

Vertical Mobility - RCP and RQP Levels



Vertical Mobility

Rappelling is a controlled descent down a Static line. It is a basic tool for rope access and rescue. There are several skills necessary to rappel safely and effectively, including proper technique, understanding belay systems, and knowledge of anchor systems.

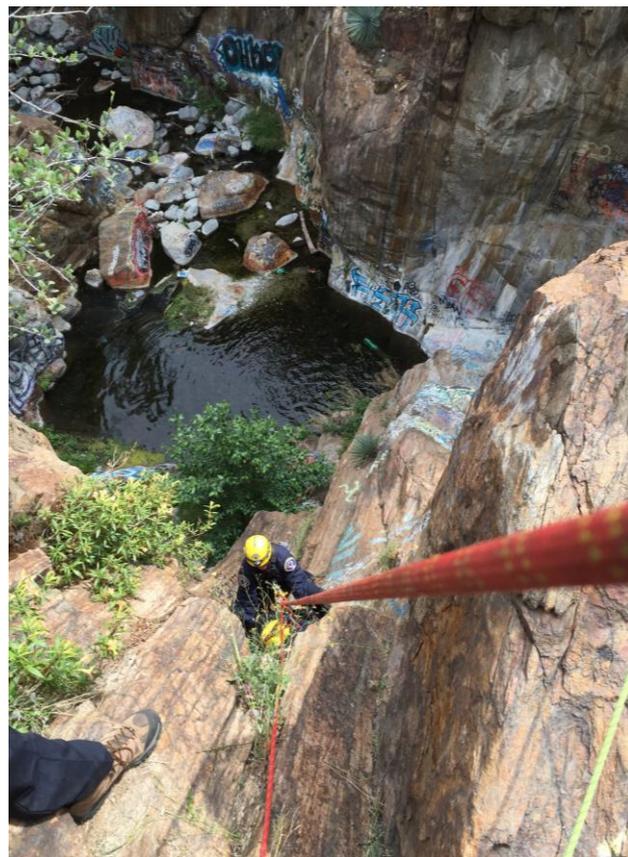
As opposed to recreational or military rappelling, rope access/rescue rappelling is done in a slow and controlled manner. Rapid, bouncing rappels are a very unprofessional approach in reaching the victim. This kind of attitude can contribute to loss of control, rope damage, and potential system wide failure.

Always check your rigging, and have another team member double check your rigging, carabiners should be in the down, locked position. Make sure the helmet strap is secure, gloves are on, and hair is tucked in prior to beginning.

When rappelling, never take your brake hand off the rope, unless the descent device is properly lock and/or tie-off. Make sure to take appropriate ascending devices with you in the event self-rescue becomes necessary.

Rescue rappel operations should employ a separate belay line.

The use of high directionals, either natural, structural, or artificial, is highly recommended whenever possible. The higher above the waistline the rappel rope is anchored the easier it will be to negotiate the edge.



Rappel Signals

When using a dedicated belayer the communication between the person on rappel and the belayer is of the utmost importance.

Study the Rappel signal sequence below.

Rappel signals include:

Rappeller States

Belayer Responds

"Belay On?" (Is belayer ready?)

"On Belay." (Belayer is ready.)

"On Rappel?" (Rappeller is ready.)

"Rappel On."

"Slack." (Need slack in belay line.)

"Slack"

"Up Rope."

"Up Rope"

(Belayer takes up slack.)

"Off Rope." (Rappeller finished and off)

Signals anyone can make:

"Rock!" (A rock is falling overhead.)

"Stop!" (Cease all operations.)

OTHER CONSIDERATIONS

Always address edge protection.

Don't rush.

The simplest way is often the most effective.

Wear protective clothing when appropriate.

Minimize the number of personnel near the edge.

Use knives with extreme caution; rescue scissors are a better option.

You have a right to question authority. Make sure you feel comfortable with a given situation.

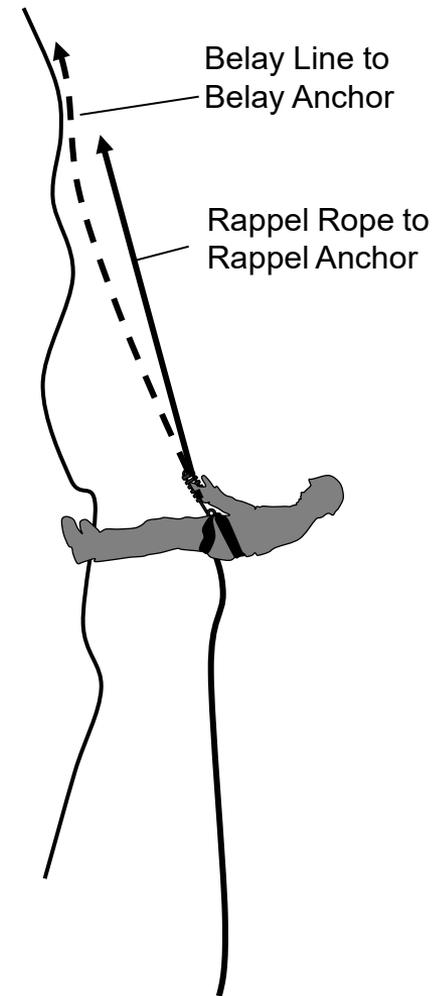


Correct rappel posture is typically:

Feet placement about the same width as the rescuer's shoulders, wider if the terrain type dictates the need.

