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# FineLine® BUTTON ASSEMBLY INSTRUCTIONS

Choose **CABLE RAILING DIRECT™** for all your fittings and cablerail assemblies!

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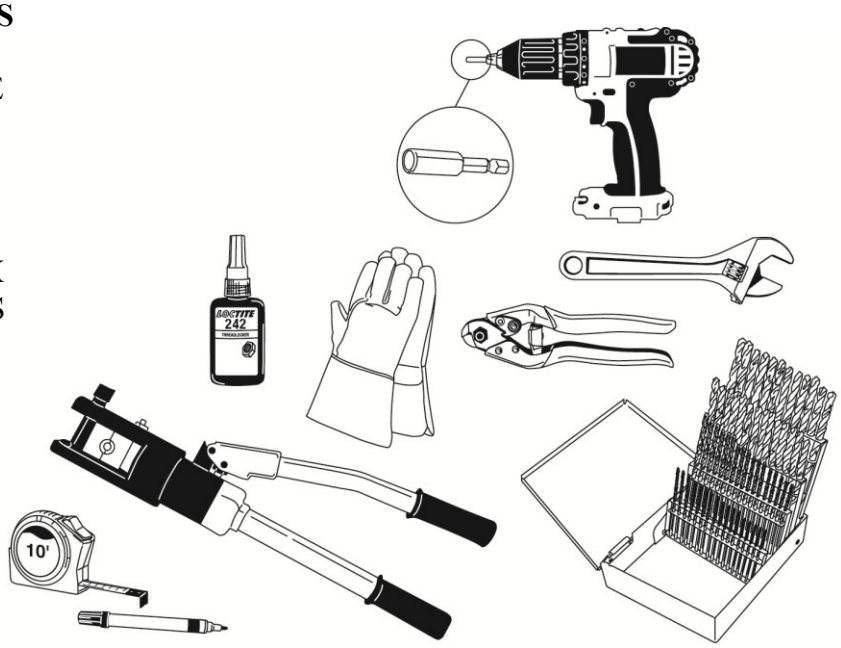
8. REINSTALL FineLine® BUTTON TURNBUCKLE/SWAGE BUTTON END TO POST 2
9. TENSION THE CABLES

FOLLOW THESE INSTRUCTIONS TO INSTALL CABLE AND FITTINGS

**Just follow these simple steps:**

## 1. NECESSARY TOOLS

1. MEASURING TAPE
2. CABLE CRIMPERS
3. CABLE CUTTERS
4. LOCTITE™
5. DRILL
6. DRILL BITS INDEX
7. LEATHER GLOVES
8. WRENCH
9. BLACK MARKER





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## 2. LAYOUT

Fig 1

Determine where the cable will start and stop (ie; Sections). Reference the color-coded layout sheet (Fig 1) if it was included with these instructions.

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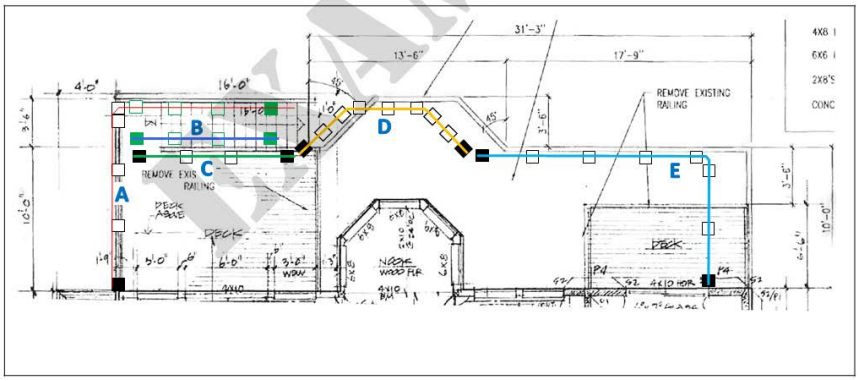
**PROJECT LAYOUT**

