

Installation Instructions

Disconnectable Splice with Sacrificial Cap

CONTENTS:

BUS Kit "CH", "CY", or "I" Splice, Sacrificial Cap, Lubricant and Instruction Sheet

HP Kit: "CH", "CY", or "I" Splice, Sacrificial Cap, Lubricant, Instruction Sheet, Receptacle Housings, Nylon Rod and Hardware Prepacks (Bolt, Washer and Belleville Washer)

Complete Kit: "CH", "CY", or "I" Splice, Sacrificial Cap, Lubricant, Instruction Sheet, Receptacle Housings, Nylon Rod, Cable Adapters, Retaining Rings, Spade Contacts and Hardware Prepacks (Bolt, Washer and Belleville Washer)

These splices are designed to splice and tap solid dielectric type cables rated for 600 ampere at 28kV and includes a receptacle sacrificial cap that can be cut with a hydraulic cutting and grounded tool to confirm that the circuit is de-energized.

DANGER

All apparatus must be de-energized during installation or removal of part(s).

Do not touch or move energized products in the work area.

These instructions do not attempt to provide for every possible contingency.

Failure to follow these instructions will result in damage to the product and serious or fatal injury.

This product should be installed only by competent personnel trained in good safety practices involving high voltage electrical equipment. These instructions are not intended as a substitute for adequate training or experience in such safety practices.

All apparatus must be installed and operated in accordance with individual user, local and national work rules and electrical standards.

For loadbreak products follow operating instructions. All deadbreak connectors must be de-energized before operating. All 200A deadbreak connectors must be mechanically secured with bails when connected.

If this product is supplied with a protective shipping cover(s), remove this shipping cover(s) and replace with the appropriate HV insulated cap(s) or connector(s) before submerging or energizing the circuit.

Inspect parts for damage, rating and compatibility with mating parts.

Excess distortion of the assembled product may result in its failure.

FOR MORE INFORMATION ON PARTS, INSTALLATION RATINGS AND COMPATIBILITY, CALL THE NEAREST ABB INSTALLATION PRODUCTS INC. OFFICE.

For installation on other cable constructions call the nearest ABB office.

Limited Warranty:

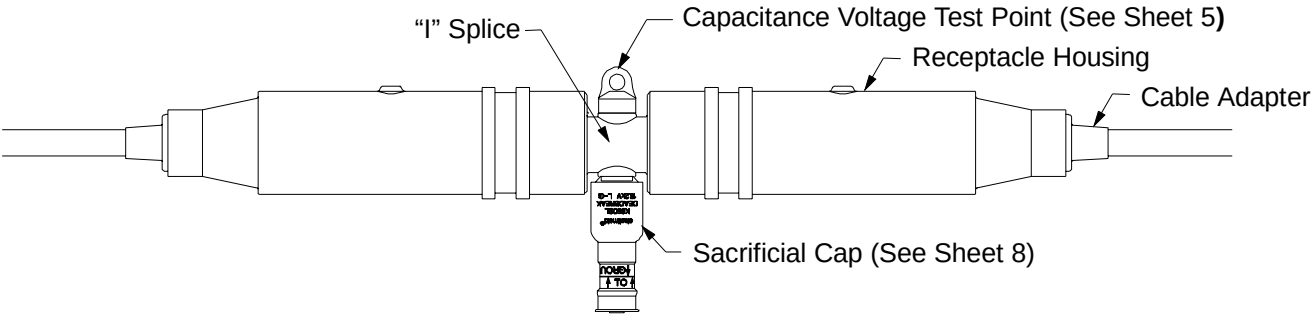
1. ABB Installation Products Inc. warrants that its products will be free from defects in materials or workmanship for a period of two (2) years, except for tools which are warranted separately (see warranty accompanying those products). Fisher Pierce[®] products and Elastimold[®] Reclosers are warranted for three years; and Joslyn t VBT and VBU capacitor switches are warranted for four years or 40,000 operations whichever occurs first. Upon prompt notification of a warranted defect, ABB Installation Products Inc. will, at its option, repair or replace the defective product.
2. In no event shall ABB Installation Products Inc. be liable for any consequential, indirect or special damages, nor will ABB Installation Products Inc. be liable for transportation, labor, or other charges arising out of the removal or reinstallation of its products. Liability for breach of warranty is limited to the cost of repair or replacement of the warranted product only.
3. Misuse, misapplication or modification of ABB Installation Products Inc. products immediately voids all warranties.

