Ober Mountain Lift Evacuation Guidelines

I. Purpose

To ensure the safe and efficient evacuation of guests from a fixed grip aerial lift at Ober Mountain in the event of a mechanical failure, prolonged stoppage, or other emergencies requiring evacuation. This plan adheres to **ANSI B77.1: 4.3.2.5.7, 4.2.12.4,** standards and best practices as outlined by the **NSAA Lift Evacuation Resource Guide.**

II. References

- **ANSI B77.1-2022 – Passenger Ropeways and Passenger Conveyor Systems – Safety Requirements**
- **NSAA Lift Evacuation Resource Guide (Latest Edition)**
- **Petzl Technical Documentation for Petzl I'D S Devices**
- **Cascade Rescue Company Equipment Specifications**

III. Evacuation Triggers

Evacuation will be initiated only after all reasonable attempts to restart the lift have failed, and under any of the following conditions:

- Failure of lift propulsion or braking systems.
- Environmental or operational hazards that prevent safe continued use.
- Instruction from mountain operations management or lift maintenance leadership.

IV. Personnel and Training

All personnel involved in lift evacuation operations must:

- Be trained in accordance with **ANSI B77.1 Section 3.2.4**.
- Participate in annual lift evacuation training drills per **NSAA recommendations**.
- Be proficient in the use of:
    - Belay and decent control devices
    - Rope savers and lowering systems
    - Rescue harnesses

Two-way radios and verbal communication protocols

V. Equipment

Storage of Equipment

Locations: Lift evacuation kits will be stored in two separate locations that are readily accessible by appropriate personnel (persons qualified to be lift evacuation leaders and coordinators)Tags: A tag on each lift evacuation kit will show the contents and the signature/initials and date of the last inspector/inspection. The kit should be secured in a manner that prevents removed of any piece of equipment without removal of the tag.

Each evacuation team shall be equipped with:

- Petzl I'D S (primary lowering device)
- Static evacuation rope (11mm or as specified)
- Rope saver/friction sleeve to protect rope over towers or edge transition
- commercially available rescue harness such as Cascade Toboggan Rescue Seat.
- Seat harness and helmet for rescuers
- Radios for top-to-bottom communication
- Anchors 1-inch tubular webbing or manufactured anchors where applicable)
- Access ladders, extension poles, and throw lines
- Wooley bag (located at each load area of the lift)
- Other advanced equipment for trained personnel for rope ascending.

Inspection/Care

Equipment is to be inspected before and after each use and twice during the winter and twice during the summer.

Inspection will consist of inventory of each lift evacuation kit to assure completeness (all contents on tag). Each piece of webbing will be inspected for signs of wear such as fraying, stiffness, and discoloration from dirt or grease etc... The evacuation rope will be inspected by pulling it from the rope bag through the hand feeling and looking at the entire length. Rope wear signs include fraying, discoloration, uneven thickness, and uneven stiffness. Hardware (such as Petzl I'D's and carabineers) should be visually inspected for damage such as abrasion, deformation, and cracking. If any piece of equipment is in questionable equipment is to be destroyed (made unusable).

All equipment should be stored in a cool, dry, dark area away from all solvents, petroleum products or any other substance that may cause damage. Lift evacuation kits are not to be used for any purpose other than evacuations.

Stage 1: Preparation

The following general procedure is to be used as a guideline only. Every "real" situation will be different; good judgment and common sense are crucial to a safe evacuation. The general procedure in this section will cover only the technical portion of the lift evacuation.

Lift Stoppage: At the time of the actual lift stoppage, the Lift Supervisor, the lift operators, and immediately available maintenance personnel are allowed 5 to 10 minutes to evaluate and correct any minor problem(s) before they are required to report the lift stoppage to the Area Manager. If it is apparently a serious problem, it must be reported immediately.

Evaluate Situation: The Area Manager, Maintenance Supervisor, and Lift Supervisor are to evaluate the situation and decide whether an evacuation might become necessary. If so, or if no decision can be made with available information, the Area Manager must immediately proceed to activate a command center.

Command Center: The Area Manager must establish a command center from which to monitor and direct the evacuation. The Operations Office will not properly handle lift evacuation and regular operations details. The administration offices are well suited so that access is limited enough to avoid undesirable interruptions, and multiple phones are available for efficient communication.

Issue Evacuation: If the Area Manager and the Maintenance Supervisor have not been able to develop a prompt, reasonable, dependable plan to restore lift operation, an Evacuation Alert must be issued to all area department supervisors. They will then promptly assess their staff and departments for all assistance they may provide. The alert must be given promptly during inclement or very cold weather to minimize exposure of lift passengers. The alert may be rescinded if the lift is repaired. Departmental procedures follow and are duplicated in the team instructions. All departments must hold all available personnel (no one leaves before the lifts are cleared) to assist with the evacuation.

Deploy Runners: Runners must be selected who are properly dressed and able to walk the lift line. These Runners will be transported to their assigned portion of the lift and then ascend, making an accurate list of the number of passengers on the lift, noting any potential problem chairs of passengers. The Runners must reassure the passengers and encourage them to conserve body heat and to remain in their chairs. The Runners call their report in to the Evacuation Coordinator and wait for re deployment or to assist in the evacuation and sweep. The first Runner may be a lift attendant from the top station if there are sufficient personnel remaining at the top station and if the person is capable (physically able, suitably dressed, able to effectively communicate with passengers).

Communications: During the alert period, the communications system must be reconfigured. Non-essential radio assignments must be recalled and reassigned to Team leaders. The area switchboard operator must direct calls to Customer Relations and screen all incoming calls, particularly calls to the resort extensions.

Assemble Teams: The Area Manager and the Evacuation Leader designate Team Leaders for the support teams, the evacuation teams and any departments lacking an available supervisor (ski patrol, zip staff, ski school, etc…). Lift Evacuation Team Leaders must be experienced in lift evacuation as well as supervisory skills. The ascent Team Leader must be skilled in ascent and general climbing and rescue skills. The teams must have a balance of skills and equipment specified in their own general directions to perform their duties.

Final Preparation: The Evacuation Leader and the Team Leaders must detail and finalize the assignments. Team Leaders will use these final minutes to re-evaluate their teams and assignments. Special equipment and/or techniques must be worked out to accommodate problems peculiar to the circumstances (invalids on the lift, darkness, threatening weather, steep grades, etc…). Lift evacuation equipment is stored in the rental room and the ski patrol building.

