

RESCUE GUIDE

Pole Top

Platform

Tower

Bucket Rescue

Bucket Escape

*Substation &
Transformer Rescue*

RESCUE GUIDE

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ATCO Electric
Work Standards Group
1006 - 15th Ave
Nisku, Alberta, Canada, T9E 7S5
Phone: (780) 955-6226
Fax: (780) 955-6234

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INTRODUCTION

This guide provides step-by-step procedures for conducting rescue practice sessions and emergency rescues from various types of equipment. Rescue procedures must be practiced annually to make sure all employees can complete the specific emergency rescue procedures associated with their work activities.

General Procedures

Periodically inspect all rescue equipment to make sure it is in good operating condition. NEVER reuse a practice rope or a rope that has been used to arrest a fall in an actual rescue.

Immediately remove rescue equipment from service if:

- The rescue rope shows signs of excessive wear or damage to the strands.
- Markings (labels) are illegible or absent.
- There are defects or damage to hardware.
- There is evidence of improper function, improper fit or alteration of any mechanical component.
- There are missing parts.

Appendix A identifies equipment requirements for conducting emergency rescues and practice sessions. Replacement parts for rescue and escape equipment are included in the Operations PPE Intranet catalogue. Contact the warehouse for ordering assistance.

BEFORE attempting a rescue:

1. Identify and take precautions to eliminate or control the hazard(s).

Table 1

Hazards	Precautions
Body Mechanics	<ul style="list-style-type: none">• Use fall protection equipment when accessing the victim.• Keep rescue rope tight.
Electrical	<ul style="list-style-type: none">• When conducting a rescue on lines with isolated circuits, ground phase conductors before lowering the victim.• Observe and maintain limits of approach when using fall protection and rescue ropes near energized equipment.• DON'T climb if you have received an electrical shock because you may lose consciousness unexpectedly.
Mechanical	<ul style="list-style-type: none">• Replace any component in the fall protection system that has arrested a fall.

2. Make sure the victim is clear of the power source and/or the hazard that caused the initial accident. Don't become a second victim.
3. Check:
 - Full body harness fitting;
 - All rigging; and
 - Back-up system, if applicable.
4. Call the ATCO Electric emergency number (1-888-667-1261 or 911 on ATCO Electric radio) and provide your location and vital information.

When you reach the victim:

- Check for breathing by "look, listen and feel." If the victim is not breathing, open their airway and give two deep breaths using an artificial resuscitation barrier one-way valve.
- Lower the victim to the ground.
- Once the victim is on the ground, administer first aid as required. Focus on breathing, pulse and bleeding. Administer artificial resuscitation and CPR as required.

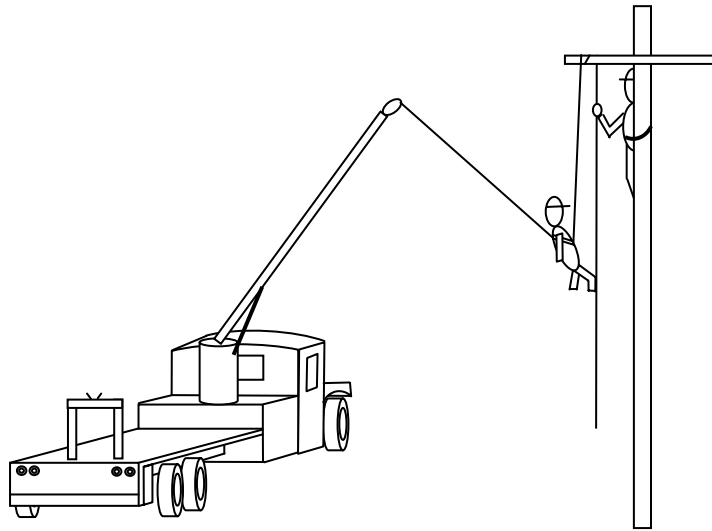
POLE TOP RESCUE

Practice Session

When practicing pole top rescue a mannequin (Rescue Buck, Tuff Kelly etc.) must be used and an appropriate mechanical back up system must be in place, such as a polecat, a material handling unit, hoisting device, etc. Equipment requirements are provided in Appendix A.