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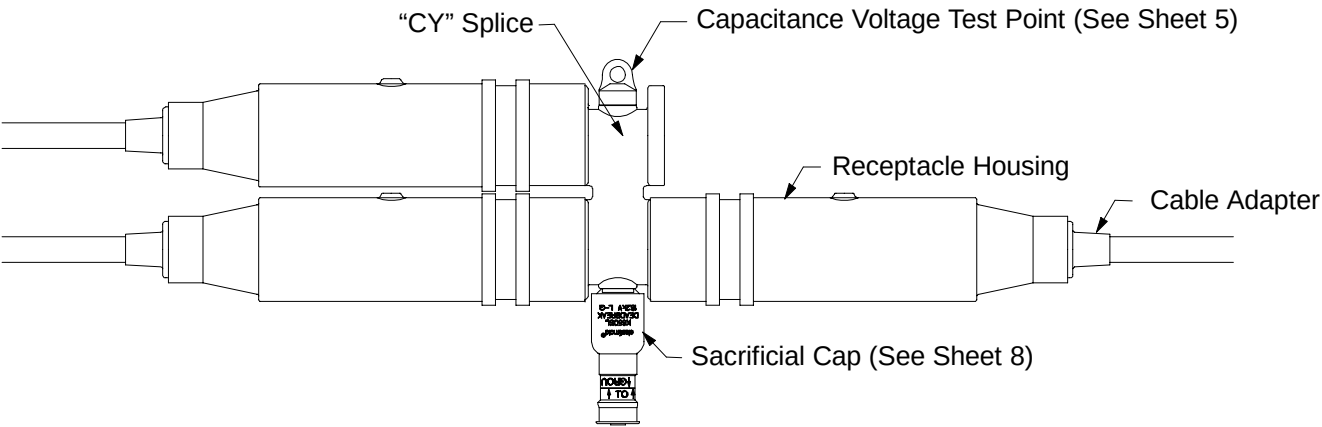
IMPORTANT

1. Check contents of package to ensure they are complete and undamaged.
2. Check all components to ensure proper fit with cable and/or mating products.
3. Read entire installation instructions before starting.
4. Have all required tools at hand and maintain cleanliness throughout the procedure.

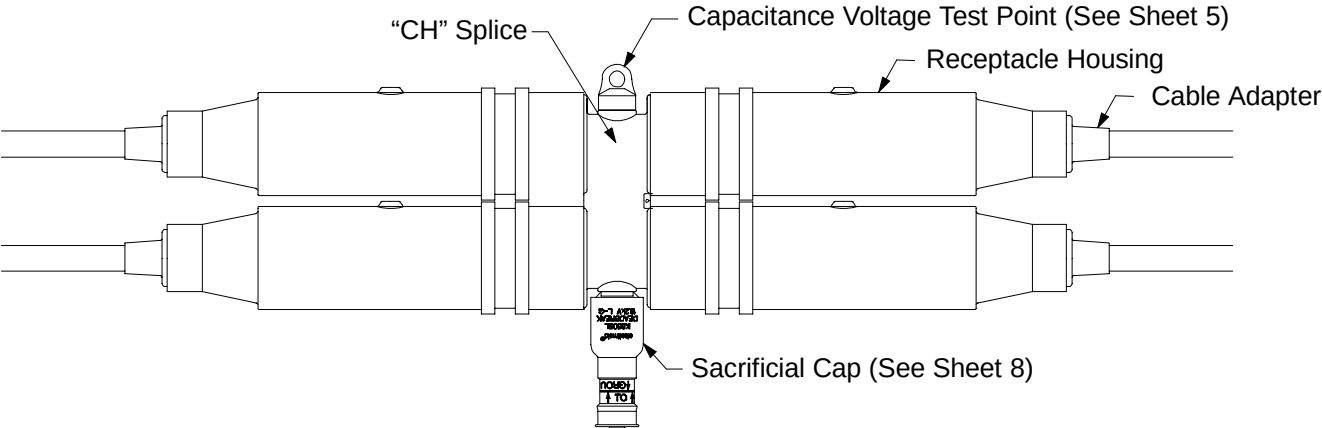
“I” Splice



“CY” Splice



“CH” Splice



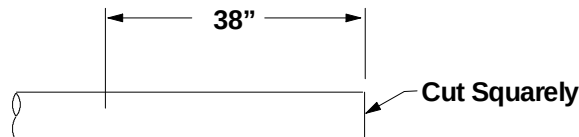
GENERAL INSTRUCTIONS

These instructions illustrate the installation of one leg of the "I", "Y" or "H" connector. A complete installation requires repeating the instructions for the total number of cables required (two for the "I", three for the "Y" and four for the "H").