**Customer Name:** John Smith **Estimate Date:** Sep 5, 2014

| Cable Run by Letter | 1X19 1/8" CABLE: Cable Length(FT) | Cable Length(IN) | # of cable runs | TOTAL CABLE LENGTH (Includes 6in overage per strand) | CABLE FITTINGS: Selection 1: Field Tensioner 1/8" | Field Terminal 1/8" | Acorn/Hex/Washer 1/8" | selection 2 | additional: 360deg Tapered Stair Washer 1/8" | POSTS: 36 in WHITE: Terminal Post w/Holes | Intermediate Post w/Holes | DECK MOUNT: Terminal Post NO Holes | Intermediate Post NO Holes | 3/8x4in Lag Screws | Hinged Screw Cover & 3/8 Washer | TOP RAIL / POST-TO-POST RAIL: WHITE RECTANGULAR: # Feet of Top Rail | # Feet of Snap Cover | Splice | 90° Angle Corner | Custom Angle Corner | Rail End Cap |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 37 | | 11 | 412 FT 6 IN | 22 | | 22 | | 11 | 1 | 5 | 1 | 2 | 36 | 36 | 37 | 37 | | 1 | | 2 |
| B | 15 | | 11 | 170 FT 6 IN | 11 | 11 | 22 | | 22 | | | 2 | 2 | 16 | 16 | 15 | 15 | | | | 2 |
| C | 11 | | 11 | 126 FT 6 IN | 11 | 11 | 22 | | | 2 | 2 | | | 16 | 16 | 11 | 11 | | | 1 | 1 |
| D | 18 | | 11 | 203 FT 6 IN | 11 | 11 | 22 | | | 2 | 7 | | | 36 | 36 | 18 | 18 | | | 3 | |
| E | 27 | 9 | 11 | 310 FT 9 IN | 11 | 11 | 22 | | | 2 | 6 | | | 32 | 32 | 28 | 28 | | 1 | | 1 |
| F | | | | | | | | | | | | | | | | | | | | | |
| G | | | | | | | | | | | | | | | | | | | | | |
| H | | | | | | | | | | | | | | | | | | | | | |
| I | | | | | | | | | | | | | | | | | | | | | |
| TOTAL CABLE: | | | | 1224 FT | 66 | 44 | 110 | | 33 | 7 | 20 | 3 | 4 | 136 | 136 | 109 | 109 | | 2 | 4 | 6 |
| Total Lineal Feet: | | | | 108.750 | | | | | | Cable Cutter | | | | N | | Top Rail 20' Sticks: | | 6 | | Snap Cover 20' Sticks: | 6 |
| | | | | | | | | | | Cable Crimper | | | | N | 1/8" | | | | | | |




EXAMPLE

## 3. HOLE DRILLING

Do you need to drill holes for the cables? (Fig.2)

