This product meets ANSI A300 standard for supplemental tree support

INSTRUCTION

TreeSave 10/5

(10mm @ 5,200 lb. tensile)
for branches up to 15" diameter

TreeSave 13/11

(13mm @ 11,000 lb. tensile)
for branches up to 24" diameter
(estimated safe working load 20% of tensile)

SHERRILLtree®
TREE GEAR. TREE PEOPLE.
Cable by:
SAMSON ROPE TECHNOLOGIES
The Strongest Name In Rope

For PROFESSIONAL use only!

Installer must have previous experience with tree support systems and an in depth understanding of the dynamic relationship between trees and their environment before attempting to install <u>any type</u> of supplemental support or restraint system in trees. Improper use of supplemental support may acerbate a problem, potentially leading to personal injury or property damage. No supplemental support system is designed to stop tree failure during catastrophic weather events. Use of this and other supplemental support systems is at the property owners own risk. Future monitoring of all supplemental support sytems in trees is required.

Instruction version 2.2

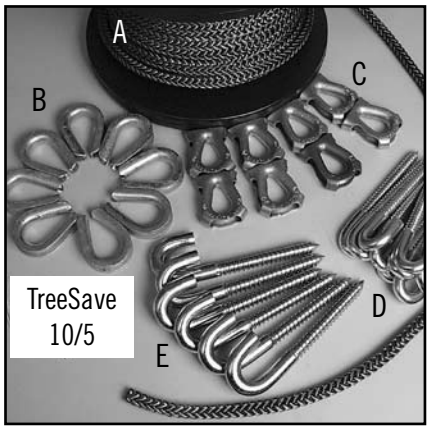
Tools to use (not included)
Sharp (pointed) scissors
Measuring tape
Sharpie® or similar marking device
Electrical tape (or heat shrinking tube with portable propane torch)
Cordless drill
Drill bit 1/16th smaller than j-lags (or 1/16th larger than eye bolts)
5-9mm prusik cord and/or ascender

PACKAGE CONTENTS

TreeSave 10/5 KIT

Used for trees up to 15 in. at connection point.

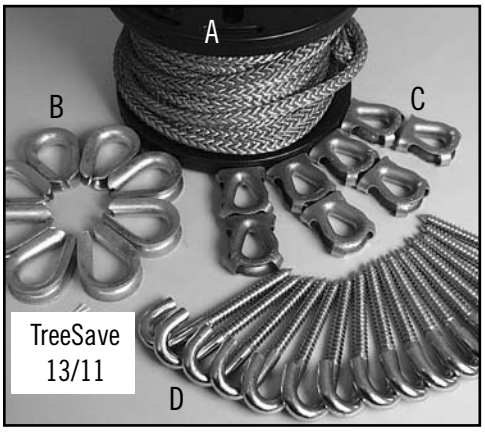
A.	27601	150 feet of shock dampening cable
B.	15022	8 heavy-duty galvanized 3/8 in. thimbles
C.	27593	8 10/5 bronze adjuster thimbles
D.	15010C	10 1/2 in. j-lags
E.	15014	6 5/8 in. j-lags
	27749	(plastic) splicing fid
		16 black zip ties (not pictured)
	27884	Instructions



TreeSave 13/11 KIT

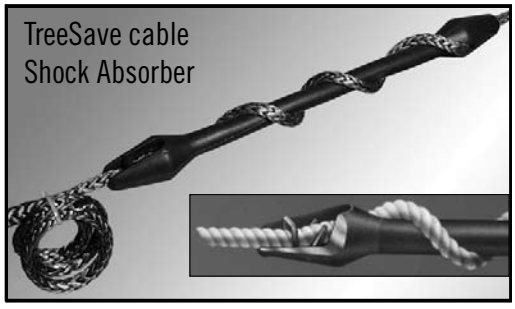
Used for trees up to 24 in. at connection point
(may require eye bolts in lieu of j-lags)

A.	27603	150 feet of shock dampening cable
B.	27596	8 heavy-duty galvanized 1/2 in. thimbles
C.	27594	8 13/11 bronze adjuster thimbles
D.	15014	16 5/8 in. j-lags
	27750	(plastic) splicing fid
		16 black zip ties (not pictured)
	27884	Instructions



Other Products and Accessories

27598	TreeSave 10/5 Shock Absorber
27599	TreeSave 13/11 Shock Absorber
27887	10/5 Aluminum Splicing Fid
27888	13/11 Aluminum Splicing Fid



SPLICE INSTRUCTIONS

(abbreviated)

The following "simple instructions" exclude the anchor installation of cabling and skips directly to the splicing procedure. For details on the anchor installation, please refer to the in-depth instruction on the following pages.

A Mark the cable 24 in. from the end and then 15 in. beyond that. Spread cable strands to expose the core, pry the core out, and cut. Remove the core from the (short) end. Tape the last 7 in. of cable tightly to stiffen it for pushing through the cable body.

B Push the taped cable end into the back of the hollow fid. Push the fid into the cable at the first (24 in.) mark and exit at the second (15 in.) mark. DO NOT PINCH THE FID! Try to avoid any pressure on the fid by holding only the taped portion and bunching the cable over the front of the fid. Move the bunched cable gently along until the taped end disappears into the cable entry point (utilize a milking action). Bring the fid out at the exit point, followed by the taped cable's end. Then remove and store the fid.

C Introduce the thimble into the eye and then cinch the eye down tightly by pulling on the taped tail.

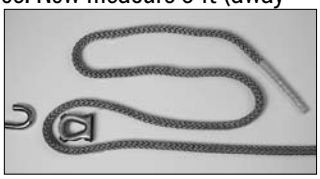
D Pinch the splice entry point with one hand and milk the splice throat until the taped end is as far in as possible. Keeping your eye on the point where the cable exits the throat, pull the cable out and mark it approximately one-half in. IN, TOWARD the eye. Pull the taped end out firmly to properly seat the thimble.

E Using scissors, cut the cable at the recent mark.

F Remove any remaining tape.