These instructions are applicable to concentric neutral cables and flat metallic shielded cable with semi-con shield.

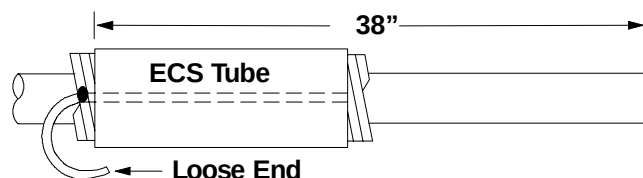
STEP 1

Cut cable end square and wipe outer jacket clean 38" from cut end.



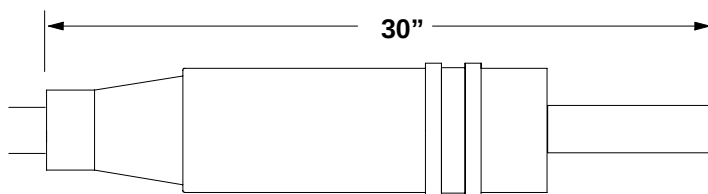
STEP 2

If an ECS grounding device is being used, slide the tube on to the cable a distance of 38" from cut end.



STEP 3

Slide receptacle housing onto the cable a distance of 30" from cut end.



STEP 4

REFER TO THE SPECIAL CABLE PREPARATION SUPPLEMENT INCLUDED WITH THESE INSTRUCTIONS AND FOLLOW THE PROCEDURE FOR THE TYPE OF CABLE BEING USED.

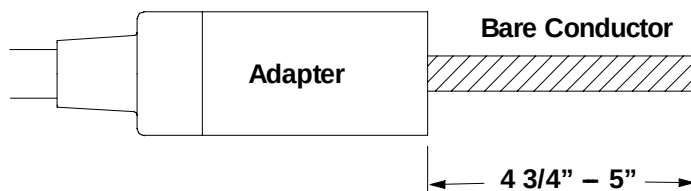
PART A - Jacketed Concentric Neutral Cable (page 5)

PART B - Flat Metallic Tape Shielded Cable with Semi-con Shield (page 6)

STEP 5

Remove the protruding cable insulation by cutting it even with the end of the cable adapter. Do not cut or nick the cable adapter or the conductor. The length of exposed conductor should be $4 \frac{3}{4}$ " - 5". Otherwise redo assembly.

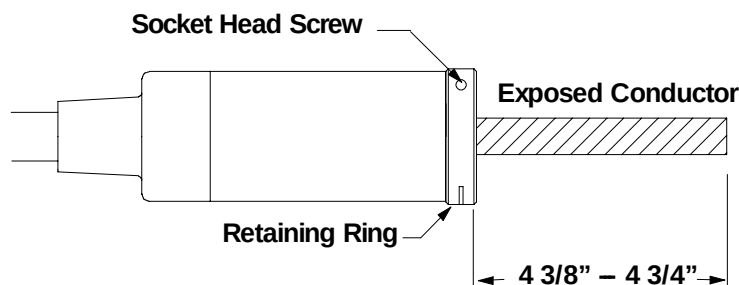
NOTE: If you are using stripping tools that will not allow you to cut off the cable insulation with the cable adapter in place, you can mark the cable with the cable adapter on, remove the cable adapter, skive the cable and reinstall the cable adapter.



STEP 6

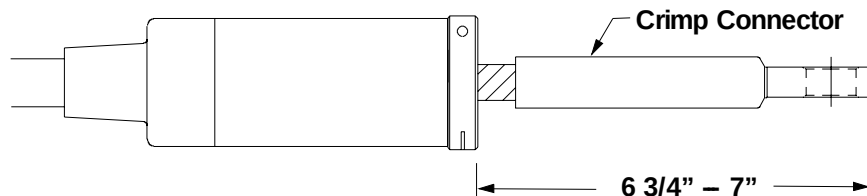
Assemble aluminum retaining rings over conductor and snug firmly against cable adapter. Using the hex wrench provided tighten the socket head screw hand tight.

