RP280 Singing Tree Rope Wrench

Instructions for Installation/Set-up, Operation, and Maintenance

Intent and Purpose

The Singing Tree Rope Wrench is meant to be used by arborists servicing, accessing, or maintaining trees in conjunction with a Single Rope Technique (SRT) configuration. The Rope Wrench is a friction control device that allows a climber to ascend and descend a single rope without changing equipment. When used as part of a secure, hitch-based climbing system, it allows the climber to smoothly control the rate of descent by adding friction to the climbing system.

The Rope Wrench is NOT

- a life support device. It is, however, a load-bearing device that may bear more than 50% of the climbers weight during the climb;
- for use without a life supporting friction hitch or similar device that will immediately stop descent in an emergency situation;
- for use by persons novice to SRT techniques;
- an SRT training device.

Basic Operation

The Rope Wrench has two gears, neutral and engaged, as shown to the right. **Figure 1a**. also provides nomenclature for parts of the Rope Wrench.

Neutral Gear. The climbing rope can pass freely through the Rope Wrench.

Engaged Gear. Due to downward loading on the tether attachment point, the climbing rope is bent into an S shape by the Wheel and Slic Pin. The climbing rope may still pass through the Rope Wrench, but the Slic Pin and Wheel apply friction that slows it down.

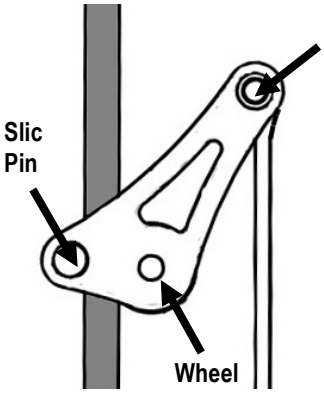


Figure 1a. Neutral Gear

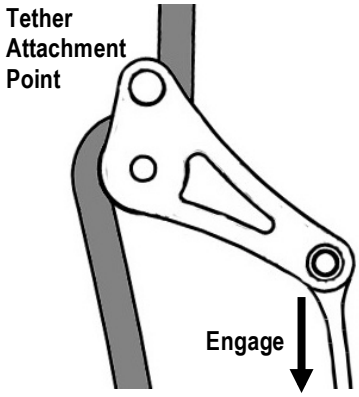


Figure 1b. Engaged Gear

⚠ SPECIAL ROPE WRENCH WARNINGS

- Never use as life support. Failure to use proper life support will lead to serious injury or death.
- For use only by arborists who are experienced in SRT. Using the Rope Wrench without proper training and experience with SRT can lead to serious injury or death.
- Practice using device “low and slow” before using at height.
- Improper orientation of installation will cause the device not to function.
- Read and follow all of these instructions before using the device.

Equipment Needed to Safely Climb Using the Rope Wrench System

Equipment Checklist

Required Equipment

- Rope Wrench
- Climbing Rope
- Friction Hitch
- Tether
- Carabiner
- Harness
- Helmet, Boots and Safety Glasses
- Back-up descent device such as a carabiner for a munter hitch.

Optional Equipment

- Slack-Tending Pulley
- Other Personal Protective Equipment (PPE)
- Ascender(s)

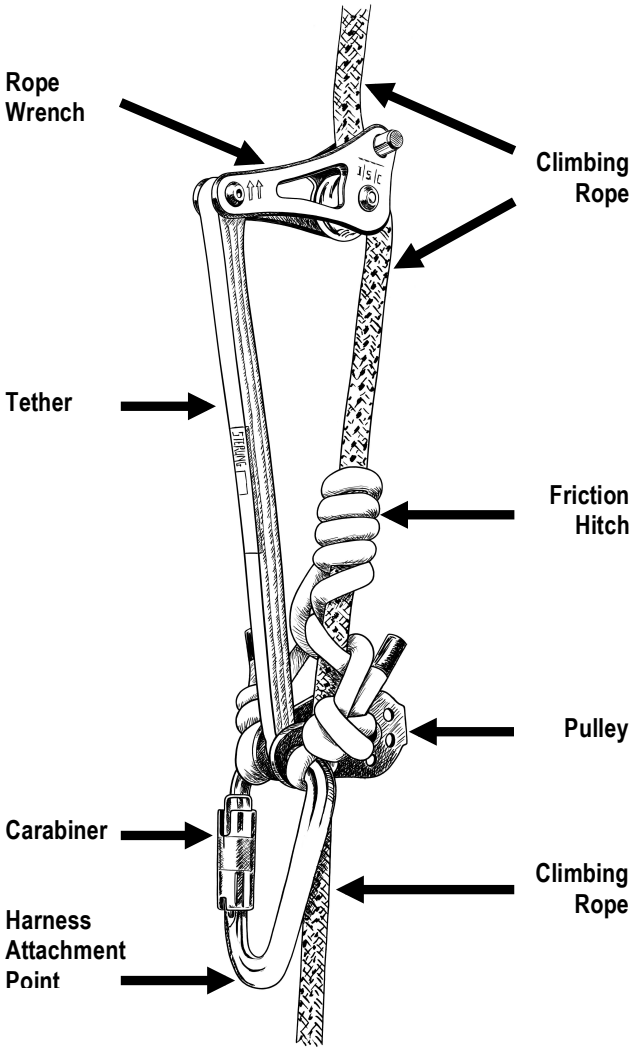


Figure 2. Fully Assembled Rope Wrench System

Note: Attach harness to end of carabiner. If desired, Ascenders could attach to the climbing rope above or below the system.

