition</li> <li>6. Notify all Affected and Authorized Employees that the energy control procedure is complete</li> </ol>

<b>Energy Control Procedure No. 4</b> <b>Truck Washing Machines &amp; Steam Cleaners</b> (gas fired and electric)	
Scope	Use this procedure for all servicing and / or maintenance operations performed on any stationary hard wired truck washing machine.
Types & Magnitude of Hazardous Energy	<ul style="list-style-type: none"> <li>• <u>Mechanical Energy</u>: Moving parts of the engine have potential to cause injury by direct contact to a body part or by causing tools or other materials to be thrown.</li> <li>• <u>Thermal Energy</u>: Contact with hot water or heated components has potential to result in burns.</li> <li>• <u>Chemical Energy</u>: Sparks created from servicing the machine have potential to ignite natural gas.</li> <li>• <u>Hydraulic Energy</u>: Contact with high pressure has potential to result in injury.</li> </ul>
Energy Control Techniques	<ol style="list-style-type: none"> <li>1. Notify Affected Employees that the machine is being locked and tagged for maintenance.</li> <li>2. Turn the breaker switch for the truck washer to the OFF position and apply a lock.</li> <li>3. Place a lock on the breaker box switch to keep it in the OFF position.</li> <li>4. Legibly complete a tag and attach it to the breaker box as near as possible to the switch.</li> <li>5. Turn the gas supply valve to the fully closed position if gas fired.</li> <li>6. Legibly complete a tag and attach it to the gas supply valve.</li> <li>7. Allow the hot water reservoir to cool.</li> <li>8. Close water supply valve and bleed of residual pressure.</li> <li>9. Legibly complete a tag and attach it to the water supply valve.</li> <li>10. Verify that the truck washer has been isolated from its energy source by attempting to start it. After isolation is verified, return the machine or equipment to the off position.</li> </ol> <p>Note: If an Authorized Employee is called away from the process while applying lockout and tagout, a thorough recheck of the steps previously taken is mandatory upon returning. This will prevent inadvertently missing important steps to de-energize a machine or piece of equipment.</p>
Reactivating for Testing	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools from the area</li> <li>2. Ensure all persons are clear of the potential danger area</li> <li>3. Install any guards or covers which were removed during work activities</li> <li>4. Remove the locking devices and perform the testing</li> <li>5. Avoid any contact with moving parts or energy sources while testing</li> <li>6. Upon completion of testing, reattach the locking devices prior to continuing</li> </ol>

Returning to normal operations	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools and other items from the area</li> <li>2. Ensure everyone is clear of the area</li> <li>3. Install any guards or covers which were removed</li> <li>4. Remove the lockout and tagout devices. Coordinate removal with others if a group procedure is used</li> <li>5. Re-energize the equipment to normal operating condition</li> <li>6. Notify all Affected and Authorized Employees that the energy control procedure is complete</li> </ol>
--------------------------------	--

<b>Energy Control Procedure No. 5</b> <b>Air Compressors</b> (stationary and portable)	
Scope	Use this procedure for all servicing and / or maintenance operations performed on any air compressor.
Types & Magnitude of Hazardous Energy	<ul style="list-style-type: none"> <li>• <u>Mechanical Energy</u>: Moving parts of the engine have potential to cause injury by direct contact to a body part or by causing tools or other materials to be thrown.</li> <li>• <u>Thermal Energy</u>: Contact with hot parts or components has potential to result in burns.</li> <li>• <u>Pneumatic Energy</u>: Compressed air has potential to cause injury through direct skin contact or by airborne projectiles.</li> </ul> <p>Note: Always use a safety tip on blow guns designed to reduce dead-head pressure to &lt;30 psi.</p> <ul style="list-style-type: none"> <li>• <u>Electrical Energy</u>: Direct or indirect contact with energized electrical circuits has potential to result in electrical shock.</li> </ul>
Energy Control Techniques	<ol style="list-style-type: none"> <li>1. Notify Affected Employees that the compressor is being locked and tagged for maintenance.</li> <li>2. Turn the compressor switch at the breaker box to the OFF position.</li> <li>3. Place a lockout device on the breaker box switch to keep it in the OFF position.</li> <li>4. Legibly complete a tag and attach it to the breaker box as near as possible to the switch.</li> <li>5. Verify that the compressor has been isolated from its energy source by attempting to start it.</li> <li>6. De-energize the compressor by draining the air out of all tanks. After isolation is verified, return the machine or equipment to the off position.</li> </ol> <p>Note: If an Authorized Employee is called away from the process while applying lockout and tagout, a thorough recheck of the steps previously taken is mandatory upon returning. This will prevent inadvertently missing important steps to de-energize a machine or piece of equipment.</p>
Reactivating for Testing	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools from the area</li> <li>2. Ensure all persons are clear of the potential danger area</li> <li>3. Install any guards or covers which were removed during work activities</li> <li>4. Remove the locking devices and perform the testing</li> <li>5. Avoid any contact with moving parts or energy sources while testing</li> <li>6. Upon completion of testing, reattach the locking devices prior to continuing</li> </ol>
Returning to normal operations	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools and other items from the area</li> <li>2. Ensure everyone is clear of the area</li> </ol>

	<ol style="list-style-type: none"><li>3. Install any guards or covers which were removed</li><li>4. Remove the lockout and tagout devices. Coordinate removal with others if a group procedure is used</li><li>5. Re-energize the equipment to normal operating condition</li><li>6. Notify all Affected and Authorized Employees that the energy control procedure is complete</li></ol>
--	---

<b>Energy Control Procedure No. 7</b> <b>Portable Air Compressors</b> <b>(Towed Units)</b>	
Scope	Use this procedure for all servicing and / or maintenance operations performed on a gas fired portable air compressor (towed unit).
Types & Magnitude of Hazardous Energy	<ul style="list-style-type: none"> <li>• <u>Mechanical Energy</u>: Moving parts of the engine have potential to cause injury by direct contact to a body part or by causing tools or other materials to be thrown.</li> <li>• <u>Thermal Energy</u>: Contact with hot parts or components has potential to result in burns. LPG liquid has the potential for a cold burn, if used.</li> <li>• <u>Pneumatic Energy</u>: Compressed air has potential to cause injury through direct skin contact or by airborne projectiles.</li> </ul> <p>Note: Always use a safety tip on blow guns designed to reduce dead-head pressure to &lt;30 psi.</p> <ul style="list-style-type: none"> <li>• <u>Electrical Energy</u>: Direct or indirect contact with energized electrical circuits has potential to result in electrical shock.</li> </ul>
Energy Control Techniques	<ol style="list-style-type: none"> <li>1. Notify Affected Employees that the compressor is being locked and tagged for maintenance.</li> <li>2. Turn the battery shut-off switch to the off position and apply a lock. If no switch exists, pull the negative wire from the battery and apply a cover and lock.</li> <li>3. Legibly complete a tag and attach it to the switch and lock.</li> <li>4. Drain the compressed air from the tanks(s)</li> <li>5. Close fuel supply valve.</li> <li>6. Verify that the compressor has been isolated from its energy source by attempting to start it.</li> <li>7. After isolation is verified, return the machine or equipment to the off position.</li> </ol> <p>Note: If an Authorized Employee is called away from the process while applying lockout and tagout, a thorough recheck of the steps previously taken is mandatory upon returning. This will prevent inadvertently missing important steps to de-energize a machine or piece of equipment.</p>
Reactivating for Testing	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools from the area</li> <li>2. Ensure all persons are clear of the potential danger area</li> <li>3. Install any guards or covers which were removed during work activities</li> <li>4. Remove the locking devices and perform the testing</li> <li>5. Avoid any contact with moving parts or energy sources while testing</li> <li>6. Upon completion of testing, reattach the locking devices prior to continuing</li> </ol>
Returning to normal operations	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools and other items from the area</li> </ol>

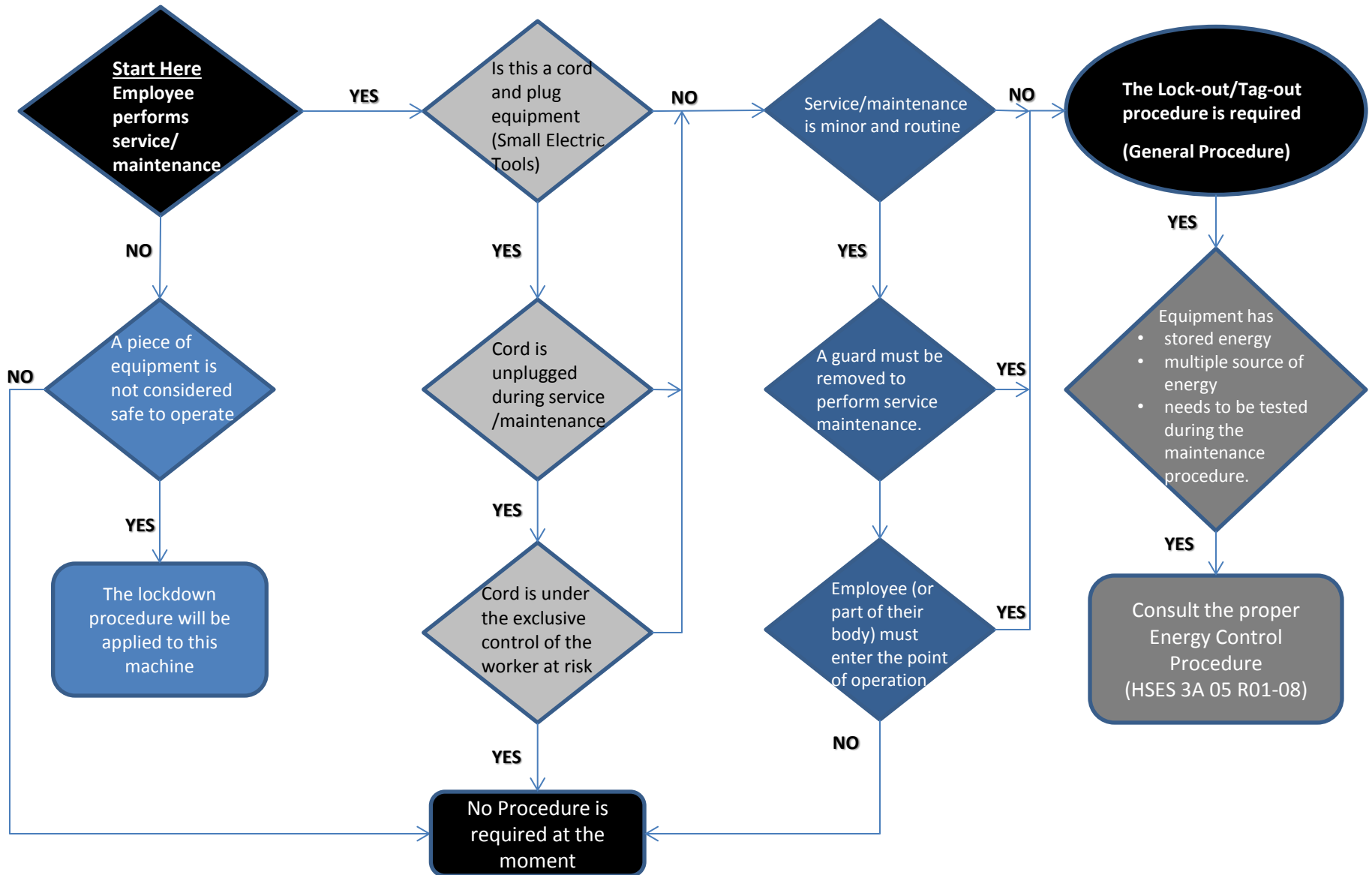
	<ol style="list-style-type: none"><li>2. Ensure everyone is clear of the area</li><li>3. Install any guards or covers which were removed</li><li>4. Remove the lockout and tagout devices. Coordinate removal with others if a group procedure is used</li><li>5. Re-energize the equipment to normal operating condition</li><li>6. Notify all Affected and Authorized Employees that the energy control procedure is complete</li></ol>
--	---

<b>Energy Control Procedure No. 8</b> <b>Gas Fired Portable Equipment</b>	
Scope	Use this procedure for all servicing and / or maintenance operations performed on gas fired portable equipment.
Types & Magnitude of Hazardous Energy	<ul style="list-style-type: none"> <li>• <u>Mechanical Energy</u>: Moving parts of the engine have potential to cause injury by direct contact to a body part or by causing tools or other materials to be thrown.</li> <li>• <u>Thermal Energy</u>: Contact with hot parts or components has potential to result in burns.</li> <li>• <u>Pneumatic Energy</u>: Compressed air has potential to cause injury through direct skin contact or by airborne projectiles.</li> </ul> <p>Note: Always use a safety tip on blow guns designed to reduce dead-head pressure to 30 psi or less.</p> <ul style="list-style-type: none"> <li>• <u>Electrical Energy</u>: Direct or indirect contact with energized electrical circuits has potential to result in electrical shock.</li> </ul>
Energy Control Techniques	<ol style="list-style-type: none"> <li>1. Notify Affected Employees that the equipment is being serviced and maintained.</li> <li>2. Turn the battery shut-off switch to the off position and apply a lock, if applicable.</li> <li>3. If no switch exists, pull the spark plug wire and apply a cover and lock.</li> <li>4. Legibly complete a tag and attach it to the cover and lock.</li> <li>5. Dissipate or block any secondary energy. Apply cap and plug kit, if applicable. (e.g. pneumatic, hydraulic, capacitors, etc.)</li> <li>6. Verify that the piece of equipment has been isolated from all energy sources by attempting to start it.</li> <li>7. After isolation is verified, return the machine or equipment to the off position.</li> </ol> <p>Note: If an Authorized Employee is called away from the process while applying lockout and tagout, a thorough recheck of the steps previously taken is mandatory upon returning. This will prevent inadvertently missing important steps to de-energize a machine or piece of equipment.</p>
Reactivating for Testing	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools from the area</li> <li>2. Ensure all persons are clear of the potential danger area</li> <li>3. Install any guards or covers which were removed during work activities</li> <li>4. Remove the locking devices and perform the testing</li> <li>5. Avoid any contact with moving parts or energy sources while testing</li> <li>6. Upon completion of testing, reattach the locking devices prior to continuing</li> </ol>
Returning to normal operations	<ol style="list-style-type: none"> <li>1. Remove all non-essential tools and other items from the area</li> </ol>



	<ol style="list-style-type: none"><li>2. Ensure everyone is clear of the area</li><li>3. Install any guards or covers which were removed</li><li>4. Remove the lockout and tagout devices. Coordinate removal with others if a group procedure is used</li><li>5. Re-energize the equipment to normal operating condition</li><li>6. Notify all Affected and Authorized Employees that the energy control procedure is complete</li></ol>
--	---

## Lock-out / Tag-out Decision Map

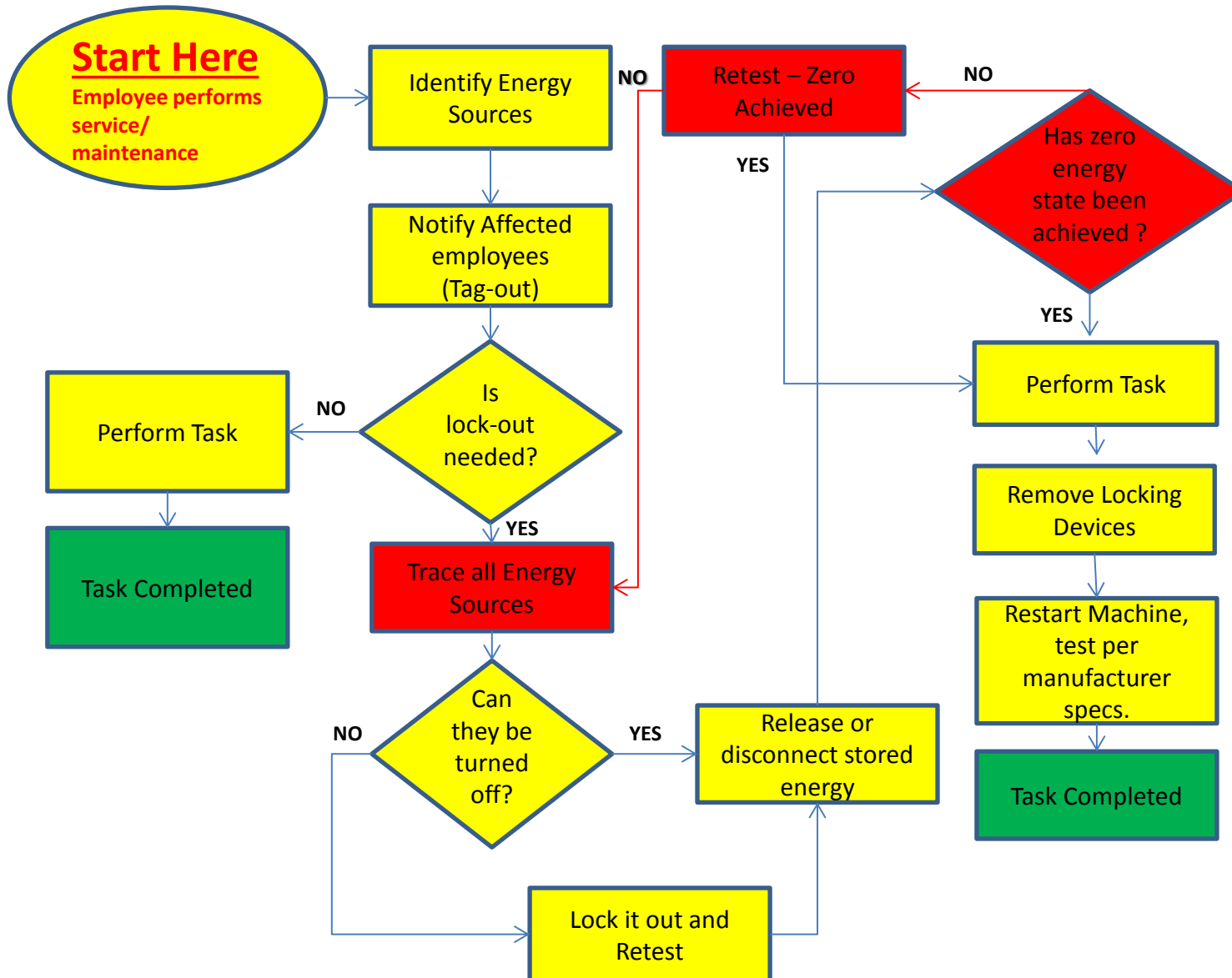


# Lock-out / Tag-out Process Map

## Energy State:

- electrical,
- mechanical,
- hydraulic (liquid pressure),
- pneumatic (air pressure),
- chemical,
- thermal,
- gravitational, and
- stored (i.e. spring tension).