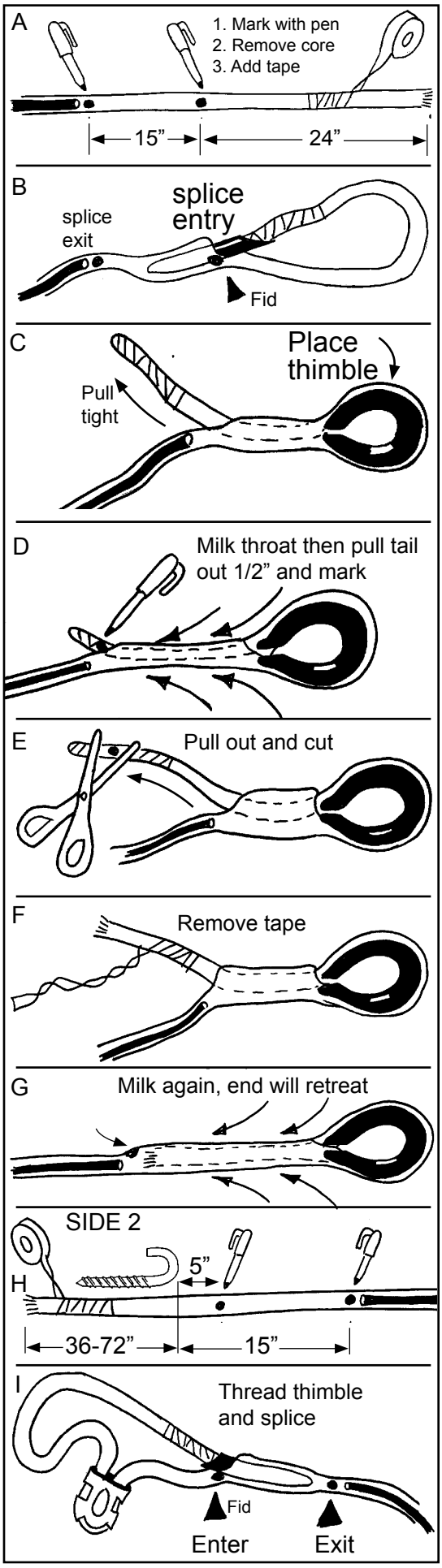
G Pinch the splice entry point AGAIN with one hand and milk the splice throat until the end disappears inside the splice throat. Lock-stitch splice and move to the opposite tree branch or stem.

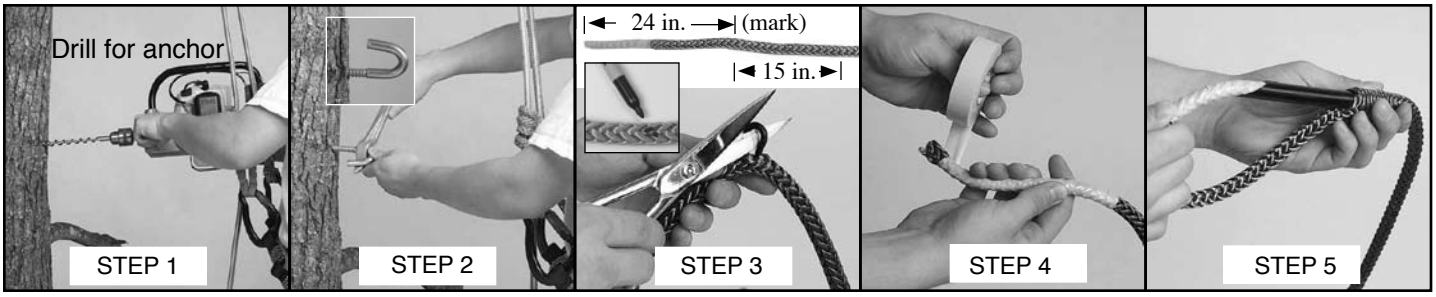
H Pull the cable up to the anchor (j-lag or eye bolt) and mark the cable at inches 5 and 20, towards the first (previously finished) splice. Now measure 3 ft (away from the first splice), then tape and cut the cable. Spread cable strands (at the 20 in. mark) to expose the core. Pry the core out, then cut and remove it from the (short) end. Tape the last 7 in. of cable tightly to stiffen it for splicing.



I Thread the cable's end through the bronze adjuster thimble and perform the splice by entering at the 5 in. mark and exiting at the 20 in. mark. Hook the cable over the lag and make any final adjustments. Lock-stitch the splice (inside STEP 12) and then address the cable's end by removing the tape and introducing a heat-shrink end cap or, fuse the strands with a propane torch. Otherwise, wind and weather will loosen the tape and unravel the cable's end within a relatively short time. Finally, roll the excess cable and zip-tie it to the span; this will act as reserve to loosen the system should the tree's growth act to tighten it.

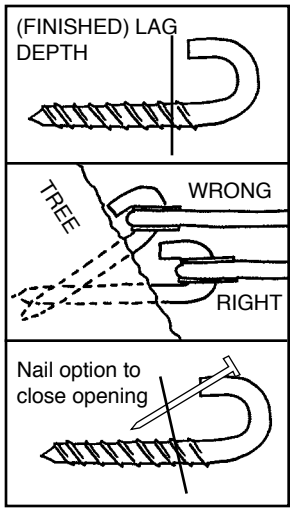
SIDE 1 (end of cable ⟶)





DETAILED INSTRUCTIONS

It is strongly recommended that you practice the cable splice on the ground before installing cable in a tree. (Don't be intimidated by these instructions; nearly every detail was included.)



STEP 1 Install the j-lag for the first side of the cable by drilling a hole in the center of the branch 1/16 in. smaller in diameter than the j-lag to be installed (that is, 7/16 in. for 1/2 in. j-lags or 9/16 in. for 5/8 in. j-lags). Drill to a depth equal to the j-lag shank under the head (see image at right/top). The hole should point directly towards the opposing branch's anchor point (see image at right/bottom).

STEP 2 Turn the j-lag into the hole, leaving an opening of about 1 in. so that you can attached the finished cable. (This gap will be closed upon cable connection.)

FOR EYE BOLTS ONLY: Completely seat and finish the bolt installation. Next, open and then close a thimble through the bolt's eye and then splice the cable around the thimble according to the following instructions.