Equipment Requirements

Rope Wrench. Always use the original Rope Wrench manufactured by ISC. Do not attempt to use a "home-made" Rope Wrench.

Climbing Rope. It is recommended that a 11mm to 13mm thick, 16 or 24 strand rope made of nylon, polyester, polypropylene or kernmantle and that is approved for arboriculture be used with the Rope Wrench system. Ultra static climbing ropes are not recommended. The rope should have just enough "give" or "bounce" to be comfortable.

Friction Hitch. It is recommended that a semi-supple, 28 inch long, 8mm to 10mm thick, heat resistant rope of a different material than the climbing rope be used for the friction hitch.

Note 1: The above recommendations for the selection of ropes are general guidelines only. There are many factors that go into selecting suitable ropes for climbing. A professional arborist should carefully consider all the factors present before making a decision regarding the ropes to be used.

Note 2: It is recommended that each rope used in the Rope Wrench system be a different color or pattern for clarity of distinction.

Tether. It is required that a stiffened tether be used in conjunction with the Rope Wrench. Stiffened tethers designed specifically for use with the Rope Wrench are commercially available. Do not use tethers made of a brittle material such as acrylic or wood. It is the responsibility of the climber to select a proper tether.

⚠ DANGER: FREE FALL HAZARD

Do not use a loose or supple tether with the Rope Wrench. It may become entangled in the Rope Wrench and cause it to be locked in neutral and release the grip of the friction hitch. This will lead to free fall resulting in serious injuries or death.

Figure 3: Dangerous result of using a loose or supple tether: Rope Wrench is stuck in neutral position and could release the grip of the friction hitch below it.

Carabiner. The carabiner selected must:

- be designed for use in arboriculture;
- be self-closing;
- be self-locking;
- take three consecutive and deliberate motions to unlock ("triple locking");
- be large enough to ensure that when configured, no loading or interference with the gate occurs;
- be secured such that no loading or interference with the gate will occur.

The ISC HMS carabiner is an example of an acceptable carabiner.

Harness. The harness selected for use with the Rope Wrench system must be adjusted to best fit the climber's body. Suspended work positioning harnesses are recommended for use with the Rope Wrench system. Harnesses with a chest attachment point may be used with the Rope Wrench and should be attached to the Tether Attachment Point or to the tether itself. A chest attachment point should not be load-bearing and is only meant to keep the system upright and to keep slack out of the system (see section titled Setting Up the Rope Wrench System.)

Helmet, Boots, and Safety Glasses. It is always recommended that the climber wear a helmet, boots, and safety glasses that have been commercially manufactured for arboriculture.

Optional Equipment Recommendations

Other PPE. Each climb will have its own unique set of obstacles and hazards that should be well understood before climbing begins. Use of other PPE such as ear, face, hand, leg, and respiratory protection will depend on the level of exposure of the climber to these hazards.

Slack-Tending Pulley. A pulley is not required, but is highly recommended to assist in keeping slack out of the system and moving the friction hitch up the climbing rope during ascent. Use a pulley designed for climbing systems, such as the ISC Micro Pulley.

Ascender(s). Mechanical ascent devices such as foot or hand ascenders are compatible with the Rope Wrench. Be sure to check the manufacturer's instructions to ensure the climbing line you are using is compatible with your ascender(s). Any time more gear is added to any rope system it increases the complexity and likelihood of disorder and entanglement. Extra care must be taken to maintain a clean and tidy system when using ascenders as becoming entangled in gear can lead to catastrophe especially when panicked.

Back-up Descent Device. During a particularly long descent, the life of the friction hitch can be prolonged by incorporating the use of a back-up descent device. A munter hitch or a figure eight may be used above or below the friction hitch in place of or in conjunction with the Rope Wrench. A back-up descent device can also be used if the Rope Wrench becomes incapacitated during the course of the climb (e.g., if the climber loses the Slic pin.)

⚠ WARNING: USE A FRICTION HITCH

Always remember that the Rope Wrench is not a life support device and even a system using ascenders in conjunction with the Rope Wrench requires a properly tied and functioning friction hitch. Failure to do so can lead to serious injuries or death.

Standard Set-Up Instructions

NOTICE: REGARDING SUBSTITUTIONS

The following set-up instructions are based on the equipment recommended in the previous section. Substitutes to any of the equipment or methods described herein are made at the sole risk of the climber. Make sure the function and limitations of any substitutions are well understood before deviating from these instructions.