Energy source i.e: Battery, Wheels





# Computer Workstation Self Evaluation

Assessment Date: \_\_\_\_\_

Union Affiliation: \_\_\_\_\_

Employee Name: \_\_\_\_\_

Employee ID #: \_\_\_\_\_

Branch #: \_\_\_\_\_

District #: \_\_\_\_\_

Region#: \_\_\_\_\_

Date of Hire: \_\_\_\_\_

Reason for Assessment (Circle all that apply)

New Employee

Transfer

Equipment Request

Discomfort

Annual Review

## Seated Position

Do you know how to adjust your chair?

☐☐

Date of Correction

\_\_\_\_\_

Is your chair adjusted for support & comfort?

☐☐

\_\_\_\_\_

Are your feet firmly supported by the floor or a footstool?

☐☐

\_\_\_\_\_

## Arm Position when using the computer

Are shoulders relaxed?

☐☐

\_\_\_\_\_

Are elbows next to your side, not reaching forward

☐☐

\_\_\_\_\_

Is the mouse or trackball at the same height and next to the keyboard?

☐☐

\_\_\_\_\_

Are wrists straight (not bent up/down/or side to side)

☐☐

\_\_\_\_\_

-When typing?

☐☐

\_\_\_\_\_

-When using the mouse or trackball?

☐☐

\_\_\_\_\_

## Head Position

Is your head upright & straight-not severely bent or turned?

☐☐

\_\_\_\_\_

-When viewing the monitor?

☐☐

\_\_\_\_\_

-When looking at documents or copy?

☐☐

\_\_\_\_\_

Are frequently used items close?

☐☐

\_\_\_\_\_

## Work Habits

Do you reduce repetitive typing and the mouse use through use of macros, shortcut keys, arrow keys?

☐☐

\_\_\_\_\_

Do you leave your workstation periodically (pick up print out, refill water cup, etc.)

☐☐

\_\_\_\_\_

Have you received, reviewed, and do you understand how each of the following documents applies to your workstation and work habits?

☐☐

\_\_\_\_\_

Review with your Branch Manager and/or Location Manager advocate any items to which you answered

“No”

Employee Signature: \_\_\_\_\_

Supervisor Signature: \_\_\_\_\_

Retain original in Employee's Safety Training File.

## Material Handling and Ergonomics

### Table of Contents

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents.....	2
5.	Abbreviations, Acronyms, and Definitions .....	2
6.	Procedure.....	2
6.1.	Training Requirements .....	2
6.2.	Manual Materials Handling Guidelines .....	3
6.3.	Safe Lifting Rules .....	3
6.4.	Workstation Ergonomics .....	4
6.5.	California Operations Only .....	4
6.6.	Guidelines for Branch Operations .....	4
7.	Records.....	5
8.	Approvals .....	5
9.	Appendix A – Leader Sheet Manual Material Handling and Ergonomics .....	6

## 1. Objective

1.1. To provide guidelines for manual material handling and ergonomics. To ensure that all employees are aware of proper lifting techniques as well as tools and equipment that can be used to minimize material handling.

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1.1. Location Manager

3.1.1.1. Must periodically evaluate work areas and employees' work techniques to assess the potential for and prevention of injuries.

3.1.1.2. Review needs for mechanical aides and ergonomic equipment for the location and acquire as needed.

## 4. Reference Documents

Document Number	Document Description
<a href="#">HSES 3A.06_F01</a>	Computer Workstation Self Evaluation
<a href="#">HSES 5A.02</a>	Planned Inspections and Housekeeping
<a href="#">HSES 6A.01</a>	Incident Investigation
OHS Code 2009 Part 14	Lifting and Handling Loads
CSA Z1004	General Workplace Ergonomics

## 5. Abbreviations, Acronyms, and Definitions

HSES	Health, Safety, Environmental and Sustainability
Musculoskeletal Injuries	means an injury or disorder of the muscles, tendons, ligaments, joints, nerves, blood vessels or related soft tissue, for the purpose of this SOP it will almost always refer to those injuries related to sprains, strains and physical exertions, and inflammation that may be caused or aggravated by work.

## 6. Procedure

### 6.1. Training Requirements

6.1.1. If training is required: Training will be in accordance with HSES 4A.01 Competency Assurance Program.

**6.1.2.** See Appendix A for Leader Sheet on Manual Material Handling and Ergonomics.

## **6.2. Manual Materials Handling Guidelines**

**6.2.1.** To reduce lifting of heavy or awkward objects:

6.2.1.1. Use mechanical aids such as forklifts, lifting tables, dollies, hand trucks, lift-assist devices, jacks, carts, hoists or other engineering controls

6.2.1.2. Purchase goods in smaller containers.

6.2.1.3. Get help to lift heavy or awkward objects.

**6.2.2.** Assess the lift and work area to determine potential hazards

6.2.2.1. Weight, size and center of gravity must be assessed to safely perform lift

6.2.2.2. Determine the safest way to complete the lift, including PPE

6.2.2.3. Assess and ensure clear paths of travel, consider traffic areas, ramps or slopes.

6.2.2.4. When possible eliminate backwards travel to the greatest extent possible.

6.2.2.5. Determine the safest spot and manner to place the item

**6.2.3.** Reduce stressful body movements

6.2.3.1. Ensure sufficient space for the entire body to turn.

6.2.3.2. Relocate objects within easy reach.

6.2.3.3. Ensure that there is a clear and easy access to the load.

6.2.3.4. Use slings and hooks to move loads without handles.

6.2.3.5. Balance contents of containers.

6.2.3.6. Use rigid containers.

6.2.3.7. Change the shape of the load so the load can be handled close to the body.

6.2.3.8. Change the type of movement – for example, pushing is easier on the body than pulling; pulling is easier than carrying.

**6.2.4.** New operations or procedures in the workplace must be assessed to determine lifting hazards and their remediation.

## **6.3. Safe Lifting Rules**

**6.3.1.** Do not lift if you are not convinced that you can handle the load safely.

**6.3.2.** Prepare to lift by warming up the muscles.

**6.3.3.** Stand close to the load, facing the way you intend to move.

**6.3.4.** Use a wide stance to gain balance.

**6.3.5.** Ensure a good grip on the load.

**6.3.6.** Keep arms straight.

**6.3.7.** Tighten abdominal muscles.

**6.3.8.** Tuck chin into the chest.

**6.3.9.** Initiate the lift

6.3.9.1. Using your legs if the item is lower than waist level.

6.3.9.2. Using your body weight if the item is at your shoulder height.

**6.3.10.** Lift the load close to the body.

**6.3.11.** Lift smoothly without jerking.

**6.3.12.** Avoid twisting and side bending while lifting and lowering.

#### **6.4. Workstation Ergonomics**

**6.4.1.** Provide chairs or benches to eliminate excessive standing.

**6.4.2.** Provide anti-fatigue mat when standing is required for long periods.

**6.4.3.** Provide a footrest that can readily and comfortably support the feet, for example stools or when feet can't lay flat.

**6.4.4.** HSES 3A.06\_F01, Computer Workstation Self Evaluation can be used to review workstation setup.

#### **6.5. California Operations Only**

**6.5.1.** In the event at least two employees performing identical tasks have been diagnosed by a physician with repetitive motion injuries (RMIs) within 12 consecutive months, the employer must establish a program which shall:

**6.5.2.** Evaluate each job, process, or operation of identical activity for exposures which have caused RMIs at the affected worksite.

**6.5.3.** Control or minimize to the extent feasible the exposures that have caused repetitive motion injuries, considering engineering controls and administrative controls.

#### **6.6. Guidelines for Branch Operations**

**6.6.1.** Install lift gates on all delivery pick-ups, to the greatest extent possible.

**6.6.2.** Customers shall not assist in the loading and unloading of equipment.

**6.6.3.** A forklift must be available for use by employees.

**6.6.4.** No physical lifting over 45 pounds. Routine lifting tasks for materials over this weight will require handling devices (such as dollies or lifting tables) or a two-person lift. Anything non-routine will require review with the location manager.

6.6.4.1. Routine manual lifts above 45 lbs. should be reviewed by the location manager and/or RSD.

**6.6.5.** New operations should be evaluated to engineer out hazards before work processes are implemented.





LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Material Handling and Ergonomics

Reserved  
Doc number: HSES 3A.06  
Issue: C  
Date: 4/1/13  
Page: 5 of 6

## 7. Records

Record	Location	Retained for	Maintained By
HSES 3A.06_F01, Computer Workstation Self Evaluation	Branch Files	2 years	Branch Manager

## 8. Approvals

*Approvals on File*

_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date

## Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
C	4/1/13	Streamline Team	NA	Revised to new format. Re-numbered from SOP #16.
B	12/1/2011	NA	NA	Minor changes throughout, added scope, revised footer
A	12/1/2010	NA	N/A	New format, minor content changes

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

### UNITED RENTALS, INC. INTERNAL USE ONLY

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Material Handling and Ergonomics

Reserved  
Doc number: HSES 3A.06  
Issue: C  
Date: 4/1/13  
Page: 6 of 6

---

## 9. Appendix A – Leader Sheet Manual Material Handling and Ergonomics

Review this procedure

Review common repetitive tasks in the location

Review routine manual lifts and discuss potential solutions to eliminate

Review materials over 40 pounds that are routinely lifted

Review the steps of a safe lift.

Discuss proper storage locations of heavier material

Discuss preparation for work such as warming up, stretching.

Review workstation setup for office/desk personnel.

## Heat/Cold Stress

### Table of Contents

1. Objective .....	2
2. Scope .....	2
3. Responsibilities .....	2
4. Reference Documents.....	3
5. Abbreviations, Acronyms, and Definitions .....	3
6. Procedure.....	3
6.1. Training Requirements .....	3
6.2. Protecting Personnel in Hot Environments .....	4
6.2.9. Heat cramps .....	5
6.2.10. Heat Exhaustion .....	5
6.2.11. Heat stroke .....	5
6.3. Working Safely in Hot Weather .....	5
6.4. Protecting Personnel in Cold Environments .....	6
6.4.2. Frostbite .....	6
7. Records.....	8
8. Approvals .....	9
9. Attachment 1 – Heat Index Chart .....	10
10. Attachment 2 - OSHA Quick Card - Protecting Workers from Heat Stress.....	8
11. Appendix A – Leader Sheet for Heat & Cold Stres .....	11

---

## 1. Objective

1.1. The purpose of this procedure is to define the minimum requirements for the protection against heat & cold stress. The goal of this procedure is to provide employees the knowledge to recognize heat & cold stress and take immediate action to prevent escalation of heat & cold stress emergencies.

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1.1. Location Manger

3.1.1.1. Ensure new employees are closely observed for their first two weeks on the job at a minimum to assure acclimation and orientation.

3.1.1.2. Ensure employees have access to sufficient quantities of water as needed for proper hydration. Locations will have potable water available for employees. The water will be found in the break room, shop or showroom from a potable water faucet or a water cooler supplied with delivered water.

3.1.1.3. Ensure employees have access to shade when temperatures reach 80 degrees. Employees shall use United Rentals facilities when present in the branch environment for the purpose of supplied shade and air conditioning. Where employees are off-site conducting work United Rentals vehicles can be used for shade and the vehicle air conditioning for cooling. When vehicles are used for shade the employee shall sit on the opposite side of the vehicle where it casts a shadow. If the cab of the vehicle is to be used, the windows will be rolled down until the vehicle is started and the air conditioning is in full effect.

3.1.1.4. Assure "high heat" procedures are available at 95 degrees and above; including effective observation and monitoring, mandatory cool down periods every two hours, buddy systems, work rotation and/or regular communication with lone workers.

3.1.1.5. Ensure proper rest areas are communicated to the staff, fans and additional cooling supplies are brought in as needed for the work environment.

3.1.1.6. Ensure proper weather gear for anticipated conditions.

3.1.1.7. Ensure location has an adequate number of First Aid/CPR trained employees. Employees with symptoms must be provided appropriate first aid or emergency response.

3.1.1.8. The Heat/Cold Stress program is documented, shared and available to all employees on MyUr.

3.1.1.9. Ensure employees have knowledge of Company Nurseline for consultation and monitoring of symptoms related to heat illness if necessary (1-877-URI-RISK).

### 3.1.2. Employees

3.1.2.1. Ensure proper hydration

3.1.2.2. Be prepared and monitor weather conditions to ensure proper protection as needed.

3.1.2.3. Understand and implement procedures in HSES 3A.07. Communicate needs, requirements, concerns and issues with Supervision.

## 4. Reference Documents

Document Number	Document Description
<a href="#">HSES 3F.01</a>	Emergency Planning and Prevention

## 5. Abbreviations, Acronyms, and Definitions

Shade	Means blockage of direct sunlight. Shade is sufficient when objects do not cast a shadow in the shaded area and there is sufficient space for the employee to be comfortable. Avoid sources of shade such as metal sheds or parked cars that are hot from sitting in the sun. Also, machinery does not qualify as source of shade.
HSES	Health, Safety, Environmental and Sustainability

## 6. Procedure

### 6.1. Training Requirements

6.1.1. If training is required: Training will be in accordance with HSES 4A.01, Competency Assurance Program.

6.1.1.1. Training will be provided to all employees and supervisors who have employees who may be affected by heat or cold stress. Training will be provided initially on hire and annually thereafter.

6.1.1.1.1 Employees will be instructed on the health effects of heat and cold stress.

6.1.1.1.2 Cold weather employees will be instructed of dangers from snow and ice buildup. See Appendix A for Leader Sheet on Heat & Cold Stress

6.1.1.2 Supervisors must be trained in preventing heat related illnesses prior to supervising employees.

6.1.1.3 Supervisor training must define measures to prevent heat illness and processes to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

6.1.2. See [Appendix A](#) for Leader Sheet on Heat & Cold Stress.

## **6.2. Protecting Personnel in Hot Environments**

**6.2.1.** When temperatures exceed 80 degrees, increase monitoring work/rest cycles and use of shade in operations. When temperatures exceed 95 degrees, continue above, and increase monitoring and communications.

**6.2.2.** Employees shall have access to potable drinking water meeting the requirements as applicable, including but not limited to the requirements that it be fresh, potable, suitably cool, and provided to employees free of charge. The water shall be located as close as practicable to the areas where employees are working. Where drinking water is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking for the entire shift. Locations may begin the shift with smaller quantities of water if they have effective procedures for replenishment during the shift as needed to allow employees to drink one quart or more per hour or a total of 2 gallons per employee for an 8-hour shift. The frequent drinking of water, as described shall be encouraged.

**6.2.3.** Electrolyte liquid may also be provided, but it should be used to supplement, not replace water consumption.

**6.2.4.** Disposable/single use drinking cups will be provided to employees.

**6.2.5.** Employees and management should monitor the water container levels to ensure adequate water supply for the workers.

**6.2.6.** Employees suffering from heat illness or believing a preventative recovery period is needed shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling for a period of no less than five minutes.

**6.2.7.** Access to shade shall be permitted at all times when temperature reaches 80 degrees, or when shade is requested.

**6.2.8.** The Supervisor shall remind employees of the need to drink plenty of water and to seek shade on days with a heat index above 95. See Appendix A

**6.2.9.** The Supervisor shall regularly monitor employees for heat related illness on days with a heat index above 95, see [Attachment 1](#).

**6.2.10.** Physical factors that contribute to heat related illness should be taken into consideration before performing a task. These factors may include: type of work, level of physical activity and duration, and clothing color, weight and breathability.