1. The lineman up the pole attaches the rescue line around the cross arm.
 2. Position the back up system in place, hoist up mannequin and belt him into position above the cross arm.
 3. Attach the rescue line snap to the dorsal D-ring on the mannequin full body harness. Position yourself to safely undo the pole strap and lower the mannequin.
 4. Practice the rescue by placing a screw driver deep into the pole and placing the rescue rope as per diagram 2. In this situation utilize the back up system to support the mannequin prior to undoing the pole strap.
- **See Practice Diagrams 1 & 2, on the next pages.**

Practice Diagram 1



Emergency Rescue

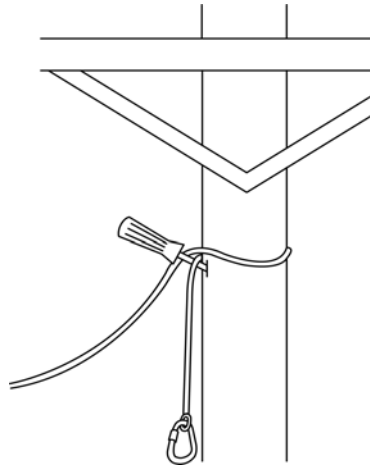
Equipment

- A 13 mm (1/2 inch) rescue rope (hand line) of sufficient length to reach from the victim's location to the ground.

Procedure

1. Climb up to the victim and administer artificial resuscitation, if necessary.
2. Split the hand line and throw one end over the cross arm approximately 30 centimeters (12 inches) from the pole.
3. IF THERE IS NO CROSSARM, improvise with whatever equipment that is available. For example:
 - Make an attachment point by driving a screwdriver deep into the pole with the blade crossways to the grain. To make sure it can withstand the pressure; drive the screwdriver well into the pole with no consideration for recovery (see Diagram 2).

Diagram 2



4. Twist the load line around the fall line TWICE to gain adequate friction to safely and easily lower the victim.
5. Place the load line under the victim's arms and tie a knot at about face level. Always tie or snap the loose end above the knot.
6. Remove excess slack from the hand line.
7. Remove the victim's pole strap.
8. Lower the victim, paying out the hand line to control his descent.

PLATFORM RESCUE

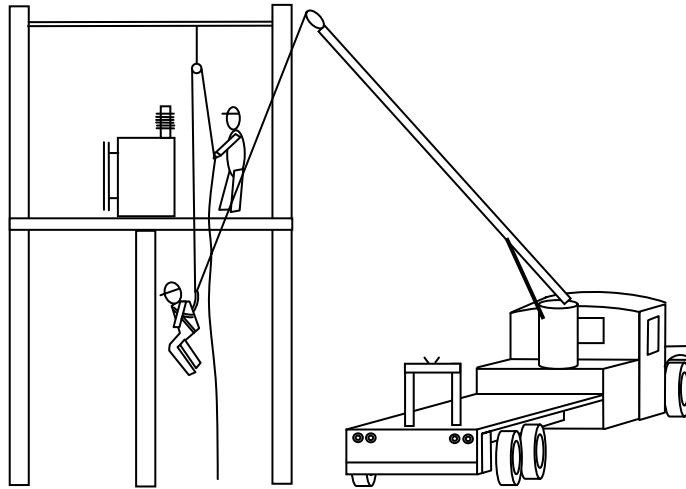
Practice Session

When practicing platform rescue a mannequin (Rescue Buck, Tuff Kelly, etc.) must be used and an appropriate mechanical back up system must be in place, such as a polecat, a material handling unit, hoisting device, etc. Equipment requirements are provided in Appendix A.

- 1 The lineman up the pole attaches the rescue line onto the Personal Fall Arrest System (PFAS) Anchor.
- 2 Position the back up system in place, hoist up mannequin and position him on the platform.
- 3 Attach the rescue line snap to the dorsal D-ring on the mannequin full body harness. Maneuver mannequin close to the edge of the platform. In a crouch position start moving mannequin over the platform and then lower him to the ground.

See Practice Diagram 3, next page.

Practice Diagram 3



Emergency Rescue

Equipment

- A 13 mm (1/2") rescue rope (hand line) of sufficient length to reach from the victim's location to the ground.

Procedure

1. Climb up to the victim and administer artificial resuscitation, if necessary.
2. Split the hand line and thread the end with the locking snap TWICE through the eye of the free hanging sling.
3. Clip the locking snap from the hand line into the dorsal D-ring on the victim's full body harness.
4. Remove excess slack from the hand line.
5. Remove the victim's fall protection rope or lanyard.
6. *In a crouch, position the victim in front of your body to enable the victim to safely clear the platform when being lowered to avoid any further injury to the victim.*
7. Lower the victim, paying out the hand line to control his descent.