With the body at a 90-degree angle to the surface being rappelled.

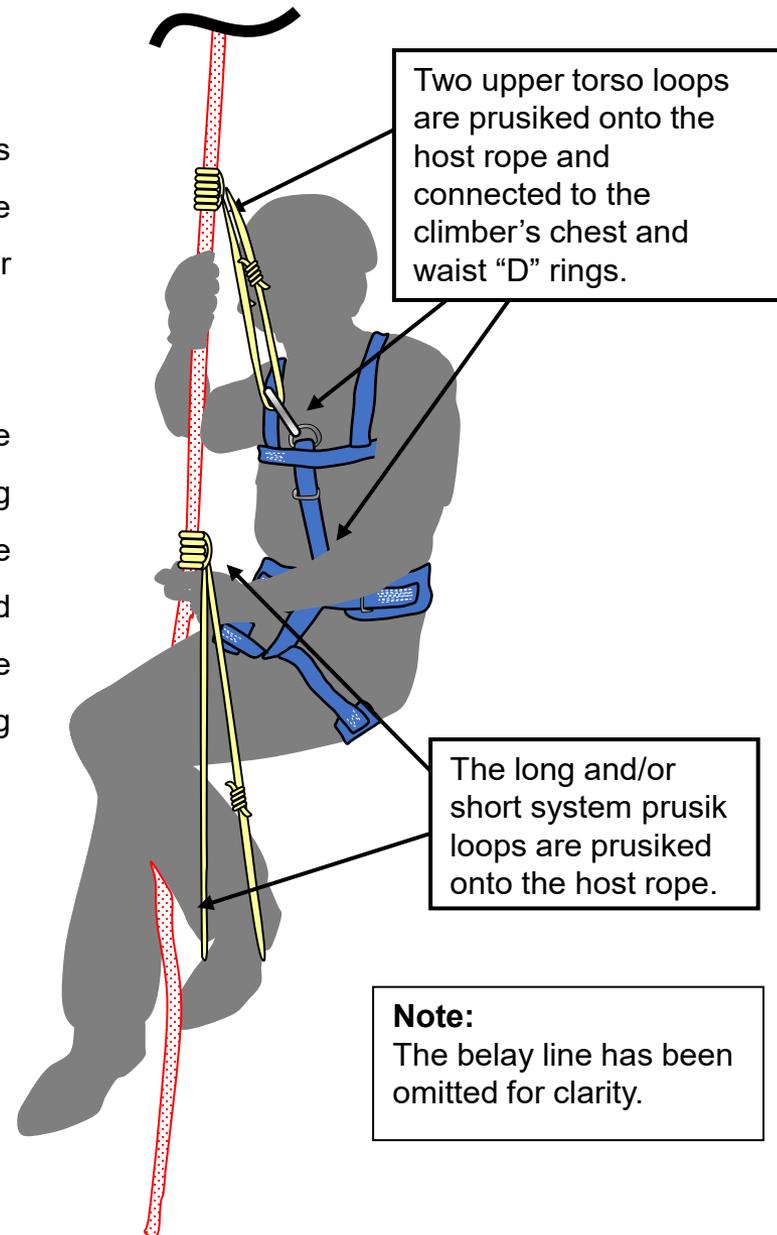
The rescuer should employ a separate belay rope. The rescuer's end of the belay should be tied to a dedicated point of attachment separate from the rappel line. Preferably the rescuer end of the belay line should connect to the sternal "D" ring of a class 3 harness. A Double-Overhand Noose is a preferred termination knot for the belay line connection. As we get into solo pickoffs there will be other belay options addressed that facilitate a belay connection for the victim.



Ascending with System Prusiks

There are various ways to use prusik loops. It is important that the rescuer practices with these tools and find a comfort zone that meets his/her personal needs.

One upper torso loop is typically connected to the sternal "D" ring or the waist "D" ring. One long loop is operated by a foot. By alternating the weight of the rescuer between the chest loop and the foot loop, the climber will be able to adjust the prusiks upward (or downward) while ascending (or descending) the host rope.



Ascending Rope with the RAD System (Rapid Ascend and Descend)

Rope may be ascended by using your hand ascender/foot loop and the Petzl I'D. As with all aspects of rope access, the user must be on a separate belay line (Shown in the drawing is the Petzl ASAP).

The RAD system is a simple process of rigging a pulley on the top attachment hole of the hand ascender and running the non-loaded leg of the rappel rope up and through the pulley. This will give the user a 3:1 mechanical advantage. Combining the foot loop which is attached to the bottom of the hand ascender will allow for easy step and pull action for ascending the rope.

For a faster response, omit the 3:1 and simply pull slack through the I'D during the step-up move. Although this is quicker, it does require more effort and timing.

Note: With the advent of the CMC Clutch, this technique becomes even more efficient when replacing the I'D with the Clutch.