Stage 2: Evacuation

Stage 2 is the final attempt at clearing the lift by its own power, and if necessary, the chair-by-chair rope evacuation of the disabled lift(s). Proper documentation and reporting are required, and the lift passengers and area personnel must be evacuated from the area.

Power Lock-out: All personnel and equipment should be prepared to evacuate the lift(s). The evacuation Leader directs the Maintenance Supervisor to lock out power to the disabled lift(s). The Lift Supervisor will verify that power lock-out has been accomplished, disabling primary power at the breakers and power switched, and secondary power at the control panel and the loading station stop buttons (ALL!). Tag out procedures must be followed as documented.

Remote Evacuation Teams: Evacuation teams assigned to more remote sections of the disabled lift(s) must deploy by available vehicles immediately upon the power lockout order to allow time to reach their lift sections. Re-deploy runners to reassure passengers if the lift-down time exceeds 30 minutes.

Auxiliary Drive: Power off Auxiliary powered evacuation commences under the direction of the Maintenance Supervisor. Lift or EMS personnel should evaluate the passengers as they get off the lift, and record their names and addresses, and condition. Transportation may be necessary; DO NOT LOAD ANY PASSENGERS under auxiliary power (except ski patrol to sweep ski slopes). Basic documentation is mandatory per state regulations.

Local Evacuation: The local section evacuation teams (reasonable walking distance) deploy immediately upon receiving the power lockout confirmation from the Lift Supervisor. Direct the Base Support Team to prepare for the evacuated passengers and advise them of their probable conditions and needs.

Commence Evacuation: The Evacuation Leader orders all evacuation and support teams to commence chair-by-chair rope evacuation immediately upon confirming auxiliary shutdown with the Lift Supervisor and Maintenance Supervisor. Logistics Team(s) begin transporting the injured passengers to the Base Lodge.

Terminate Evacuation: Under rare circumstances the lift evacuation may be dismantled and normal operation resumed. If this is to be done, ALL ropes, other equipment, and personnel and patrons being evacuated must be cleared from the lift line. Because of the extreme risk to equipment, people, and the entire lift, absolute confirmation MUST be made BEFORE the power is restored or the controls are re-enabled. The lift evacuation coordinator must complete documentation.

Evacuation progress: This plan details the team assignments to clear each lift. Some sections may be cleared more quickly than others. All teams should remain on the hill and assist one another until the Top Team can sweep the area. Downhill loaded chairs, and disabled passengers may need to be cleared by lower teams. The logistics Team and Base support Team should be utilized to assist passengers from the hill, accelerating the overall evacuation process. Runners should be re-deployed every thirty minutes to areas that are not in direct contact with evacuation teams by the evacuation team leader.

Stage 3: Sweep

Once the lift itself is cleared of passengers, the passengers, personnel and all the evacuation equipment must be safely transported from the area to the base lodge and accounted for. The events, procedures, and details must be documented, and the area must be cleared except for the maintenance personnel working on the disabled lift.

Quick Sweep: While transporting/assisting the last passenger from the lift area, the Logistics Team(s) perform a quick sweep of the area and remove or redirect all personnel, customers, and equipment to the Base Lodge.

Area Sweep: All evacuation teams must sweep their own areas. The teams evacuating the extreme areas must perform a final sweep as they return to the base lodge. Only maintenance personnel repairing the disabled lift and Snowmakers may remain in the area. Police should be called to remove any others.

Accounting: After the sweeps are completed, all personnel and equipment must be accounted for. Bastard searches, and general area searches are coordinated by the police and may be necessary if someone cannot be accounted for. Encourage everyone to sign out.

Debriefing: The Area Manager, Evacuation Leader, Evacuation Coordinator, Team Leaders, and involved department supervisors, and all Team Leaders meet in the conference room after everyone, and all equipment has been accounted for. All reports and documentation are completed and delivered to the Evacuation Coordinator during the debriefing, and the Evacuation Leader will conduct a cursory evaluation of the evacuation, and the Area Manager will set a date to meet to review the evaluation.

Critique: The Area manager and the Evacuation Leader will solicit written suggestions from all involved departments and supervisors within 2 weeks. All available team leaders and supervisors meet on the preset date to review those suggestions, and to critique the actual evacuation and the Lift Evacuation Plan. The Lift Evacuation Plan may then be revised accordingly.

Area Manager's General Directions

The Area Manager, with the assistance of the Lift Supervisor and Maintenance Supervisor, makes the decision to evacuate an inoperative lift, and oversees the evacuation process. The Area Manager must appoint an Evacuation Leader to supervise the evacuation and ensure the proper documentation and incident reporting required, (state), for a lift evacuation.

The Area manager may supervise the evacuation personally if circumstances permit. Appoint the following Team Leaders:

Evacuation Leader: A senior staff member or supervisor with sufficient supervisory skills, lift evacuation experience, and general area knowledge to efficiently supervise an evacuation. The Area Manager may fill this role if circumstances allow.

Base Support Team Leader: A knowledgeable, experienced senior staff member or supervisor from the Snack bar, Ice Arena, Rental Room, or Processing.

Logistics Team Leader: A senior staff member or supervisor of Operations or Maintenance knowledgeable of area vehicles and the personnel of these departments.

Lift Evacuation Team Leaders: Person responsible for the actual lowering of passengers from chairs specified by the Lift Evacuation Leader.

Lift Evacuation Team Members: Persons aiding the Team Leaders in the lowering of passengers from the non-operable lift. Team members include a scribe who maintains the documentation for the team (names, addresses, problems, etc…)

Departmental Alert Procedures

All Departments: All supervisors must keep personnel and evaluate their staff and need to provide as many capable personnel as possible to assist in the evacuation: NO ONE should leave until the evacuation is complete.

Bear Habitat: Available Bear Habitat personnel will be used according to their abilities in Lift Evacuation, Logistics, or Base Support teams.

Customer Relations: All Customer Relations and Marketing personnel must be informed of the situation. ONLY Marketing's Public Relations personnel are authorized to provide any news or general information releases.

Food Service: Food Service personnel will provide Base Support Team assistance. They should provide blankets, hot beverages, simple hot foods, and a suitable place for lift passengers and evacuation personnel to rewarm. Hot foods and beverages may be delivered to the hill by the logistics personnel.

