

To: Mr. Szymanski:  
From: Mike Mitchell, Occupational Safety Specialist

The following are answers to the questions that you e-mailed to Craig Hamelund on 5/17/02, and to Marilyn Schuster on 6/4/02. We also received the article that you mailed comparing prussik knots to mechanical grab devices.

Question 1: Is a worker who is rappelling considered to be in the fall protection mode, or the fall restraint mode?

Answer 1: Rappelling is neither fall protection nor fall restraint. Rappelling involves the use of a fixed rope for a controlled descent, normally used in emergency or rescue operations. If done correctly, the person will safely reach a lower level. Fall protection, which includes fall restraint, either prevents a person from falling any distance (such as guardrails or fall restraint systems), or safely stops a fall with minimal or no injuries (such as fall arrest systems, safety net systems, catch platforms, or slideguard systems).

Question 2: Is a worker who is being lowered by use of a belay device (such as a figure 8 device) considered to be in the fall protection mode, or the fall restraint mode?

Answer 2: The use of a belay device is neither fall protection nor fall restraint. While belay devices provide safe, controlled descents, they are not designed for, or used in industry for fall protection (fall restraint is a form of fall protection).

Question 3: Is a safety line required to be used when rappelling or using a belay device?

Answer 3: If rappelling or using a belay device is part of a rescue or emergency operation, then the use of a safety line is not required, though it certainly is recommended when possible. Oregon OSHA's rules do not address such operations since they are not normal activities found in either construction or general industry. When training for rappelling or belaying, OR-OSHA requires workers to be protected from injuries from falls (with the use of safety lines, safety nets, or equivalent means).

Question 4: When engaged in rescue operations, are workers prohibited from using prussik knots as rope grabs after doing everything to eliminate the possibility of dynamic loads, which may still occur?

Answer 4: The use of prussik knots are not prohibited during either routine tasks or rescue operations, though the use of manufactured rope grabs are highly recommended. When knots are used, one needs to remember (and plan for) that rope strength is significantly reduced. Prussik knots are often used during emergency operations, which often do not fit into the scope of general industry or construction work.

Question 5: When engaged in rescue training exercises, are workers prohibited from using prussik knots?

Answer 5: If prussik knots are going to be used in rescue operations, then they also must be used in training exercises. Otherwise the training would be substandard. As already stated in a previous answer, workers must be protected against falls when training for rescue operations. This may require the use of additional fall protection during training.

I hope that these answers reflect the requirement for adequate fall protection in both normal daily operations and during emergency rescue operations. Oregon OSHA recognizes that sometimes in emergency situations standards can not be followed "to the letter". At the same time, though, Oregon OSHA expects emergency personnel to be protected against falls whenever feasible. Should you have additional questions, please call me at 800 922-2689, extension 7450.

Mike Mitchell, Occupational Safety Specialist  
Oregon OSHA, Standards & Technical Resources