**6.2.11.** Supervisors must also ensure that personal factors that may contribute to heat related illness are taken into consideration before assigning a task where there is the possibility of a heat-related illness occurring. The most common personal factors to be consider include: Acclimation, Age, Weight/fitness, prior heat-related illness or medication.

#### **6.2.12. Heat cramps**

6.2.12.1. Heat cramps usually affect workers who sweat a lot during strenuous activity. This sweating depletes the body's salt and moisture levels. Low salt levels in muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion.

6.2.12.2. Workers with heat cramps should stop all activity, sit in a cool place and drink clear juice or a sports beverage.

#### **6.2.13. Heat Exhaustion**

6.2.13.1. The worker with heat exhaustion still sweats, but experiences extreme weakness or fatigue, giddiness, nausea, or headache. The skin is clammy and moist, the complexion pale or flushed, and the body temperature normal or slightly higher

6.2.13.2. If Heat Exhaustion is suspected – Move the employee to a cool area, have employee rest, drink water or electrolyte liquids, and take cool shower if possible.

#### **6.2.14. Heat stroke**

6.2.14.1. Heat Stroke, the most serious health problem for workers in hot environments, is caused by the failure of the body's internal mechanism to regulate its core temperature. Sweating stops and the body can no longer rid itself of excess heat. Victims of heat stroke will die unless treated promptly. Signs include:

6.2.14.1.1. Mental confusion, delirium, loss of consciousness, convulsions or coma;

6.2.14.1.2. A body temperature of 106 degrees Fahrenheit or higher; and

6.2.14.1.3. Hot, dry skin which may be red, mottled, or bluish.

6.2.14.1.4. If Heat Stroke is suspected – Call 911, move employee to a cool shaded area, cool the worker by soaking, or spraying clothes with water, or fanning their body.

6.2.14.1.5. For any heat illness, proper cooling off rest breaks, first aid and/or emergency procedures must be provided.

### **6.3. Working Safely in Hot Weather**

**6.3.1.** Drink plenty of water throughout work shift. If traveling to a jobsite take water with you when you leave. Water or electrolyte liquids with disposable cups are to be kept in the shop and made available to employees. Avoid caffeine, energy drinks, etc. as they cause dehydration. Wear loose fitting, lightweight clothing, and a hat. Use sunscreen when working outside. Work/rest cycles in shaded area are encouraged when needed. Mandatory 10 minite breaks mustbe taken for 10 minutes every two hours.

---

## **6.4. Protecting Personnel in Cold Environments**

### **6.4.1. Prevention:**

- 6.4.1.1. Wear appropriate clothing.
- 6.4.1.2. Regularly used walkways and travelways shall be appropriately sanded, salted or cleared of snow and ice as soon as practicable.
- 6.4.1.3. Cold weather supplies such as salt and sand and driver emergency kits should be inspected regularly to ensure that they remain stocked and ready for inclement weather.
- 6.4.1.4. Avoid wetness or excessive sweating.
- 6.4.1.5. Stay dry. Change into dry clothes and shoes if they become wet.
- 6.4.1.6. Keep active. Avoid sitting or standing still for prolonged periods.
- 6.4.1.7. Take frequent breaks in warm, shielded areas.
- 6.4.1.8. Work in pairs to keep an eye on each other.
- 6.4.1.9. Consume warm, high calorie food often.
- 6.4.1.10. Drink plenty of warm non-caffeinated, non-alcoholic liquids.
- 6.4.1.11. Don't smoke.

### **6.4.2. Frostbite**

- 6.4.2.1. Frostbite occurs when the deep layers of the skin and other body tissues freeze (tissue temperature <28°F-30°F). Ice crystals form, destroying tissues and causing permanent damage.

**6.4.3.** In cold conditions, your body reduces heat loss and increases heat production in order to maintain an internal (core) body temperature of 98.6°F. This is why you shiver first; it is your bodies attempt to warm you up.

**6.4.4.** Over time, your body will decrease blood flow to your extremities and outer skin and shift it to the body core to keep the internal organs warm.

**6.4.5.** However, this allows exposed skin and the extremities to cool rapidly and increases the risk of cold-related injuries, such as frostbite.

### **6.4.6. Frostbite Treatment**

- 6.4.6.1. Move the person to a warm dry area. Don't leave the person alone.
- 6.4.6.2. Remove any wet or tight clothing that may cut off blood flow to the affected area.
- 6.4.6.3. Treat for hypothermia if victim is also experiencing hypothermia. Perform CPR if necessary.
- 6.4.6.4. Do not rub the affected area, because rubbing causes damage to the skin and tissue.



6.4.6.5. Gently place the affected area in a warm (105°F) water bath and monitor the water temperature to slowly warm the tissue. Don't pour warm water directly on the affected area because it will warm the tissue too fast causing tissue damage. Warming takes about 25-40 minutes.

#### **6.4.7. Hypothermia**

6.4.7.1. Hypothermia ("low heat") is a potentially serious and fatal health condition resulting from the body's failure to maintain its normal core temperature of 98.6°F.

6.4.7.2. When exposed to cold conditions, your body begins to lose heat faster than it can be produced. Prolonged exposure to cold eventually uses up your body's stored energy and your core body temperature drops to 95°F or below. The result is hypothermia.

6.4.7.3. Body temperature that is too low affects the brain, making the affected person unable to think clearly or move well.

6.4.7.4. This makes hypothermia particularly dangerous because a person may not realize it is happening and may deny being in any trouble.

6.4.7.5. Recognition of symptoms depends on co-workers' ability to identify symptoms and to seek medical help.

6.4.7.6. Shivering is your body's automatic defense against cold temperature — an attempt to warm itself. Constant shivering is a key sign of hypothermia. Signs and symptoms of moderate to severe hypothermia include:

- 6.4.7.6.1. Shivering
- 6.4.7.6.2. Clumsiness or lack of coordination
- 6.4.7.6.3. Slurred speech or mumbling
- 6.4.7.6.4. Stumbling
- 6.4.7.6.5. Confusion or difficulty thinking
- 6.4.7.6.6. Poor decision making, such as trying to remove warm clothes
- 6.4.7.6.7. Drowsiness or very low energy
- 6.4.7.6.8. Apathy or lack of concern about one's condition
- 6.4.7.6.9. Progressive loss of consciousness
- 6.4.7.6.10. Weak pulse
- 6.4.7.6.11. Slow, shallow breathing

#### **6.4.8. Hypothermia Treatment:**

- 6.4.8.1. Move the person to a warm dry area. Don't leave the person alone.
- 6.4.8.2. Remove any wet or tight clothing that may cut off blood flow to the affected area.
- 6.4.8.3. Perform CPR if necessary.



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Heat/Cold Stress

Reserved

Doc number:

HSES 3A.07

Issue:

F

Date:

10/24/19

Page:

8 of 11

6.4.8.4. Call 911 – This is a true emergency

## 7. Records

Record	Location	Retained for	Maintained By

**UNITED RENTALS, INC. INTERNAL USE ONLY**

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Heat/Cold Stress

Reserved  
Doc number: HSES 3A.07  
Issue: F  
Date: 10/24/19  
Page: 9 of 11

## 8. Approvals

*Approvals on File*

Name	Position	Date
Name	Position	Date
Name	Position	Date
Name	Position	Date

## Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
F	10/23/19	Candace Chudzik, Kevin Converse	NA	Added shade requirements and detailed supply requirements
E	1/5/17	Candace Chudzik	NA	Added additional cold weather requirements.
D	11/25/15	Cheryl Wisenbaker	NA	Revised heat stress portion to meet new regulatory requirements
C	4/1/2013	Streamline Team	NA	Revised to new format. Re-numbered from SOP #39. Added Heat Index Chart
B	12/1/2011	Kurt Southerland	NA	Added Scope, revised footer, minor changes throughout, added cold emergency
A	12/1/10	NA	N/A	New Program

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

## UNITED RENTALS, INC. INTERNAL USE ONLY

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

## 9. Attachment 1 – Heat Index Chart

### NOAA's National Weather Service

#### Heat Index

Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

#### Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution
  Extreme Caution
  Danger
  Extreme Danger

NOAA's heat alert procedures are based mainly on Heat Index Values. The Heat Index, sometimes referred to as the apparent temperature is given in degrees Fahrenheit. The Heat Index is a measure of how hot it really feels when relative humidity is factored with the actual air temperature.

To find the Heat Index temperature, look at the Heat Index chart below. As an example, if the air temperature is 96°F and the relative humidity is 65%, the heat index--how hot it feels--is 121°F. The Weather Service will initiate alert procedures when the Heat Index is expected to exceed 105°-110°F (depending on local climate) for at least 2 consecutive days.



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Heat/Cold Stress

Reserved  
Doc number: HSES 3A.07  
Issue: F  
Date: 10/24/19  
Page: 11 of 11

---

## **10. Attachment 2 – OSHA Quick Card – Protecting Workers from Heat Stress**

## **11. Appendix A – Leader Sheet for Heat & Cold Stress**

### **Heat Stress**

- Review the applicable section of this procedure
- Discuss equipment for keeping cool
- Ensure facility and service/delivery trucks are equipped with proper water containers
- Review and discuss the Heat Index Chart
- Review OSHA Quick Card – Protecting Workers from Heat Stress

### **Cold Stress**

- Review the applicable section of this procedure
- Discuss equipment for keeping warm
- Ensure facility and service/delivery trucks are equipped with proper equipment for cold weather extremes
- Discuss the dangers and destructive potential caused by unstable snow buildup, falling icicles and ice dams. Discussion should include prevention of such incidents.
- Discuss working alone conditions in extreme cold

## Electrical Safety

### Table of Contents

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents.....	2
5.	Abbreviations, Acronyms, and Definitions .....	3
6.	Procedure.....	3
6.1.	Training Requirements .....	3
6.2.	Safety and Environmental Precautions .....	3
6.3.	Electrical Safety Qualified Employees .....	4
6.4.	PRE-WORK.....	5
6.5.	Electrical Safety Non-Qualified.....	5
6.6.	Overhead Lines .....	6
6.7.	Protecting Personnel .....	6
6.8.	Personal Protective Equipment, Protective Barriers, Shields and Tools .....	6
6.9.	Assured Grounding .....	7
6.10.	Ground Fault Circuit Interrupters (GFCI) .....	9
7.	Records.....	9
8.	Approvals .....	10
9.	Appendix A – Leader Sheet for Electrical Safety.....	11
10.	Appendix B – Approach Distances for Qualified Employees (1910.333, Table S-5)	11

## 1. Objective

**1.1.** To reduce the potential for exposure to energized parts that may result in electrical shock, burn, or electrocution to a worker and to ensure that employees are aware of the difference between “qualified” and “un qualified” electrical work so that limitations are understood.

**1.2.** The purpose of this procedure is to provide a requirement for the grounding of electrical equipment to protect workers. A properly installed grounding conductor has a low resistance to ground and greatly reduces the amount of current that passes through your body. A common example is cord and plug equipment with a three-prong plug.

**1.3. NOTE:** Assured grounding is only required on construction sites that are not using permanent wiring systems or GFCIs. United Rentals will use the buildings electrical systems at the branch level. For field work, GFCIs shall be utilized. If on a customer location that is utilizing assured grounding and we need to conduct work using electricity, we will utilize this SOP or the customers program for compliance.

## 2. Scope

**2.1.** The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1.1. Location Manager/Operations Manager

3.1.1.1. Ensure employees are qualified for the work assigned.

3.1.1.2. Ensure electrical equipment is properly maintained.

### 3.1.2. Employees –

3.1.2.1. Only qualified employees may perform work on electrical equipment or devices.

3.1.2.2. Lockout equipment prior to work being conducted.

## 4. Reference Documents

Document Number	Document Description
CAN/CSA Z462	Workplace Electrical Safety
OHS Code 2009 – Part 17	Overhead Power Lines
<a href="#">HSES 3A.03</a>	Personal Protective Equipment
<a href="#">HSES 3A.05</a>	Equipment Isolation and Lockout Tagout

Document Number	Document Description
<a href="#">HSES 3B.01</a>	Forklift and Aerial Operator Safety
NFPA 70 E	Standard for Electrical Safety in the Workplace
OSHA 1910 Subpart S	Electrical
OSHA 1926 Subpart K	Electrical

## 5. Abbreviations, Acronyms, and Definitions

HSES	Health, Safety, Environmental and Sustainability
MSAD	Minimum Safe Approach Distances
Qualified Person	A person that is trained (training must meet the requirements of NFPA 70E), authorized and is capable of working safely on energized parts and shall be familiar with the proper use of special precautionary techniques, personal protective equipment, insulating and shielding materials and insulated tools.
Unqualified person	A person that is not trained or experienced in working on energized parts.

## 6. Procedure

### 6.1. Training Requirements

6.1.1. If training is required: Training will be in accordance with HSES 4A.01 Competency Assurance Program.

6.1.2. See [Appendix A](#) for Leader Sheet on Electrical Safety.

### 6.2. Safety and Environmental Precautions

6.2.1. Prior to work being conducted at customer location personnel will notify the Onsite Supervisor before accessing equipment.

6.2.2. Lockout equipment prior to work being conducted-

6.2.3. Employees may not reach blindly into areas which may contain energized parts.

6.2.4. Whenever natural light is insufficient to illuminate the worksite, artificial lighting shall be provided to enable the individual to perform the work safely.

6.2.5. Employees using portable electrical equipment need to be protected from electrical shock. This is accomplished by grounding the metallic case of electrical equipment using a grounding conductor in the portable cord. The third pole completes the path to ground for the grounding conductor in the cord.

6.2.6. Cords and equipment shall be protected by a ground fault circuit interrupter (GFCI) within three feet of water source or when job site requires it.

6.2.7. The GFCI shall be located at the source of electricity, providing protection for all cords and portable equipment.



**6.2.8.** GFCI's shall always remain outside of confined spaces and out of direct travel of operating equipment.

**6.2.9.** Receptacle adapters must have a grounding prong.

### **6.3. Electrical Safety Qualified Employees**

**6.3.1.** Only electrical safety qualified employees may perform the following types of tasks:

- 6.3.1.1. load bank testing
- 6.3.1.2. diagnose/repair/replace wiring components on various rental units
- 6.3.1.3. taking voltage and current readings
- 6.3.1.4. troubleshooting equipment with test equipment
- 6.3.1.5. installing or removing and replacing fuses in energized electrical equipment
- 6.3.1.6. adjustment of system controls or variables, etc.

**6.3.2.** All exposed energized electrical work (>50 volts) on United Rentals equipment shall be performed by a United Rentals Authorized Employee or authorized supplier personnel. Exposed Energized Electrical Work is work performed on or near energized electrical systems or equipment with rated voltages greater than or equal to 50 volts.

**6.3.3.** Employees shall be trained and knowledgeable of the construction and operation of the electrical equipment and be trained to recognize and avoid the electrical hazards associated with the tasks to be performed on or near the electrical equipment.

**6.3.4.** Qualified employees must adhere to the approach distance in Appendix B, Approach Distances for Qualified Employees, 1910.333 Table S5.

**6.3.5.** This procedure is designed as a reference for safe electrical work practices but should not be used in place of any regulation, engineering document, or procedure and should not be used as a sole reference for performing the testing, installation, servicing, or repair of United Rentals equipment.

**6.3.6.** It is the policy of United Rentals to perform **ALL ELECTRICAL WORK IN A DEENERGIZED STATE.**

6.3.6.1. However, employees or suppliers may be permitted to occasionally perform work on energized electrical equipment **ONLY** when de-energizing the equipment would create a greater risk or make the task impossible **AND** all other alternatives have been exhausted.

6.3.6.2. Note, exposed energized electrical work is acceptable while performing standard procedures, and the work **MUST** be performed by a trained and authorized person while using proper personal protective equipment (PPE), tools, and equipment.

**6.3.7.** It is United Rentals policy that electrical conductors and circuit parts be put in an electrically safe condition prior to work being performed.

**6.3.8.** All United Rentals Authorized Employees and authorized Contractors must be up to date with all applicable training from HSES 4A.01, Competency Assurance Program, which includes the following:

- 6.3.8.1. Lockout/Tagout
- 6.3.8.2. Electrical Safety SOP 3A.08
- 6.3.8.3. Stop Work
- 6.3.8.4. Personal Protective Equipment
- 6.3.8.5. Hazard Identification and Controls
- 6.3.8.6. Equipment Specific Training

**6.3.9.** All United Rentals Authorized Employees and authorized Contractors must utilize the appropriate PPE for the work they are performing on (exposed or non-exposed) energized electrical conductors and circuit parts.

**6.3.10.** United Rentals Authorized Employees and authorized Contractors must receive specific authorization before performing work on electrical systems exceeding 600 volts AC.

#### **6.4. PRE-WORK**

**6.4.1.** Ensure that proper Lock Out / Tag Out (LO/TO) procedures are followed as detailed in the LO/TO program and machine-specific procedures. Ground fault circuit interrupters (GFCI) must be used for the connection of portable lighting, tooling, communication devices, and extension cables.

