Ascending a Rope

The EPCSAR ascending system is designed to provide versatility in rescue situations while being lightweight, and using equipment a rescuer would normally have on their harness. This system is designed to be simple but provide an acceptable margin of safety, to be easy to attach and remove from the rope, and to be multidirectional (able to move up or down the rope). The components of the EPCSAR ascending system are discussed below and shown in Figure 9:

Safety Prusik:

As in the rappel system, the safety prusik is a length of cord tied to the load line using a prusik knot, and connected directly to the rescuer’s harness. In many situations a transition will be made mid-face from a rappel system to an ascending system and vice versa. As a result, this safety prusik is often the same safety prusik used as a rappel backup.

Short prusik:

A second prusik that is shorter in length than the safety prusik should be tied to the rappel line below the safety prusik. This prusik will serve as both the rescuer’s second point of attachment to the rappel line, and the attachment point for a foot loop. A locking carabiner will be clipped into this second, shorter prusik.

Harness prusik:

A third piece of 7mm cord should be attached to a locking carabiner on the rescuer’s harness, then clipped into the locking carabiner that is clipped into the short prusik mentioned above. This completes the connection from the short prusik already attached to the rope to the rescuer’s harness.

Foot Loop:

A long piece of 7mm cord (or webbing) should be attached to the same locking carabiner used to connect the short prusik and the harness prusik. This will be used as a foot loop, sharing an attachment point to the rope with the second prusik connected to the rescuer’s harness.