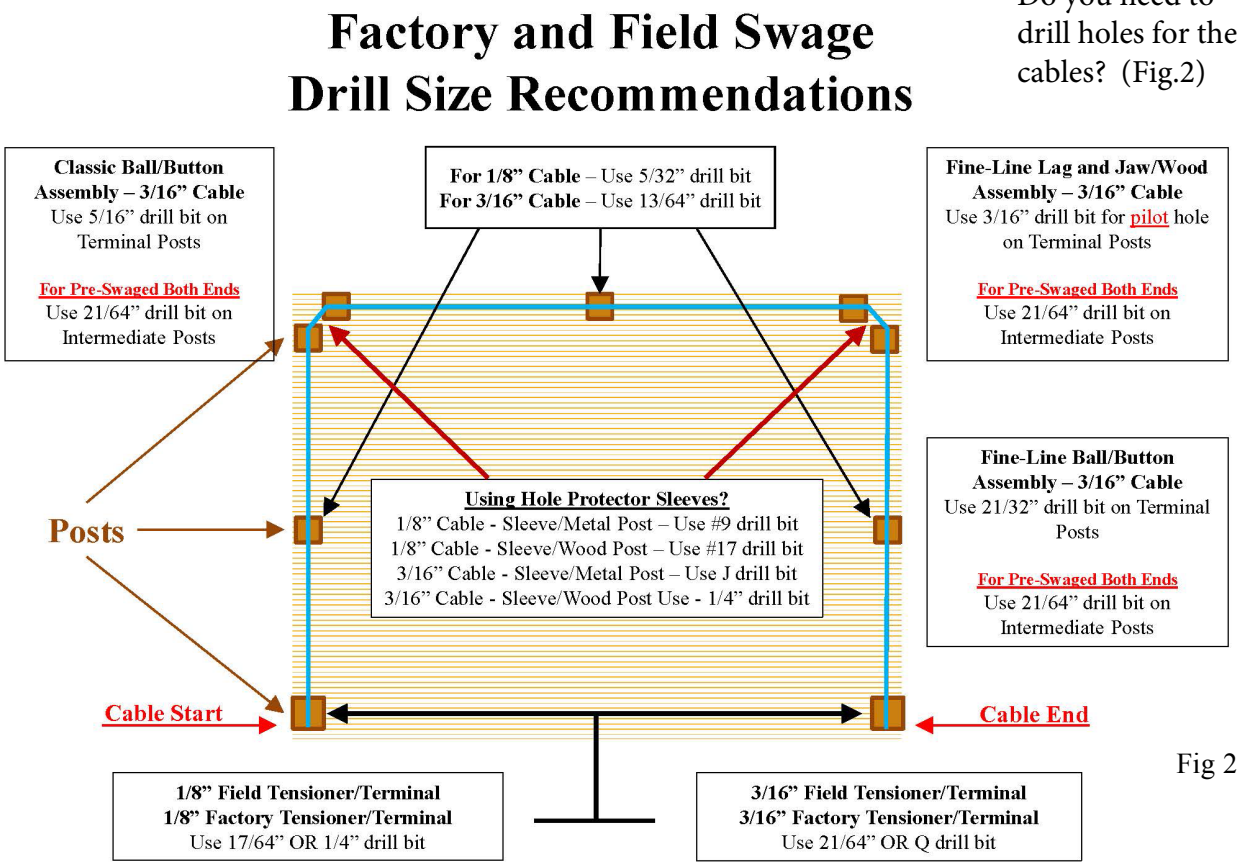



Fig 2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## 4. MEASURE/CUT CABLE ASSEMBLY

4.1 Doing only one section at a time, measure (Fig. 3) overall length from outside face of the beginning post (AKA terminal/end post) to the outside face of your ending post face.

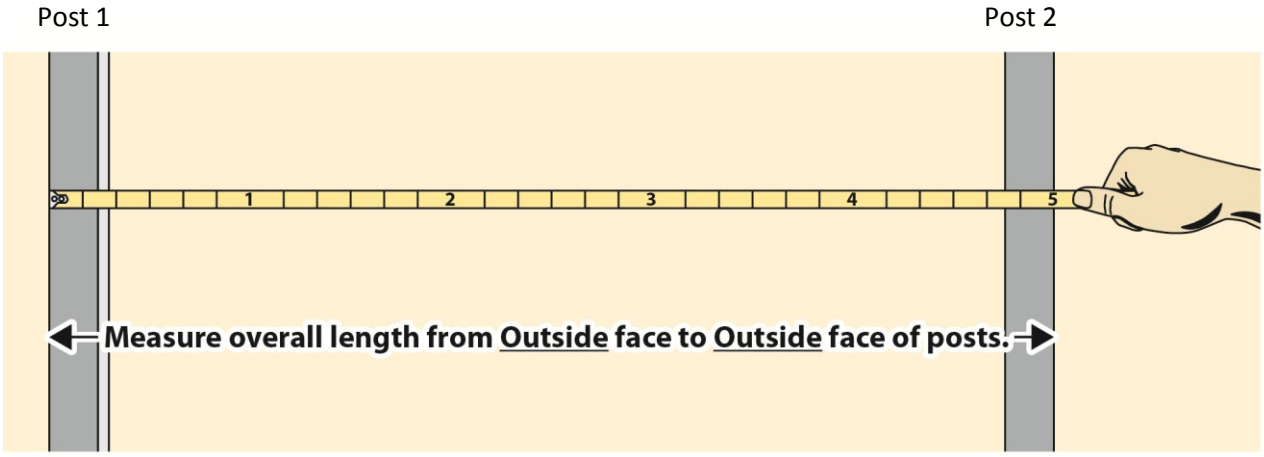



Fig 3

4.2 Using this measurement, unroll enough cable from the spool to complete one cable assembly. Add an extra 3" – 6" to make sure the cable is long enough and to make it easier to work with. Cut to this length using the recommended Cable Cutters or a Hand Grinder.

## POSSIBLE FITTING COMBINATIONS

Fig 4 **FineLine® Button Turnbuckle (ref. #1)/Swage Button End (ref. #2)**

Fig 5 **FineLine® Button Turnbuckle (ref. #1)/FineLine® Button Turnbuckle (ref. #2)**

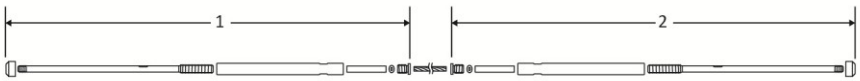
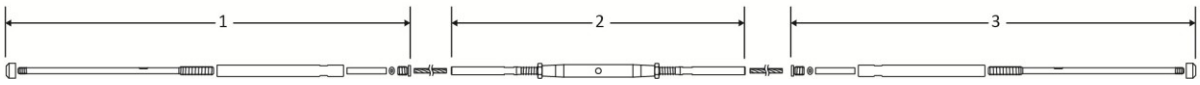



Fig 6 **FineLine® Button Turnbuckle (ref. #1)/FineLine® Inline Turnbuckle (ref. #2)/FineLine® Button Turnbuckle (ref. #3)**





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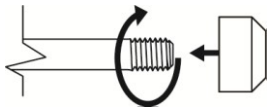
## 5. CRIMP FITTING ON ONE END OF CABLE

5.1 Attach a fitting, either a FineLine® Button Turnbuckle or Swage Button End, depending on the design, to one end of the cable using the Cable Crimper.