**6.4.2.** Prior to performing work, visually inspect for safe condition of PPE, tooling, test equipment, extension cords, cord caps, ground cables, test leads and cables. Discard or reject any equipment that is worn, damaged, or incomplete.

#### **6.5. Electrical Safety Non-Qualified**

**6.5.1.** Non-qualified employees must maintain a minimum of 10 foot clearance from an energized electrical source.

**6.5.2.** Any frayed or damaged electrical cords must be repaired or replaced immediately. Repairs shall be made by a qualified person.

**6.5.3.** Employees shall be made aware of the location of fire exits and electrical control boxes and emergency shut off switches in his/her work area.

**6.5.4.** Employees must always exercise caution when operating equipment that will elevate around power lines. See HSES 3B.01, Forklift and Aerial Operator Safety for requirements and additional information.

**6.5.5.** Do not overload wiring. If cords become warm, this is the first sign of a possible overload. Ensure amperage of component and amperage rating of cord is known prior to task.

**6.5.6.** Do not use extension cords in place of permanent wiring.

**6.5.7.** Never attach or hang extension cords from walls or ceilings.

**6.5.8.** Ensure grounding prong is in good condition on all plugs.

**6.5.9.** Follow safe work practices for electrical equipment and cords.

**6.5.10.** Keep flammable materials, such as solvents, paper, wood, etc. away from electrical equipment.

## **6.6. Overhead Lines**

**6.6.1.** Place electrical hazard warning signs in all areas of overhead lines (i.e., along fences or mounted on sign post).

**6.6.2.** Do not store aerial equipment, mobile cranes, forklifts or any other equipment with parts that can be elevated within 25' of overhead electrical lines.

**6.6.3.** Train all employees regarding overhead electrical line hazards and storage and movement of equipment in yard.

**6.6.4.** In cases where the above steps will not provide effective protection for employees contact your power company regarding possible insulation and/or relocating the power lines.

## **6.7. Protecting Personnel**

**6.7.1.** Always assume equipment is energized until the unit and or parts have been properly isolated, tagged, locked and a protective ground installed (if appropriate). Reference HSES 3A.05, Equipment Isolation and Lockout Tagout

**6.7.2.** Warning signs shall be posted at the job location if electric supply lines are present. Signs must be visible to all workers.

**6.7.3.** Warning cones shall be placed around the equipment if work is completed on site.

**6.7.4.** Barricades shall be used in conjunction with safety signs where it is necessary to prevent or limit individual access to work areas exposing individuals to un-insulated energized conductors or circuit parts. Jewelry of any kind may not be worn while conducting qualified electrical work.

**6.7.5.** If ladders are utilized in the work involving electricity, the ladders must have non-conductive side rails such as a fiberglass ladder.

## **6.8. Personal Protective Equipment, Protective Barriers, Shields and Tools**

**6.8.1.** Prior to entering work site personnel will review the basic personal protective equipment requirements for the site.

**6.8.2.** Proper non-conductive personal protective equipment shall be worn to protect personnel from electrical shock and arc flashes.

**6.8.3.** Protective shields, barriers, or insulating materials shall be used to protect employees from shock, burns, or other electrically related injuries while the employee is working near exposed energized parts which might be accidentally contacted or where dangerous electric heating or arcing may occur.

**6.8.4.** When working near exposed energized conductors or circuit parts, employees shall use insulated tools or handling equipment.

**6.8.5.** If the insulating capability of the tool or handling equipment is damaged, the tool or handling equipment will be placed out of service and the Supervisor notified.

**6.8.6.** Fuse handling equipment insulated for the circuit voltage, shall be used to remove or install fuses when the fuse terminals are energized.

**6.8.7.** Ropes and hand lines used near exposed energized parts shall be nonconductive.

## **6.9. Assured Grounding**

**6.9.1.** Assured grounding is only required on construction sites that are not using permanent wiring systems or GFCIs. United Rentals will use the buildings electrical systems at the branch level.

**6.9.2.** For field work, GFCIs shall be utilized. If on a customer location that is utilizing assured grounding and we need to conduct work using electricity, we will utilize this process or the customers program for compliance.

### **6.9.3. Check Tag**

6.9.3.1. Check each portable for proper tag connected at the attachment plug end (male end).

6.9.3.2. If the tag is not the proper color, year, or quarter, return the item to the source origin.

6.9.3.3. If an item has no tag, return it to the source of origin for re-inspection.

### **6.9.4. Inspect Tag Permanently Issued Equipment**

6.9.4.1. Inspect and tag portable equipment that has been permanently issued before use.

6.9.4.2. When the tag expires, send the item to the source of origin for inspection and retagging.

6.9.4.3. If removal of customer owned equipment is not possible, have the equipment checked and tagged by a customer Electrician (example: mounted retractable extension cord).

### **6.9.5. Listed or Labeled Equipment**

6.9.5.1. **ATTENTION! LISTED OR LABELED EQUIPMENT SHALL BE INSTALLED AND USED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING.**

### **6.9.6. Use of Portable Generators**

6.9.6.1. **NOTE:** If source of 120 volt power is a portable generator or vehicle mounted generator, it must meet the following conditions as set forth under article 250-34 of the National Electric Code. Compliance with NEC 250-34 permits the generator frame to serve as a grounding electrode. In this case, do not deliberately

bond the frame or one of the power phases to earth ground. This includes setting a portable directly on the ground.

6.9.6.2. The frame of a portable generator shall not be required to be grounded and shall be permitted to serve as the grounding electrode for a system supplied by the generator under the following conditions:

6.9.6.2.1. The generator supplies only equipment mounted on the generator or cord and plug connected equipment through receptacles mounted on the generator, or both, and

6.9.6.2.2. The non-current carrying metals parts of equipment and the equipment grounding conductor terminals of the receptacles are bonded to the generator frame.

6.9.6.3. The frame of a vehicle shall be permitted to serve as the grounding electrode for a system supplied by a generator located on the vehicle under the following conditions.

6.9.6.3.1. The frame of the generator is bonded the vehicle frame, and

6.9.6.3.2. The generator supplies only equipment located on the vehicle or cord and plug connected equipment through receptacles mounted on the vehicle or both equipment located on the vehicle and cord and plug connected equipment through receptacles mounted on the vehicle or on the generator, and

6.9.6.3.3. The non-current carrying metal parts of equipment and the equipment grounding conductor terminals of the receptacles are bonded to the generator frame, and

6.9.6.3.4. The system complies with all other provisions of articles 250-34.

6.9.6.4. A system conductor that is required to be grounded by section 250-26 shall be bonded to the generator to its frame shall not be required.

6.9.6.5. NOTE: Customer electrical personnel will designate the power source if portable generators are not used or if unit power receptacles are not available or adequate

**6.9.7.** Dated tags with year and quarter shown in color code to reflect: Tags shall be Panduit Marker Ties, or equivalent, (3 7/8" x 99 mm)

6.9.7.1. January Thru March – Red (With Year)

6.9.7.2. April Thru June - White (With Year)

6.9.7.3. July Thru September– Blue (With Year)

6.9.7.4. October Thru December– Yellow (With Year)

6.9.7.5. NOTE: It is acceptable to inspect cords thirty (30) days prior to the end of a quarterly inspection cycle. For example; Inspection and labeling for the second quarter may begin March 1st.

---

## 6.10. Ground Fault Circuit Interrupters (GFCI)

**6.10.1.** A GFCI shall be used on all 120 volt single phase, 15, 20 or 30 amp receptacles outlets that are not part of permanent wiring.

### 6.10.2. IN LINE GFCI CORDS

6.10.2.1. A 15- and 20 Ampere, 120 V, in-line GFCI cord (also known as a pig tail) shall be used when using portable lights and tools, and fixed field electric power tools and machines. **ONLY APPROVED IN-LINE GFCI CORDS SHALL BE USED.** The in-line GFCI cord must be connected to the first point of connection to the permanent wiring. This equipment provides the GFCI protection for everything from the permanent receptacle to the temporary light or power tool to be used.

#### 6.10.2.2. A GFCI CORD IS NOT REQUIRED AS FOLLOWS:

6.10.2.2.1. An in-line GFCI cord is not required where the light or power tool or machine is to be powered through:

- a) An approved portable or permanent GFCI breaker.
- b) GFCI's are not required in office areas for PC's/ printers.
- c) Power with GFCI protection included
- d) Exception: Where tripping of the GFCI may cause a more serious safety hazard, such as atmosphere monitoring, electro-magnetically held equipment, etc.

#### 6.10.2.3. INSPECTION AND TESTING OF GFCI

6.10.2.3.1. Inspect the GFCI for any crack, damage or abnormality, etc. before each use.

6.10.2.3.2. GFCI Test before Connection of light or Power Tool: The GFCI device shall be tested before each use by pressing the 'Test' button. The GFCI will disconnect the circuit or power to the GFCI receptacle. Pressing the 'Reset' button may reconnect the circuit or power.

6.10.2.3.3. GFCI Test after Connection of Light or Power Tool: When testing a GFCI, the tripping power must be confirmed by trying to run the tool or light plugged into the GFCI Receptacle. If the GFCI does not trip and interrupt the power, **DO NOT USE THE GFCI.**

## 7. Records

Record	Location	Retained for	Maintained By
Training Records	Employee Safety Training Files	3 years	Branch Manager



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Electrical Safety

Reserved  
Doc number: HSES 3A.08  
Issue: D  
Date: 8/13/13  
Page: 10 of 11

## 8. Approvals

*Approvals on File*

_____	_____	_____
Name	Position	Date
_____	_____	_____
Name	Position	Date
_____	_____	_____
Name	Position	Date

## Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
D	8/13/13	Curt Watson	NA	Added Section 6.3, Electrical Safety Qualified Employees, minor changes throughout.
C	4/1/13	Streamline Team	NA	Revised to new format. Re-numbered from SOP #22. Combined SOP #21 into this document.
B	12/1/11	NA	NA	Minor changes throughout, added scope, revised footer, added requirements from SOP #7 Fire Prevention
A	12/1/10	NA	N/A	New format, revised content

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

## UNITED RENTALS, INC. INTERNAL USE ONLY

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.



## 9. Appendix A – Leader Sheet for Electrical Safety

Power Group has a pre-qualification process for working on electrical system.

### Qualified Employees

Review this procedure

Electrical Safety (list course number)

Lockout/Tagout Training

## 10. Appendix B – Approach Distances for Qualified Employees (1910.333, Table S-5)

TABLE S-5 - APPROACH DISTANCES FOR QUALIFIED  
EMPLOYEES - ALTERNATING CURRENT

Voltage range (phase to phase)		Minimum approach distance
300V and less .....		Avoid Contact
Over 300V, not over 750V .....		1 ft. 0 in. (30.5 cm).
Over 750V, not over 2kV .....		1 ft. 6 in. (46 cm).
Over 2kV, not over 15kV .....		2 ft. 0 in. (61 cm).
Over 15kV, not over 37kV .....		3 ft. 0 in. (91 cm).
Over 37kV, not over 87.5kV .....		3 ft. 6 in. (107 cm).
Over 87.5kV, not over 121kV .....		4 ft. 0 in. (122 cm).
Over 121kV, not over 140kV .....		4 ft. 6 in. (137 cm).



## Trenching, Shoring and Excavation

### Table of Contents

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents.....	2
5.	Abbreviations, Acronyms, and Definitions .....	2
6.	Procedure.....	3
6.1.	Training Requirements .....	3
6.2.	Federal OSHA/CSA Regulations.....	3
6.3.	Competent Person .....	4
6.4.	Inspections .....	4
6.5.	Soil Testing Methods.....	5
6.5.2.	Visual Tests:.....	5
6.5.3.	Manual Tests:.....	5
6.6.	Soil Types and Classifications.....	6
6.7.	Trenching and Shoring Equipment.....	7
6.8.	Manufacturer's Tabulated Data Sheet.....	8
6.9.	Atmospheric Testing Requirements and Equipment .....	8
6.10.	Registered Professional Engineer .....	9
7.	Records.....	9
8.	Approvals .....	10
9.	Attachment A – Leader sheet for Trenching Shoring & Excavation.....	11

## 1. Objective

1.1. The purpose of this procedure is to inform employees of the dangers of working by or around an open trench and comply with OSHA/CSA regulations in and around excavations.

1.2. **NOTE: United Rentals does not enter trenches/ excavations as a general rule of thumb. If entry into a trench/excavation is required by a United Rentals employee, the branch manager shall contact Division/ Region Safety Director or Division Safety Manager for review and approval to complete an entry.**

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1.1. Location Manager

3.1.1.1. Ensures a competent person is trained and available for any trenching, shoring or excavation.

### 3.1.2. Employees

## 4. Reference Documents

Document Number	Document Description
OSHA 1926 Subpart P	Excavations
OSHA 1926.21 (b)(6)(i) – (ii)	General Safety and Health Provisions
OSHA 1910.146	Permit-Required Confined Spaces
Occupational Health and Safety Code 2009 – Part 32	Excavating and Tunneling

## 5. Abbreviations, Acronyms, and Definitions

Cave-in	the separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.
Competent Person	Means one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Excavation	Any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.
HSES	Health, Safety, Environmental and Sustainability
Protective system	Means a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.
Trench	A narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet (4.6 m).

## 6. Procedure

### 6.1. Training Requirements

**6.1.1.** If training is required: Training will be in accordance with HSES 4A.01 Competency Assurance Program.

**6.1.2.** See Appendix A for Leader Sheet on Trenching, Shoring and Excavation.

### 6.2. Federal OSHA/CSA Regulations

**6.2.1.** All surface encumbrances must be removed or supported. Surface encumbrances include rocks, trees, telephone poles, fire hydrants, etc.

**6.2.2.** All underground installations (gas, electrical, sewer, and water pipes) must be located and marked prior to working in the area and must be protected, supported or removed while the trench is open. Property owners and/or utility companies should be notified at least 24 hours prior to digging.

**6.2.3.** Most countries/provinces have a designated phone number that is to be called before beginning an excavation. Check your local area for the appropriate number.

**6.2.3.1.** In the U.S call 811 before you dig.

**6.2.4.** Any trench greater than 4 feet deep must be provided a means of access and egress (way of getting out).

**6.2.4.1.** Access and Egress requirements:

**6.2.4.1.1.** Ladders – Ladders must be secured and must extend 36 inches above the landing. (If you are working around electrical lines, review the requirements for using metal ladders.)

**6.2.4.1.2.** Spacing between ladders, stairs or ramps cannot be more than 25 feet to reach the means of egress.

**6.2.4.1.3.** Ramps – Structural ramps used by equipment and/or employees must be designed by a Registered Professional Engineer.

**6.2.5.** Employees are never permitted underneath a raised load or near equipment that is being loaded or unloaded. Equipment operators may stay in the equipment, if it is properly equipped with an overhead protection canopy (i.e. ROPS or OPS).

**6.2.6.** Prevent vehicles from falling into the trench by providing barricades, hand or mechanical signals, stop logs or by grading away from the excavation.

**6.2.7.** Employees must be protected from all hazardous atmospheres.

**6.2.8.** Emergency rescue equipment must be available.

**6.2.9.** All water accumulation must be controlled to prevent cave-ins. Surface water must be diverted and controlled. Water removal equipment must be monitored by the Competent Person or by the person designated by the Competent Person.

**6.2.10.** All adjacent structures that may be unstable due to excavation must be stabilized through the use of support systems. Excavation below the base or footing of a foundation or wall is not permitted unless a support system is provided to ensure the stability of the structure, the excavation is in stable rock, or the operation is approved by a Registered Professional Engineer.

**6.2.11.** Employees must be protected from loose rock or soil. Spoils and equipment must be set back at least 2 feet from the edge of the trench.

**6.2.12.** If a bridge or walkway is being used over a trench greater than 6 feet in depth, it must be equipped with standard guardrails and toe boards.

**6.2.13.** All remotely located excavations (wells, pits, shafts, etc.) must be backfilled, covered, or barricaded.

**6.2.14.** All inspections must be performed by the Competent Person.

### **6.3. Competent Person**

**6.3.1.** The Competent Person must have the authority to take immediate action if a hazard exists.

**6.3.2.** It is mandatory that every jobsite have a Competent Person in trenching or shoring operations.

**6.3.3.** The Competent Person must have specific training in, and be knowledgeable about, soil analysis, the use of protective systems, and the requirements of this standard.

**6.3.4.** The Competent Person will conduct the inspections of the jobsite, surrounding area, equipment to be used, personal protective equipment to be used, and all written permits and procedures.

### **6.4. Inspections**

**6.4.1.** All jobsite inspections must be performed by the Competent Person. Inspections are required at the following times:

6.4.1.1. Daily, prior to beginning work.

6.4.1.2. As needed throughout the shift.

6.4.1.3. After every rainstorm.

6.4.1.4. After other hazard increasing occurrence (snowstorm, windstorm, thaw, earthquake, etc.)

**6.4.2.** The following items are part of a thorough inspection:

6.4.2.1. Any indications of a possible cave-in (fissures, tension cracks, sloughing, undercutting, water seepage, bulging at the bottom, etc.).