STEP 3 From the end of the cable, measure 2 ft and mark the cable. Next, measure another 15 in., then mark and spread the strands apart, exposing the Dampener Core. Pull the Dampener Core out of the cable at this point and cut it with sharp scissors (be careful not to cut the cable). Pull the short Dampener Core out of the end (this piece may be disposed of once you return to the ground).

STEP 4 The cable's end will now be loose and will require a tight taping for about 7 in. (if using plastic fid)

STEP 5 Insert the taped rope's end into the fid and, beginning at the first mark, push the fid into the cable (pointing toward the cable's long end). Use a milking action to shuttle bunched rope down the fid and over the stiff rope's end. Be careful not to separate the cable from the fid by taking your time, especially in the learning stage (refer to the "milking series image" in terms and tips, page 7). If you find it difficult to keep the fid and cable together, you can construct a "fid pusher" using an 18 in., doubled-over section of coat hanger or similarly stiff wire that's shoved into the rope and fid. With very little practice, however, such a tool will not be necessary.

FOR EYE BOLTS ONLY: Before splicing you must thread the cable through the bolt's eye and over the thimble.

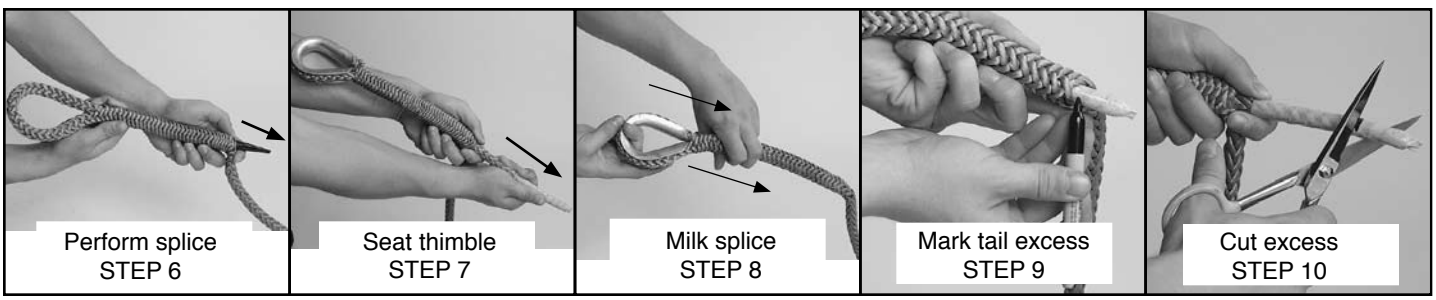
STEP 6 Bring the fid out of the cable at the second mark (Dampener Core end). Remove the fid from the cable and pull on the cable until you've formed a small eye for the thimble. Place a galvanized thimble in the loop.

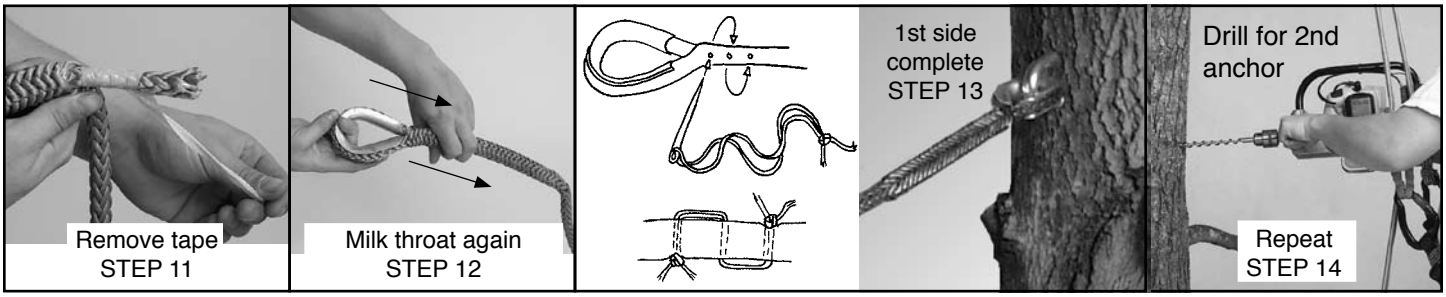
STEP 7 Cinch the cable around the thimble tightly by pulling on the taped end.

STEP 8 Milk the cable throat down firmly with one hand and watch the tail end withdraw into the throat.

STEP 9 Pull the tail end out about half an inch and mark the cable at the point that it exits the splice.

STEP 10 Pull the tail end out and cut the cable at the fresh mark (this will be the terminal end that is soon buried within the splice's throat).





STEP 11 Remove any remaining tape from the end of the cable (tapering the cable is not necessary).

STEP 12 Repeat step 8 by pinching the splice throat firmly and "milking" slack away from the thimble to remove any excess bunching. During this action, the cable's untaped end will recede back into the cable where it will remain for the life of the installation. The cable around the galvanized thimble should be snug enough that the thimble cannot fall out. Perform a lock stitch as shown using the sailmakers needle and thread provided.

STEP 13 Hook the thimbled cable around the j-lag and finish turning the j-lag into the wood, being careful not to further damage the limb by scratching it with the rotating lag head. The finished position of the lag should be vertical and upright. The opening between the j-lag and tree should not exceed the thickness of the cable's thimble assembly or provide room for the thimble to "jump" the lag opening. If an opening must remain, install a single galvanized or stainless-steel nail to "gate" the opening (see page 5, nail option illustration mid-page)

MOVE TO THE OPPOSITE ANCHOR POINT

STEP 14 Repeat installation of anchor hardware according to steps 1 and 2.

FOR EYE BOLTS ONLY: Eye bolts are incompatible with the bronze adjuster thimbles. The only adjusting option available is to (leave enough excess cable to) completely resplice the installation at a later date. Eye bolts require the use of a second heavy-duty, galvanized thimble.

STEP 15 Use a Prusik cord (4 to 8 mm) or other rope-holding mechanism to secure the cable to the tree no less than 2 ft from the new installation point.

STEP 16 Pull the cable's (uncut) end up to its new position, measure 3 to 6 ft towards the end, and then tape and cut. This end will provide the reserve necessary to adjust the system longer in the future. Reserve should be determined by the age of the tree as well as shape of the crotch (very sharp crotches with included bark tend to drive their tips apart over time more so than other crotch formations). NOTE: too much reserve is always better than too little. Also, this system can be installed without reserve or bronze thimble if so preferred.