Step 1. Choosing a Time And Place

Every climbing location has an unlimited number of potential obstacles and hazards. Even with a perfectly rigged system and all the proper PPE, some conditions can still pose a threat to a climber's safety. Consider the following when choosing a time and location for climbing.

Environmental Conditions

- Rain or moisture can lead to slipping.
- Wind can affect stability and send debris toward the climber.
- Lightning can often strike trees.
- Humidity can affect the function of equipment, particularly the friction hitch.
- Temperature can affect the function of equipment, and affect the performance of the climber.

Tree-Specific Hazards

- Insect and animal habitations that can become agitated.
- Dead, rotten, or weakened branches can break especially when used for anchoring.
- Nearby power lines.
- Anything sharp, such as nearby fences or encroaching structures.

Step 2. Anchoring

1. Tie a weighted object to one end of the climbing rope.
2. Throw the weighted object over a limb or crotch that will support several times the weight of the climber.
3. Tie the climbing rope to the tree using a trunk-secured basal approach or a limb-secured canopy approach.

Note: The climber is responsible for having sufficient knowledge and experience with tying secure anchors. If there is any uncertainty in tying an anchor, consult with a professional arborist.

⚠ DANGER: FREE FALL HAZARD

Failure to properly anchor any rope climbing system will lead to free fall resulting in serious injuries or death.

⚠ WARNING: USE EXCESSIVE ROPE

Leave excessive rope at the working end so that the climber can always reach the ground and will not unintentionally come off the rope. This is particularly important if the climber intends to move from branch to branch within the tree. Failure to supply sufficient rope can lead to serious injuries or death.

Step 3. Tie Friction Hitch

⚠ WARNING: USE PROPER HITCH

The friction hitch is a climber's ultimate life support and failure to properly tie and operate a friction hitch can lead to serious injury or death.

Tie a secure friction hitch to the climbing rope. Examples of appropriate friction hitch styles include Valdotain, Michoacán, Distel, Schwabisch, Cooper's, XT, and Knut. Mechanical friction hitches may also be acceptable (check with the manufacturer that the mechanical device is rated for SRT.) The friction hitch chosen must be well understood before use.

Note: It is imperative that the climber knows how to properly tie a friction hitch. There are many variables to be considered when tying a friction hitch, such as temperature, humidity, level of expertise, desired ascent and descent speeds, etc. There is no substitute for experience and hands-on training – consult with a professional arborist if you are not properly experienced or trained.

Step 4. Attach Elements to Carabiner

Attach the ends of the tied friction hitch and one end of the tether to the carabiner. If using a micro pulley, slide it onto the rope and attach it to the carabiner as well. Attach all elements so as to maintain symmetry on the carabiner, e.g., attach the ends of the friction hitch on either side of the tether.

Test. Apply as much downward force on the carabiner as possible to ensure the friction hitch is gripping the rope properly. This should be done multiple times. Ensure that the friction hitch catches when the climbing rope is both weighted and unweighted.

Step 5. Attach System to Harness

Attach the end of the carabiner to your harness at the harness's designated attachment point. If the harness has a chest attachment point, attach it to the Tether Attachment Point or to the tether itself.

Step 6. Bounce Test

1. Slide the friction hitch and Rope Wrench up the climbing rope as far as possible.
2. Lean back or crouch down so that the friction hitch grips the rope. Proceed to the next step only if this is successful.
3. Take a small jump and swing the legs forward, such that the entire body weight is put onto the system and the climber bounces on the rope.
4. Look and listen for cracking or creaking from the supporting branches and trunk. Do not climb on the system if cracking or creaking is observed.
5. Be sure there is no excessive give in the branches.
6. Perform all relevant inspections listed in the section titled "Pre-Climb inspections".

This test ensures the system will maintain its integrity should a fall occur.

Rope Wrench Set-Up Instructions

The following nomenclature will be used for various parts of the Rope Wrench:

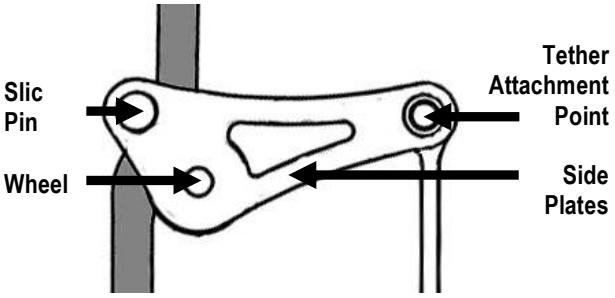


Figure 4. Rope Wrench Nomenclature

Step 1. Attach Tether To Rope Wrench

1. Unscrew and remove the Tether Attachment Point bolt.
2. Place the free end of the tether between the Side Plates at the Tether Attachment Point.
3. It is recommended that a reversible thread-locking fluid be applied to the bolt to prevent loosening.
4. Reinsert the bolt.
5. Make sure the bolt is screwed in all the way.