6.4.2.2. Adjacent areas (spoil piles, structures, etc.).

6.4.2.3. Protective systems and their components (uprights, wales, sheeting, shields, hydraulics, etc.) before and during use.

6.4.2.4. Any indications of a hazardous or potentially hazardous atmosphere.

**6.5. Soil Testing Methods**

**6.5.1.** There are various ways to test soil and determine the type. It is imperative that the type of soil be determined, as the soil type dictates what type of protective system is best suited for the job. Some of the more common tests are as follows:

**6.5.2. Visual Tests:**

6.5.2.1. Samples of soil newly excavated and soil in sides of trench for range of particle size, relative amount of particle size.

6.5.2.2. Soil as it is being excavated for clumping and breaking.

6.5.2.3. Sides of trench and adjacent areas for tension cracks and spalling.

6.5.2.4. Adjacent areas for utility and other underground structures to identify previously disturbed soils.

6.5.2.5. Sides of trench for layered soils.

6.5.2.6. Sides and adjacent areas for evidence of water.

6.5.2.7. Adjacent areas for sources of vibration.

**6.5.3. Manual Tests:**

6.5.3.1. Ribbon Test or Plasticity – A moist soil sample is rolled between the palms of the hands until a cylinder approximately 6 inches long is formed. The cylinder is then squeezed between the thumb and index finger until it is approximately 1/8 inch thick. The squeezed portion is allowed to hang over the side of the hand. If it forms a ribbon 6 inches in length or longer it is said to be cohesive. The longer the ribbon, the more clay the soil may contain.

6.5.3.2. Dry Strength – how easily soil crumbles or breaks up when dry. If the soil is dry and crumbles without much effort, the soil is granular. If the soil is difficult to break, it is cohesive.

6.5.3.3. Thumb Penetration – how easily the thumb penetrates sample. Type A soils are indented by the thumb with difficulty. Type B soils can be indented by the

thumb with moderate effort. Type C soils can be easily penetrated by the thumb and can be molded by light finger pressure.

6.5.3.4. Pocket Penetrometer – a device that reads the unconfined compressive strength of the soil. The spring operated device uses a piston that is pushed into the soil up to a calibration groove. An indicated sleeve marks and retains the reading. The reading is calibrated in tons per square foot (tsf). Always follow the manufacturer's instructions.

6.5.3.5. Shear vane – a device that estimates unconfined compressive strength of the soil. The blades of the vane are pressed into a flat section of undisturbed soil and the knob is turned slowly until soil failure. The reading is calibrated in kilograms per square centimeter. This reading must be converted to the approximate unconfined compressive strength by multiplying by a factor of 2. Always follow the manufacturer's instructions.

## **6.6. Soil Types and Classifications**

**6.6.1.** Soil is made up of clay, silt, sand, organic material and gravel. The Competent Person must be able to distinguish the difference between the soils and be able to classify the soil. For the purposes of excavations, soils are classified into three types, Type A, Type B, and Type C.

**6.6.2.** One cubic foot (12" x 12" x 12") of soil can weigh between 90 and 140 pounds. Therefore, one cubic yard (3' x 3' x 3') weighs as much as a pickup truck or approximately 3,000 pounds.

### **6.6.3. Soil Types:**

6.6.3.1. Stable Rock – difficult to determine without knowing if cracks slope into or away from trench. Many states do not recognize stable rock as a classification because they do not feel it exists.

6.6.3.2. Type A – includes clay, silty clay, sandy clay, clay loam, hardpan and cemented soils.

6.6.3.2.1. No soil will be considered Type A if the soil is fissured, subjected to vibration, previously disturbed, part of a sloped layered system sloping into the trench at a slope greater than 4H:1V, or seeping water. \*\*

6.6.3.3. Type B – includes angular gravel, silt, silt loam, previously disturbed soils unless otherwise classified Type C, dry unstable rock, sloped layered systems sloping into the trench at a slope less than 4H:1V.

6.6.3.4. Type C – includes granular soils, sand, loamy sand, submerged, soil with freely seeping water, any soil not otherwise classified.

**6.6.4.** For Canada operations, see Occupational Health and Safety Code 2009 – Part 32, Table 32.1 for soil classification.

## **6.7. Trenching and Shoring Equipment**

**6.7.1.** A cave-in occurs when a mass of soil or rock material separates from the side of an excavation, or from under the trench shield or support system, and its sudden movement into the excavation is of sufficient quantity to entrap, bury, or otherwise injure and/or immobilize a person. The purpose of trenching and shoring equipment is to prevent cave-ins in excavations.

**6.7.2.** While working in any excavation greater than 5 feet deep, all Employees must be protected by shields, sloping or shoring. The protective system must have the strength to resist all intended or expected loads. Employees are never permitted inside the shield when the shield is being installed, removed or moved vertically.

**6.7.3.** Any materials used for protective systems must be free from damage or defects, maintained in good condition, inspected by the Competent Person and removed from use if determined unsafe. If determined unsafe, the protective system must be evaluated and approved by a Registered Professional Engineer before returning to service.

**6.7.4.** All protective systems are installed from the top down and removed from the bottom up.

**6.7.5.** There are three types of protective systems available:

**6.7.5.1. Trench Boxes (Shields):**

6.7.5.1.1. Shields shall be installed in a manner to restrict lateral movement.

6.7.5.1.2. Workers must be protected from cave-ins when entering and exiting trenches.

6.7.5.1.3. Employees may remain inside a trench shield when it is moved horizontally.

6.7.5.1.4. Trenches should be cut approximately 3 inches wider than the trench shield.

6.7.5.1.5. Manufacturer's tabulated data will indicate the depth that a shield can be used in a specific type of soil.

6.7.5.1.6. Materials may be excavated to a depth 2 feet below the bottom of the shield if the box is rated for the full depth of the trench and there is no indication of a possible loss of soil from behind or below the shield.

**6.7.5.2. Hydraulic Shoring (Horizontal):**

6.7.5.2.1. Horizontal and vertical spacing is measured center to center.

6.7.5.2.2. The top hydraulic cylinders must be placed between 12 inches and 24 inches down from the top of the trench.

6.7.5.2.3. The bottom cylinder must be placed a maximum of 4 feet above the bottom of the trench.



6.7.5.2.4. Solid sheeting must be close (edges butted together when there is no water) and tight (interlocking to hold back water).

6.7.5.2.5. Some hydraulic cylinders may require over sleeves to prevent buckling.

6.7.5.2.6. Always follow the manufacturer's tabulated data.

**6.7.5.3. Hydraulic Shoring (Vertical):**

6.7.5.3.1. Horizontal and vertical spacing is measured to center.

6.7.5.3.2. When vertical shores are used, there must be no less than 3 vertical shores spaced equally down the length of the trench.

6.7.5.3.3. The top hydraulic cylinders must be placed between 12 inches and 24 inches down from the top of the trench.

6.7.5.3.4. The bottom cylinder must be placed a maximum of 4 feet above the bottom of the trench.

6.7.5.3.5. Some hydraulic cylinders may require over sleeves to prevent buckling.

6.7.5.3.6. Always follow the manufacturer's tabulated data.

**6.8. Manufacturer's Tabulated Data Sheet**

**6.8.1.** Tabulated data is information from the manufacturer containing tables and charts approved by a Registered Professional Engineer and used to design and construct protective systems. All tabulated data must be in written form and describe in detail the use and limitations. A tabulated data sheet is issued for each trench box and hydraulic shore that is manufactured. Tabulated data must be at the jobsite during construction of the protective system. However, after the construction of the protective system, it may be kept off site so long as it is available for inspection. The identity of the Registered Professional Engineer who approved the data must be stamped on the data.

**6.8.2.** Any protective system to be used in an excavation greater than 20 feet deep must be designed by a Registered Professional Engineer and the tabulated data and design must be available for inspection.

**6.8.3. At the time of rental, Customers are to be given the tabulated data sheet.**

**6.9. Atmospheric Testing Requirements and Equipment**

**6.9.1.** Preventing exposure to hazardous materials in the air or dangerous environments is the Competent Person's responsibility. Air testing and controls must be provided when there is a possibility that a hazardous atmosphere could exist in the trench or excavation. Emergency rescue equipment must also be available at all sites where a hazardous atmosphere exists or could reasonably be expected to exist.

**6.9.2.** An atmosphere is considered hazardous if it is explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful and may cause death, illness or injury.



**6.9.3.** Air quality tests are to be performed prior to entry into any excavation greater than 4 feet deep and on a continual basis while work is being performed. Determine what type of sampling is to be performed:

6.9.3.1. Area sampling is used to pinpoint high exposure areas, indicate flammable concentrations, and determine if an area is safe to enter.

6.9.3.2. Personal monitoring is used to evaluate worker exposure to air contaminants.

**6.9.4.** The air inside the work area should be tested from outside the trench or excavation before anyone enters the area. If a hazardous atmosphere is found, it must be controlled or eliminated before employees may enter the trench or excavation. Respirators or ventilation fans may be necessary to eliminate the possibility of worker exposure. The majority of the air monitors today are capable of simultaneously testing for oxygen, combustibles and one or two toxins. Testing should be conducted at various levels of the trench as different gases have different levels.

**6.9.5.** Oxygen levels should be between 19.5% and 23.5%. Normal air has approximately 21% oxygen. Even if an oxygen reading of 19.5% is found, this does not necessarily mean that the environment is safe. There is a 1.5% of some gas that needs to be accounted for. If that missing 1.5% is carbon dioxide, the exposure can cause serious injury and even death.

**6.9.6.** The person responsible for using air monitoring equipment must be trained on the equipment and on how to calibrate the equipment properly. The type of equipment must be selected based upon the purpose of the sampling, the equipment available, the environmental conditions, the nature of the contaminant and regulatory requirements.

**6.9.7.** Refer to the manufacturer's materials to select the proper equipment.

**6.9.8.** Often, the most effective manner in which to control a hazardous atmosphere is through proper ventilation.

## **6.10. Registered Professional Engineer**

**6.10.1.** A Registered Professional Engineer (RPE) is a person who is registered as a professional engineer in the state where the work is performed. A RPE is necessary to approve designs for manufactured protective systems or tabulated data.

**6.10.2.** A RPE is also required to design the protective system to be used in excavations over 20 feet deep.

**6.10.3.** A RPE is required to examine and re-certify any damaged protective structure prior to being placed back into service. The RPE re-certification is required when the damage is structural and compromises the integrity of the structure.

## **7. Records**

Record	Location	Retained for	Maintained By



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Trenching, Shoring and Excavation

Reserved  
Doc number: HSES 3A.09  
Issue: D  
Date: 4/24/17  
Page: 10 of 11

Record	Location	Retained for	Maintained By

## 8. Approvals

*Approvals on File*

Name	Position	Date
Name	Position	Date
Name	Position	Date
Name	Position	Date

## Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
D	4/24/2017	Candace Chudzik	NA	Added Division Safety Director and Division Safety Manager
C	4/1/13	Streamline Team	NA	Revised to new format. Re-numbered from SOP #51.
B	12/1/11	NA	NA	Added scope, revised footer, added disclaimer about entry
A	4/1/11	NA	N/A	New format, revised content

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

## UNITED RENTALS, INC. INTERNAL USE ONLY

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Trenching, Shoring and Excavation

Reserved

Doc number:

HSES 3A.09

Issue:

D

Date:

4/24/17

Page:

11 of 11

---

## 9. Attachment A – Leader sheet for Trenching Shoring & Excavation

United Rentals Trench Safety has developed instructor led and eLearning courses. These should be utilized for anyone needing training.

## Confined Spaces

### Table of Contents

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents.....	2
5.	Abbreviations, Acronyms, and Definitions .....	3
6.	Procedure.....	3
6.1.	Training Requirements .....	3
6.2.	Prohibition of Confined Space Entry.....	4
6.3.	Safety and Environmental Precautions .....	4
6.4.	Entry Procedures.....	4
6.5.	Protecting Personnel .....	5
6.6.	Permit Requirements.....	5
6.7.	Closing a Permit .....	6
6.8.	Reclassification of a Confined Space .....	6
6.9.	Multiple Employers .....	7
6.10.	Atmospheric Testing/Hazardous Conditions .....	7
6.11.	Emergency Procedures/Rescue .....	9
7.	Records.....	10
8.	Approvals .....	11
9.	Appendix A – Leader Sheet for Confined Spaces .....	12

## 1. Objective

1.1. The purpose of this procedure is to protect workers against the hazards involved in confined spaces. This procedure establishes the controls and responsibilities for entering, working in, and exiting confined spaces.

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1.1. Location Manager

3.1.1.1. Shall ensure all confined spaces on their site are properly labeled

3.1.1.2. Shall ensure that anyone entering designated confined space is properly authorized and trained.

### 3.1.2. Employees

3.1.2.1. Shall not enter any confined space without proper training and approval.

### 3.1.3. Corporate Safety

3.1.3.1. Will review this plan to ensure employees are properly protected on an annual basis. This review will include a review of all closed permits, if any entry has been performed.

3.1.3.2. The plan will also be reviewed whenever applicable regulations are revised, changes in equipment design affect confined spaces or their hazards, or changes in operations affect this plan.

## 4. Reference Documents

Document Number	Document Description
<a href="#">HSES 3A.03</a>	Personal Protective Equipment
<a href="#">HSES 3B.04</a>	Welding Cutting and Hot Work
1926.21 (B)(6) and 1910.146	Confined Space Regulations
Occupational Safety and Health 2009 – Part 5	Confined Spaces
CAN/CSA Z1006-10	Management of Work in Confined Spaces

---

## 5. Abbreviations, Acronyms, and Definitions

Confined Space as defined in the OSHA Construction Standard (CFR 1926.21 (B) (6) as follows	A Confined Space is any space having a limited means of egress, which is subject to the accumulation of toxic or flammable contaminants or has an oxygen deficient atmosphere.
Confined Space as defined in the OSHA General Standard (CFR 1910.146) as follows:	A Confined Space is an enclosed space having the following characteristics: <ul style="list-style-type: none"><li>• Has limited or restricted means of entry and exit;</li><li>• Is large enough for a person to enter; and</li><li>• is not designed for continuous employee occupancy</li></ul>
Confined Space as defined by OHS 2009 Part 5	<ul style="list-style-type: none"><li>• an atmosphere that is or may be injurious by reason of oxygen deficiency or enrichment, flammability, explosivity, or toxicity</li><li>• a condition or changing set of circumstances within the space that presents a potential for injury or illness, or</li><li>• the potential or inherent characteristics of an activity which can produce adverse or harmful consequences within the space;</li></ul>
Entrant	An Entrant is considered to have entered the confined space as soon as any part of the Entrant's body breaks the plane of an opening into a confined space.
HSES	Health, Safety, Environmental and Sustainability
Non-Permit Required Confined Space	Means a confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.
Permit Required Confined Space	A Permit Required Confined Space is a confined space with one or more of the following characteristics: <ul style="list-style-type: none"><li>• Contains or has a known potential to contain a hazardous atmosphere</li><li>• Has potential for engulfment or entrapment</li><li>• Has an internal configuration that could trap or asphyxiate the entrant</li><li>• Contains any other recognized serious safety or health hazard</li></ul>

## 6. Procedure

### 6.1. Training Requirements

**6.1.1.** If training is required: Training will be in accordance with HSES 4A.01, Competency Assurance Program.

**6.1.2.** See Appendix A for Leader Sheet on Confined Spaces.

## **6.2. Prohibition of Confined Space Entry**

**6.2.1. United Rentals does not enter confined spaces as a general rule. If HSES were to allow entry into a confined space, this process would be followed.**

**6.2.2. If confined space entry is required by a United Rentals employee, the branch manager shall contact their Division/Region Safety Director or Division Safety Manager for review and approval to complete an entry.**

## **6.3. Safety and Environmental Precautions**

**6.3.1. Confined spaces may include any of the following:**

- 6.3.1.1. Concrete Mobile Mixer Trailers
- 6.3.1.2. Oil/Water Separators
- 6.3.1.3. Manholes
- 6.3.1.4. Pipelines
- 6.3.1.5. Culverts
- 6.3.1.6. Underground utility vaults
- 6.3.1.7. Storage tanks
- 6.3.1.8. Tunnels
- 6.3.1.9. Septic tanks
- 6.3.1.10. Pits over four (4) feet deep

**6.3.2. Prior to entrance of any confined space, HSES must be contacted to develop a safe entry and rescue plan, and to ensure proper employee training.**

## **6.4. Entry Procedures**

**6.4.1. Prior to entrance of any confined space, HSES must be contacted to ensure that proper procedures are taken, including all appropriate employee training.**

**6.4.2. Three persons are required when performing confined space operations:**

6.4.2.1. Entry Supervisor – The person authorizing must be an individual who by reason of training, education and experience is knowledgeable in the operation to be performed and is competent to evaluate the hazards and to authorize and supervise entry.

6.4.2.2. Attendant – An individual stationed outside the confined space to monitor the entrants inside the confined space and to restrict unauthorized entry. The entrant must remain on duty, outside of the confined space, for the duration of the entry. This individual must receive appropriate training, including simulated rescues, prior to assignment as Attendant. The Attendant may only monitor ONE confined space during any given time.