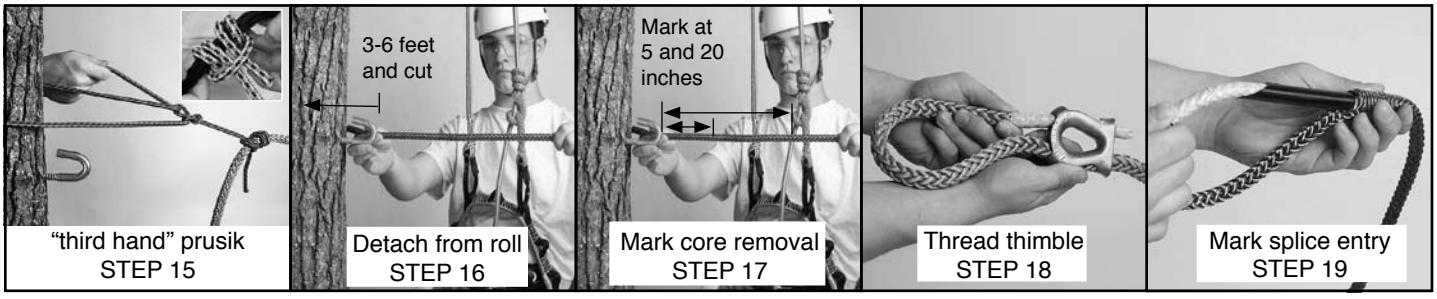
STEP 17 Hold the cable up again and mark (17 in. for 10/5 or 19 in. for 13/11 cable) toward the previously finished end. This mark represents the position where you will cut and remove the core (repeat steps 3 and 4).

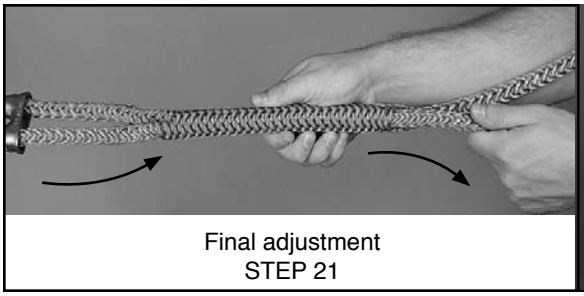
STEP 18 Tape the cable's end for 7 in. and thread the cable through the bronze adjuster thimble.

STEP 19 Slide the thimble to its permanent position to make the final measurements. Mark the cable 2 in. from the thimble for the second and final splice entry point. (This distance from the thimble will leave room to further shorten the system if deemed necessary.)

STEP 20 Perform the final splice by repeating steps 5 and 6 (leaving out galvanized thimble installation).

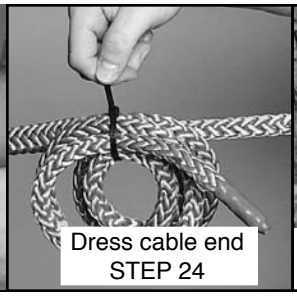
STEP 21 Because the j-lag requires screwing in to reach its final position, you'll want to counter-twist the cable so that its finished position is as straight as possible. The best way to do this is to count the number of lag threads showing outside the tree and turn the cable in the opposite direction that number of times. Now, hook the adjuster thimble over the j-lag and tighten down the j-lag.





Final adjustment
STEP 21

Dress cable tip
STEP 22



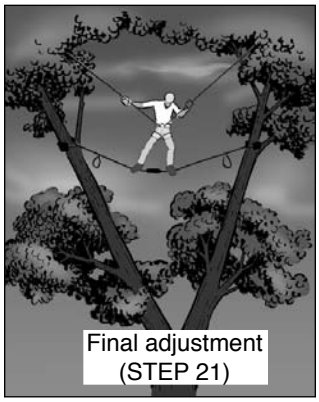
Dress cable end
STEP 24

Side 2 complete

STEP 22 This is the time to test load the system. Adjust the cable shorter by pulling on the loose tail or, longer by adjusting line back into the eye. Keep in mind that high tension is not preferred with TreeSafe or, other dynamic systems (see page 12).

STEP 23 The loose end of cable must be properly dressed to avoid unraveling in wind and weather. Electrical tape will hold the rope's end together only for a year or two, so we recommend heat-shrink tubing or taping (loosely) and fusing (burning) the end fibers together using a torch or lighter.

STEP 24 Coil the remaining cable end into small loops and use a zip tie to attach it to the cable span (DO NOT run the zip tie through the body of the cable span). Other methods of "end dressing" may be used for a clean visual effect, but keep in mind that customers are usually not "offended" by the sight of tree cable. (It is acceptable to run the excess back through the thimble opening and attach it to one leg of the splice.)



Final adjustment
(STEP 21)

WARNING • WARNING • WARNING

• The employer or foreman must instruct an employee about the proper use and warnings of this product before directing installation.

• This product is intended for use by properly trained professionals only.

• Be certain that this product is suitable for the intended use and environment. If suitability for intended use is in doubt, consult a safety engineer or contact Sherrill, Inc. before using.

• This product should NOT be used for personal support or any other activity that involves personal support or safety.

• This product has a safe working load (SWL) equal to 20 percent of its (rated) tensile strength.

• Avoid contact of this product with high heat sources such as fire, petroleum products such as oil and gas, and sharp edges or bends such as metal burrs or blade edges.

• NOT for towing or hoisting.

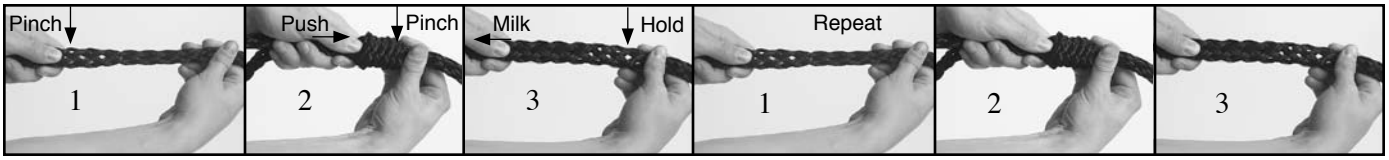
• Never use or install without proper fall-arrest and personal protection equipment.