Do not:

- repeatedly remove and attach tethers.
- force the bolt into the socket.
- use the device if the bolt will not fully screw in.
- use the device if the bolt is loose.

CAUTION: TIGHTEN TETHER BOLT

The bolt at the Tether Attachment Point may come unscrewed during climbing if not properly tightened. This will cause the tether to detach and the render the Rope Wrench useless.

Step 2. Attach Rope Wrench

1. Press the spring-loaded tab on the Slic Pin inward and pull the Slic Pin out of the first side plate. There is a small recess on the inside of the other side plate that seats the spring-loaded tab, allowing the climbing rope to be inserted without removing the tab completely.
2. Place the climbing rope along the Wheel.
3. Push the Slic Pin back in such that the climbing rope is secured between the Slic Pin and the Wheel.

Do not install the Rope Wrench upside-down (see **Figure 5b** for proper installation orientation.) It will not function at all if upside-down and may interfere with the friction hitch.

CAUTION: SECURE SLIC PIN

The Slic Pin relies on the actuation of a small spring to become secured. Before use, ensure that the Slic Pin is fully inserted, constrained, and uninhibited by any rope fibers, and that the metal tab clicks outward. Failure to do so will cause the Rope Wrench to come off of the climbing rope and render the Rope Wrench useless.

⚠ WARNING: INSTALLATION ORIENTATION

Do not install the Rope Wrench upside down. Failure to do so could interfere with the function of the friction hitch and can lead to serious injury or death.

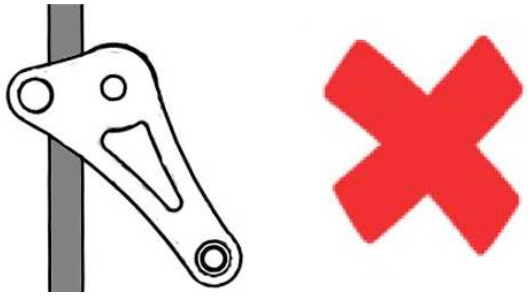


Figure 5a. Incorrect Rope Wrench Orientation

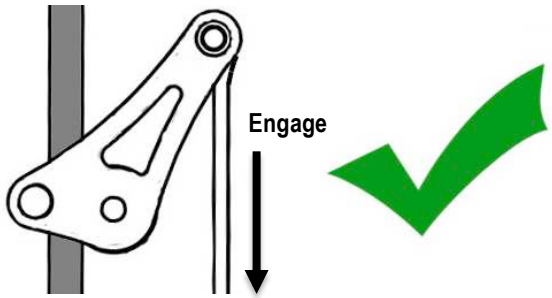


Figure 5b. Correct Rope Wrench Orientation

Note: When installed correctly and pulled down, the Rope Wrench should bend the climbing rope into an S-shape.

Step 3. Repeat Bounce Test

With the Rope Wrench installed, repeat the test described in **Step 6** of the previous section.

Climbing Using the Rope Wrench System

NOTICE: PRACTICE "LOW AND SLOW"

Practice all of the instructions in this section "low and slow" before ever attempting anything at height, regardless of experience or skill level.

Basic Operation of the Rope Wrench

The Rope Wrench has two "gears", neutral and engaged, as shown below.

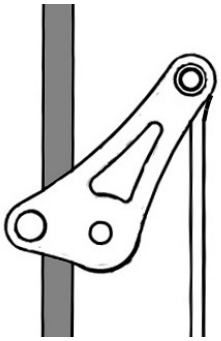


Figure 6a. Neutral Gear

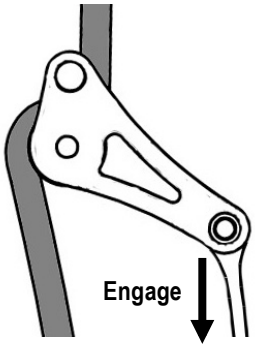


Figure 6b. Engaged Gear

Neutral Gear. The climbing rope can pass freely through the Rope Wrench.

Engaged Gear. Due to downward loading on the tether attachment point, the climbing rope is bent into an S shape by the Wheel and Slic Pin. The climbing rope may still pass through the Rope Wrench, but the Slic Pin and Wheel apply friction that slows it down.

Ascending

⚠ WARNING: DO NOT USE AS ASCENDER

Do not attempt to hang on the Rope Wrench as you would an ascender as this may inadvertently release the friction hitch and can lead to serious injury or death.

The Rope Wrench is NOT an ascender and plays no part in ascending. It must, however, be pulled up along with the rest of the system as the climber ascends, in order to keep the system clean and tidy. This can be facilitated by attaching a harness with a chest attachment point to the Tether Attachment Point of the Rope Wrench or to the tether itself. This will help keep slack out of the system as the climber ascends.

Ascend using any desired SRT method. Hand ascenders, foot ascenders, foot loops, and the footlocking method are all acceptable means of engaging the rope. The sit-stand method helps keep slack out of the system.

