

Working at Heights Rescue Procedures

This document is intended to provide guidance for site-specific working at heights rescue plans.

Company Policy on Working at Heights Rescues

It is our company policy to provide prompt rescue and medical treatment when a worker is injured on the jobsite. On occasion, our workers may have to rescue a worker who has fallen and is being suspended in a safety harness. This “working at heights” rescue involves lowering a worker to a safe location.

Purpose of Working at Heights Rescues

When a worker falls and is suspended in a harness, it’s important to rescue them as quickly as possible for the following reasons.

- The worker may have suffered injuries during the fall and may need medical attention.
- When workers are suspended in their safety harnesses for long periods, they may suffer from blood pooling in the lower body. This can lead to suspension trauma.
- Suspended workers may panic if they are not rescued quickly.
- The events that led to the fall may create additional risks that need to be addressed.

Emergency Planning

The three main parts of emergency planning are:

- 1) Creating a training and testing plan**
- 2) Creating an emergency plan**
- 3) Outlining rescue procedures.**

1) Training and Testing Plan

All site personnel must attend a site-specific safety training session where they will review emergency response procedures and receive instruction on alarms and assembly areas.

Train a designated crew to perform the rescue. This crew must know how to safely use the equipment that is available to them at the jobsite and where they can find it. They should review the rescue procedure every two weeks with the crane crews.

2) Emergency Response Plan

If a worker falls and is suspended by a safety harness, implement the emergency response plan by following the steps below. *Note: It's important for everyone to know their role.*

1. The site supervisor (or alternate foreperson) takes control of the situation.
2. The site supervisor sounds the emergency alarm—two long blasts from a horn. All workers in the immediate vicinity of the incident stop working. The site supervisor quickly evaluates the situation and identifies any further hazards that could arise.
3. The site supervisor or their designate goes to get help if workers are close by. If no one is close enough, the site supervisor calls for help.
4. The site supervisor calls 911 to notify local police, fire, and ambulance if required.
5. The crane operator remains on standby. The operator frees the hook and waits for further direction in case the designated rescue team must perform a basket rescue.
6. The site supervisor (or a worker assigned to the task) isolates the accident zone and its perimeter to limit further exposure.
7. The site supervisor (or a worker assigned to the task) moves all non-affected personnel to a safe zone or directs them to remain where they are.
8. The site supervisor enables radio silence on the jobsite, except for crisis communications from emergency responders. These communications are conducted on a pre-selected "emergency only" radio channel.
9. The site supervisor sends a designated worker to the site gate to meet the response team (police, medical, fire, etc.) and ensure that they have a safe access path to the accident scene.
10. The site supervisor assembles the emergency rescue team at the accident site as quickly as possible to determine the best rescue procedure for the situation.

3) Rescue Procedures

The following rescue procedures are ordered (A) through (D), with (A) being the preferred method and (D) being the method used when there is no other means of rescue.

A. Elevating Work Platform Rescue—If an elevating work platform (EWP) is available on site and the suspended worker can be reached by the platform, follow the procedure below.

1. Bring the EWP to the accident site and use it to reach the suspended worker.
2. Ensure that rescue workers are wearing full-body harnesses attached to appropriate anchors in the EWP.
3. Ensure that the EWP has sufficient load capacity for both the rescuer(s) and the victim.
4. If the victim is not conscious, two rescuers will be needed to safely handle the weight of the victim.
5. When the worker is safely on the EWP, reattach the lanyard to an appropriate anchor point on the EWP, if possible.
6. Lower the worker and arrange for treatment of the victim for suspension trauma and any other injuries.
7. Arrange for transport to nearest hospital.

B. Ladder Rescue—If an elevating work platform is not available, use ladders to rescue the fallen worker with the procedure outlined below.

- Where possible, use ladder(s) to reach the victim.
- Rig separate lifelines and fall arrest equipment for rescuers to use while assessing the victim from the ladder(s).
- If victim is not conscious or cannot reliably help with their own rescue, at least two rescuers will be needed.
- If victim is suspended from a lifeline, move them to an area that can be safely reached by the ladder(s), where possible.
- If victim is suspended directly from their lanyard or from a lifeline, securely attach a separate lowering line to the victim's harness. Other rescuers will lower the victim while being guided by the rescuer on the ladder.
- In no case should ladders be used to support the weight of more than one worker.
- Once the victim has been brought to a safe location, administer First Aid and treat the person for suspension trauma and any other injuries.
- Arrange for transport to nearest hospital.