Ice Arena: Ice Arena and custodial personnel may be used in First Aid, Logistics, etc…

Lift Operations: All Lift Operations personnel will be reassigned to make as many lift evacuation trained people available as possible. These people (and/or Ski Patrol during ski season) will normally be the core of the Lift Evacuation Teams.

Maintenance: Maintenance personnel will continue with all reasonable efforts and prepare the auxiliary drive engine(s) for operation. Some maintenance personnel may be needed to operate on-snow vehicles, or to service critical equipment.

Human Resource: Processing personnel should be assigned to the Base Support Team along with Food.

Service personnel. They should document the name and address, report and observe the condition of the people they assist.

Ski Patrol: One patroller or more should be assigned to each Lift Evacuation team if possible. Sufficient patrollers must be kept available for incidents that may occur elsewhere during the evacuation.

Ski School: Ski School personnel should be assigned to the Lift Evacuation teams to assist in the evacuation, and to assist passengers from the lift to the ski lodge.

Snow Making: Snowmaking in the vicinity of the inoperative lift must be discontinued immediately to permit communications and reduce exposure for the people on the lift. Snowmakers may provide logistical support.

General Procedures of a Lift Evacuation

1. Pre-Evacuation Lockout Procedure

- Secure the Lift System
  Before initiating any evacuation, the lift must be completely powered down. This includes performing a full **Lock Out–Tag Out (LOTO)** procedure in accordance with established safety protocols.
- Perform Lock Out–Tag Out
  A qualified individual shall carry out the Lock Out–Tag Out procedure to ensure that all sources of energy to the lift are isolated, and that the lift cannot be accidentally or unintentionally powered on or moved.
- Verification of Lock Out–Tag Out
  The completion and integrity of the Lock Out–Tag Out procedure must be verified by the Incident Commander (IC) or by a designated individual appointed by the Incident Commander.

No personnel shall proceed with the evacuation operation until Lock Out–Tag Out has been fully executed and verified.

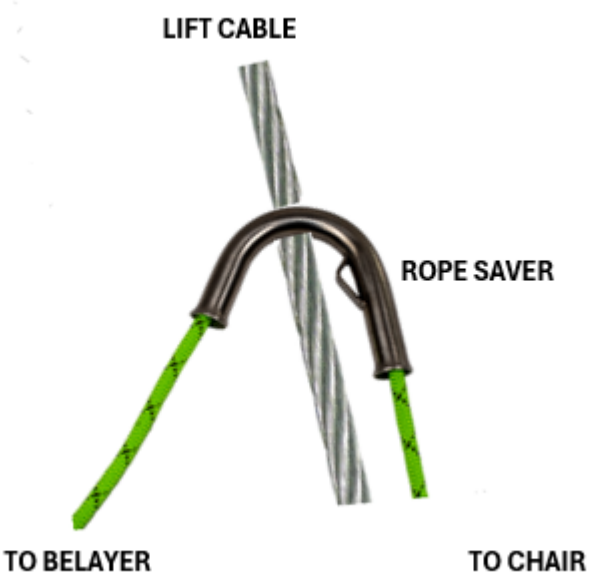
2. Positioning Evacuation Rope

When the evacuation team arrives at the scene (under the inoperable lift), the next task is to position the evacuation rope over the cable. This may be accomplished in one of several ways. The simplest method involves throwing (by hand) a weight over the lift cable with a small cord attached. The small cord is then tied to the evacuation rope, which can then be pulled over the lift cable. The line can be assisted over the cable using the Launcher II or the Big-Shot. (See instructions in Appendixes) Any method of getting the evacuation rope over the cable will be acceptable, provided it does not endanger the passengers, rescuers, or any equipment (i.e., the evacuation rope, the lift, etc…)

The rope may also be placed over the cable by having a properly trained person climb one of the lift towers and put the rope in place. The ascending team may also be required to ascend to an evacuated chair and manually place the evacuation rope around the chair so that it may be moved into place for the next chair**. These tasks (tower climbing and ascending) may only be performed by properly trained personnel.**

The rope should not be pulled to the ground and re-set for each chair. It is preferable, although not always possible, to "flip" the evacuation rope over the evacuated chair and then slid along the cable to the next chair. The evacuation rope must also be equipped with a rope saver. This is placed on the evacuation rope as it is being hauled over the cable.

It is important for the rope saver to be in the correct orientation, the long side of the line saver is towards the chair (Towards the passenger being lowered).



It is important to remember that the passengers being evacuated will be stressed. Reassurance from the rescuers is essential. The rescuer must be careful and confidently explain exactly how the lowering will be performed and demonstrate the use of the harness/chair from the ground if requested.

FIGURE EIGHT FOLLOW THROUGH

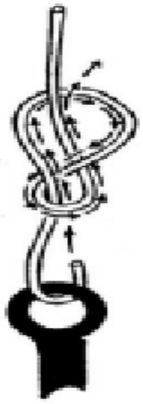


FIGURE EIGHT KNOT ON A BITE

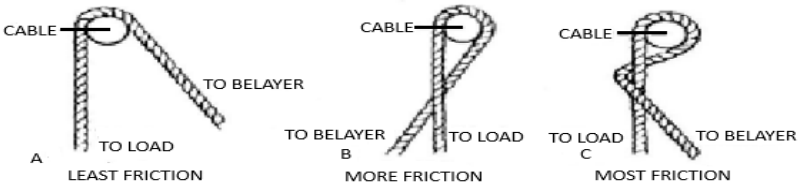


3. The Evacuation Seat

The evacuation seat shall be attached to the rope using a figure 8 knot and a carabiner. If a carabiner is not available; the rope can be directly tied to the chair using a figure 8 follow through. The harness/chair must be properly fastened to the evacuation rope on the side. The line saver must be in place. The belay position should be slightly downhill from the chair. This prevents the passenger from being lowered too abruptly if the belayer should slip. The setup should be checked and then the chair/harness may be raised to the passenger. The passenger will not be experienced so effective communication is important when instructing the passengers to use the chair/harness. (See Communications Card) After the passenger is properly positioned in the chair/harness the slack is taken out of the evacuation rope by pulling tightly (they should still have the safety bar down). This will alleviate a sudden, small drop of the passenger as weight is applied when they slide out of the chair. It is especially important, at this point, to make sure that all rescuers and rescuee are ready. The passenger is instructed to raise the safety bar, slide forward and off while rotating toward the center of the chair. The passenger is then lowered to the ground and the process is repeated until the chair is completely unloaded. The passengers on the inside (of the quad chairs) should be unloaded first, then the outside (after they have moved to the inside position). When the passenger is safely on the ground the scribe must record the necessary information. Passengers should be escorted from under the chairlift to a safe location.