TOWER RESCUE

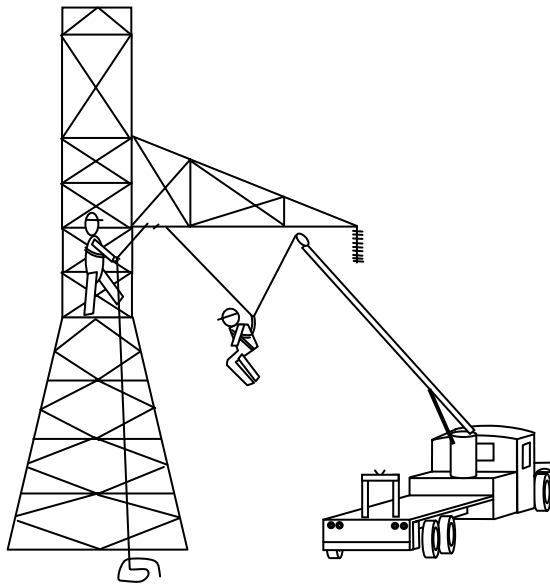
Practice Session

When practicing tower rescue a mannequin (Rescue Buck, Tuff Kelly, etc.) must be used and an appropriate mechanical back up system must be in place, such as a polecat, a material handling unit, hoisting device, etc. Equipment requirements are provided in Appendix A.

- 1 The lineman up the pole attaches the rescue line around the cross arm.
- 2 Position the back up system in place, hoist up the mannequin and belt him into position above the cross arm.
- 3 Attach the rescue line snap to the dorsal D-ring on the mannequin full body harness. Position yourself to safety undo the pole strap and lower the mannequin.

See Practice Diagram 4, next page.

Practice Diagram 4



Emergency Rescue

Equipment

- A 13 mm rescue rope (hand line) of sufficient length to reach from the victim's location to the ground; OR
- If the ground crew will control the victim's rate of descent, a rope twice the length of the structure height.

Procedure

1. Climb to a location above the victim and attach your lanyard to a steel member on the structure.
2. Wrap the snap end of the hand line two times around the main steel member above the victim.
3. Connect the snap to the dorsal D-ring on the victim's full body harness.
4. Remove excess slack from the hand line and tie it to a steel member.
5. Remove the victim's fall protection rope or lanyard.
6. Untie the hand line and lower the victim, paying out the rope to control his descent.

BUCKET RESCUE

Practice Session/Emergency Rescue

Equipment

- Bucket rescue rope blocks (for non-tipping bucket only).

Procedure

Remove the worker using one of the following two methods, depending on the design of the bucket.

Tipping Bucket

Lower the bucket to the ground, tip the bucket and extract the worker.

- For a bucket with knuckle booms, you must be able to lay the booms out flat to get the bucket to the ground.
- For telescoping booms, you must be able to lower the bucket to the ground, then extend the boom to slightly tilt the bucket until you can extract the worker.
- In the event of a hydraulic failure, use the override controls to tip the bucket.

Non-Tipping Bucket

A rescue block system is required for non-tipping buckets. The rescue rope blocks are attached to the boom and the victim's D-ring. The rescuer pulls on the fall line of the blocks until the victim is clear of the bucket, and then lowers the victim to the ground. The upper boom of the aerial device must be in a near vertical position for this method to be effective. Use the following steps:

Rescue Block Procedure

1. Snap the fixed block (yellow) to the D-ring on the boom strap.
2. Unfold the blocks and throw the fall line to the ground. Make sure there are no kinks or knots in the fall line.
3. Snap the running block to the dorsal D-ring on the victim's harness.
4. Pull the fall line of the blocks to straighten the victim. Administer artificial resuscitation, if necessary.
5. Remove the victim's lanyard.
6. Unfold the upper boom to position the bucket 2 metres (6 to 8 feet) from the truck deck.
7. Proceed carefully from the truck deck to the ground.
8. Pull the fall line to raise the victim clear of the bucket.
9. Lower the victim to a clear spot on the ground.
10. Unsnap the rescue blocks.