Measure the exposed conductor to confirm it is the range of $4 \frac{3}{8}$ " - $4 \frac{3}{4}$ ".



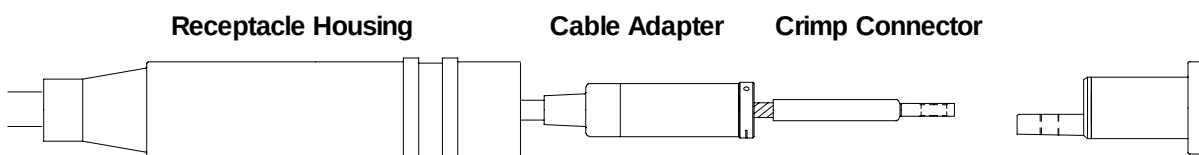
STEP 7

Remove the protective cap from the crimp connector. If using aluminum cable, wire brush the conductor and immediately insert into the crimp connector containing inhibitor. *Make sure conductor is fully inserted into the crimp barrel.* Measure the distance from the end of the connector to the holding collar. If the distance is over 7" (17.8cm) do not proceed. Recheck all previous work.



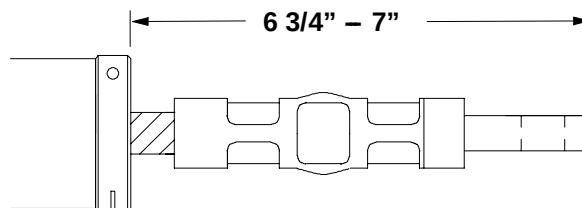
STEP 8

As a final check prior to crimping the connector, all components on all cables should be positioned as shown below. **CHECK THAT THE BOLT HOLES IN THE CRIMP CONNECTORS ARE POSITIONED PROPERLY TO ALIGN WITH THE BOLT HOLES** of the mating part.



STEP 9

Crimp the connectors following the instructions packaged with the connectors. *Rotate each crimp 90 or 180 degrees. After crimping, measure the distance from the end of the connector to the holding collar. If the distance is over 7" do not proceed. Recheck all previous work.*

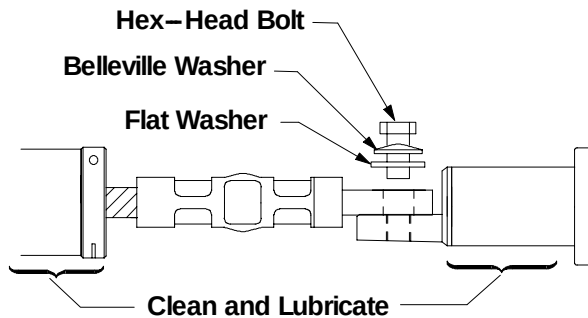


STEP 10

Repeat Steps 5 (page 2) through 9 for the remaining cables to be joined.

STEP 11

Assemble the washers and bolt in the following order: flat washer against spade contact, Belleville washer (concave side down), and hex-head bolt. Hand tighten all the bolts. The splice and cables are now in their final positions. *Do not attempt to move or reposition any part of the assembly after the bolts are tightened.*



STEP 12

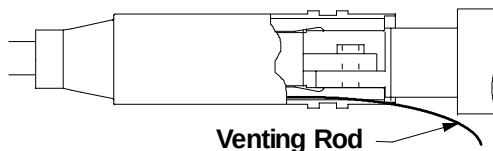
Using a torque wrench with a $15/16"$ socket, tighten all bolts to 50 to 60 ft. lbs.

STEP 13

Apply supplied lubricant or ELASTIMOLD approved lubricant generously to the outside of the cable adapter, the area of the splice section as shown in step 11 and the inside mating surface of the receptacle housing.

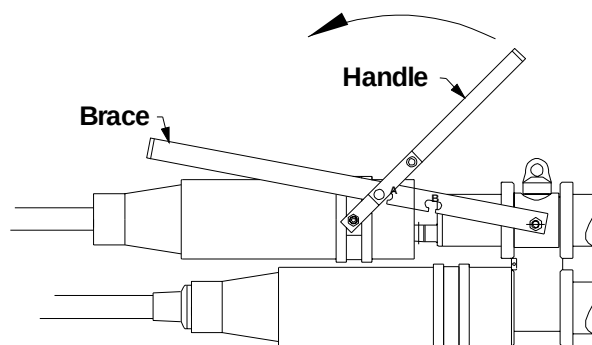
STEP 14

Slide the receptacle housing over the cable adapter and up to the position shown. Insert the nylon venting rod (supplied).