4. Belay Techniques

Ober Mountain uses two belay techniques for lift evacuations. The Rescue 8 with Prusik or the Petzl ID. Belaying is a means to add friction to a rope system to allow a controlled descent of the rescuee. The rescuer's end of the rope will feed through belay device and attached to the rescuer's harness. The weight of the rescuee must be evaluated.

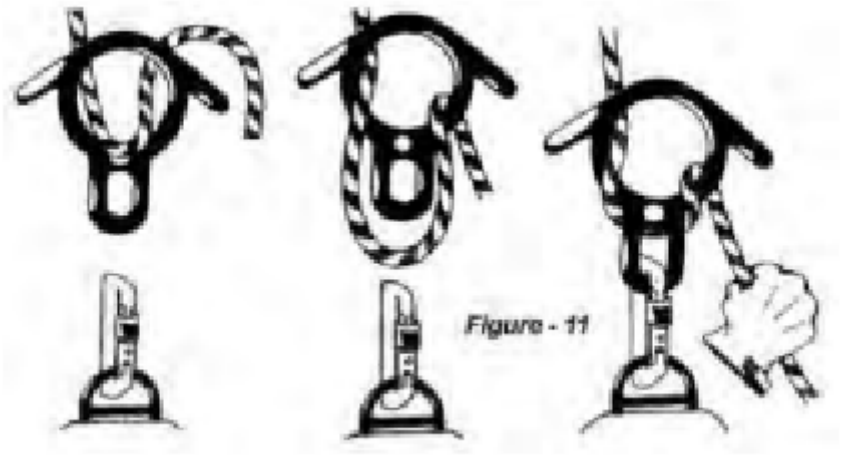


A secondary backup belayer can be seated or standing behind the primary belayer. The secondary belayer should be prepared to take some of the weight of the load of the victim.

Belay Techniques

A. Figure Eight

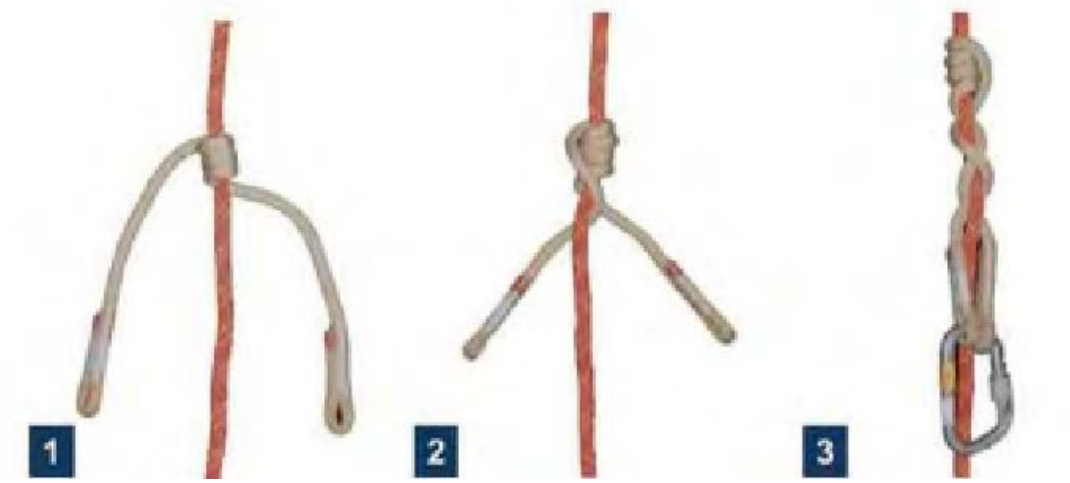
The device is loaded by feeding a bight of rope through the large hole and looped down around the outside of the small end till it rests on the "neck" of the Figure Eight. The bottom small hole is clipped to the rescuer or anchor. The “rescue eight” design (Figure 11) incorporates protruding ears, which prevent the rope from sliding up to the top of the device and forming a Girth Hitch during belaying, which immediately stops further descent.



B. Valdotain Tresse (VT) Hitch (slang- "VT Prusik") The Valdotain Tresse (VT) is a friction hitch that can be used as an autoblock as well as to ascend a line. The VT Hitch is classified in a group of knots collectively known as the "French Prusik." When used for self-belay on rappel it is recommended to rig the VT above the rappel device.

Tying the Valdotain Tresse

1. Start by making at least three full wraps around host rope. Adjust the tails down so ends are even.
2. Cross the tails over one another in the front and the rear.
3. Cross strands in front and back of host rope.
4. Join eyes with carabiner.



NOTE: It is important to understand that the number of wraps and crosses required for optimal performance will vary with rope size, type, and condition.

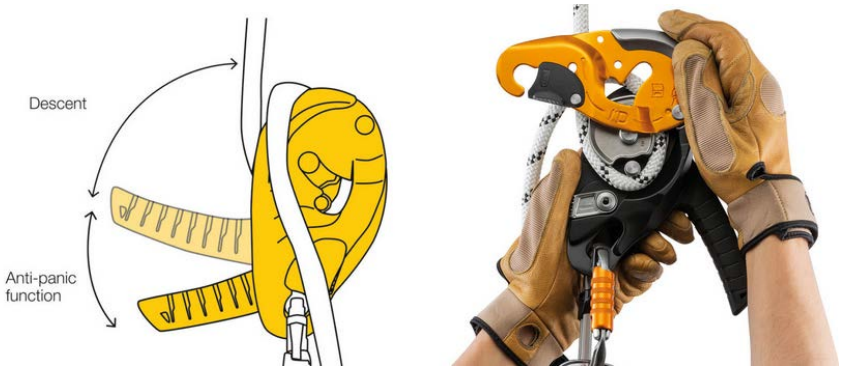
Figure 8 and VT Prusik Setup.



C. **Petzl I'D**

The preferred belay technique for lift evacuations at Ober Mountain is the Petzl I'D. This technique is done by first positioning the rope over the cable, and through the line saver. The chair/sling should be on the inside of the cable, and the line saver should be oriented with the long side towards the belayer. The rescuer's end of the rope will feed through the Petzl I'd and attaches to the rescuer's harness.