**NOTE:** Individual components may need assembly (Fig. 7).

**SWAGE BUTTON END COMPONENTS**



**FineLine® BUTTON TURNBUCKLE COMPONENTS**

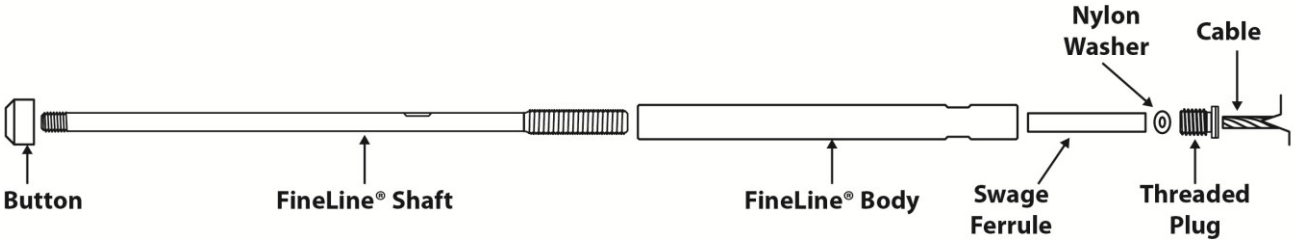



Fig 7

**CRIMPING INSTRUCTIONS FOR SWAGE BUTTON END**

– Insert cable into fitting all the way
– Using a black marker, mark the cable to provide a visual reference that the cable remains fully seated down inside the fitting and does not slip out (Fig. 8).

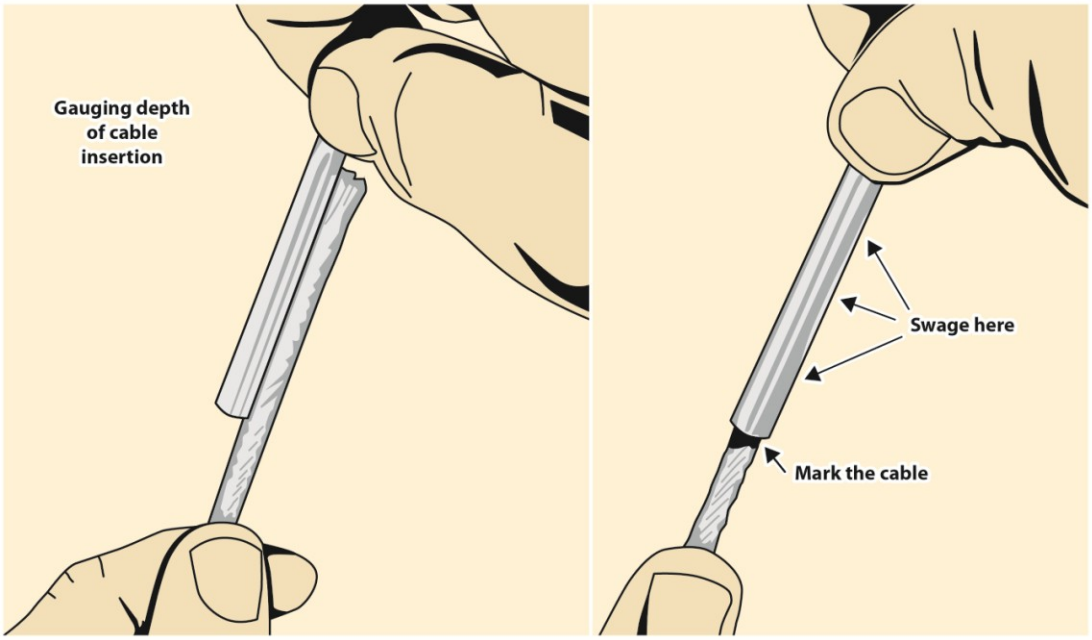



Fig 8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**CRIMPING INSTRUCTIONS FOR FineLine® TURNBUCKLE**
– Grasp cable end and push the following sequence of components onto the cable (Fig. 9).