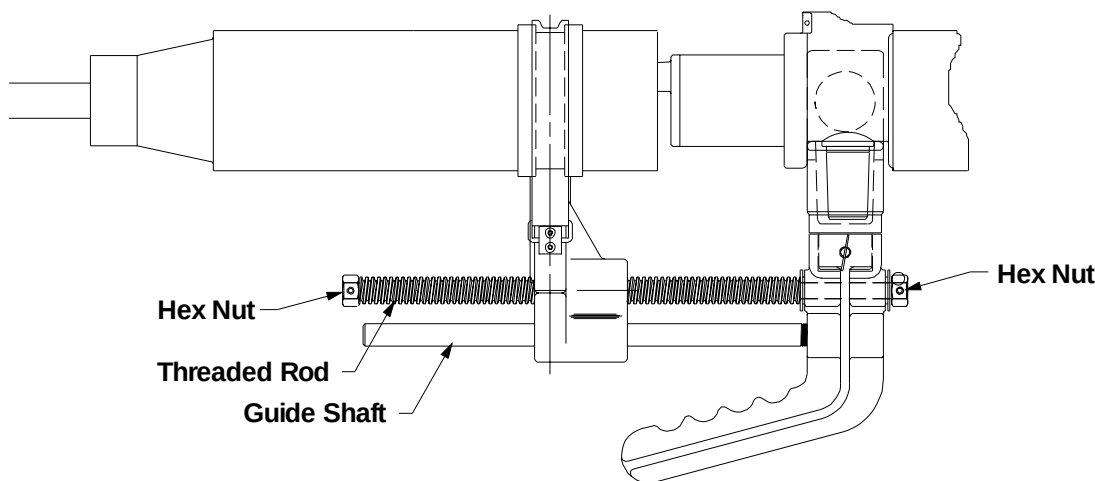
STEP 15A - USING THE 600YADT-2 ASSEMBLY TOOL

See instruction sheet IS-1307 (IS-600YADT-2).



STEP 15B - USING THE 600RRT-2 ASSEMBLY TOOL

See instruction sheet IS-1333 (IS-600RRT-2)



STEP 16

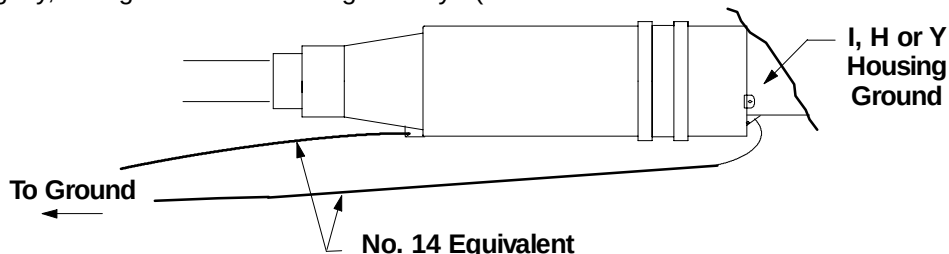
Repeat Steps 14 through 15 for the remaining cables.

STEP 17

Check all cable adapters to make sure they are located properly and remove all vinyl tape markers.

STEP 18 - Grounding

1. Complete installation of ECS grounding device following instructions included with the grounding device.
2. Connect a short length of wire (No. 14 AWG, copper or equivalent) to the grounding eyes of the housings. Make a small loop and twist tightly, taking care not to damage the eye (DO NOT use one of the concentric neutral wires).



VOLTAGE TEST

The ELASTIMOLD deadbreak connector is equipped with an integral capacitance test point that can be used to establish whether or not the circuit is energized. When using the test point, complete the following steps:

1. Remove test point cap with a hotstick. When removing cap, PEEL OFF AT AN ANGLE rather than pulling directly in line with the test point assembly.
2. **WARNING:** THE VOLTAGE TEST POINT IS A CAPACITANCE DEVICE, IT IS NOT DIRECTLY CONNECTED TO THE CONDUCTOR. Do not use conventional voltage measuring equipment. Follow the manufacturer's directions for the meter that is used. Test with a suitable sensing device, made for use with separable connectors manufactured with capacitive test points, to determine if cable is energized. Contamination, moisture, dirt, etc. around the test point or use of the wrong measuring equipment can provide a false "no voltage" indication on an energized elbow. To prevent serious or fatal injury, treat the elbow as energized until the "no voltage" test point indication is confirmed by other means.
3. After voltage detection has been made, clean and lubricate the inside surface of the cap with supplied lubricant and replace cap on the test point.