⚠ WARNING: UNDERSTAND SRT

The Rope Wrench must only be used by arborists who have received training and have practical experience with climbing using the Single Rope Technique (SRT). Using the Rope Wrench without proper training and experience with SRT can lead to serious injury or death.

Descending

⚠ DANGER: NOT FOR LIFE SUPPORT

The Rope Wrench is designed to act as a friction control device. It is not a life support device. The climber must always rely on the friction hitch as primary life support. If the friction hitch does not engage, it cannot be expected that the Rope Wrench will slow the climber's fall. Using the Rope Wrench as life support will lead to serious injury or death.

Before Descending. Ensure that the Rope Wrench has begun to engage (refer to **Figure 6b.**) To do this, move the Rope Wrench as far up the climbing rope as possible, and while holding it there, gently release the grip of the friction hitch so that the body weight can be partially shifted from the climbing rope to the tether, which should then begin to engage the Rope Wrench.

Descent. To descend, simply pull down gently on the top of the friction hitch to release its grip on the climbing rope. The friction from the engaged Rope Wrench and partially engaged friction hitch will allow the climber to descend at a smooth, controlled rate. At no point during descent does the Rope Wrench need to be touched.

⚠ DANGER: RAPID DESCENT HAZARD

Do not use the Rope Wrench to release the grip of the friction hitch. This will lead to very rapid descent resulting in serious injury or death.

CAUTION: DO NOT DESCEND TOO QUICKLY

Although the Rope Wrench is designed to act as a heat sink during descent, the climber should not descend too quickly, as doing so can still damage the friction hitch.

Halting Descent. To stop descending, simply let go of the friction hitch.

Limb-Walking with the Rope Wrench

Anchor. The climbing rope must be tied to a secure anchor point or Tie in Point (TIP).

Redirects. From the TIP, the rope may pass through redirects as the climber works the tree. Unlike a Doubled Rope Technique (DdRT) climbing system, the Rope Wrench climbing system allows consistent friction regardless of the number of redirects the climber uses. Refer to **Figure 7** below for an example of a redirect.

Selecting Redirect Points. To limit the exposure to dangerous swings, take advantage of natural redirects in the tree. Select redirects with caution and care. Constantly inspect the tree for spots of decay and test the redirect before trusting you full weight to it. Remember, trees are not rated. Being able to judge the health and strength of trees as well as understanding the physics of fundamental tree rigging are imperative to being a safe climber.

⚠ WARNING: STAY BELOW REDIRECTS

Always stay below the last redirect. Failure to do so can lead to dynamic falls and uncontrolled swings resulting in serious injury or death.

Forces. Understand that forces can be multiplied on redirects depending on the angle of the rope. Understand that a redirect that is strong in one direction may be weak in a different direction.