1. Threaded Plug
2. Nylon Washer
3. Swage Ferrule

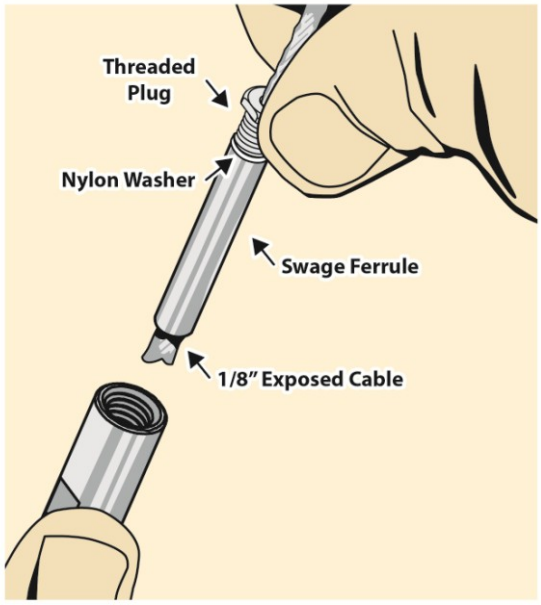


Fig 9

a) Turn the knob on the Cable Crimper counterclockwise to open the jaws and position the fitting 1/8" from the end of the fitting (Fig. 10).

b) Turn knob clockwise and pump the handle consecutive times until the two die halves nearly touch. **WARNING:** Only firm handle pressure is needed to close the die halves. Applying excessive force to the tool will result in damage.
c) Reposition the dies ¼" further along the fitting and repeat crimping process for a total of three crimps.

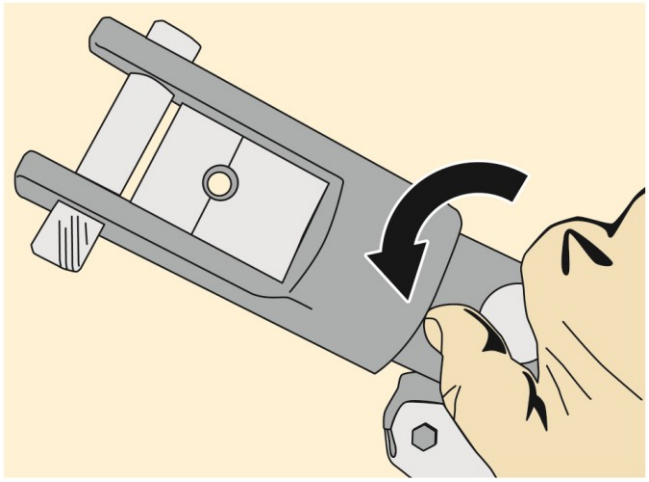

Fig 10


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## 6. INSTALL FineLine® BUTTON TURNBUCKLE/SWAGE BUTTON END WITH ATTACHED CABLE TO POST 1

(See Fig. 3)

a) Insert FineLine® Button Shaft/Swage Button End Shaft through the 3/8" drilled hole on Post 1. Apply Loctite™ to the threads (Fig. 11) and screw on the button which will rest on the outside face of the post (Fig. 12).

