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Installation Instructions

JS Series I Disconnectable Joint Sleeve

Applicable Current Ratings

600A (Aluminum) | 900A (Copper)

Applicable Voltage Classes

15/25/28kV | 35kV

Applicable Catalog Prefix

15/25/28kV Class

P625JS
P925JS

35kV Class

P635JS
P935JS

For Use With the Following Cable Types

Jacketed Concentric Neutral (JCN)
 Longitudinally Corrugated Neutral (LC)
 Tape Shield Neutral





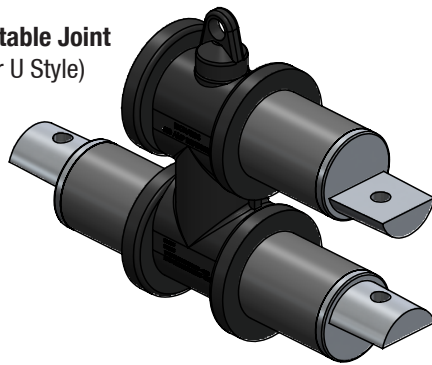
WARNING

- System must be de-energized during installation or future operation of this product or its components.
- Do not touch or move energized connectors or components by hand.
- Excess distortion of the assembled connector may result in its failure.
- Failure to follow these instructions will result in damage to the connector and serious or fatal injury.
- This product should only be installed and/or operated by trained personnel in accordance with normal and safe work procedures.
- Variations in equipment or configuration or work procedures may not be covered in these instructions.
- Please contact Richards Manufacturing for any additional questions.

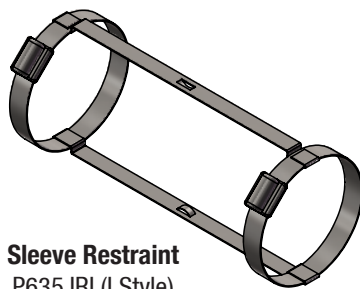
KIT CONTENTS

Standard kits may include the following. Custom kits may vary.
Check package contents to be sure they are complete, undamaged, and properly sized for the application.

Disconnectable Joint
(I, Y, H, or U Style)



Joint Sleeve



Sleeve Restraint
P635JRI (I Style)
P635JRE (E Style, Not Shown)

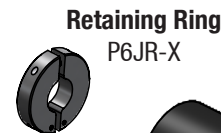


Barrier Bolt
P6JPB

OR



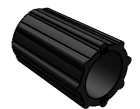
Standard Bolt
P6JP



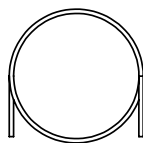
Retaining Ring
P6JR-X



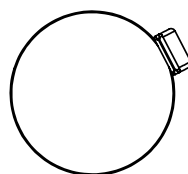
Cable Adapter & Assembly Aid
P625CA-W



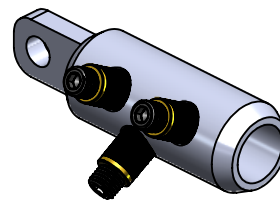
Silicone Lubricant
P6SL1



Vent Rod

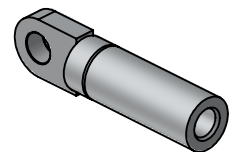


Joint Sleeve Interface Clamp
(for 35kV Only)
P635JSIC



Shear Bolt Lug
P6ALR-X

OR



Compression Lug
P6AL-X
P7ALCU-X
P9CU-X

TIP: Use To-Scale Cable Cutback Template as aid to prepare cable.

NOTE: Certain items used, such as PVC tape, may not be included.

1.1

Positioning Cable

- A. Straighten and train cable ends.
- B. Cut cables with 15" between them to allow for Bus.
- C. Clean cable jacket up to 36" from end of cable.



1.2

Parking Jacket Seal Tube

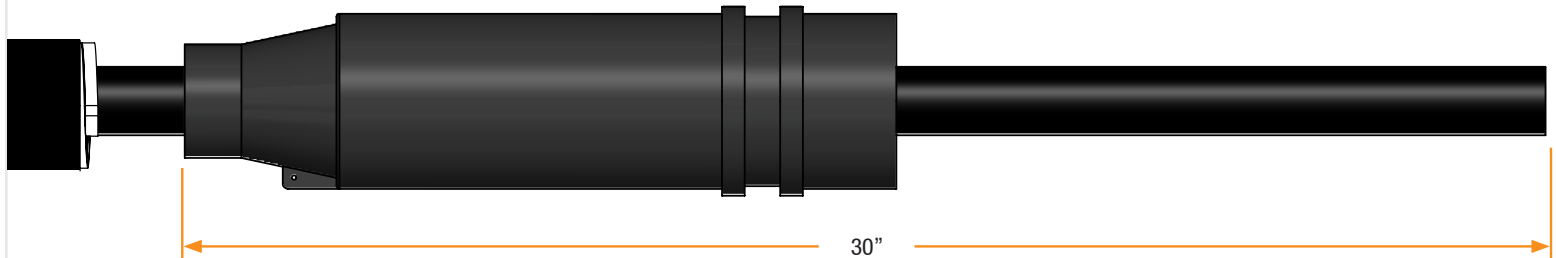
- A. Slide jacket seal tube onto cable as shown. If using a cold shrink tube, orient pull tab facing away from cable end.