• Before use, read, understand, and follow all instructions and cautions attached to and/or packed with product.

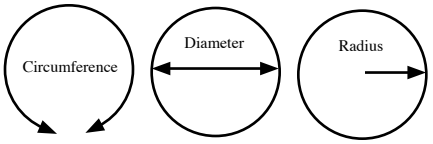
TERMS AND TIPS

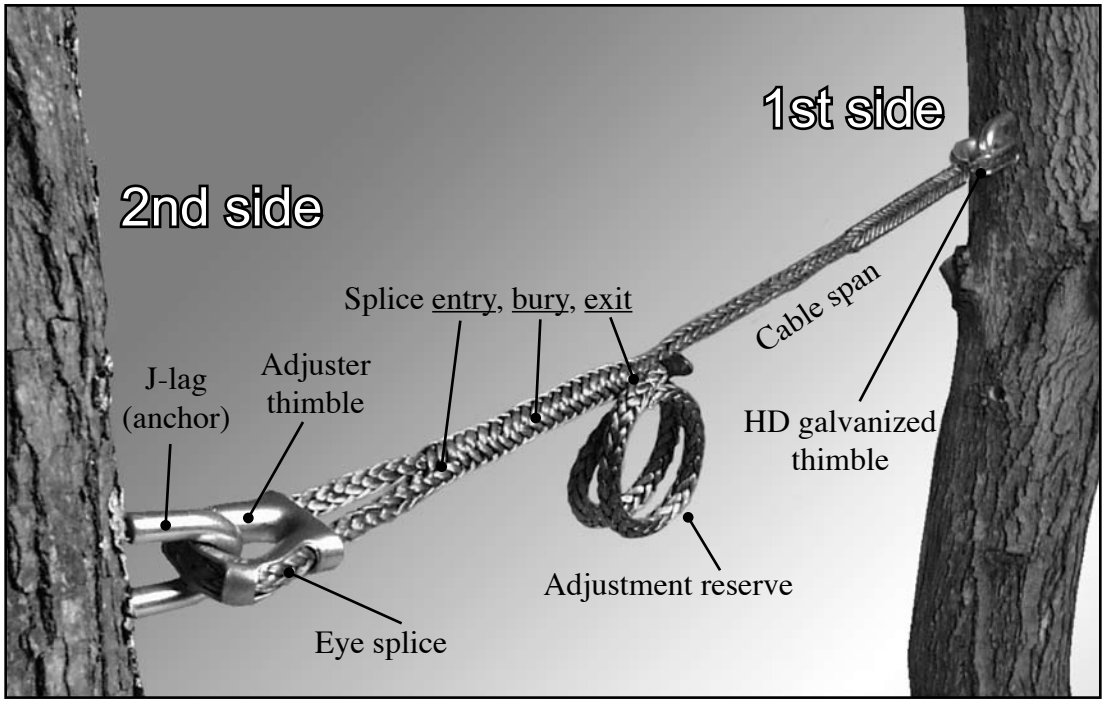
ANSI A300: American National Standards Institute's support systems guideline
Circumference: the boundary line measurement of a circle
To find the circumference of a circle, multiply diameter by 3.1
Codominant stems: limbs sharing similar portions of a tree's mass and evolving from a common (low) point from the tree's trunk
Compression and expansion wood: wood fiber will fail (crush) with pressure equal to approximately half of that required to pull it apart. Trees exposed to high pressure from wind or ice fail on the compression side first.
Crotch: area of branch or stem union
Diameter: measurement of a straight line through the center of a circle
Dynamic: relating to energy or to objects in motion; cables that are energy absorbent
Frequency: the number of repetitions per unit time of a complete waveform
Included bark: bark that becomes embedded in a crotch between branch and trunk or between codominant stems and causes a weak structure (see figure at right) by wedging stems apart
Lever: resulting forces at a tree's base when wind or ice loads the canopy
Milking action: the technique of moving cover slack over a fid or separate rope part to create a splice. (see below)


Included bark

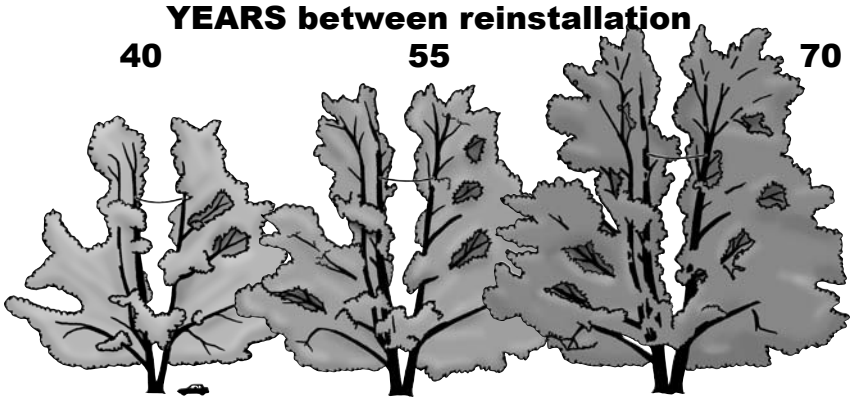


Radius: measurement from a circle's center point to outside edge
Splice: the act of creating a loop or eye in a rope, using the rope's own end, fed into its body, in a fashion that is self-holding with tension
Static: having no motion, cables without energy-absorbing characteristic
Stem or spar: major portion of upper tree trunk, primary limb
10 millimeters = .4 inches
1 meter = 1.1 yards





Q. How long should supplemental support cable be left in the same location in a tree?



A. The answer differs greatly depending on the age, shape and environmental exposure of the particular species but, as a rule of thumb, most supplemental support systems are due for repositioning within ten years. An old tree that is growing more slowly might exceed that time, while a younger, fast-growing tree might require repositioning sooner. The figure at right provides a visual model of the two-thirds rule in a healthy, maturing tree. Cables too low in a tree's crotch result in enormous leverage by the limb against the cable, too high in the canopy means utilizing branch parts that may not be strong enough to handle loads placed upon them.