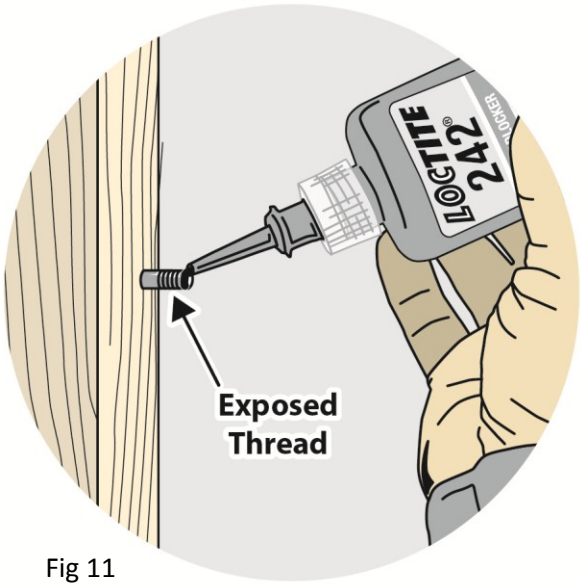


Fig 11

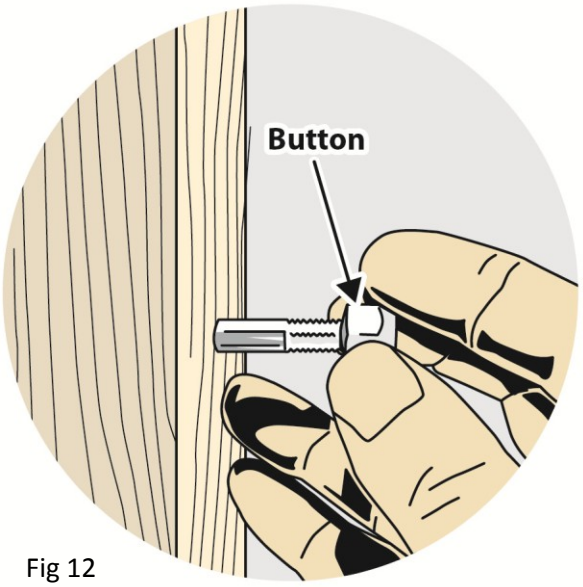


Fig 12

**NOTE:** If using a FineLine® Button Turnbuckle (Fig. 4 Ref #1), screw on the FineLine® Body 3-4 turns to allow cable tightening once installed.

b) Lace cable through intermediate posts (Fig. 13).

**NOTE:** If using an Inline Turnbuckle (Fig. 6 Ref #2), determine desired position in the cable run and cut cable accordingly.

**NOTE:** If using Hole Protector Sleeves, install these prior to lacing the cable through the intermediate posts. Reference (Fig. 2) for drill size recommendations.

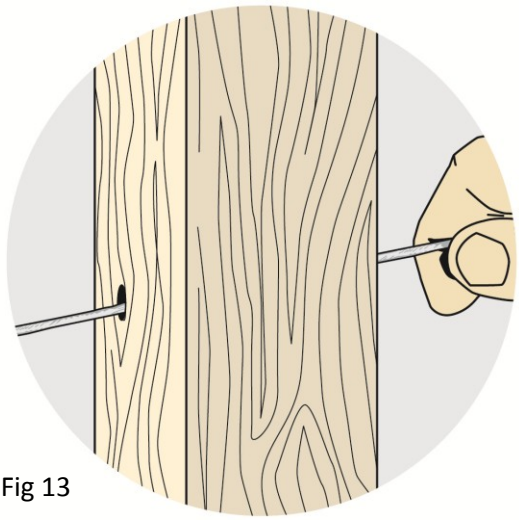

Fig 13


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## 7. DETERMINE & CUT CABLE TO FINAL LENGTH & CRIMP

### PROCEDURE FOR SWAGE BUTTON END

– Insert a piece of cable into the receiver end of the Swage Button End (Fig. 14) and mark on the fitting that indicates how far the cable penetrates.

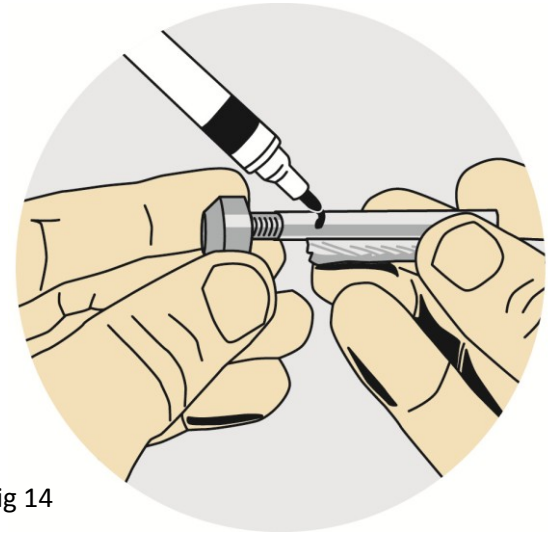

Fig 14

– Position the Swage Button End on the outside face of the post, pull all slack out and hold cable adjacent to the Swage Button End. Mark the cable where it matches mark on the Swage Button End (Fig. 15). Cut cable to its final length (Fig. 16).