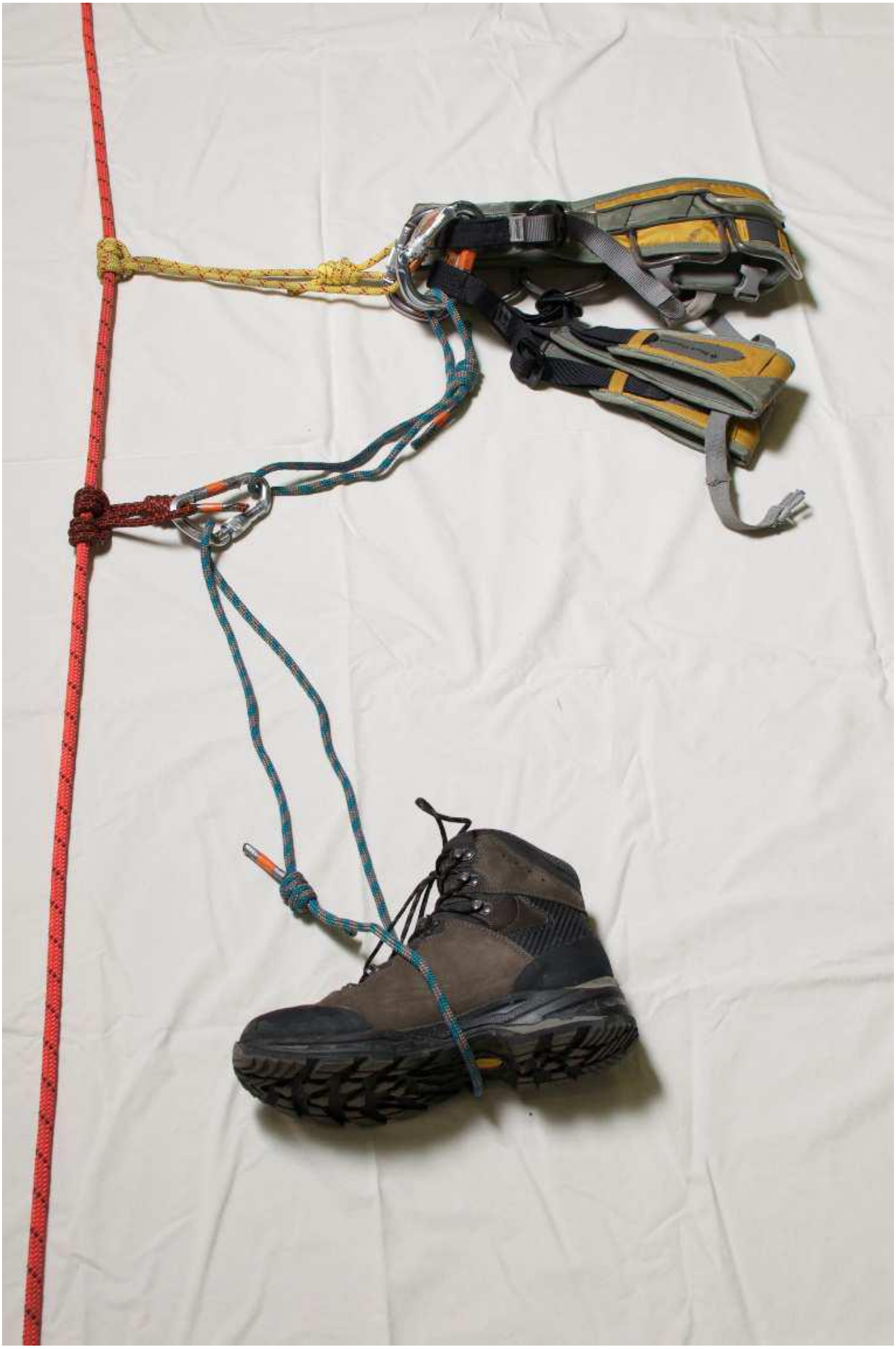

Figure 9 – EPCSAR ascending system showing redundant harness attachment, prussik assembly, and foot loop positioning.

Technique:

1. From the bottom of the line being ascended, tie a safety prusik to the ascending line and secure it to your harness.
2. Tie a shorter prusik to the ascending line and clip a locking carabiner into the loop.
3. Clip a second prusik into the locking carabiner and secure that prusik to your harness.
4. Clip a third, longer, prusik into the same locking carabiner to be used as a foot loop.
5. Perform a safety check on the ascending system.
6. Sit into the harness to weight the safety prusik (the top prusik) (Figure 10).
7. Slide the bottom prusik up the rope until it is taut. This prusik will be below the top prusik if the lengths of the various prusiks are appropriate (Figure 10).
8. Step up into the foot loop and transfer body weight off of the top prusik onto the foot loop (Figure 11).
9. Loosen the top prusik and slide it as far up the rope as possible (Figure 11).
10. Sit into the harness to weight the top prusik again in its new location (Figure 12).
11. Repeat the process as many times as needed to get where you need to go.
12. If the rescuer needs to descend a short distance, the process can be followed in reverse.

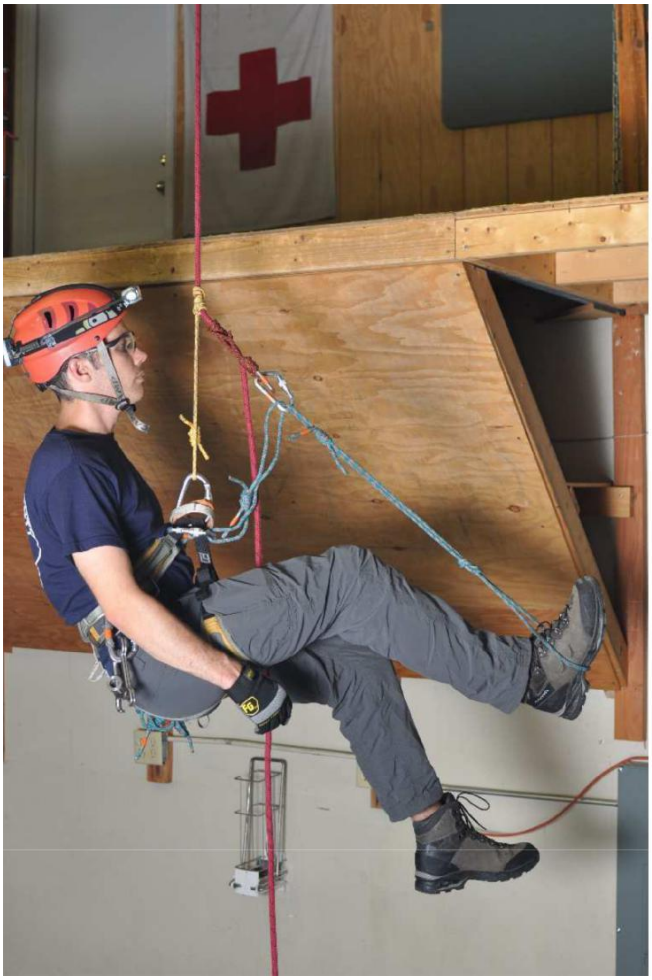

Figure 11 – Weight is on the safety prusik (yellow). The short prusik (red) is positioned as close to the safety prusik (yellow) as possible and locked.