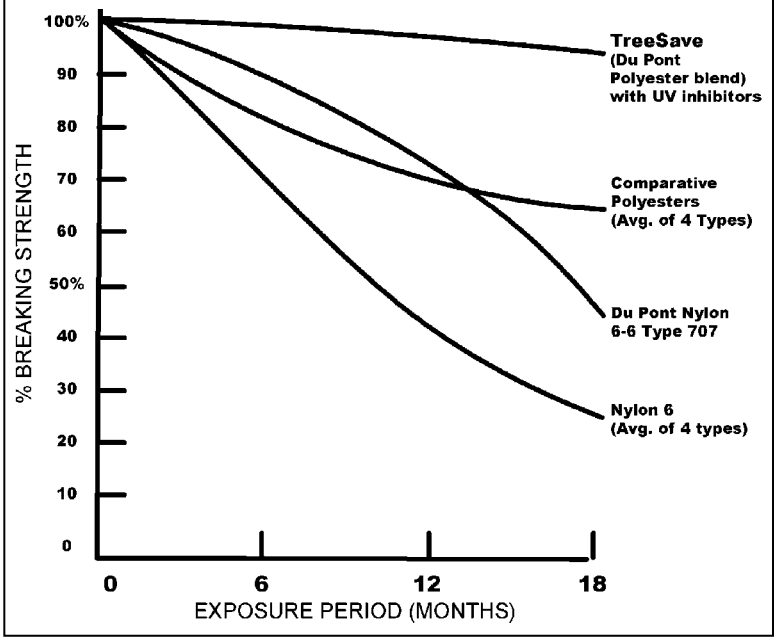
Q. Is there a formula available that defines how strong a cable needs to be, say, in reference to how large the limb is at a given point?

A. No. Studies have been done, but until every different limb length and wood fiber make-up can be plugged into that formula, we will have to continue over-sizing supplemental tree support systems. One recent year-long study in Australia on a 95 ft codominant Eucalyptus Cladocalyx, using dynamometers to record the impact on steel cable, measured its highest load of 970 lbs during a 28-mph wind event. This load turned out to be nearly double that of loads of similar wind speeds and higher than loads during other gusts. This study, like others, points to the fact that tree cables experience less force than often assumed by installers. Most arborists agree that it is not sensible to "imprison trees" in hopes of preventing risk because there will never exist a "risk-free tree."

Q. Will the tree that I've cabled always need a cable in it?

A. Likely so. Cable installation within a tree is usually performed to restrain precarious limbs or stems in order to reduce self-damage or damage risk to nearby landscape or structure. Cabling the limb will not reverse a poorly formed crotch and therefore will likely require life-long placement. This does not mean that cable should be placed tightly (except in conjunction with bracing) in a manner that forms a "crutch" for any tree part. Instead, it should be installed loosely to encourage the tree to continue on its path of self support. If a tree's crotch cannot support its own limbs or stems, then the part should be removed, CABLE SHOULD NOT BE INSTALLED IN SUCH A SITUATION.

FIG. 4
COMPARATIVE SUNLIGHT & WEATHER RESISTANCE OF COMMERCIAL ROPES
(Data obtained from specimens of 1/2" diameter ropes exposed outdoors in Florida)



Q. How long does TreeSafe last?

A. All materials corrode, degrade, deteriorate or break down with exposure to air, moisture, salt, and sunlight. Fibers that make up synthetic rope degrade at various rates, but those rates can be significantly enhanced with UV inhibitors. TreeSave's UV-inhibited polyester materials are recorded to degrade at about 2 to 5 percent per

year over a ten year period. For example, TreeSave 10/5 at 5,200-lb tensile strength new will likely break test at somewhere between 2,600 and 4,100-lbs over that period of time. By all accounts, this strength is still sufficient to support trees with elevated risk of crotch failure IF placement is within the "two-thirds up from crotch" region of the canopy as specified in the ANSI A300 standard. Remember, the installed cable will remain at its originally installed height while tree tips grow longer, over-reaching the two-thirds position of the cable with time.

Q. How long does steel cable last?
A. Would you believe as little as seven years? This is recorded fact in regions close to the ocean, but on average, steel cable and hardware are good for somewhere between 20 and 30 years. This time frame would be much longer if not for the dynamic environment that the cable and hardware are involved in. In many cases, the steel wire abrades as a result of rubbing caused by the low-oscillation activity of rather flexible trees. This low-frequency phenomenon most often affects the cable at the thimble. Wire also tends to show stress when flexed constantly, as happens with the more flexible
tree species. The fact that even old trees are in near-constant motion (between growing and blowing) makes steel an often poor choice for supplemental tree support.

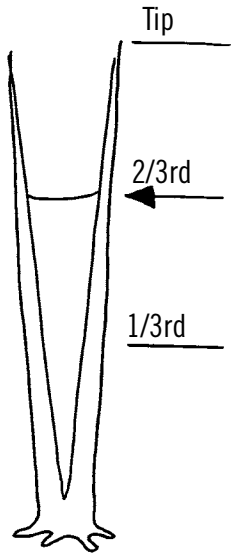
Q. How can I be sure that the tree's owner will have the cable periodically checked for proper tension and position (according to the ANSI A300 standard) after I've performed the installation?
A. You can't. This is when the property's owner take responsibility for their tree's maintenance and welfare, just as they might do for the family van or other personal property. Land owners must be informed that their growing tree, fitted with (mechanical) supplemental support, will require occasional inspection just as the tires on their car must be occasionally rotated or entirely replaced. If a customer implies that he or she has no desire to have the supplemental support system inspected or tree further maintained, then it is up to you to deny cabling as an option for the tree(s).

Q. Can I replace an old steel wire with TreeSave?
A. Yes, but be careful. If the steel wire is under tension, you must take great care in replacing it. Cutting such cable without first installing its replacement above can result in tree failure. It may be necessary to remove a tree showing a high level of dependence or appearing to be near failure in the absence of embedded cables. In some situations in which a tree is sound and wire is replacing wire, certain arborists elect to leave the cable in position because of the tree's level of dependence and/or the perceived strength of the limb and crotch below the cable. In less extreme situations in which the tree is reliant but tension is moderate, the dynamic system can be installed tightly (without shock absorbency) and adjusted looser over time (one to five years, depending on the tree) until the tree is back under full support, even in strong winds.