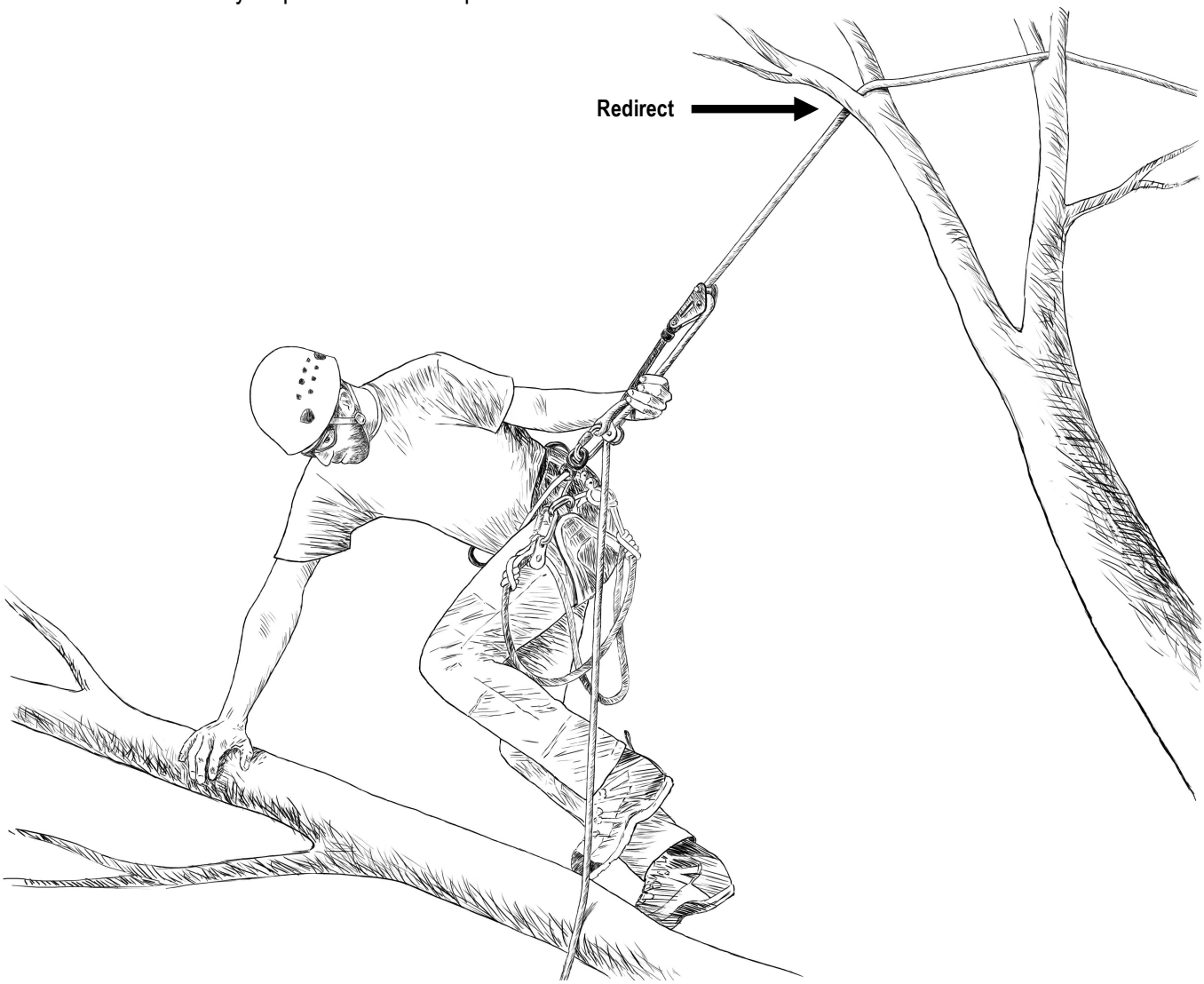


Figure 7. A climber properly utilizing the Rope Wrench System, PPE, and climbing technique.

Returning From a Limb-Walk

Unlike a DdRT climbing system, an SRT climbing system (including the Rope Wrench climbing system) does not allow the climber to hoist oneself up the rope with a 2:1 mechanical advantage. This can make climbing in certain situations more difficult. By placing a pulley on the standing line, the climber can create a 3:1 mechanical advantage in the system (see **Figure 8** below.) This allows for a less strenuous return from a steep limb walk or section of the tree.

Installation and Use. Before descending, install a pulley above the Rope Wrench using a desired method. Pass the tail end of the climbing rope through the pulley. Begin the descent or limb-walk as usual, but keep the tail end of the rope within reach. To ascend, simply pull the tail end of the rope. This is much like traditional DdRT climbing, but with a 3:1 mechanical advantage instead of 2:1.

NOTICE: PRACTICE PULLEY INSTALLATION

As with all aspects of climbing, the climber should practice and fully understand the desired method of pulley installation before attempting anything at height.