The Petzl I'D (Industrial Descender) is advertised as a self-braking descender/braking device. Descent is controlled by pulling on the control handle while keeping hold of the rope with the opposite hand. The I'D handle has a range of positions that include stop for work positioning, descent, and panic stop. Petzl manufacturers the I'D S and I'D L models. The I'D S has an internal safety catch, which reduces the chance of an accident associated with threading the rope improperly into the device. A safety gate is located on the side plate, which permits opening the I'D S without completely disconnecting it from the rescuer's harness. On slopes with a light load, the panic brake activates easily. This is overcome with a button on the end of the control handle that allows for easier travel in non-vertical situations. The I'D can also be employed in a reversible haul system for short ascents by a rescuer, when combined with a single ascender.



The I'D S (part # D20S) operates with 10mm to 11.5mm rope diameters. The I'D meets NFPA 1983 (2012 edition) for "Technical Use" as a DCD. Additionally, the device is certified to meet CE EN 341 class A and CE EN 12841 type C. The rated strength is 14 kN (3,147 lbf) MBS and weighs 530 g (18 oz).

ID Setup

The Petzl I'D will be attached to the rescuers' harness or an approved fixed anchor via a self-locking and self-closing carabiner. The rope coming from the lift line and chair will be fed through the device as shown in the diagram. The free end of the rope will exit the device over the rolled edge of the side plate of the Petzl I'd.

I'D Use

The belayer should be seated or standing and should be backed up with another rescuer who also wears a harness. The side plate needs to be in a secured position. The primary belayer shall coordinate with the victim in the chair to position the victim for lowering. The slack in the system can be taken up with the I'D in the Belaying position. When the victim is ready to be lowered the I'D is moved into the Descent position. The user must never let go of the brake-side rope. The friction and speed of the rope through the Petzl ID is adjusted by the belayer feeding the rope into the device over the rolled edge or friction groove of the Petzl ID. If the rescuer pulls too far in the descent position the device will move to the Panic Brake position. If the device is accidentally put in the panic brake position, the device will need to be reset in the belaying position before the device can be used in the belaying position again. The victim is lowered to the ground. After the victim is on the ground the device should be moved back to the belaying position for the chair to be pulled back up for the next victim. The device can be locked in the Working position, and the rope will not move through the device.

The secondary backup belayer can be seated or standing behind the primary belayer. The secondary belayer should be prepared to take some of the weight of the load of the victim through the primary rescuers harness.

Post-Evacuation

- Debrief all personnel.
- Inspect all rescue equipment for damage.
- Document event, times, participant names, and any guest injuries or concerns.
- File full report in accordance with **NSAA reporting standards**.

VIII. Drills and Preparedness

- Full evacuation drills will be conducted **annually before peak season**.
- Training logs, participant rosters, and equipment checklists will be maintained by the Lift department and/or the Risk Manager.

Definition of Terms

- Lift Failure: The time or condition at which a lift becomes inoperable.

- Aerial lift: Aerial passenger tramways and lifts where the passengers are transported in carriers and are not in contact with the ground or snow-surface. The carriers circulate around a closed system by way of a wire rope of chain. They usually make U-turns in the terminals and move along generally parallel and opposing paths. The carriers may be open or enclosed cabins or chairs and may be fixed or detachable

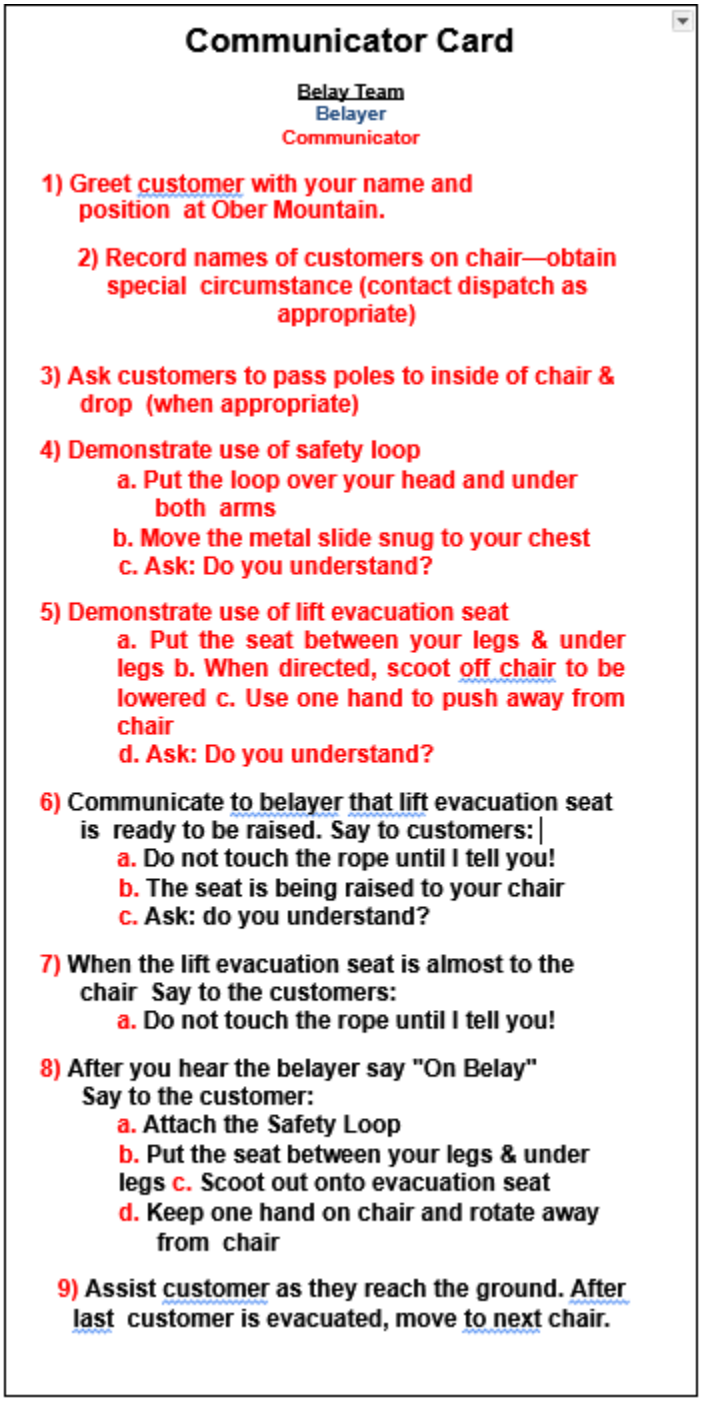
- All clear: A phrase indicating that the haul rope is free of all evacuation ropes, equipment, and personnel, and that emergency evacuation procedures have terminated.
- Ascent device: A device or method by which a rescuer can ascend to a chair, gondola, or tram.
- Auxiliary power unit: A machine that has the ability to start an aerial lift system with a power source independent of the primary power unit
- Belay: To hold, stop or control the rate of descent of a load being lowered by a rope.
- Cable: Term often applied to wire rope
- Carabiner: A snap-like device used to connect a rope to a piece of equipment.
- Cascade Toboggan Rescue Seat: A harness-like evacuation seat designed to provide secure support for guests during descent.
- Chair: An open or partially enclosed carrier for one or more persons on an aerial lift.
- De-ropement: When the wheels, wire rope or carriage leave or come off a sheave train.
- Duckbill: See wire rope attachment device.
- Evacuation: The removal of passengers from the carriers of an aerial tramway system.
- Evacuation alert: The phase of a possible lift evacuation during which evacuation teams prepare to perform an evacuation.
- Friction: The principle of dissipating the energy on the evacuation rope caused by the descending load.
- Friction device: mechanical devices used to generate friction on the evacuation rope.
- The carabineer brake, carabineer wrap, the Munter Hitch, and figure eight descender are commonly used as friction devices.
- General evacuation: The removal of all occupants from an aerial lift due to the inability or inadvisability of operating the lift.
- Individual evacuation: The removal of one passenger at a time from a carrier at or near a lift station. This is usually necessary when a passenger fails to load or unload successfully.
- Grip: A device that attaches a carrier to a wire rope.
- Lift station: A specific location on an aerial lift staffed by either a lift attendant, operator or both and where carriers are loaded or unloaded.