Q. Is there ever any need to use more than one cable within a tree's canopy?
A. Yes. Certain crotches may require repetitive cables installed, but most often, a tree will require multiple systems to support multiple limbs or leads branching from the main trunk.

Q. Can TreeSave be used for guying a tree?
A. Yes; in fact this is a situation in which dynamic cables really show their stuff. All parts of guying normally need to be drastically oversized due to static cable's ability to snap anchorage out of the ground or tree. The same comparison can be seen with mariners who use nylon line from boat to anchor to enhance the anchor's biting ability. Dynamic cable provides much-needed flexibility here and also provides a signaling effect to the root system during low-wind events. We recommend that cable from the ground to 10 ft above be installed with chain in areas where vandalism is prevalent.

EVALUATING THE TARGET TREE



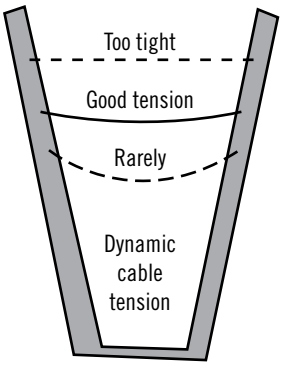
two-thirds rule

The initial evaluation of any tree targeted for supplemental cable support should begin at ground level. A significant number of tree failures are the result of conditions related to soil, roots and/or trunk. Such conditions below the canopy will not likely be improved and more likely will be exacerbated bycabling.

Although it's likely that you've already evaluated your clients tree to determine the cable's position (a minimum two-thirds up from the supporting crotch), it's important that you include another perspective based on how the tree moves during a windy day and/or how much the tree might flex during a reasonable ice load. Dynamic cable should be installed in a manner that allows as much natural sway and movement as is possible, reasonably short of potential crotch or limb failure. Because it's not likely to be blowing or icing during your evaluation, this exercise takes insight based on knowledge from observations made during actual events. Don't be afraid to rely on instinct because experience with wood fiber combined with stress prediction is what defines a good tree cabler. It is advised that dynamic cable be installed prior to pruning since the tree has proven that it can flex to a point before cable dampening takes effect. If the cable is excessivly loose it can be drawn tighter after pruning.

Things to look for: What species is the tree? How old is the tree? *This information is critical in determining its inherent flexibility. For example, ash and beech are more flexible than oak and hickory, while young trees are more flexible that old.* What element of exposure is the tree subject to? *A tree standing alone beside a lake or on a mountain's ridge might be stunted in height (with acute trunk taper) due to wind shaping, while a similar species just a mile away might be tall and lanky (having long taper) because it is protected from prevailing winds by other trees or buildings. Stunted trees experience less movement, requiring taut cable to provide proper support, while tall, lanky stems may require a looser installation.* What is the distance of the cable installation? *With 10 percent stretch at high loads, a 40 ft-long cable will elongate 4 additional feet, while a 10 ft-long span will only stretch 1 additional foot.* Depending on your specimen, it may be necessary to remove the Dampener Core to decrease OR increase elongation by utilizing a externally applied shock-absorber.


Optional Shock Absorber



Remember, dynamic cable is best installed loose to taut, lending support in times of high stress but otherwise leaving the tree to support itself. This dynamic technique has become very popular in b&b tree plantings in order for saplings to better strengthen their trunk and to signal root spread for better anchorage. Cabling too tightly with dynamic cable may only lead trees to early cable detection followed by support dependence, requiring a return climb to release tension. There are situations in which an initially tight installation is necessary, such as in replacing old static systems that the tree has grown too tall for, resulting in excessive tension. TreeSave can be installed initially taut and then released in increments over the coming months (or years, depending on the trees age) until the stem stiffens back into a mode of self-support.

In conclusion, it should be obvious by the variety of shapes and situations referred to in this section that tree cabling is as much an art as it is a science. No two trees or the area in which they stand are exactly alike. The instructions for TreeSave, although detailed, are really quite simple: study and practice on the ground so that your attention can be placed where it belongs on properly supporting the subject at hand.




North American Tree Monitoring Program (NATMP)

NATMP is a program that mails scheduled notification to property owners as a reminder to get their tree(s) with mechanical systems installed (lightning protection or support), inspected by an experienced or Certified Arborist. The American National Standards Institute (ANSI) A300 standard suggests periodic inspection by an experienced professional to check for such things as tree and cable integrity, excessive tension, improper positioning, and abnormal wear. Contracting for such inspection is the tree owners' responsibility and will be at their expense unless otherwise stated in writing. This form IS NOT a contract for inspection.

INSTALLING COMPANY'S NAME

City State Zip

Phone

Fax

Return this form with payment ($10) to:
NATMP, 200 E. Seneca Rd., Greensboro, NC 27406

Date of installation (separate form and payment must be used for installations separated by more than 30 days or on separately owned or addressed properties)

Did previous cable or bracing exist? YES NO

Was previous cable left in place? YES NO

PAYMENT METHOD (can be made by either property owner or installer). Confirmation will be mailed to the property owners address upon receipt of form and payment. If confirmation is not received within 90 days please call 336-378-0444.
Payment enclosed ($10. US dollars) ;

Check Money order Credit card (please call in)

Please use the graph (below right) to map and number the location of trees affected and then provide the following specific information by filling in the box or circling yes or no (additional paper may be used); "Product installed" should reflect brand or description.

TREE#	TREE SPECIES	DBH (diameter at breast height)	NUMBER of CABLES	BRACED	LIGHTNING PROTECTED	GUYED	PRODUCT INSTALLED
1				yes no	yes no	yes no	
2				yes no	yes no	yes no	
3				yes no	yes no	yes no	
4				yes no	yes no	yes no	

LAND OWNER PORTION

NATMP is a by-mail notification program ONLY and has no responsibility for products or services related to the care of trees. This form, once filled out and returned with payment, will put the addressee on scheduled notice by US mail in years 1, 3, 6, 9 and 12 to the fact that their supplemental tree support or lightning protection system is due for inspection. Read and understand the paragraph at the top of this form before signing (required) below.