C. Rescue from Work Area or Floor Below—If the fallen worker is suspended near a work area and can be safely reached from the area from which they fell or the floor below, use the following procedure:

- Ensure that rescuers are protected against falling.
- If possible, securely attach a second line to the workers' harnesses to assist in pulling them to a safe area. (Note: more than two strong workers will be needed to pull a victim upwards for rescue.)
- Ensure that any slack in the retrieving lines is taken up to avoid slippage.
- Once the victim has been brought to a safe location, administer First Aid and treat the person for suspension trauma and any other injuries.
- Arrange for transport to the nearest hospital.

D. Basket Rescue—If a worker has fallen and is suspended in an inaccessible area, you may need to perform a basket rescue.

For basket rescues, the basket must be designed by a professional engineer and constructed in accordance with good manufacturing processes to withstand all loads to which it may be subjected. It must be kept on site at all times in an accessible location where it is clear of material or other equipment.

Fit the rescue basket with a double connection to the crane and appropriate rigging for quick hookup by the crane operator.

Always keep the following items in the rescue basket.

1. First-aid kit
2. Three lanyards equipped with shock absorbers
3. One full-body harness
4. Tag line attached to the basket at all times
5. Descent controller rescue device in good working condition
6. Secondary safety line to tie the basket above the headache ball of the crane.

To perform a basket rescue, follow the steps below.

1. Make sure preferred methods A, B, and C are not possible.
2. Notify the crane operator immediately to position the crane to attach the basket.

3. While the basket is being attached, the crew leader checks that all safety rigging is done and all the required safety equipment is available.
4. With two rescuers in the basket, hoist it to a position that is above and as close as possible to the fallen worker. A designated worker on the ground guides the basket with a tag line. The designated worker must make sure that when the rescue basket reaches the right elevation, the door of the basket is facing the structural steel to provide an easy exit for rescuer #1.
5. Rescuer #1 exits the rescue basket and gets into a position to reach the fallen worker. When doing this, rescuer #1 must be tied-off at all times to either the structure or the rescue basket.
6. Rescuer #2, who is still in the rescue basket, lowers the line that will be used to retrieve the worker. Rescuer #2 attaches an extra lanyard to the line if required.
7. Rescuer #1 assesses the fallen worker for injuries and then decides how to proceed (i.e., treat injuries first, guide the fallen worker into the rescue basket, or lower the basket to the ground with the fallen worker attached to it).
8. Once the fallen worker has been brought to a safe location, administer first aid. Treat the person for suspension trauma and any other injury.
9. Arrange transportation to hospital. A designated worker must accompany the injured worker to hospital.

If the basket rescue is the method used, keep the following points in mind.

- Perform a basket rescue only when it is not possible to use conventional equipment to rescue the fallen worker in a safe manner.
- Never exceed the maximum number of workers in the basket as indicated on the nameplate.
- Ensure that a competent worker inspects the crane and equipment being used prior to lifting rescuers.
- Always equip the crane with a fail-safe mechanism to prevent the boom from descending in the event of a power source or system failure.
- Maintain an adequate means of communication between the rescuers in the basket and the crane operator at all times.
- Ensure that workers in the rescue basket wear full-body safety harnesses attached to a lanyard and anchored to appropriate points in the basket at all times.
- Make sure that all rigging used to attach the rescue basket to the hook of a load line has a safety factor of 10 against failure. There should be a safety line attached to the load line directly from the basket.
- Do not allow cranes to travel while rescuers are in the basket.

- Do not use suspended rescue baskets during high winds, electrical storms, snow, ice, sleet, or other adverse conditions that could affect the safety of personnel on the platform or in the basket.

Post-Rescue Procedure

All non-affected workers should remain in the designated safe gathering zone until the site supervisor notifies them to do otherwise.

The site supervisor and health and safety representative should

- Begin the accident investigation.
- Quarantine all fall-arrest equipment that may have been subjected to fall fatigue effects and/or shock loading for further investigation.
- With a critical injury or fatality, secure the area. (The OSHA requires that an accident scene not be disturbed where a fatal or critical injury has occurred.)
- Determine whether or not the jobsite-specific rescue and evacuation plans were followed as designed. Make corrections to the plan if necessary.
- Record modifications or additions to the plans that the rescue team deems necessary.
- Record all documented communications with fire, police, MOL, and other contractors involved. (When a fall occurs and is arrested, you must notify a Director of the MOL in writing.)
- Record all documented statements from employees, witnesses, and others.
- Save all photographs of the incident.
- Record all key information such as dates, time, weather, general site conditions, and specific accident locales including sketches of the immediate incident area, complete with measurements if applicable.

Tower Crane Operators: Rescue Training

Time is of the essence when attempting to rescue an injured or ill tower crane operator. A rescue will involve training and a solid working knowledge of how to use the specific equipment. Ontario has several independent training providers you can hire to train your workers.