BUCKET ESCAPE

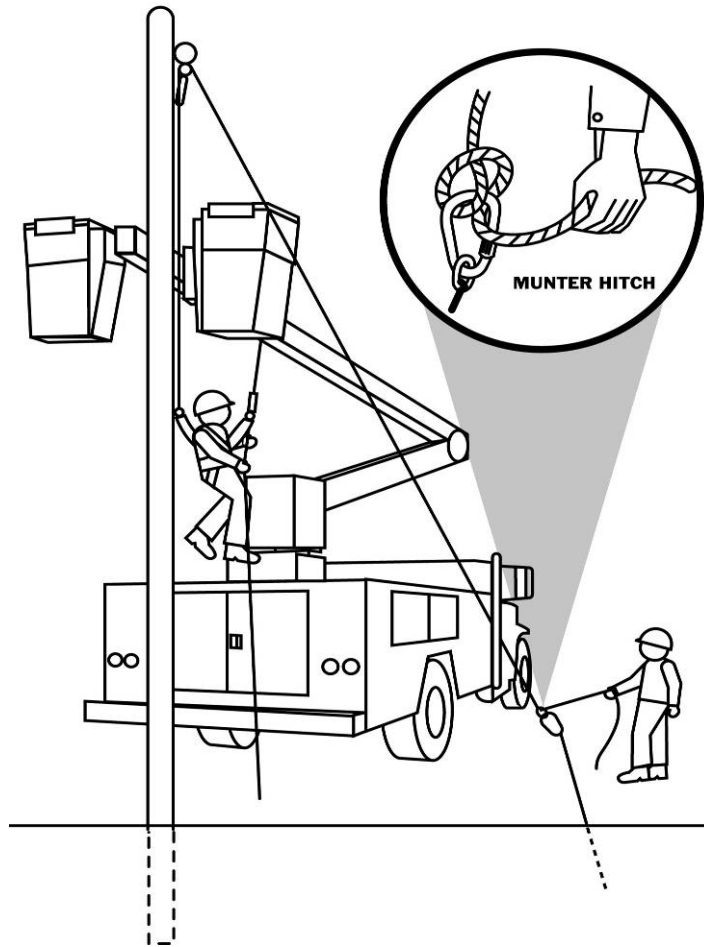
Practice Session

Equipment requirements are provided in Appendix A.

1. Attach the rope descender/rider to the bucket and then snap the dorsal D-ring onto the full body harness to the worker. With the worker standing on the ground raise the bucket/worker 3 – 4.5 metres off the ground.
2. The worker then lowers himself to the ground using the rope descender.

See Practice Diagram 5, next page.

Practice Diagram 5



Emergency Escape

Equipment

- Bucket escape rescue system (e.g., Rope Descender or Rope Rider rescue system).

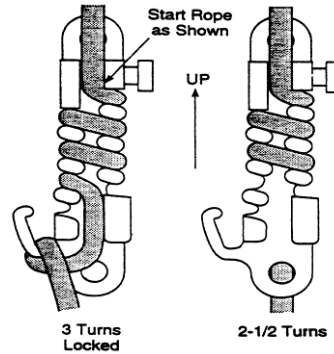
Procedure

1. *If using the rope rider* device, check for correct positioning of the descent rope. At a minimum, the rope should be wrapped 1 1/2 times through the device (see Diagram 6).

Increase wraps depending on weight, using three wraps for more than 112 kg (250 lbs).

If using a rope descender proceed to step 2.

**Diagram 6
Rope Rider**



Rope Descender



Use the carabiner to attach the top end of the descent rope to the attachment on the boom. Make sure the attachment point is reliable.

2. Position the descent device as close as possible to the attachment point to minimize drop when leaving the bucket.
3. Use a carabiner to attach the bottom end of the lowering device to the attachment loop on your descent cradle or harness.
4. Lower the free end of the descent rope to the ground. Make sure the rope is not tangled, the descent path is clear and the person on the ground is in control of the fall line.
5. Remove your lanyard and begin descent:
 - Climb from the bucket and transfer your weight to the descent rope. Adjust the descent harness so you are comfortable.
 - Pull downward on the descent device to start your descent. You can stop at any time by releasing the descent device.
 - Continue until you have reached the ground.

SUBSTATION & TRANSFORMER **RESCUE**

Please follow the training document stored on the transmission drive under Tech Training.

Appendix A: Rescue Equipment Requirements

BACK UP SYSTEM		
Qty	Description	Catalogue #
1	<i>Mechanical Device, such as a polecat, material handler, hoist, vehicle & rope blocks</i>	34 03 3300
1	Carabiner	34 13 0552
1	Full body harness with dorsal D-ring	34 03 3880

Note: an anchor must be installed next to the practice structure to operate the back up system.

POLE TOP, PLATFORM AND TOWER RESCUE		
Qty	Description	Catalogue #
1	Hand line of suitable length (13 mm diameter rope minimum)	34 03 3300

BUCKET RESCUE		
Qty	Description	Catalogue #
1	Bucket Rescue Rope Blocks	34 13 0303

BUCKET ESCAPE		
Qty	Description	Catalogue #
1	Bucket Escape Rescue System	34 13 0304

