Getting Started with Spikes

By Mark Bridge, member of the ISA International Safety Committee

Spikes, climbers, hooks, or gaffs are an essential work-positioning aid when working on a stem during removal operations. They are similar to a foot ascender in the sense that neither are classed as personal protective equipment (PPE), but inhabit that grey area where although they are not PPE, failure can lead to awkward—or even hazardous—situations. Therefore, correct selection, maintenance, and fitting of spikes is important if you intend to use this tool in a safe and efficient fashion. By bearing in mind a couple of key points, you give yourself the opportunity to work *with* your equipment, rather than against it.

Selection

When deciding what model or type of spikes to buy, it is important to consider what type of environment they are going to be used in. This can relate as much to the physical environment (tree species, accessibility of locations, humidity, salinity) as well as the persons using them. These factors will influence whether you choose a heavy, robust, steel model or a lighter, aluminum or carbon fiber version. In some situations, weight can be a deciding factor (or a material less prone to corrosion), whereas in other instances, robust handling may make a heavier material (e.g., steel) the more appropriate choice. Depending on what species is predominant in the area where the spikes are going to be used, choosing the correct shape and length of the spikes will have a significant impact regarding their ease of use.

Maintenance

This is fairly straightforward and can be reduced to a couple of points: A properly shaped and sharpened spike will penetrate the wood with greater ease, making positioning easier, safer, and more precise. On the other hand, a blunt spike will give unreliable purchase, and will be more prone to gaffing out. Arborists should sharpen the spike according to the angles the manufacturer defines in the user instructions; check that the bolts securing the spike to the shaft are well tensioned; and check that the shaft shows no sign of mechanical or other damage (e.g., deformation or cracks). Further, check the attachment straps or Velcro® for cuts or damage. Do not attempt to modify the spikes by drilling the shaft (unless this is explicitly allowed by the manufacturer) as this can lead to weakening and potential failure.

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Fitting

Take the time to set up the length of the shaft to just below the knee without interference of movement. If the padding sits too low, the spike will not be held in place reliably, exerting greater pressure on the shin bone and causing chafing. If the shaft is too long, it will interfere with the movement of the knee, also creating pressure and chafe points. The correct length should offer good support and allow for the full range of movement. Appropriate footwear should be used that allows for a positive location of the stirrup of the spike. Sneakers or boots with a very low heel are not appropriate when working on spikes. The foot straps should be cinched tight, as a positive location on the foot ensures a consistent point of contact into the stem.

Correct selection, maintenance and fitting will make the use of spikes safer and easier. However, it is important to remember that this alone does not ensure correct use: a thorough introduction to and training on spikes and work-positioning on stems is equally important.

Next Steps: Before you head out for your next removal, take a look at your collection of spikes. Are you using the right ones for the job? Sharpen your spikes as a rainy day activity. Finally, make sure your employees are properly trained in the use of spikes. Set aside some time to practice with your new climbing arborists, and show them the correct foot placement and lanyard length. **A•N**