- Lift attendant: A person who is assigned a specific duty or function in the operation of an aerial lift.
- Lift operator: the person in charge of a particular aerial lift.
- Line saver: a commercially produced rope-protecting device that provides a smooth, curved tunnel through which the evacuation rope may slide also acts as a mechanical belay to develop friction by bending the belay rope over a metal surface.
- Non-operable lift: an aerial lift that is impossible or inadvisable to operate by either the primary or auxiliary power unit.
- Petzl I'D S: A self-braking belay device used for lowering passengers safely.
- Runner: a person (employee) designated to walk under the chairlift to perform a specified function, such as informing passengers of the current status of operations.
- Sheave: a grooved wheel that supports a rope on a haul line support structure.
- Span: the distance between two connecting points (i.e., between two towers, chairs, etc...)
- Tower: a haul line support structure.

IX. Appendices

- **Appendix A:** Communications Card
- **Appendix B :** ANSI B77.1 4.2.12.4
- **Appendix C :** ANSI B77.1 4.2.3.5.7
- **Appendix D:** Petzl I'D Setup and Inspection Guide
- **Appendix E:** Rescuee Harnesses; Cascade Rescue Seat Attachment Diagram
- **Appendix F:** Big Shot instructions
- **Appendix G**: Cascade Rescue Line Launcher Instructions

Appendix A:



Communicator Card

Belay Team
Belayer
Communicator

1) Greet customer with your name and position at Ober Mountain.

2) Record names of customers on chair—obtain special circumstance (contact dispatch as appropriate)

3) Ask customers to pass poles to inside of chair & drop (when appropriate)

4) Demonstrate use of safety loop
   a. Put the loop over your head and under both arms
   b. Move the metal slide snug to your chest
   c. Ask: Do you understand?

5) Demonstrate use of lift evacuation seat
   a. Put the seat between your legs & under legs b. When directed, scoot off chair to be lowered c. Use one hand to push away from chair
   d. Ask: Do you understand?

6) Communicate to belayer that lift evacuation seat is ready to be raised. Say to customers:
   a. Do not touch the rope until I tell you!
   b. The seat is being raised to your chair
   c. Ask: do you understand?

7) When the lift evacuation seat is almost to the chair Say to the customers:
   a. Do not touch the rope until I tell you!

8) After you hear the belayer say "On Belay" Say to the customer:
   a. Attach the Safety Loop
   b. Put the seat between your legs & under legs c. Scoot out onto evacuation seat
   d. Keep one hand on chair and rotate away from chair

9) Assist customer as they reach the ground. After last customer is evacuated, move to next chair.

Appendix B: ANSI B77.1

4.2.12.4 Emergency lighting

Emergency lighting shall be provided in the event of electric power failure to permit:

a) regular unloading of an aerial lift;

b) emergency evacuation of carriers;

c) operation of the evacuation drive.

Appendix C: ANSI B77.1 4.2.3.5.7

4.3.2.5.2 Starting

Following procedural clearances, the aerial lift shall be started by the operator or at the direction of the operator. Capability for starting from other locations may be provided for maintenance or emergency operation.

4.3.2.5.3 Loading and unloading platforms

The maze or corral, loading platform surface, breakover point, and the load/unload seat height shall be reasonably maintained according to the prevailing weather conditions and established procedures.

4.3.2.5.4 Stops

After any stop of an aerial lift, the operator shall determine the cause of the stop, and not restart until clearance has been obtained from all attended stations.

4.3.2.5.5 Damage to carriers

Should any carrier become damaged or otherwise rendered unfit for passenger transportation during normal operation, it shall be clearly and distinctively marked and not used for passengers until repaired or replaced. It shall be removed from the line as soon as feasible.

4.3.2.5.6 Hazardous conditions

When wind or icing conditions are such that operation is hazardous to passengers or equipment, according to predetermined criteria based upon the area's operational experience and the designer's design considerations, the aerial lift shall be unloaded and the operation discontinued. If necessary under the predetermined criteria, device(s) shall be installed at appropriate location(s) to ascertain wind velocity and direction when aerial lifts are operated. No aerial lift shall operate when there is an electrical storm in the immediate vicinity. Should such conditions develop while the aerial lift is in operation, loading of passengers shall be terminated, and operation shall be continued only as long as necessary to unload all passengers. When such shutdown has been caused by an electrical storm, grounding of control circuits and haul ropes that are used as conductors in communication systems is permissible. Such grounding shall be removed prior to resumption of passenger operations.