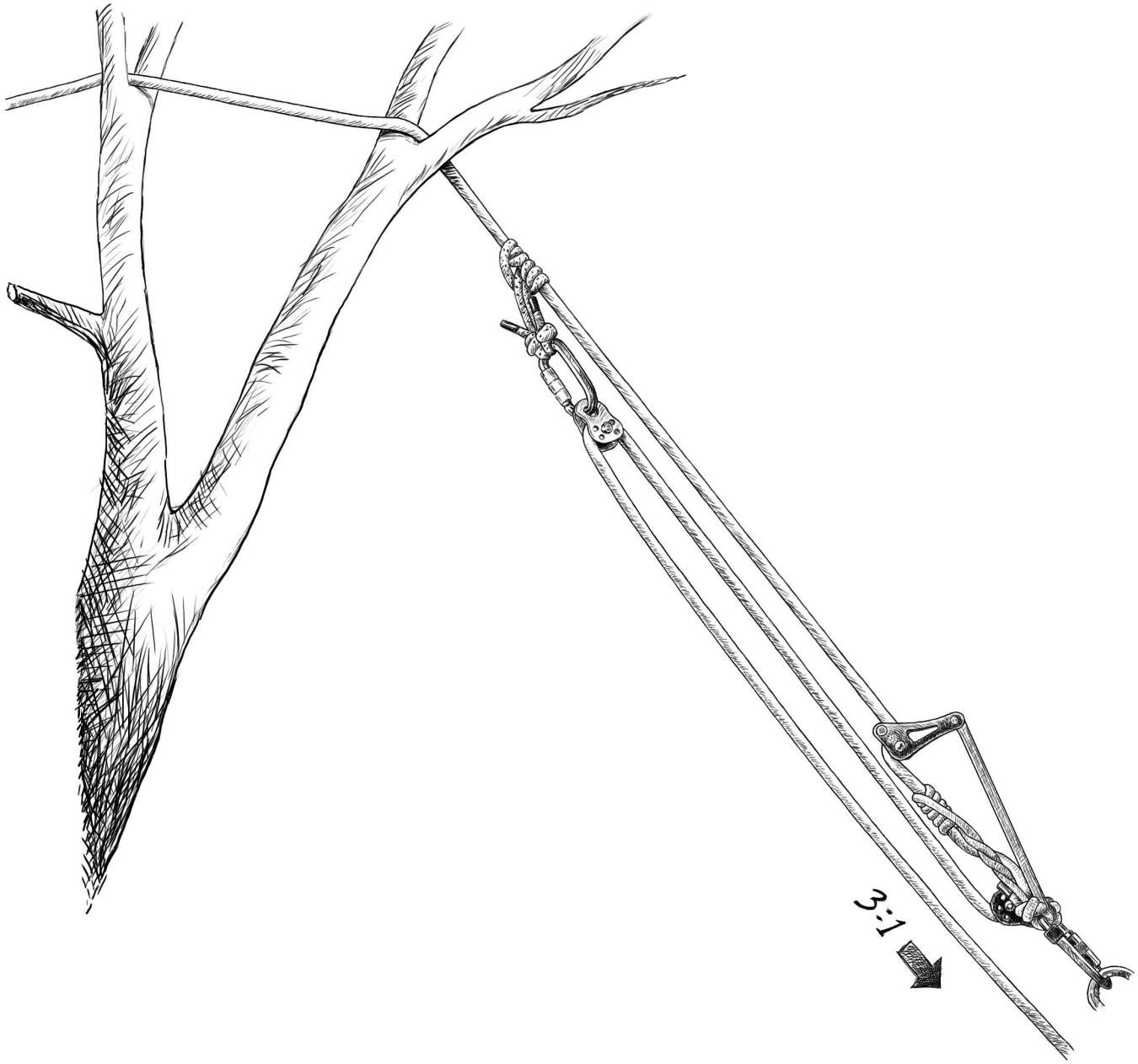


Figure 8. An example of a properly executed 3:1 mechanical advantage pulley system

Rescue with the Rope Wrench

The Rope Wrench may be used as a tool both by rescuers as well as by victims of accidents at height.

Use by a rescuer. The rope wrench provides additional friction to the system and allows a friction hitch to work. It is not designed for heavy loads or high speeds. If the rescuer is performing a pickoff while on a single line then additional friction besides a rope wrench should be employed. If the Rescuer is using double rope technique, than a rope wrench can be added to the system to provide additional friction to the system.

Use by a victim. The cause of the accident must first be understood. Depending on the scenario, different options are available. For example, if the climber has been using a basal anchor, he may be lowered to the ground by using the climber's rope. The lowering system should be well thought out and secure. Use backups so that if the belayer loses grip on the rope there will be a backup.

Aerial Rescue. It may not be possible to lower the climber using a basal anchor. Depending on the incident, the climber's system may not function. If there has been a large fall, the hitch may be tight to the line and the hitch cord may even be damaged. In these cases, lifting the injured climber and transferring him to an alternate system may be the best course. To lift an injured climber, a 3:1 system like the one demonstrated in **Figure 8** can be used to create mechanical advantage allowing the victim to be lifted with less exertion. If through inspection the climber's system is still intact, then the injured climber may be lowered using his/her own system.

Equipment Maintenance and Inspections

Pre-Climb Inspections

Before each and every use of the Rope Wrench System, all components should be inspected for damage, wear, and compatibility with the present situation. Never use any piece of equipment that does not pass all inspections listed below.

Standard Equipment Inspections

1. **Ropes.** Each rope (particularly the climbing rope, friction hitch, and tether) should be inspected for anything that makes the rope appear non-uniform, including:
   - **Soft spots:** areas that seem prone to bending.
   - **Hourglassing:** areas where the outside of the rope seems to have collapsed in on itself.
   - **Boogers**: frayed, cut, or rough areas.
   - **Puffs:** rope fibers sticking out of the rope excessively.
   - **Glazing**: melted or burned areas.

   Note: these are not necessarily industry standard terms.

   The rope should be inspected not only visually but also physically, with an ungloved hand. Touch can sense changes in stiffness and texture that vision cannot.

   Be sure all ropes were stored in a clean, dry, non-corrosive environment (or acceptable environment per the manufacturer's specifications.) Leaving a rope in an adverse environment for longer than the time required to perform the necessary tree work could cause it to be invisibly weakened and should not be used.
2. **Carabiners, Pulleys, and Ascenders.** Each of these devices will be slightly different depending on the choices of the climber. As such, they will all have their own set of inspections to be made. Follow these general guidelines:
   1. Always begin by consulting the instructions or owner's manual for that particular device.
   2. Operate the device several times to verify proper operation (for example, for the carabiner, unlock, open, and let it close.)
   3. Check for burrs or sharp edges.
3. **Harness.** Each harness will be different depending on the choice of the climber. Consult the harness's instructions or owner's manual for directions regarding pre-climb inspections.