PROPERTY OR TREE(S) OWNER'S NAME

Physical address (no PO Box please)

City State Zip

Phone

Owner or agent sign

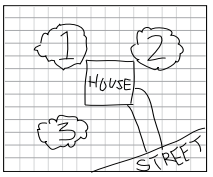
Owner or agent (print)

Commercial Residential Date

FOR INSTALLER

Use the box below to map the property's trees that have cable or bracing installed. Number each tree for use in the list above.

EXAMPLE-



Cabling systems to use “Rule of Thumb”

Steel wire, static (intrusive)

- Appropriate for use in trees that require bracing at the crotch
- Appropriate for use in trees with acute taper that experience very little movement during wind events (high-frequency structures)
- To provide pre-tensioned low-level static support, usually as reinforcement to bracing and often in conjunction with dynamic cable above

TreeSave, dynamic (intrusive)

- For trees not included in the list above
- Any tree where producing reliance on artificial support is not preferred
- Ideal for trees known for their flexibility (low-frequency structures)

Cobra, dynamic (non-intrusive)

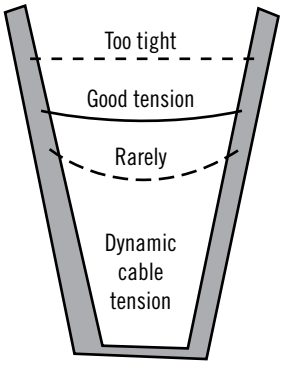
- For trees not included in the “steel wire” list at top
- For hollow limbs where sound wood is more than 50 percent diameter.
- For trees at high risk of infection from invasive hardware
- Ideal for trees known for their flexibility (low frequency trees

WARNING
Crotch (on left) has included bark that forces canopy spread and will tension cable if adjustment is not maintained.
Crotch (on right) does not.

DO’s and DON’TS of dynamic cabling

DO

- Do evaluate the tree’s structural integrity prior to installing cable of any type. Cabling will change the tree’s response to forces by sending them further down the stem or trunk. Tree failure can be the result of excess pressure to other weak areas.
- Define your objective for the entire plant and its surroundings prior to installation.
- Do prune the tree prior to cabling to reduce excessive windsail effect.
- Do leave dynamic systems with as much slack as is affordable for that particular species and its structure. Too much slack can allow the tree to reach its critical breaking point.
- Put the customer on a reminder schedule like NATMP so that their tree can be properly cared for and cable position monitored. Tag the tree for future property owners to be made aware that their growing tree has supplemental support in its canopy.



Remember; ANSI A300/ 37.2 states that “Prior to installation, the owner or owner’s agent should be notified of the need for periodic inspection by an arborist. Inspections shall be the responsibility of the tree owner and should include system: condition; position; cable tension; and the tree’s structural integrity.”

DO NOT

- Do not cable a tree that shows signs of root or trunk decay (i.e. mushrooms at or near base).
- Do not cable a tree with invasive hardware (eye bolts) where sound wood is less than 70 percent of branch diameter or where j-lags penetrate a decaying cavity. Only use Cobra when sound wood is more than 50% diameter.
- Do not cable a tree when the tree’s health is in obvious decline or when the tree is dead.
- Do not provide a tree owner with assurance that cable supported tree parts are immune to failure or causing of damage. Cables only provide an increased measure of support for the tree and its surroundings. It might be explained that the Fujita scale was developed by the weather service to measure wind speeds in part by, evaluating tree damage.

Visible decay

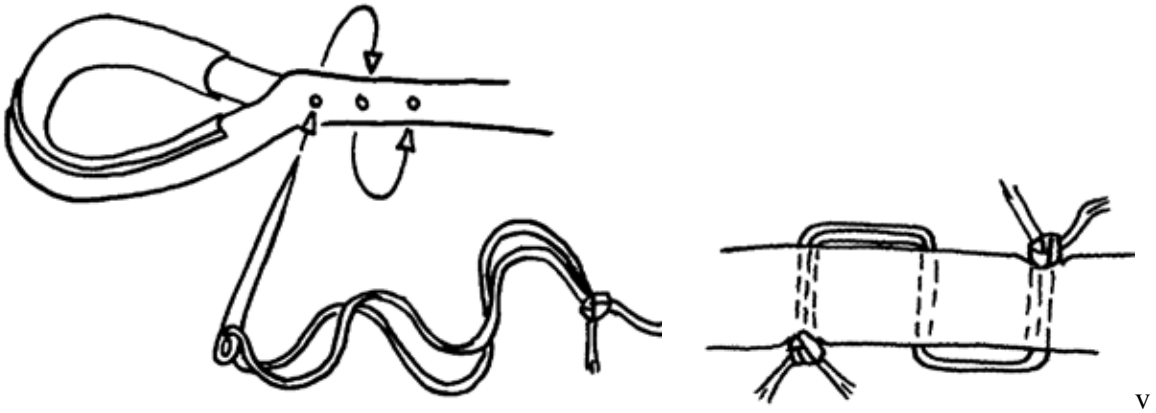
WARNING: Beware of trees with included bark that develop significant spread in the limbs above. Such trees can turn “taut” cable into “high tension” cable in just a few years. Extreme caution is advised when removing or replacing cables under tension.

ADDENDUM TO TREESAVE INSTRUCTIONS

Future TreeSave instructions will include a step to provide assurance that low oscillating forces created by light wind don't loosen the splice enough to allow the galvanized thimble to fall out. Concern for the adjustable (opposite) end loosing tension is marginal but, it too should be lock-stitched. For TreeSave cables that have been installed without this procedure, please call for further instruction.

LOCK-STITCH INSTRUCTION:

STEP: Thread needle with 12 inches of TreeSave thread and tie the two ends together with an overhand knot. Starting approximately half an inch from the splice throat (area closest to the thimble), stitch through as shown and tie a square knot.



v

AND THIS JUST IN!!
NEW TreeSave splicing fids

This newly designed fid makes splicing of TreeSave cable extremely simple and fast!
15456 for small cables (10/6 or 10/5 products)
15458 or large cables (11/11 or 13/11 products)