4.3.2.5.7 Evacuation

The owner shall be responsible for the development, training, implementation, documentation, and annual review of a plan for evacuation of passengers and personnel from each aerial lift. At a minimum, the plan shall include:

a) the definition of the line of authority in the event of an evacuation. This line of authority shall list:

1) the positions responsible for determining the need for and ordering an evacuation by use of the evacuation power unit or evacuation from individual carriers;

2) the personnel responsible for performing the evacuation, for first aid, and for ground care of evacuated passengers.

b) a description of the equipment necessary for evacuation and where it will be stored;

c) provisions for adequate training in the functions performed in the evacuation process at least once each operating season. Such drills are to be recorded in the evacuation log of each aerial lift (see 4.3.5.5);

d) an estimate of the time necessary for the total evacuation of each aerial lift;

e) a description of unusual terrain, surface vegetation, and other conditions under the aerial lift and how each of these conditions will be dealt with during an evacuation;

f) an estimate of when the evacuation should begin in the event the aerial lift becomes inoperable;

g) provisions for communications with passengers of an inoperable aerial lift, the frequency of such communication, how soon after the aerial lift becomes inoperable such communication to the passengers will start, and the frequency of communications thereafter;

h) the methods of evacuation to be used for the typical passenger, incapacitated passenger, passengers using common adaptive ski equipment (e.g., SMB's), and non-ambulatory passengers;

i) provisions for communication with the evacuation teams;

j) provisions for suspending the evacuation in the event that the aerial lift is made operable during the evacuation;

k) provisions for control and assistance of evacuated persons until released;

l) provision for emergency lighting for evacuations that occur in or may extend into the hours of darkness (see 4.2.12.4(b));

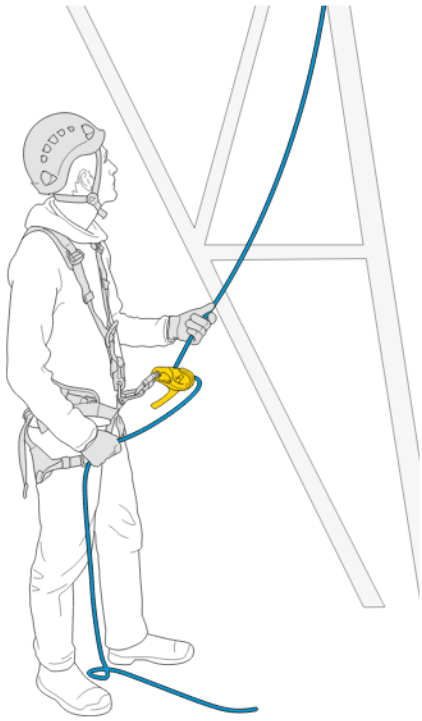
m) provisions for a post-evacuation report.

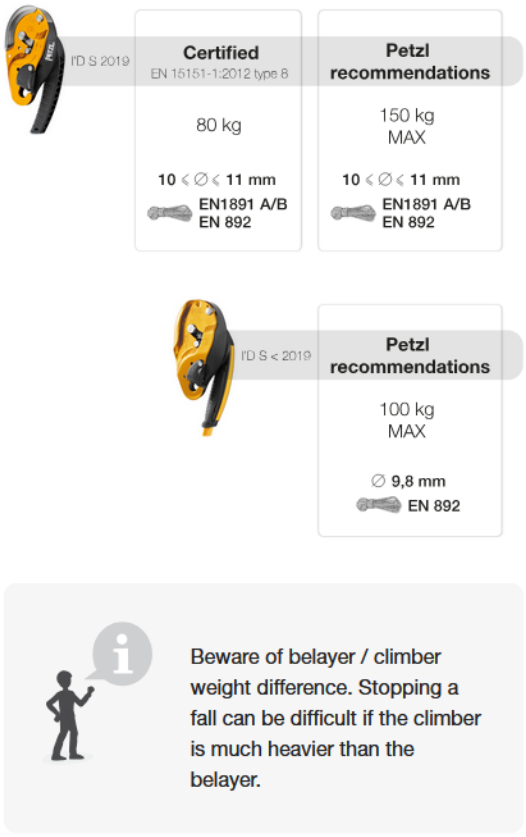
All nonmetallic rope used for evacuation shall be rated for Life Safety applications. Breaking strength, when new, shall be at least 15 times the maximum expected operating load, but in no case less than 4000 pounds (17.8 kilonewtons). No natural fiber or polypropylene ropes shall be used.

These ropes shall be carefully stored when not in use and shall be examined after each completed aerial lift evacuation and prior to each season of operation, both summer and winter, to ascertain that they are in satisfactory condition.

Carabiners, if used, shall be of the self-closing, self-locking type and rated for rescue/life safety use.

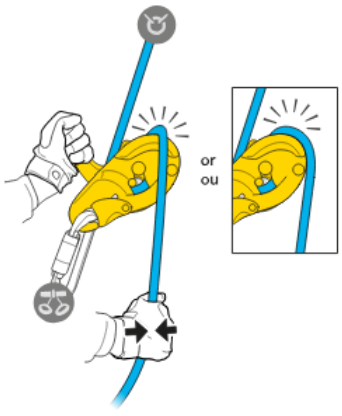
Appendix D: https://www.petzl.com/INT/en/Professional/I-D-S-uses-and-specifications