6.4.2.3. Entrant – An individual who has been trained to safely enter into a confined space.

**6.4.3.** The Entry Supervisor, the Attendant, and the Authorized Entrants must know how to recognize hazards. The hazards may include, but are not limited to, the following:

- 6.4.3.1. Asphyxiation due to hazardous atmospheres (toxic, asphyxiating, flammable, or explosive)
- 6.4.3.2. Asphyxiation due to constriction (slipping or falling into a narrow, tapering water tower discharge pipe)
- 6.4.3.3. Crushing by moving or rotating parts (agitators, augers, conveyors)
- 6.4.3.4. Electrocution
- 6.4.3.5. Drowning (flooding of a pipe, manhole or compartment)
- 6.4.3.6. Engulfment (soil, sawdust, dry bulk materials)
- 6.4.3.7. Untrained rescuers being killed or injured

## **6.5. Protecting Personnel**

### **6.5.1. Personal Protective Equipment**

6.5.1.1. Entry into a Confined Space may dictate the use of such personal protective equipment as gloves, hard hat, fall protection, body protection, hearing protection, foot protection and respirators.

6.5.1.2. Depending upon the conditions, greater protection may be required, such as a fully encapsulating suit. HSES 3A.03, Personal Protective Equipment shall be followed

6.5.1.2.1. HSES must be contacted prior to the assignment of respirators and/or work requiring respirators to employees.

### **6.5.2. Barriers**

6.5.2.1. To protect employees involved in confined space entry from external hazards, such as vehicles, barriers must be set up around the entrance to the confined space, and the attendant will be responsible to ensure that the barriers remain in place and are effective.

## **6.6. Permit Requirements**

**6.6.1.** Some confined spaces may require a permit and some may not.

**6.6.2.** The type of confined space work performed at the Company is normally Non-Permit. However, if confined space work is being performed at a customer's location, the customer's requirements for confined space must be followed. All permits must be completed prior to beginning the work.

### **6.6.3. Non-Permit Required Confined Space**

6.6.3.1. A written certification that the hazards within the Non-Permit Confined Space have been eliminated and the space is safe to enter must be maintained. The



written certification must include the date, location and signature of the entry supervisor

6.6.3.2. If any changes occur in the Non-Permit confined space that increase the hazards, the space may need to be re-classified as a Permit-Required confined space.

#### **6.6.4. Permit Required Confined Space**

6.6.4.1. A Permit Required Confined Space must have a sign posted at the entrance to notify Employees what hazards may be present and that only authorized entrants may enter the Confined Space. (For example: "DANGER – PERMIT REQUIRED CONFINED SPACE – DO NOT ENTER WITHOUT PERMIT AND AUTHORIZED ATTENDANT").

6.6.4.2. A Permit must be cancelled when safe entry procedures are violated or when an Attendant or Entrant report and unsafe condition.

#### **6.6.5. Hot Work Permit**

6.6.5.1. A Hot Work Permit is required when any welding or other hot work is being performed in accordance with HSES 3B.04, Welding Cutting and Hot Work.

6.6.5.2. The hot work must be noted on the Entry Permit or on a separate Hot Work Permit attached to the Entry Permit.

6.6.5.3. The Entry Supervisor must sign the permit before entry begins, but not until all actions and conditions for safe entry have been performed.

### **6.7. Closing a Permit**

6.7.1. When work has been completed in a confined space, authorized attendant shall confirm that entrants are removed from the permit space, affected personnel shall be notified, the entry permit voided by clearly writing "VOID" across the face of the permit, and the confined space shall be returned to operating condition by closing the space and cleaning tools and debris from the area.

### **6.8. Reclassification of a Confined Space**

6.8.1. When there are changes in the use or configuration of a non-permit confined space to entrants, the Supervisor shall reevaluate the space and, if necessary, reclassify it as a permit-required confined space.

6.8.2. A space classified as a permit-required confined space may be reclassified as a non-permit confined space by the Program Administrator under the following procedure:

6.8.3. If the permit space poses no actual or potential atmospheric hazards and if all hazards within the space are eliminated without entry into the confined space, the permit space may be reclassified as a non-permit confined space for as long as all hazards remain eliminated.

**6.8.4.** If it is necessary to enter the permit space to eliminate hazards, such entry shall be performed under permit required confined space procedures. If testing and inspection demonstrate that the hazards within the permit space have been eliminated, the permit space may be reclassified as a non-permit confined space for as long as the hazards remain eliminated.

**6.8.5.** The determination that all hazards in a permit space have been eliminated shall be documented with a certification that contains the date, the location of the confined space, and the signature of the person making the determination. This certification shall be made available to each employee entering the confined space. This certification is included in Appendix D.

**6.8.6.** If hazards arise within a permit space that has been reclassified as a non-permit space, all employees must exit the space. The Program Administrator shall then reevaluate the space and determine if it should be reclassified as a permit space.

## **6.9. Multiple Employers**

**6.9.1.** When United Rentals employees are working in a confined space with contractor or customer employees, the following measures shall be in effect:

**6.9.2.** Contractor/customer employees shall be trained as authorized entrants in accordance with this plan.

**6.9.3.** If authorized attendant is a contractor/customer employee, he shall be trained as an authorized attendant in accordance with this plan.

**6.9.4.** Entry Supervisor, if a contractor/customer employee, shall be trained in accordance with this plan.

**6.9.5.** All procedures, including emergency procedures, of this plan shall apply to all entrants.

**6.9.6.** Extreme care must be taken so that employers of one company do not endanger other employees.

## **6.10. Atmospheric Testing/Hazardous Conditions**

**6.10.1.** Atmospheric testing specific to the potential atmospheric hazards must be performed prior to entry into a Confined Space. Hazardous gases vary in weight; therefore it is necessary to take air samples from the Confined Space at different levels (top, middle and bottom) with properly calibrated equipment.

**6.10.2.** Air Sampling should always be performed in the following order:

6.10.2.1. Oxygen

6.10.2.2. Flammables and combustibles (ignitables)

6.10.2.3. Toxic materials

6.10.2.4. Testing:

6.10.2.4.1. Must be within the acceptable range

6.10.2.4.2. Must be done for minimum response time specified by manufacturer

---

**UNITED RENTALS, INC. INTERNAL USE ONLY**

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

#### 6.10.2.4.3. Must be done using direct reading instruments

**6.10.3.** The Confined Space Entrant must have the opportunity to review the calibrated air monitoring data, and review the signing of the permit. The data must be used to inform the entrant of all hazards in the confined space.

**6.10.4.** Air must be continuously tested, while continuous ventilation is applied.

**6.10.5.** The entrant or their representative may request that the space be re-evaluated at any time.

**6.10.6.** There are various types of equipment available for atmospheric testing. The Entry Supervisor, Attendant and Entrant must review the manufacturer's information to ensure they are familiar with the proper calibration, testing procedures and limitations of the equipment being utilized.

#### **6.10.7. Atmosphere**

6.10.7.1. There can be numerous causes for hazardous conditions to exist in a Confined Space. An oxygen enriched atmosphere can be the result of a leak in a welding hose. An oxygen enriched atmosphere increases the fire hazard in the area. An oxygen deficient atmosphere can be the result of using power equipment in the area, oxidation of metals (rusting) or other chemicals in the area.

##### 6.10.7.2. Basic effects:

6.10.7.2.1. 23.5% - Oxygen enrichment causes serious fire hazard

6.10.7.2.2. 20.9% - Oxygen concentration of air

6.10.7.2.3. 19.5% - Minimum safe level established by OSHA

6.10.7.2.4. 16.0% - Disorientation, rapid breathing, impaired judgment/coordination

**6.10.8.** Normal air has approximately 21% oxygen. Even if an oxygen reading of 19% is found, this does not necessarily mean that the environment is safe. There is 2% of an unknown gas that needs to be accounted for. If that missing 2% is carbon dioxide, the exposure can cause serious injury and even death.

#### **6.10.9. Explosive range of flammables/combustibles:**

6.10.9.1. Lower Explosive Level (L.E.L.) is the lowest concentration (air/fuel mixture) at which a gas can ignite. Below this L.E.L., the mixture is too lean to burn.

6.10.9.2. Upper Explosive Level (U.E.L.) is the highest concentration that can be ignited. Above the U.E.L., the mixture too rich to burn.

6.10.9.3. The concentration between the L.E.L. and the U.E.L. is the explosive range.

6.10.9.4. METHANE, PROPANE, ACETYLENE, CARBON MONOXIDE, HYDROGEN SULFIDE, AND MANY OTHER CHEMICALS CAN FUEL A FIRE IN A CONFINED SPACE.

#### **6.10.10. Physical Hazards:**

---

### **UNITED RENTALS, INC. INTERNAL USE ONLY**

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

- 6.10.10.1. Engulfment
- 6.10.10.2. Falling
- 6.10.10.3. Tripping
- 6.10.10.4. Poor visibility
- 6.10.10.5. Flooding
- 6.10.11. Biological Hazards:**
  - 6.10.11.1. Bacteria and infectious materials
  - 6.10.11.2. Insects, snakes and rodents
  - 6.10.11.3. Lockout/Tagout:
  - 6.10.11.4. All energy sources
  - 6.10.11.5. Mechanical equipment
  - 6.10.11.6. Piping systems
- 6.10.12. Temperature Extremes:**
  - 6.10.12.1. Hot environments result in:
    - 6.10.12.1.1. Heat stress
    - 6.10.12.1.2. Heat exhaustion
    - 6.10.12.1.3. Heat cramps
    - 6.10.12.1.4. Heat rashes
  - 6.10.12.2. Cold environments result in:
    - 6.10.12.2.1. Hypothermia
    - 6.10.12.2.2. Frostbite
    - 6.10.12.2.3. Trench foot

**6.10.13.** Some environments will have to be tested and ventilated several times before entry may begin. In addition to monitoring prior to entry, it is equally important to monitor the atmosphere during entry and while workers are in the confined space.

## **6.11. Emergency Procedures/Rescue**

**6.11.1.** An emergency plan must be completed prior to beginning work. The plan needs to address who will notify emergency personnel and what procedures are to be followed. An effective and organized emergency plan will ensure a quicker response time and will save lives.

**6.11.2.** An in-plant rescue team, or an arrangement under which an outside rescue team responds to an emergency, may be used for confined space rescue operations. A rescue team will be present at the facility anytime there is entry into a confined space that contains or has the potential to contain an immediately dangerous to life or health (IDLH) atmosphere.

**6.11.3.** If an in-plant rescue team is used, the following requirement apply:

**6.11.4.** Personnel assigned to the in-plant rescue team are provided with and trained in the use of personal protective equipment, including respirators, required to effect rescue operations.

**6.11.5.** The in-plant rescue team shall be trained for the equipment and rescue functions required, including training required for authorized entrants.

**6.11.6.** Rescue teams shall practice making permit space rescues at least once every twelve months, through simulated rescues of dummies, mannequins, or personnel through representative openings whose size, configuration, and accessibility closely approximate permit spaces within the facility.

**6.11.7.** Each member of the in-plant rescue team must maintain current certification in basic first aid and CPR skills.

**6.11.8.** Outside rescue teams, if used:

6.11.8.1. Must be aware of the hazards they confront when called on to perform rescue work at each location.

6.11.8.2. Shall have access to all permit spaces, have the opportunity to practice rescue and decline as appropriate.

6.11.8.3. The facility will execute written service agreements with outside contractors designated to perform confined space rescues. The agreement shall detail the contractor's and the facility's duties and responsibilities in the event of an emergency inside a confined space that necessitates a rescue.

## 7. Records

Record	Location	Retained for	Maintained By
Confined Space Entry Permit	Branch	2 years	Branch



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Confined Spaces

Reserved  
Doc number: HSES 3A.10  
Issue: E  
Date: 4/24/17  
Page: 11 of 14

## 8. Approvals

*Approvals on File*

_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date

## Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
E	4/24/17	Candace Chudzik	NA	Added Division Safety Director/Manager
D	11/12/15	PPP Team	NA	No changes reviewed and approved
C	4/1/13	Streamline Team	NA	Revised to new format. Re-numbered from SOP #11.
B	12/1/2011	NA	NA	Minor changes throughout, added scope, revised footer, added instructions to contact Risk for any confined space entry.
A	12/1/10	NA	N/A	New format, minor content changes

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

## UNITED RENTALS, INC. INTERNAL USE ONLY

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

## 9. Appendix A – Leader Sheet for Confined Spaces

All employees should receive basic awareness training so that they have an understanding of the definition of a confined space and the necessary steps to take for safe entry.

Authorized attendants, entrants and entry supervisors shall receive training as described below and must be trained by a competent person.

- 1) Training shall be provided to each affected employee:
  - a. Before the employee is first assigned duties under this section;
  - b. Before there is a change in assigned duties;
  - c. Whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained;
  - d. Whenever the employer has reason to believe either that there are deviations from the permit space entry procedures required by paragraph (d)(3) of this section or that there are inadequacies in the employee's knowledge or use of these procedures.
- 2) The training shall establish employee proficiency in the duties required by this section and shall introduce new or revised procedures, as necessary, for compliance with this section.
- 3) The employer shall certify that the training required by has been accomplished. The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification shall be available for inspection by employees and their authorized representatives.
- 4) The employer shall ensure that all authorized entrants:
  - a. Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
  - b. Properly use equipment as required;
  - c. Communicate with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space as required;
  - d. Alert the attendant whenever:
    - i. The entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or
    - ii. The entrant detects a prohibited condition; and
    - iii. Exit from the permit space as quickly as possible whenever:
      1. An order to evacuate is given by the attendant or the entry supervisor,
      2. The entrant recognizes any warning sign or symptom of exposure to a dangerous situation,
      3. The entrant detects a prohibited condition, or
      4. An evacuation alarm is activated.
- 5) The employer shall ensure that each attendant:
  - a. Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
  - b. Is aware of possible behavioral effects of hazard exposure in authorized entrants;



- c. Continuously maintains an accurate count of authorized entrants in the permit space and ensures that the means used to identify authorized entrants under paragraph (f)(4) of this section accurately identifies who is in the permit space;
  - d. Remains outside the permit space during entry operations until relieved by another attendant;
    - i. NOTE: When the employer's permit entry program allows attendant entry for rescue, attendants may enter a permit space to attempt a rescue if they have been trained and equipped for rescue operations as required and if they have been relieved as required.
  - e. Communicates with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space under paragraph (i)(6) of this section;
  - f. Monitors activities inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions;
    - i. If the attendant detects a prohibited condition;
    - ii. If the attendant detects the behavioral effects of hazard exposure in an authorized entrant;
    - iii. If the attendant detects a situation outside the space that could endanger the authorized entrants; or
    - iv. If the attendant cannot effectively and safely perform all the duties required under this program;
  - g. Summon rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards;
  - h. Takes the following actions when unauthorized persons approach or enter a permit space while entry is underway:
    - i. Warn the unauthorized persons that they must stay away from the permit space;
    - ii. Advise the unauthorized persons that they must exit immediately if they have entered the permit space; and
    - iii. Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space;
  - i. Performs non-entry rescues as specified by the employer's rescue procedure; and
  - j. Performs no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants.
- 6) The employer shall ensure that each entry supervisor:
- a. Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
  - b. Verifies, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin;
  - c. Terminates the entry and cancels the permit as required;





LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Confined Spaces

Reserved  
Doc number: HSES 3A.10  
Issue: E  
Date: 4/24/17  
Page: 14 of 14

---

- d. Verifies that rescue services are available and that the means for summoning them are operable;
- e. Removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations; and
- f. Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.

---

**UNITED RENTALS, INC. INTERNAL USE ONLY**

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

## Forklift and Aerial Equipment Operator Safety

### Table of Contents

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents.....	2
5.	Abbreviations, Acronyms, and Definitions .....	3
6.	Procedure.....	3
6.1.	Training Requirements .....	3
6.2.	Forklift Operator Certification.....	3
6.3.	Certified Evaluator .....	4
6.4.	Certified Trainer.....	4
6.5.	Converting from Certified Trainer to Certified Evaluator .....	4
6.6.	Becoming a Certified Operator .....	4
6.7.	Training Files.....	4
6.8.	Fueling.....	4
6.9.	PPE .....	5
6.10.	Pre Use Inspections and Worksite inspections.....	5
6.11.	Forklift Travel.....	5
6.12.	Specific notes on operating fork truck:.....	6
6.13.	When operating in the vicinity of pedestrians: .....	6
6.14.	Portable/Permanent Docks.....	6
6.15.	Aerial Equipment Safe Operations .....	6
6.16.	Aerial Equipment - Preventative Maintenance.....	8
7.	Approvals .....	10

## 1. Objective

1.1. The purpose of this procedure is to comply with OSHA 1910.178 (forklift) and ANSI/ASA & CSA standards, and to ensure that employees who operate forklifts and aerial lifts are competent to do so. The SOP establishes and outlines compliance and training requirements.