1.3

Parking Joint Sleeve

- A. Slide joint sleeve onto cable approximately 30" back from the end of cable.



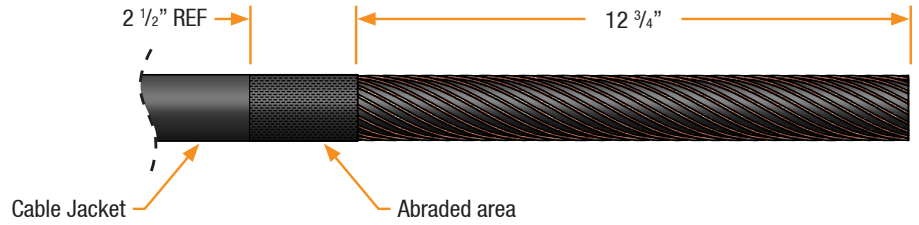
NOTE: At larger cable sizes (typically 750 kcmil and larger), parking sleeve may be difficult due to interference between cable jacket/neutrals and sleeve. If you encounter difficulty parking the sleeve, contact factory for alternative installation method.

2

Exposing Cable Shielding

- A. Remove cable jacket to dimensions shown.
- B. Abrade area as shown.

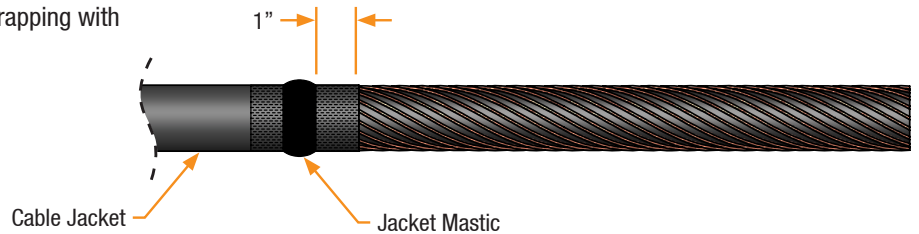
NOTE: Cable Shielding may be wires, straps, metallic tape, or LC tape. (Wires shown as example)



3

Applying Jacket Mastic

- A. Apply jacket mastic at position shown by stretching and wrapping with light tension fully around outer jacket.

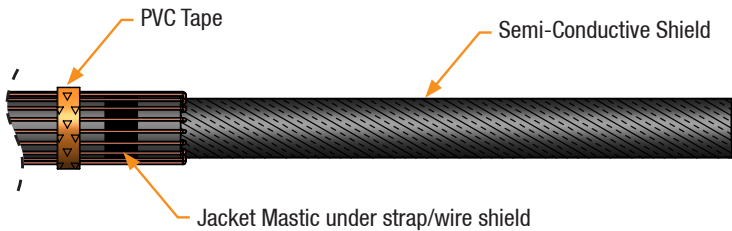


4

Exposing Cable Semi-Conductive Shield

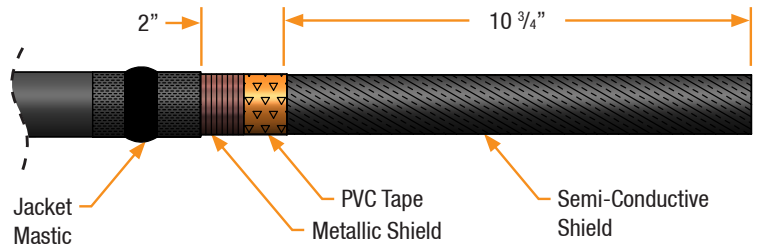
For Strap/Wire Shielded Cable

- A. Fold back strap/wire shields and press firmly into jacket mastic.
- B. Secure strap/wire shields to cable with PVC tape as shown.



For Metallic Tape/LC Shielded Cable

- A. Wrap PVC tape at dimension shown to secure metallic shield.
- B. Remove metallic shield up to PVC tape.



5

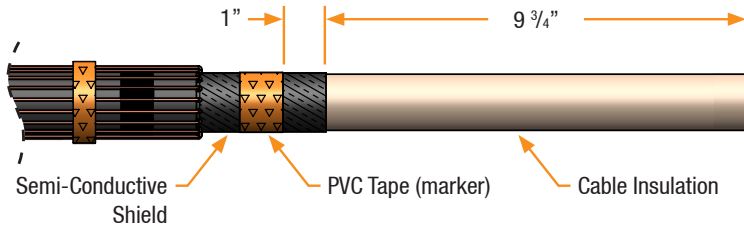
Exposing Cable Insulation

For Strap/Wire Shielded Cable

- A. Remove semi-conductive shield to dimensions shown.
- B. Place PVC tape marker at dimension shown.