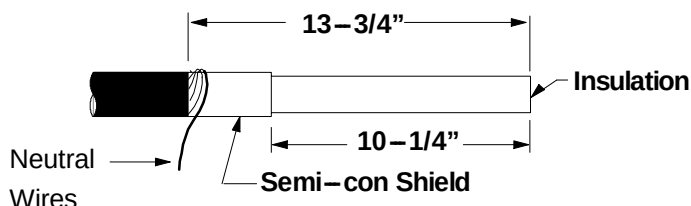
PART A

The jacket removal and neutral wire bending distances are required if a 200 or 600 ECS kit is being installed. If a different grounding device is to be used, jacket removal and neutral wire training may be different. Refer to instructions packaged with that grounding kit.

Jacketed Concentric Neutral Cable

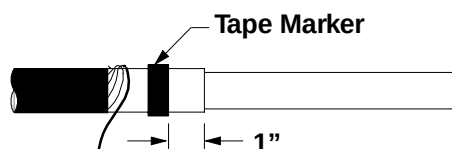
STEP 1

From the end of the cable, measure 13-3/4". Remove the cable jacket to that point with a straight smooth, square cut. Take care not to damage the neutral wires. Bend the neutral wires back and out of the way. From the end of the cable, measure 10-1/4" with a straight, smooth, "squared" cut remove insulation shield (semi-con). Take care not to cut or nick the insulation.



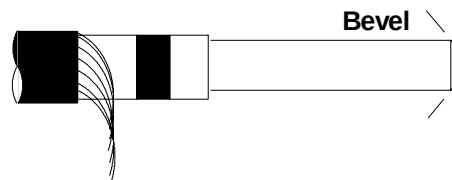
STEP 2

At a point 1" from the end of the semi-con shield wrap two turns of tape to serve as a marker.



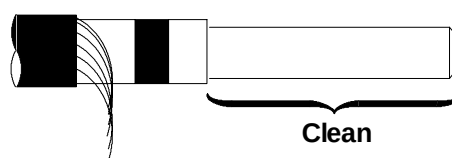
STEP 3

Bevel the end of the insulation at a 45 degree angle, approximately 1/4" back.



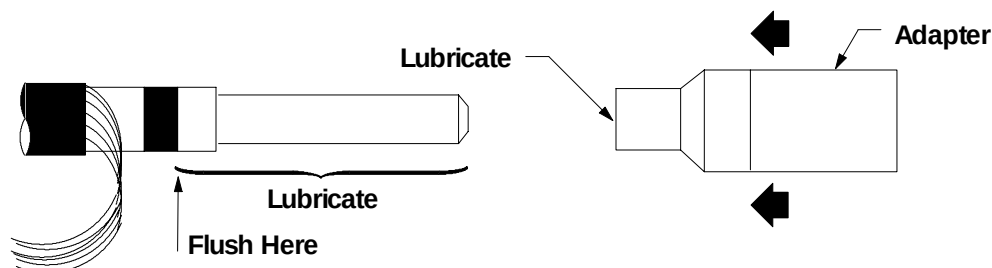
STEP 4

Thoroughly clean the insulation to remove all traces of semi-conducting residue. This may be done by wiping with a rag soaked with an approved safety solvent. Always wipe from the end of the cable toward the outer jacket.



STEP 5

Apply supplied lubricant or ELASTIMOLD approved lubricant sparingly along cable as shown. Lubricate the inside of the cable adapter. Slide the adapter, small end first, over the cable with a twisting motion until the end of the adapter is *flush* with the tape marker.



STEP 6

Refer to Steps 5 (page 2) through 18 of the General Instructions.

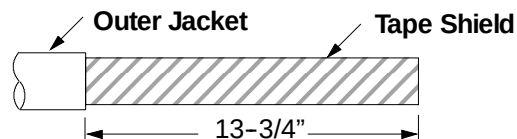
PART B

The jacket and tape shield removal distances are required if a 200 or 600 ECS-G3 kit is being installed. If a different grounding kit is being used, jacket and tape shield removal may be different. Refer to instructions packaged with that grounding kit.