Rope Wrench Specific Inspections

1. Inspect the **entire device** for burrs or sharp edges that may have developed through use or during storage.
2. Visually check the **Slic Pin** to ensure the spring-loaded tab is sticking out and keeping the Slic Pin from moving.
3. Attempt to pull the **Slic Pin** out to ensure the spring-loaded tab will not allow it to come out.

4. Ensure the wear on the **Slic Pin** is not excessive. The Slic Pin is prone to wear due to friction between itself and the climbing rope.
5. Check the **Side Plates** for damage. The Side Plates are designed to be slightly bent but symmetrical.
6. Rotate the **Wheel** to ensure it moves freely and is not obstructed by rope fibers or anything else.
7. Ensure the **Tether Attachment Point** bolt is tight and that there are no gaps between the bolt heads and the outsides of the Side Plates.

Dynamic Inspections

Throughout the course of a climb, the climber, as an expert, must constantly monitor the system and surroundings for changes that may present a hazard. For example, a friction hitch may begin to loosen and respond differently after a very long ascent. Memorize the **"TREES"** method described below for maintaining safety while climbing.

[T]ight friction hitch. Always be sure the friction hitch is tight and will engage in the event of a fall at all times. Even if a friction hitch was very tight when first tied, it can become loose over the course of a climb.

[R]ope must be securely attached to a solid anchor point and remain free of damage or wear at any point it is repeatedly contacting anything (branches, pulleys, rope wrench, etc.)

[E]xcess rope at the end of the climbing rope. This is DESIRED so that the climber does not come off the rope.

[E]xcessive slack in the system. This is NOT DESIRED and should be avoided.

[S]harp objects. Burrs and sharp edges in the system or in the tree can damage the rope and must be avoided.

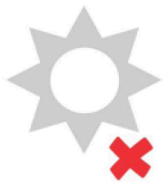
[TREES] Inspect all parts of the tree supporting any part of the body weight to ensure they are not cracking, creaking, or overly bent.

Post-Climb Inspections

The inspections performed after a climb should be the same as the inspections performed pre-climb. Particular attention should be given to the post-climb inspections when any of the following occurred during a climb:

1. A fall from heights. If the reason for the fall is due to failure of any of the equipment, discard it immediately.
2. Any intermittent fall. This will likely cause damage to the rope wrench, friction hitch, and climbing rope.
3. Very long climbs, especially those involving many descents and ascents.

General Maintenance



Never leave the Rope Wrench or any other components out in the elements. Even if exposure to the elements does not damage the equipment, it can still alter the functionality.

Dry naturally

The Rope Wrench should be cleaned after each use with a mild detergent and allowed to dry naturally.

The moving parts of the Rope Wrench may be oiled if desired. Wipe away any excess oil before use. Ensure the oil type will not degrade any rope used in the Rope Wrench System.

Regarding SRT and DdRT.

Single Rope Technique (SRT) and Doubled Rope Techniques (DdRT) are somewhat subjective terms that can mean slightly different things to different people and different organizations. Other names for Single Rope Technique are Static Rope Technique or Dynamic Rope Technique. SRT as referenced in these instructions simply refers to any means or methods of ascending and descending a tree on a single leg of rope that does not move with the climber.

For more information on the meanings of these terms, refer to the following resources:

International Society of Arboriculture: www.isa-arbor.com

Tree Care Industry Association: www.tcia.org

On Rope, by Bruce Smith and Allen Padgett (ISBN: 978-1-879961-05-0)

Best Practices for SRT in Arboriculture, by Donald Coffey and Tchukki Andersen (TCIA publication)

Single Rope Technique, by Joe Harris (The Victorian Tree Industry Association)
http://vtio.org.au/Content/wp-content/uploads/2010/07/Single-Rope-Technique-i.pdf

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Regarding Standards Testing.

ISC has carried out extensive testing with the Rope Wrench as a complete system in accordance with both European CE (EN353-2) and American ANSI (Z359.1) Standards. Whereas for several reasons it is not possible to gain a formal accreditation to either set of Standards, it is important to replicate 'real-life' use with a test method that is consistent and repeatable using different but compatible component parts. Testing with the Rope Wrench, an approved Sterling Rope Wrench Tether, an RP037 fixed cheek pulley connected to an ISC KH204 HMS carabiner, a 4-wrap Distel hitch using 28 inch Stein Copious hitch cord and industry standard 11mm-13mm rope (in these tests the ropes used were supplied by Yale Cordage) the results (primarily measuring fall distance vs peak load) clearly show that when used in a properly configured system the Rope Wrench is a product appropriate for the purpose of SRT climbing.

International Safety Components
Unit 1, Plot 2
Llandygai Industrial Estate
Bangor, Gwynedd, UK
LL57 4YH
www.iscwales.com
sales@iscwales.com

Direct questions and concerns to ISC by telephone at +44 (0) 1248 363 110 or e-mail at sales@iscwales.com.

Singing Tree Rope Tools LLC.,
33 East Parkhurst,
Detroit, Michigan, 48203
www.ropewrench.com
info@ropewrench.com