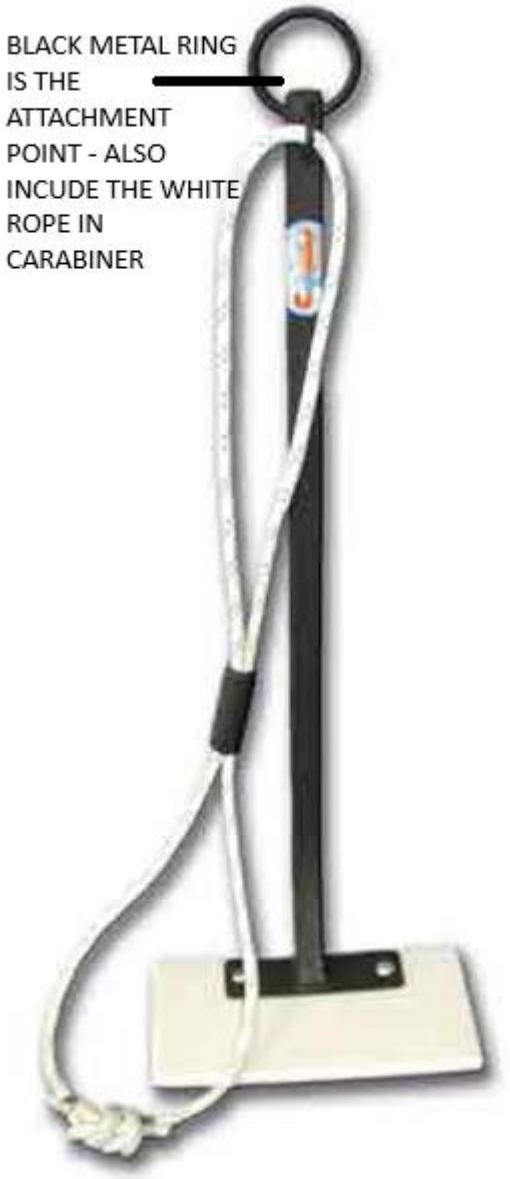
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The brake-side rope can run over the reinforced edge, or in the friction groove, depending on rope diameter, user preference, the position of the braking carabiner and the hand...





Appendix E: Cascade Rescue Seat attachment diagram

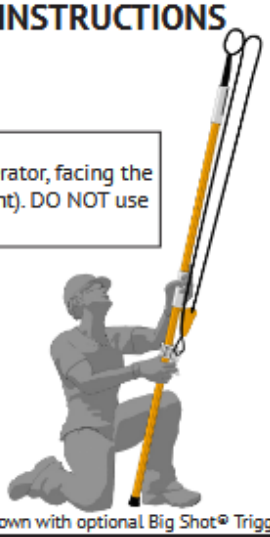


Diaper Style Hasty Harness



Appendix F:

BIG SHOT® LINE SETTING INSTRUCTIONS

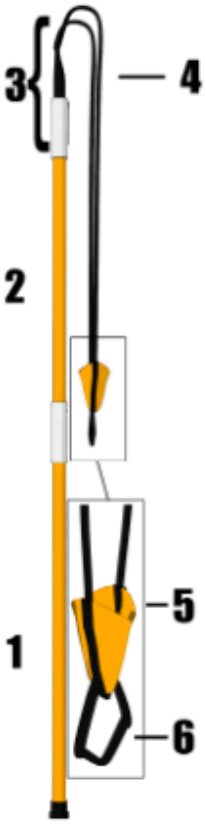


WARNING!
The Big Shot® projectile pouch and elastic straps must be turned AWAY from the operator, facing the intended target with base pole firmly positioned on the ground during operation (right). DO NOT use in any alternative orientation.

The Big Shot® head can only be used with inspected and undamaged 1.25" diameter utility grade fiberglass extension poles. DO NOT attempt to use this product on any other type of host pole. The Big Shot® pouch was designed to work with an arborist style throw weight, use of any alternative projectiles is strictly prohibited. Operator must wear proper safety equipment including helmet and safety glasses.

The Big Shot® is designed for line setting use only and should NOT be used for any alternative purpose.

Shown with optional Big Shot® Trigger



Launching Instructions

- Install Big Shot® Head **(3)** onto the fiberglass Top Pole **(2)** by inserting head into the female ferrule. Secure head by aligning the two holes and fully engaging the spring-loaded pin **(Right)**.
- If using multiple poles, connect Top Pole **(2)** to the Base Pole **(1)**, secure ferrules with spring-loaded pin. Caution: spring-loaded pin is under high tension.
- Prepare throwline by flaking it out on suitable surface such as tarp, throwline cube, bag, or bucket. Ensure the throwline is untangled and free of any obstacles which may cause the throwline to snag during deployment.
- Attach throwline to the ring of the throw bag using the termination of your choice.
- Evaluate target zone for hazards. If people or valuable property are noted in the immediate area, DO NOT LAUNCH until they have been relocated a safe distance away from the area. Prior to launching, provide a loud audible warning to alert any bystanders.
- Place the throw weight into the Projectile Pouch **(5)**. Ensure the weight is centered and balanced inside the pouch. The metal ring should be facing out of the pouch for successful launch and optimal distance. Use of any alternative projectile is not recommended.
- Grasp Webbing Loop **(6)** with index and middle finger. Using safe launching position (see warning illustration above) pull down along the pole to desired length, aim, and release the loop.



Appendix G:

PLEASE READ CAREFULLY BEFORE ATTEMPTING TO OPERATE

Line Launcher Instructions

MAINTENANCE

User must thoroughly clean the barrel, chamber, and hinge areas with a good gun cleaning solvent after each use. Improper maintenance and failure to properly and firmly position the stock of the Line Launcher may result in serious injury or death. A Line Launcher Cleaning Kit may be purchased on our website, cascade-rescue.com . A small amount of gun oil applied to the hinge area after cleaning will help to insure smooth operation. Cleaning of the chamber can be enhanced by using a .22 caliber wire brush . Also, thoroughly clean and dry the inside of the projectile tube after each launch, be certain that prior to each time you launch the projectile from the launcher that it is free of debris both internally and externally. Failure to properly maintain the aluminum insert tube in your projectile may result in serious injury or death. A rubber O-Ring in a grove near the outer end of the barrel provides a seal for the release gases of the power charge. This "0" Ring will, over time, wear causing some of the gases to escape, thereby reducing the flight distance of the projectile. Apply a thin coat of Vaseline, or any other lubricant safe for use on rubber components, to prevent drying and cracking of the O-Ring. Replacement O-Rings are available from our website.

POWER LOADS

Choose a power load based on the distance you wish to launch the projectile . Use only those charges intended for the Line Launcher that are sold at cascade-rescue.com. All distances assume a 2-3mm line is attached to the projectile.

- Light Green Load-Distance of approximately 40 yards
- Medium Yellow Load-Distance of approximately 60 yards
- Heavy Red Load-Distance of approximately 80 yards

Your Line Launcher is not a firearm, but the same handling, care, and safety precautions must be exercised. Your Line Launcher is provided with certain built-in safety features, but are not substitutes for safe handling practices, which include the use of ear and eye protection as well as the use of gloves.