Figure 10 – Standing up in the foot loop transfers weight to the short prusik (red). The safety prusik (yellow) has been repositioned at its highest possible point and locked off.

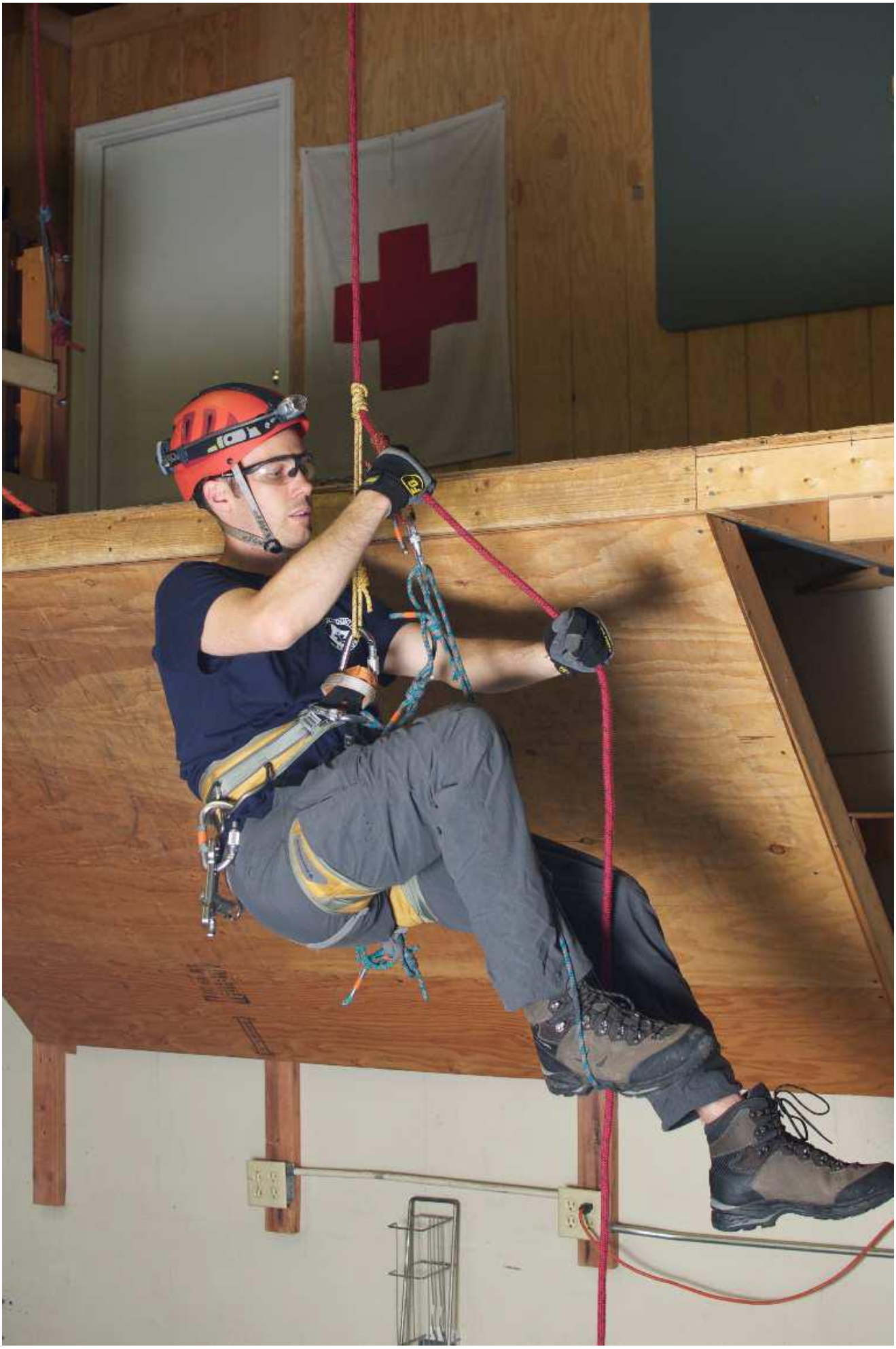

Figure 12 – Weight is transferred back to the safety prusik (yellow). Repeat the process until you have completed your ascent.