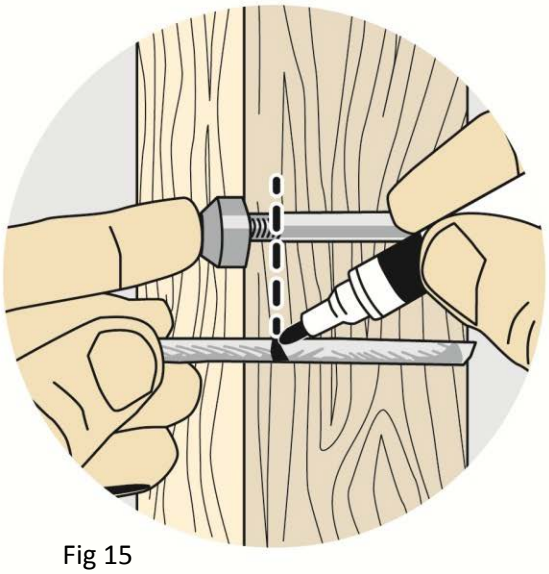

Fig 15

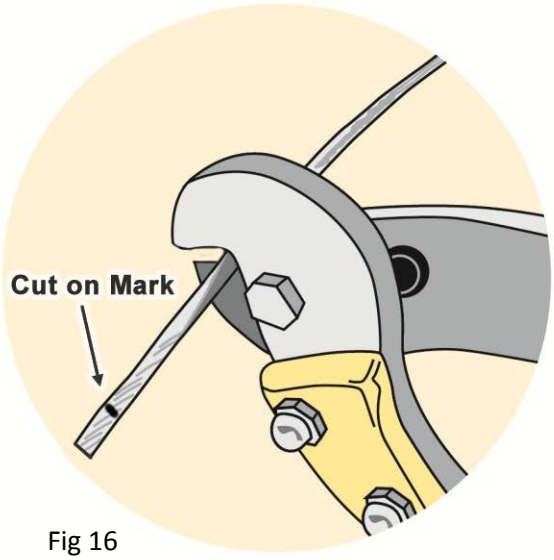


Fig 16


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**PROCEDURE FOR FineLine® BUTTON TURNBUCKLE**

– Refer to Fig 9.
– Perform step 6a. Screw FineLine® Body onto FineLine® Shaft 3-4 times (Fig. 7).
– Screw on the FineLine® Threaded Plug (Fig. 9).
– Pull all slack out and mark the cable the exact spot where it enters the FineLine® Threaded Plug (Fig. 17).
– From your mark, add 2 3/8" and mark the cable again (Fig. 18).
– Cut cable to its final length (Fig. 16).

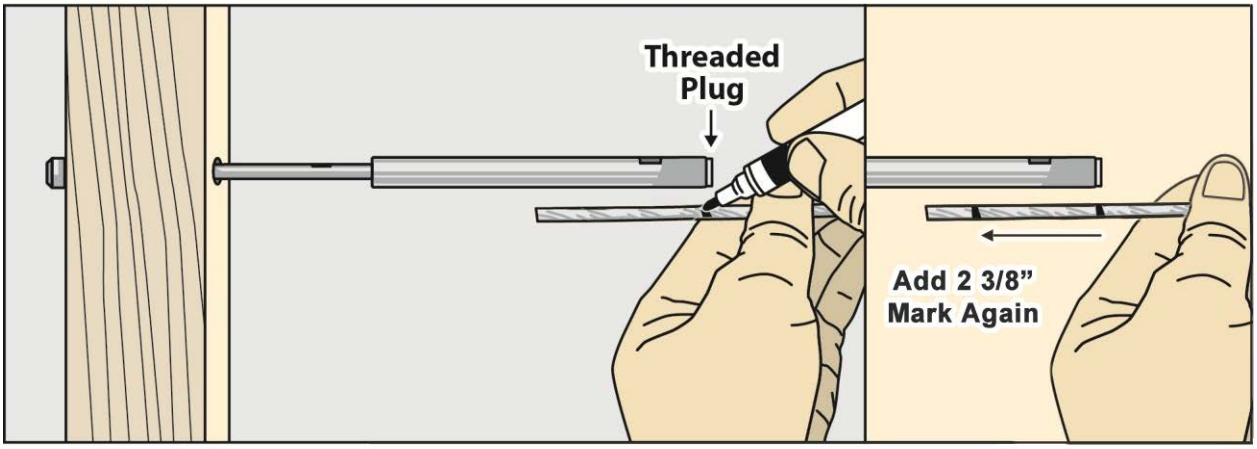


Fig 17




Fig 18

– Remove FineLine® Button Turnbuckle/Swage Button End and place on the deck surface. Do not unlace from intermediate posts. Crimp on fitting following Step 5 procedure.

## 8. REINSTALL FineLine® BUTTON TURNBUCKLE/SWAGE BUTTON END TO POST 2

## 9. TENSION THE CABLES

Turn FineLine® Body clockwise to tighten cable (Fig. 19). Start tightening the middle cable first, then tighten cables above and below in an alternating sequence until all cables have been tensioned.