Flat Metallic Tape Shielded Cable with Semi-con Shield

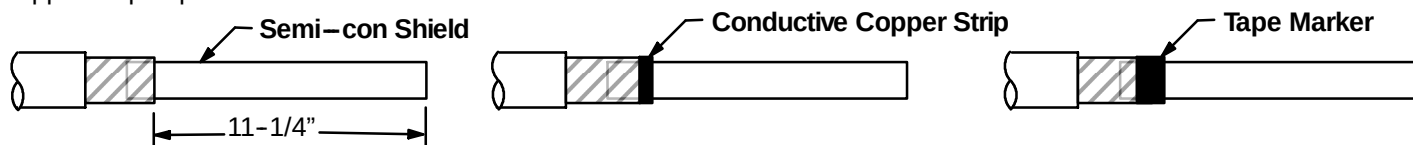
STEP 1

From the end of the cable measure 13-3/4". Remove the outer jacket to that point with a straight, smooth "squared" cut. Take care not to cut or damage the tape shield.



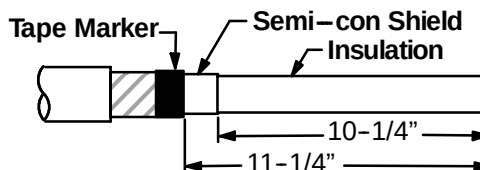
STEP 2

Measure 11-1/4" and remove the tape shield to that point. Wrap conductive copper strip around the edge to keep the copper tape shield in place. Wrap two turns of tape over the end of the tape shield and conductive copper strip, with the edge of the tape 11-1/4" from the end of the outer jacket. The tape serves as an extra support to keep the tape shield and conductive copper strip in place and also serves as a marker.



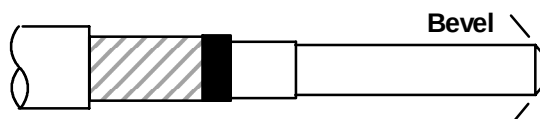
STEP 3

Measure 10-1/4" and remove the semi-con shield to that point with a straight, smooth, "squared" cut. Take care not to cut or nick the insulation.



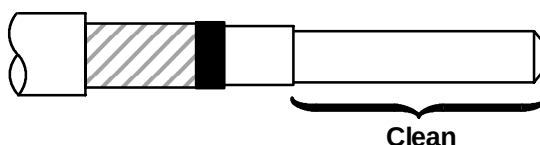
STEP 4

Bevel the end of the insulation at a 45 degree angle, approximately 1/4" back.



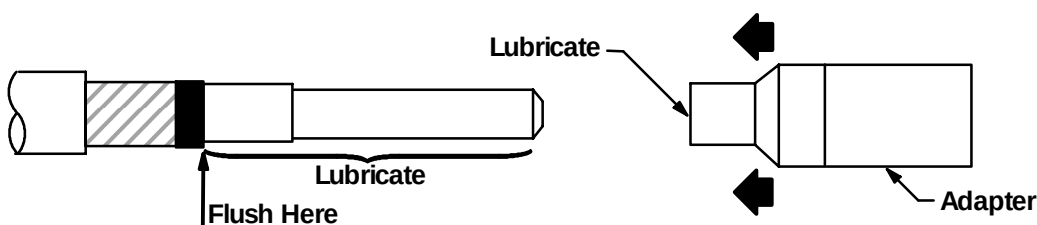
STEP 5

Thoroughly clean the insulation to remove all traces of semi-conducting residue. This may be done by wiping with a rag soaked with an approved safety solvent. Always wipe from the end of the cable toward the outer jacket.



STEP 6

Apply supplied lubricant or ELASTIMOLD approved lubricant sparingly along cable as shown. Lubricate the inside of the cable adapter. Slide the adapter, small end first, over the cable with a twisting motion until the end of the adapter is flush with the tape marker.



Assembly of Sacrificial Cap

Remove the protective shipping cap. Clean male interface, lubricate both the interface and inside the cap with lubricant supplied (See Figure A). Install the new sacrificial cap by rotating clockwise 9 to 10 turns until it stops turning. Additional torque is not required. The gap between the cap and the shoulder of the splice must be $\frac{1}{8}$ " or less. (See Figure B). Attach a 14 AWG gage wire thru the grounding eye and tighten by twisting. Attach directly to system's ground. Keep wire snug do not leave a large loop. (See Figure C).