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1. Onsite Supervisor / Management

3.1.1. Ensure all employees are trained before operating equipment.

3.1.2. Ensure that all pre-use inspections are completed, as required.

### 3.2. Employees

3.2.1. Shall not operate equipment until properly trained.

## 4. Reference Documents

Document Number	Document Description
<a href="#">HSES 3A.03</a>	Personal Protective Equipment
<a href="#">HSES 3A.05</a>	Equipment Isolation and Lockout/Tagout.
<a href="#">HSES 3B.05</a>	Guardrails, Loading Docks and Mezzanine Lofts
<a href="#">HSES 3B.01_F01</a>	30 day Pre-use Inspection Form
<a href="#">HSES 3B.01_F02</a>	Ives Pre-Use Aerial Boomlift
<a href="#">HSES 3B.01_F03</a>	Ives Pre-Use Scissor Lift
<a href="#">Maintenance Operations Number 6.05</a>	Regulatory Inspections for Aerial Equipment
ANSI A92.2	Vehicle-Mounted Elevating and Rotating Aerial Devices
ANSI A92.5	Boom-Supported Elevating Work Platforms
ANSI A92.6	Self-Propelled Elevating Work Platforms
CAN/CSA B335-04	Safety Standard for Lift Trucks
OSHA 1910.178	Powered Industrial Trucks
OSHA 1926.453	Aerial Lifts
OSHA 1926 Subpart O	Motor Vehicles, Mechanized Equipment and Marine Operation
OHS Code 2009 Part 19	Powered Mobile Equipment

## 5. Abbreviations, Acronyms, and Definitions

ABL- Aerial Boom Lift	Straight or Articulate Boom
AWP Aerial Work Platform	Scissor Lift
Certification	The employer shall certify that each operator has been trained and evaluated as required by these regulations. The certification shall include the name of the operator, the date of the training, the date of the evaluation, and identity of the person(s) performing the training or evaluation
CT	Certified Trainer
CE	Certified Evaluator
Manual AWP	Push around lift
MEWP	Mobile Elevated Work Platform
CMT	Certified Master Trainer
Self-Propelled AWP	Electric or gas propelled scissor lift

## 6. Procedure

### 6.1. Training Requirements

**6.1.1.** If training is required: Training will be in accordance with HSES 4A.01, Competency Assurance Program.

**6.1.2.** Operator Training is required for powered industrial trucks, aerial work platforms, boom lifts, scissor lifts and other powered equipment. Training is obtained through the various processes based on the specific equipment in each appendix.

### 6.2. Forklift Operator Certification

**6.2.1.** Certifications will be valid for three years for forklift operation (Note: BC, Canada is two years) from the date of evaluation, or earlier as required by location regulation.

6.2.1.1. Formal instruction includes lecture, discussion, interactive computer learning, videos, and written materials. Practical training/evaluation involves instructor demonstrations and trainee exercises for operator evaluation.

**6.2.2.** Re-training will also be conducted when:

6.2.2.1. The operator has been observed to operate the equipment in an unsafe manner;

6.2.2.2. The operator has been involved in an accident or near miss incident;

6.2.2.3. The operator is assigned to drive a different type of forklift or aerial equipment.

- 6.2.2.4. A condition in the workplace changes in a manner that could affect safe operation of the equipment (e.g. new loading dock).

### **6.3. Certified Evaluator**

**6.3.1.** It is suggested that each branch have at least one Certified Evaluator (CE) for the equipment their employees will routinely operate. In certain districts, they may be able to share the CE with nearby branches. This is a branch by branch, district by district decision based on the territory and business needs.

**6.3.2.** CEs shall be qualified by equipment type.

### **6.4. Certified Trainer**

**6.4.1.** Certified Trainers (CTs) shall be qualified by equipment type.

**6.4.2.** The Region Safety Training Manager/Regional Safety Director/Manager shall determine the need for CTs.

### **6.5. Converting from Certified Trainer to Certified Evaluator**

**6.5.1.** CT can convert to CEs by following the process described in Appendix C, CT to CE conversion.

**6.5.2.** Certified Evaluators shall be qualified by equipment type.

### **6.6. Becoming a Certified Operator**

**6.6.1.** Operator Training is by equipment type.

**6.6.2.** All documentation shall be tracked through United Academy.

### **6.7. Training Files**

**6.7.1.** Original tests, practical evaluations, and operator data sheet or record sheet should be uploaded into United Academy.

**6.7.2.** In the event of a transfer, the Safety Training Files shall be promptly sent to the new location but a copy file will remain at the original location. Under no circumstances will the trainer keep the original paperwork after it has been recorded and reported. This paperwork is the property of United Rentals.

### **6.8. Fueling**

**6.8.1.** Operators of a gasoline or diesel vehicle will shut off the engine before filling the fuel tank and will ensure that the nozzle of the filling hose makes contact with the filling neck of the fuel tank. No one will be permitted on the equipment during fueling operations except as specifically designed. There will be no smoking or open flames in the immediate area during the fueling operation.

## **6.9. PPE**

**6.9.1.** Personal protective equipment is mandatory at all times when employee operates equipment (aerial, forklift, & articulating crane) reference HSES 3A.03, Personal Protective Equipment.

## **6.10. Pre Use Inspections and Worksite Inspections**

**6.10.1.** Any forklift that is used to assist in the performance of a task must be inspected by the operator at the beginning of each day and documented on HSES 3E.01\_F01 (30 day pre-use inspection form) to ensure that the equipment is safe to operate. A pre-use inspection is required prior to use of aerial equipment.

**6.10.2.** If at any time a forklift or aerial equipment is found to be in need of repair, defective, or unsafe, it must be removed until it has been restored to safe operating condition. Notify a Supervisor immediately.

**6.10.3.** Maintenance and repairs will be performed only by authorized repair personnel.

## **6.11. Forklift Travel**

**6.11.1.** Operate trucks smoothly while loading, unloading, and traveling.

**6.11.2.** Seatbelts are required to be used on all powered mobile equipment fitted with rollover protection.

**6.11.3.** Avoid sudden stops which can spill your load and slowdown when negotiating turns. Ensure the load is secure before travel.

**6.11.4.** Slow down and sound horn at aisles and other locations where vision is obstructed.

**6.11.5.** When driving over dock boards, ensure dock board is properly secured.

**6.11.6. When leaving fork truck unattended, ensure the following are performed:**

6.11.6.1. Lower the forks to the floor, Tips down Heels Up.

6.11.6.2. Place the controls in neutral position.

6.11.6.3. Set brakes.

6.11.6.4. If the operator leaves the fork truck unattended, and/or is greater than 25 feet away or out of sight, then the truck the engine must be shut down as stated above.

**6.12. Specific notes on operating fork truck:**

**6.12.1. The rated capacity of the lifting equipment must be clearly labeled and must not be exceeded.**

**6.12.2. Travel with forks in low position to improve stability of the truck and to provide better vision.**

**6.12.3. If load obstructs your vision, travel backward. Use spotter when needed.**

**6.12.4. Elevate the forks only when stacking and unstacking.**

**6.12.5. When descending with loaded truck, travel backwards.**

**6.13. When operating in the vicinity of pedestrians:**

6.13.1.1. Ensure proper space between your equipment and pedestrians.

6.13.1.2. If a pedestrian comes too close to your equipment, STOP, inform them to move out of your operating area. Do not resume operation until they have done so.

6.13.1.3. ALWAYS look behind you and sound your horn before backing up.

6.13.1.4. Look in the direction you are moving.

6.13.1.5. Restrict customers and vendors from areas where equipment is operated.

6.13.1.6. Do not use headphones, ear pieces, or a cell phone while operating equipment.

**6.14. Portable/Permanent Docks**

**6.14.1.** Reference HSES 3B.05. Guardrails, Loading Docks and Mezzanine Lofts for safety precautions related to loading/unloading equipment utilizing portable and permanent docks.

**6.15. Aerial Equipment Safe Operations**

**6.15.1.** Always conduct a jobsite inspection (Hazard 360) prior to operation of aerial equipment. Look up, down, and around to ensure it is safe to operate the equipment.

**6.15.2.** If aerial equipment is used for work at the branch, then a pre-use inspection must be completed. HSES 3B\_01\_Form\_02, Ives Pre-Use Aerial Boomlift Inspection Checklist or HSES 3B.01\_F03, Ives Scissor Lift Pre-Use Inspection Checklist shall be utilized

**6.15.3.** The Make-Ready inspection process is a pre-use inspection for aerial equipment if the equipment is not used for production/work operations.

**6.15.5.** Operators shall maintain a minimum of 25 foot (7.62 meters) clearance of all overhead power lines.

**6.15.6.** If you need to operate the lift closer than 25 feet (7.62 meters), the power company must be contacted and the voltage determined. Based on the voltage, refer to the Minimum Safe Approach Distances below and follow the requirements. If this cannot be achieved, the power company will have to shut down the power line so safe operations can be achieved.

<b>MINIMUM SAFE APPROACH DISTANCES (MSAD)</b>		
<b>Normal Voltage KV (phase to phase)</b>	<b>Minimum Required Clearance</b>	
<b>0 to 50</b>	<b>10 feet (3.05 meters)</b>	
<b>50 to 200</b>	<b>15 feet (4.60 meters)</b>	
<b>200 to 350</b>	<b>20 feet (6.10 meters)</b>	
<b>350 to 500</b>	<b>25 feet (7.62 meters)</b>	
<b>500 to 750</b>	<b>35 feet (10.67 meters)</b>	
<b>750 to 1000</b>	<b>45 feet (13.72 meters)</b>	

Note: The above clearances are from ANSI/ASME Standards. Check with your local authorities for any variance.

**6.15.7.** Should a piece of extended aerial equipment need to be moved while the operator is in the platform, the operator should retract and lower the platform first and then move the lift to the desired location.

**6.15.8.** When moving a slab style scissor lift around the yard, in and out of the shop, or on a jobsite, operating from the ground is an option only when all other options are not available. Prior to operating a slab style MEWP from the ground controls, determine if one of these preferred methods is possible:

6.15.8.1. Operate from inside the platform

6.15.8.2. Lift with forklift

6.15.8.3. Winch

**6.15.9.** When operating the slab style scissor lift from the ground, as a last resort. The control box must be off the equipment and follow the protocol outlined below:

6.15.9.1. Ensure adequate room to operate the equipment and for yourself.

6.15.9.2. Assure the area is free of obstructions or other hazards.

6.15.9.3. Remove the control box and be in position so that there is a clear line of site to the intended travel path and walk parallel to the equipment.

**6.15.10.** When loading and unloading booms or rough terrain scissor lifts the operator must be in the platform. The winch mechanism on the trailer will be utilized to assist with loading and unloading.



6.15.10.1. Push Around Aerial Work Platform shall be loaded by appropriate lifting device. Utilize fork pockets with a forklift and/or loading platform in conjunction with a forklift (e.g. Load n Tow).

6.15.10.2. For a slab style scissor lift, a forklift should be used to load and unload it. If a forklift is unavailable and a truck bed or trailer does not lie flat on the ground for loading, use of a winch is required whenever possible. If the scissor lift cannot be loaded under its own power, a winch must be used.

6.15.10.3. Do not operate the equipment from the platform if hazardous ground conditions exist such as; slopes, pot holes, drop-offs, poor traction conditions etc.

6.15.10.4. Take additional precautions when moving equipment under adverse weather conditions or poor job site conditions.

**6.15.11.** Never use operating the equipment from the ground as a means to transport the equipment over any surface that would be considered unsafe (potentially insufficient to support the equipment, inadequate traction, etc.) when operating from the onboard operator's station.

**6.15.12.** The operator shall never attempt to use an aerial lift for a purpose other than which it is intended.

6.15.12.1. Modifications to the equipment shall not be made to any aerial equipment without the written approval from the manufacturer.

6.15.12.2. Do not exceed the load limits of the aerial equipment.

**6.15.13.** The aerial equipment must have a functional back-up alarm or a spotter must be utilized when backing the equipment.

**6.15.14.** Operators shall stand firmly on the floor and shall not climb on railings or edge of basket.

## **6.16. Aerial Equipment - Preventative Maintenance**

**6.16.1.** Reference Maintenance Operations Number 6.05, Regulatory Inspections for aerial equipment for details on preventative maintenance activities regarding aerial equipment.

**6.16.2.** Always use the Safety Prop when working on aerial equipment.

**6.16.3.** Do not depend on hydraulic pressure to keep the platform suspended when working on aerial equipment. Follow the steps when using Safety Prop:

6.16.3.1.1. Raise the platform high enough to remove the safety prop from its storage position.

6.16.3.1.2. Align the safety prop with the base frame's anchor point.

6.16.3.1.3. Once the safety prop is in place, slowly lower the platform until the prop rests against the anchor point.

6.16.3.1.4. Visually inspect the safety prop to ensure it is secure.

---

### **UNITED RENTALS, INC. INTERNAL USE ONLY**

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Forklift and Aerial Equipment Operator Safety

Reserved

Doc number: HSES 3B.01

Issue: D

Date: 5/11/2018

Page: 9 of 10

---

6.16.3.1.5. Proceed with required LOTO procedures as outlined in HSES 3A.05, Equipment Isolation and Lockout/Tagout.

---

**UNITED RENTALS, INC. INTERNAL USE ONLY**

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Forklift and Aerial Equipment Operator Safety

Reserved  
Doc number: HSES 3B.01  
Issue: D  
Date: 5/11/2018  
Page: 10 of 10

## 7. Approvals

*Approvals on File*

_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date
_____ Name	_____ Position	_____ Date

## Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
D	5/11/18	Kurt Southerland	NA	Updated to reference United Academy and defined by equipment type how to become a trainer, evaluator or operator.
C	4/1/13	Streamline Team	NA	Revised to new format. Re-numbered from SOP #32 and #33. Combined SOP #'s 32 & 33.
B	12/1/11	NA	NA	Minor changes throughout, added scope, revised footer
A	12/1/2010	NA	N/A	New format, minor content changes

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

## UNITED RENTALS, INC. INTERNAL USE ONLY

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

**OPERATOR DAILY CHECKLIST - PERFORM AT THE START OF EVERY SHIFT** ( Every operator must perform their own daily preshift )

NAME OF MONTH AND YEAR: \_\_\_\_\_ BRANCH LOCATION # \_\_\_\_\_




NAME OF CERTIFIED OPERATOR: \_\_\_\_\_ FORKLIFT EQUIPMENT NUMBER: \_\_\_\_\_

**DAYS OF MONTH**

HSES 3B.01\_F01\_Issue\_A



# Example Cutting Tool Options

Cutting Tool/Item	Description	Item #
	<b>5-1/2" Stanley® Auto Retractable Hood Safety Knife</b> <ul style="list-style-type: none"> <li>• Auto retracting blade – helps reduce the chance of lacerations and puncture wounds</li> <li>• 3-sided slider button – comfortable and easy to use from top, left or right side</li> <li>• Box tape splitter for convenience</li> <li>• Ergonomically designed for more comfortable use</li> <li>• Supplied with 1 safety blade</li> </ul>	<b>#10-783</b>
	<b>MarshallTown Auto Retractable Knife</b> <ul style="list-style-type: none"> <li>• Blade retracts automatically for safety when not in use.</li> <li>• Butterfly storage compartment holds five extra blades.</li> <li>• Resilient DuraSoft® handle provides a soft feel, reduces fatigue, and offers excellent durability.</li> <li>• Magnet holds blade during replacement.</li> </ul>	<b>#19069</b>
	<b>Stanley® Blade Disposal Container</b> <ul style="list-style-type: none"> <li>• Disposes single-edged razor and utility knife blades.</li> <li>• High impact, puncture-resistant plastic construction.</li> <li>• Includes container and wire holder.</li> <li>• Snap-on lid locks tight for safety and is tethered to the container.</li> <li>• Container can be placed on a flat surface or fixed to a wall with the metal rack.</li> </ul>	<b>#11-081</b>

## Tools and Ladders

### Table of Contents

1.	Objective .....	2
2.	Scope .....	2
3.	Responsibilities .....	2
4.	Reference Documents.....	2
5.	Abbreviations, Acronyms, and Definitions .....	3
6.	Procedure.....	3
6.1.	Training Requirements .....	3
6.2.	Safety and Environmental Precautions .....	3
6.3.	Cutting Tool Safety .....	3
6.4.	Hand Tools .....	4
6.5.	Power Tools .....	5
6.6.	Pneumatically Operated Tools .....	6
6.7.	Grinders – Bench, Portable and Pedestal .....	6
6.8.	Drill Press.....	7
6.9.	Ladders .....	7
6.9.1.	General Requirements and Usage Guidelines .....	7
6.9.2.	Footing Support Requirements.....	7
6.9.3.	Step Ladder Usage .....	8
6.9.4.	Extension Ladders.....	8
6.9.5.	Fall Protection .....	8
6.9.6.	Ladder Inspection and Identification .....	9
6.9.7.	Storage of Ladders .....	9
6.10.	Scaffolding.....	9
7.	Records.....	9
8.	Approvals .....	9
9.	Appendix A – Leader sheet for Tools, Ladders & Scaffolding .....	11

## 1. Objective

1.1. The objective of this procedure is to define the minimum requirements to protect personnel from tool hazards including proper use and inspection of portable ladders.