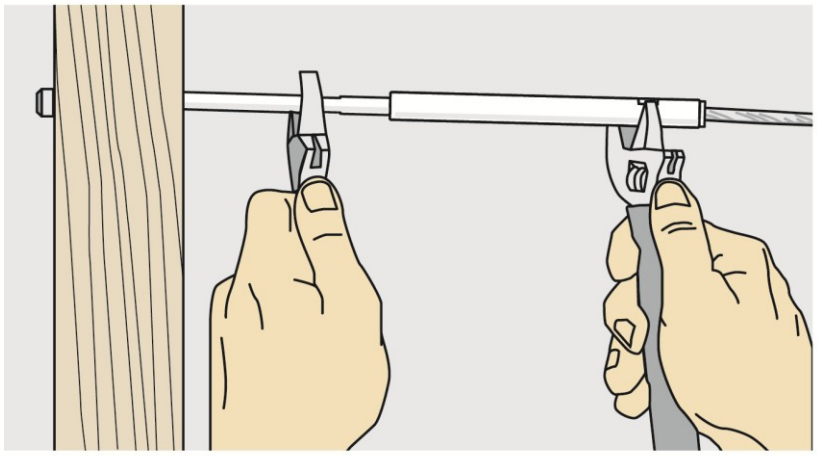

Fig 19


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# Marine-Grade Stainless Steel Maintenance and Cleaning Procedures

Cable Railing Direct offers Marine-Grade Stainless Steel Cable Infill that boasts high resilience with little maintenance. The material is in and of itself corrosion resistant thanks to a thin "passive layer" of alloying elements that forms on the surface of stainless steel. While this protective layer is strong enough to withstand typical wear and tear, it's not impervious.

We want our customers to get the most out of their cable railing and encourage periodic maintenance to keep cable infill clean, beautiful, and strong for years to come. This is especially important for exterior applications, particularly those in harsh outdoor environments exposed to salt water, industrial pollutants, de-icing salt spray, atmospheric dirt, traffic film, etc.

Here are some simple procedures to keep your cable infill good as new. See Page 2 for warnings and coastal environment procedures.

**General Cleaning:**

Remove finger prints and other marks generated from daily use as needed. Apply mild soap and water or glass cleaner to area using a clean cotton cloth or chamois. Rinse clean with water and dry completely.

**Oil, Grease, and Residue Cleaning:**

Remove oil, grease, or residue left from other cleaning materials (such as floor cleaner or polishing detergents) as soon as possible. Apply alcohol-based products (including methylated spirit and isopropyl alcohol) or other solvents (such as acetone) several times using a clean, non-scratching cotton cloth until all traces have been removed. Use Scotch Brite if necessary. Rinse clean with water and dry completely.

**Paint and Graffiti Cleaning:**

Remove as needed using proprietary alkaline or solvent-based paint strippers. Apply chosen cleaning solvent several times with a clean, non-scratching cotton cloth until all traces of paint have been removed. Use Scotch Brite if necessary. Rinse clean with water and dry completely.

**Salt Film and Environmental Deposit Cleaning:**

Preform cleaning regularly in consideration of environmental conditions and the rate of deposit build up. Use a clean cotton cloth with Citrisurf solution (available in our store) to remove contamination. Apply cleaner evenly across cables to avoid a patchy appearance. Rinse clean with water and dry completely. Use Scotch Brite if necessary.

## WARNINGS & TIPS

- Avoid use of the following products, as they will harm your cables:
    - Chloride-containing cleansers
    - Hypochlorite bleaches. Should accidental contact occur, rinse off immediately with copious amounts of fresh water.
    - Muriatic acid (commonly used to clean up tile/concrete installations)
    - Silver-cleaners
    - Scouring powders
    - Hard scrapers or knives
    - Non-stainless steel based scouring pads, cleaning wool, or wire brushes
    - Any cleaning utensils that have been used on “ordinary” (carbon) steel, as this may result in iron particle “cross-contamination”

- Do not leave stainless cables or fittings in contact with steel, iron, or any other metals, as this will cause rusting due to free-iron transfer. If your frame is made of a material other than stainless steel, use protective grommets or sleeves (which can be found in our store) to keep the metals from coming into contact.

## COASTAL ENVIRONMENT MAINTENANCE

- Due to the regular high-salt content of oceanfront air, properties in these environments are encouraged to use our **Boshield T-9** for their cables, fittings, and/or stainless steel frame, in addition to the general maintenance procedures mentioned above.

- Clean stainless steel during initial installation and regular maintenance. We recommend this maintenance be done quarterly or as needed, and that any stains or rust spots obtained through daily use be removed immediately. Always reapply Boshield T-9 once stainless steel is clean and dry.

Please follow these procedures to get the most out of your stainless steel cable infill by Cable Railing Direct. If you have any questions, call us any time at 1-855-820-8439.