## 2. Scope

2.1. The scope of this procedure includes all United Rentals, Inc. locations in the US and Canada. If local, regional, state or provincial regulations are more stringent, then the branch shall ensure compliance with those additional requirements.

## 3. Responsibilities

### 3.1.1. Location Manager

3.1.1.1. Will ensure tools and ladder use is applicable to the work being conducted and approved for use.

3.1.1.2. It is the responsibility of the branch manager to monitor the use and condition of tools used at the branch level, as well as to ensure that regular maintenance is conducted per manufacturer's recommendations.

3.1.1.3. Refer to the manufacturer's recommendations for the safe use of all tools and ladders.

6.9.2. The Location Manager will ensure that employees that are involved in scaffolding maintenance are trained using the manufacturer's training materials.

### 3.1.2. Employees

3.1.2.1. Personnel are required to follow the five basic safety rules:

3.1.2.2. Keep all tools in good condition with regular maintenance

3.1.2.3. Use the right tool for the right job

3.1.2.4. Examine each tool for damage before use

3.1.2.5. Operate all tools according to the manufacturer's instructions

3.1.2.6. Use the required personal protective equipment for each use

3.1.2.7. Refer to the manufacturer's recommendations for the safe use of all tools and ladders.

## 4. Reference Documents

Document Number	Document Description
<a href="#">HSES 3A.01</a>	Safe Work Practices & Life Safety Rules
<a href="#">HSES 3A.03</a>	Personal Protective Equipment
HSES 3B.02_R01	Example Cutting Tool Options

---

**UNITED RENTALS, INC. INTERNAL USE ONLY**

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

Document Number	Document Description
<a href="#">PPB 3J.010</a>	Tool Inventory Policy
OSHA 1926 Subpart X	Ladders
OSHA 1926 Subpart I	Tools – Hand and Power
CSA Standard CAN3-Z11-M81	Portable Ladders
Occupational Health and Safety Code 2009 – Part 25	Tools, Equipment and Machinery
Occupational Health and Safety Code 2009 – Part 8	Entrances, Walkways, Stairways and Ladders

## 5. Abbreviations, Acronyms, and Definitions

HSES	Health, Safety, Environmental and Sustainability
Portable Ladder	Ladder that can be readily moved or carried

## 6. Procedure

### 6.1. Training Requirements

**6.1.1.** If training is required: Training will be in accordance with HSES 4A.01, Competency Assurance Program.

**6.1.2.** See [Appendix A](#) for Leader Sheet on Tools, Ladders and Scaffolding

### 6.2. Safety and Environmental Precautions

**6.2.1.** Tools become hazardous if used improperly; read operators manual prior to use.

**6.2.2.** Personnel will need to keep all tools and ladders in good condition with regular maintenance.

**6.2.3.** Ladders will receive a safety inspection before each use by the operator of the ladder. All damaged ladders will be removed from service and destroyed.

**6.2.4.** Only fiberglass ladders are to be used. Wooden ladders shall not be used.

**6.2.5.** All damaged tools, attachments, cords, plugs or switches shall not be used and must be tagged/marked "DO NOT USE/OPERATE" and repaired prior to use by a qualified person.

### 6.3. Cutting Tool Safety

**6.3.1.** Personnel performing work which requires cutting or slicing will be provided a cutting tool such as a utility knife with a self-retracting blade, self-retracting guard, wire cutters, and or cable strippers designed to perform the work needed.



**6.3.2.** Only knives with auto-retracting blades are approved for use.

6.3.2.1. Example approved cutting tools are shown in HSES 3B.02\_R01.

6.3.2.2. Any deviation from auto-retracting knives requires the approval of the Regional Safety Director.

6.3.2.3. Utility knives with breakaway blades are also prohibited.

6.3.2.4. All utility knives used must have a spring loaded retractable blades that will automatically retract when released.

**6.3.3.** Pocket knives are not an approved tool and shall not be used to perform any work.

**6.3.4.** The use of Multi-Tool pocket knives (ex. Gerber, Leatherman, etc.) – They will be allowed, but for use only as a tool.(i.e. pliers, screw driver, file, etc.). The multi tool knife blade is not to be utilized, see 6.3.1.

**6.3.5.** Before using a cutting tool, ensure that the cutting tool you are using is applicable to that specific task.

**6.3.6.** Level 1 cut resistant gloves, or higher, must be used on both hands when using utility knives. See HSES 3A.03, Personal Protective Equipment for proper gloves for various tasks.

**6.3.7.** When using a knife or other sharp tools, always cut away from your hands and body. Stay out of the LINE OF FIRE. If possible, secure object with a holding device such as a clamp or other appropriate device.

**6.3.8.** All cutting tools should be inspected prior to each use and maintenance and care should follow manufacture's recommendations. A sharp edge should always be maintained on all cutting tools (replaced when actual tool or removable blade becomes dull).

6.3.8.1. Used blades should be properly disposed to avoid cut hazards for individuals handling waste.

#### **6.4. Hand Tools**

**6.4.1.** Chisels will be of good quality, as improperly hardened metals may produce shards of flying metal when struck. A chisel must be properly dressed to eliminate mushrooming of the striking area.

**6.4.2.** The use of mechanical advantage enhancing devices such as cheater bars, snipes, etc..will not be used.

**6.4.3.** Screwdrivers will not be used as levers, pry bars, etc....

**6.4.4.** The blade of a standard screwdriver will be properly dressed and maintained.

**6.4.5.** Steel hammers will not be used to strike in explosive or combustible conditions; the employee will use materials that are approved for these type conditions. (e.g. rubber, brass, etc...)

**6.4.6.** Do not dress, grind, weld, or reheat-treat a hammer, and never use the side or cheek of the hammer to strike.

**6.4.7.** Ensure gripping surfaces of wrenches are free of debris and oils.

**6.4.8.** To avoid slippage, select the correct wrench jaw size for the work being done.

**6.4.9.** Never pry, push, or pull in a manner that the body becomes unbalanced.

**6.4.10.** When working overhead, never put the body in the line of fire, work from the side.

**6.4.11.** PPE is required for hand tool usage; see HSES 3A.03, Personal Protective Equipment.

## **6.5. Power Tools**

**6.5.1.** When power operated tools are designed to accommodate guards, they shall be equipped with Original Equipment Manufacturer's guards when in use.

**6.5.2.** Tampering with guards is strictly prohibited.

**6.5.3.** Cords should be covered or elevated to protect from damage and to eliminate tripping hazards when possible.

**6.5.4.** Under no circumstances should a tool be raised/lowered/handled by the cord.

**6.5.5.** Always disconnect the tool from the power source prior to making adjustments or changing attachments.

**6.5.6.** Power tools must be held firmly and material must be properly secured before turning on and starting work.

**6.5.7.** Safety Switches - The following hand-held power tools must be equipped with a momentary contact "on-off" switch: drills, fastener drivers, horizontal, vertical, and angle grinders with wheels larger than 2 inches in diameter, disc and belt sanders, reciprocating saws, and saber saws.

**6.5.8.** The above tools may be equipped with a lock-on control, provided a single motion to turn on the tool can turn it off and allowed by regulation.

**6.5.9.** Machines designed for a fixed location shall be securely anchored to prevent walking or moving.

**6.5.10.** Personnel using portable electrical equipment need to be protected from electrical shock.

**6.5.11.** Electrical power operated tools shall either be the approved double-insulated type or grounded.

6.5.11.1. This is accomplished by grounding the metallic case of electrical equipment using a grounding conductor in the portable cord.

**6.5.12.** Cords and equipment shall be protected by a ground fault circuit interrupter (GFCI) within the circuit, when working in wet locations or required by the customer.

**6.5.13.** PPE is required for power tool usage; see HSES 3A.03, Personal Protective Equipment.

## **6.6. Pneumatically Operated Tools**

**6.6.1.** Chicago hose couplings must be secured with the use of pins, whip checks, etc.. prior to using the tool.

**6.6.2.** When a pneumatic tool is not in use, the airline should be disconnected or blocked in at the source.

**6.6.3.** Where possible, use anti-vibration grips and/or personal protective equipment (i.e. gloves).

**6.6.4.** Automatic excess flow valves must be installed on all airlines at the compressor or header/manifold to prevent whipping or the airline should component fail.

**6.6.5.** Air compressors must be run in well-ventilated areas.

**6.6.6.** At no time will an employee use an airline to “blow” dust or debris from skin or clothing.

## **6.7. Grinders – Bench, Portable and Pedestal**

**6.7.1.** All bench and pedestal grinders shall be equipped with a protection hood, an adjustable guard (either an adjustable tongue guard or a movable hood guard), and an adjustable work rest. The space between the wheel and the work rest shall not exceed 1/8 inch.

**6.7.2.** Guards installed by the manufacturer shall not be removed from portable grinders.

**6.7.3.** All portable grinders shall be equipped with an automatic hand held cut-off switch.

**6.7.4.** Grinding wheels are breakable and shall be handled with care. Wheels shall be stored in racks, bins, or drawers which are not subjected to extreme temperatures, and shall always be kept dry. Grinding wheels are not to be stored with other materials or tools.

**6.7.5.** Immediately after unpacking, all wheels shall be inspected to make sure they were not damaged during shipping.

**6.7.6.** The RPM rate of the wheel shall never be less than the RPM rate of the machine on which it is mounted. Do not mount a wheel whose RPM is not known.

**6.7.7.** All grinders shall be inspected before each use. Electric powered grinders shall be inspected to see that they include a 3-wire system for proper grounding, proper extension cords and plugs.

**6.7.8.** Employees shall never alter the hole of a wheel or force a wheel on a spindle.

**6.7.9.** Excessively worn or metal contaminated wheels shall be replaced.

**6.7.10.** Run newly mounted wheel at full operating speed for at least one minute before applying work. Employee should stand to one side of the wheel.

**6.7.11.** Each employee shall be responsible for the safe operating condition prior to beginning work. The inspection shall include the wheel guards, work rest, protection hood, etc.

**6.7.12.** A face shield shall be worn when operating a grinder.

**6.7.13.** All pedestal and bench grinders shall be properly secured to the floor or work surface.

## **6.8. Drill Press**

**6.8.1.** Drill presses shall be securely anchored to prevent walking or moving.

**6.8.2.** Do not wear loose fitting clothing.

**6.8.3.** Use the proper personal protective equipment.

**6.8.4.** Clear all debris off drill press table.

**6.8.5.** Make sure material to be drilled is well clamped to the table.

**6.8.6.** Use cutting oil to keep the bit from overheating and/or sticking.

**6.8.7.** Keep hands and fingers clear of all moving parts.

**6.8.8.** Turn off press and unplug cord before doing any adjustments, repairs or parts replacement.

**6.8.9.** Never leave machine running unattended.

## **6.9. Ladders**

### **6.9.1. General Requirements and Usage Guidelines**

6.9.1.1. All ladders shall meet the specifications set forth in applicable ANSI, OSHA and CSA standards. Labels shall be legible and replaced as needed.

6.9.1.2. Ladders are not to be used as a brace, skid, lever, guy or gin pole, gangway, platform, scaffold plank, material hoist, or for other uses for which they were not intended, unless specifically recommended by the manufacturer.

6.9.1.3. Employees shall not climb higher than the third rung from the top of an extension ladder or the second rung from the top of a step-ladder.

6.9.1.4. Ladders shall not be loaded beyond the maximum intended load for which they were built, nor beyond the manufacturer's rated capacity.

6.9.1.5. Store fiberglass ladders away from exposure to sunlight or other ultraviolet light sources.

6.9.1.6. Store ladders on racks, which give them proper support when not in use.

### **6.9.2. Footing Support Requirements**

6.9.2.1. The ladder base section must be placed with a secure footing on a firm level base. Ladder levelers may be used for this purpose.

6.9.2.2. The bottom of the side rails are to be equipped with insulated, non-slip material.

6.9.2.3. Safety feet of approved design should be installed on all ladders.

6.9.2.4. Do not use ladders on oily or slippery surfaces.

6.9.2.5. Ladders must not be placed on boxes, piping, valves or other unstable bases to obtain additional height.

### **6.9.3. Step Ladder Usage**

6.9.3.1. Stepladders are not to exceed 20 feet in length.

6.9.3.2. Stepladders shall not be leaned against a structure and used in an unopened position.

6.9.3.3. A metal spreader or locking device of sufficient size and strength must be installed on each step ladder in the open position. If the spreader is not functioning correctly, the ladder is not to be used.

6.9.3.4. Stepladders shall be fully opened with spreaders locked and all feet contacting a firm level support surface prior to use.

6.9.3.5. The bottoms of the four rails are to be equipped with insulated, non-slip materials.

### **6.9.4. Extension Ladders**

6.9.4.1. The length of a single non-self-supporting ladder or an individual section of an extension ladders are not to exceed 30 feet. Two-section extension ladders are not to exceed 48 feet in length. Extension ladders with more than two sections are not to exceed 30 feet in length.

6.9.4.2. Extension ladders are to be equipped with “positive stop” devices (one on each side rail) that will ensure adequate overlap between sections.

6.9.4.3. A guideline for setting up a non-self-supporting ladder at the proper angle for optimum balance and strength is to place the base a distance from the vertical support equal to one-fourth the effective working length of the ladder.

6.9.4.4. Ensure the top of the ladder is secure. The top should be placed with the two rails supported, unless equipped with a single support attachment.

6.9.4.5. The side rails of the ladder must extend at least 36 inches above the top support.

### **6.9.5. Fall Protection**

6.9.5.1. Fall protection should be considered based on the tasks being undertaken while on a ladder. See HSES 3A.03, Personal Protective Equipment.

6.9.5.2. When on a ladder, your center of gravity (center of trunk) must remain between the rails and you must maintain 3 points of contact.

#### 6.9.6. Ladder Inspection and Identification

6.9.6.1. A thorough ladder inspection shall be made when the ladder is originally purchased, received, put into service and before use.

6.9.6.2. Ladders with defects are to be tagged and identified as unsafe, and removed from service. They shall be destroyed.

6.9.6.3. If a ladder is involved in or encounters any of the following, immediate inspection is necessary:

6.9.6.3.1. Tipping Over and other impact Damage

6.9.6.3.2. Exposure to Fire

6.9.6.3.3. Subjected to Corrosive Substances

6.9.6.3.4. Oil and Grease

#### 6.9.7. Storage of Ladders

6.9.7.1. Ladders should be stored in/on racks or in designated areas to protect the ladder when it is not in use.

6.9.7.2. Material shall not be placed on ladders while in storage.

#### 6.10. Scaffolding

**6.10.1. NOTE: United Rentals employees DO NOT erect scaffolding for customers. Contact your Regional Safety Director if erection of scaffolding is needed for internal purposes.**

**6.10.2.** The Location Manager will ensure that employees that are involved in scaffolding maintenance are trained using the manufacturer's training materials.

6.10.2.1. This training shall be documented per HSES 4A.02, EHS Meeting Requirements.

### 7. Records

Record	Location	Retained for	Maintained By

### 8. Approvals

*Approvals on File*



LEVEL: 3 Health, Safety, Environment and Sustainability

TITLE: Tools, Ladders & Scaffolds

Reserved  
Doc number: HSES 3B.02  
Issue: E  
Date: 10/10/13  
Page: 10 of 11

---

Name	Position	Date
<hr/>	<hr/>	<hr/>
Name	Position	Date
<hr/>	<hr/>	<hr/>
Name	Position	Date
<hr/>	<hr/>	<hr/>
Name	Position	Date

### Revision History

Issue	Date	Revised By	Ref. #	Description of Revision
E	10/10/13	Kurt Southerland	NA	Added 6.3, Cutting Tool Safety
D	4/1/2012	Streamline Team	NA	Revised to new format. Re-numbered from SOP #44. Combined SOP #'s #43, Ladders and SOP #44 Tools
C	6/1/2012	NA	NA	Changed title from Power Tools to Tools, added Hand Tool section
B	12/1/2011	NA	NA	Minor changes throughout, added scope, revised footer
A	12/1/10	NA	N/A	New Program

Approval: This document has been approved in accordance with HSES Document Control procedure. Evidence of this approval is maintained on file as a quality record.

---

#### UNITED RENTALS, INC. INTERNAL USE ONLY

This document is controlled electronically.

All paper copies of this document are uncontrolled unless stamped controlled and issued by Document Control Manager.

## 9. Appendix A – Leader sheet for Tools, Ladders & Scaffolding

### Tools

Review applicable sections of this procedure based on tools used in your location

Review list of approved cutting tools

Discuss required PPE and additional PPE needed for specific tools, if any.

Discuss proper operation, storage and use as needed.

Discuss any maintenance procedures performed and proper methods to be utilized.

### Ladders

Review types of ladders and the types available at your location

Discuss the need for additional sizes and types of ladders for your location

Discuss proper setup of each type used at your location

Discuss proper pre-use inspection of the ladder

Review electrical hazards when using a ladder

Discuss 3 points of contact.

Review applicable sections of this procedure.

### Scaffolds

Complete manufactures required training if any employee is involved in the rental or maintenance of scaffolding.