WARNING: Do not nick or cut the cable insulation.

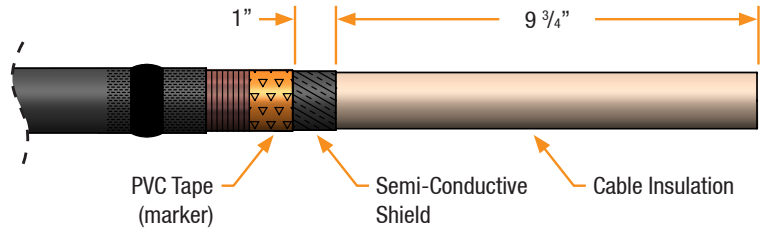


For Metallic Tape/LC Shielded Cable

- A. Remove semi-conductive shield to dimensions shown.
- B. Check that tape from previous step is 1" from the edge of the semi-conductive shield as it will serve as a marker.



WARNING: Do not nick or cut the cable insulation.



6

Preparing Metallic Shield

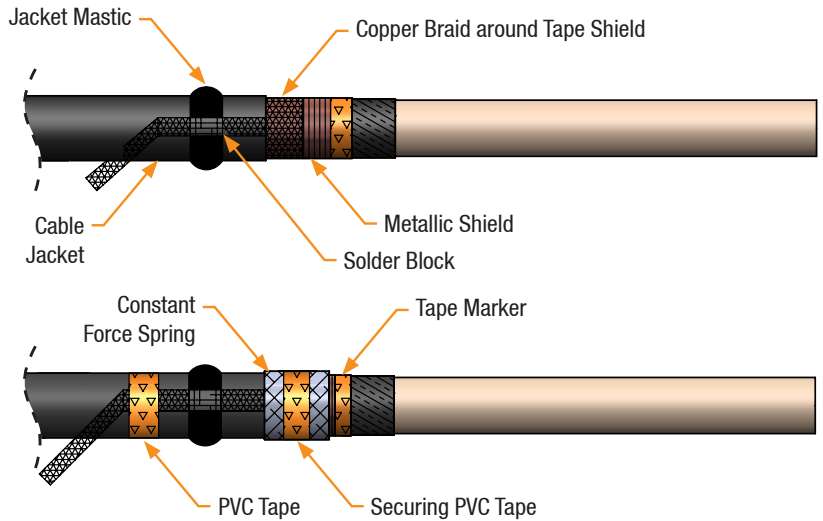
For Strap/Wire Shielded Cable

Proceed to next step

For Metallic Tape/LC Shielded

- A. Position copper braid so that solder block rests on the jacket mastic.
- B. Wrap copper braid around metallic shield as shown.
- C. Wrap constant force spring over wrapped portion of copper braid.
- D. Wrap 2 layers of PVC tape over constant force spring.
- E. Press solder block into jacket mastic.
- F. Secure braid to cable with PVC Tape.

CHECK: Confirm that solder block is aligned with jacket mastic.



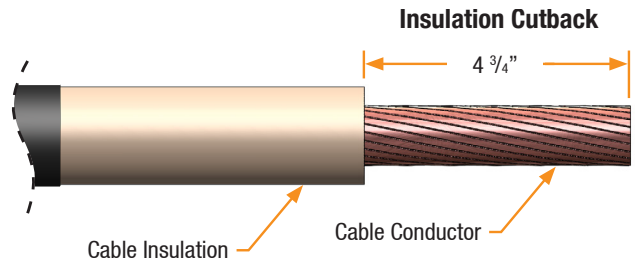
7

Exposing Conductor

- A. Remove cable insulation to dimension shown.



WARNING: Do not nick or cut the conductor strands.

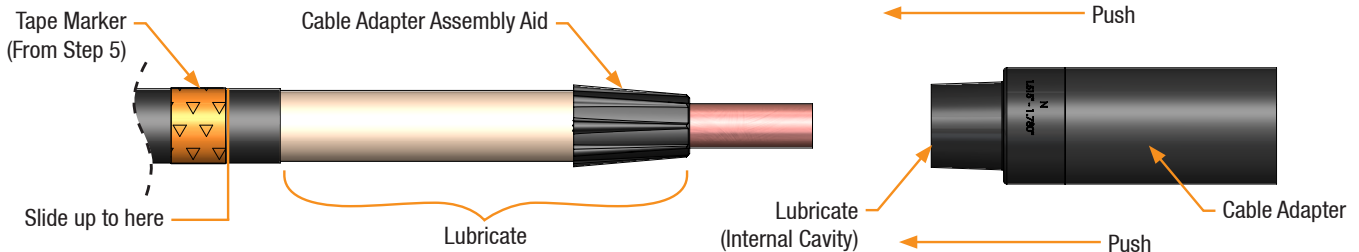


NOTE: Confirm all dimensions with To-Scale Cable Cutback Template before proceeding.

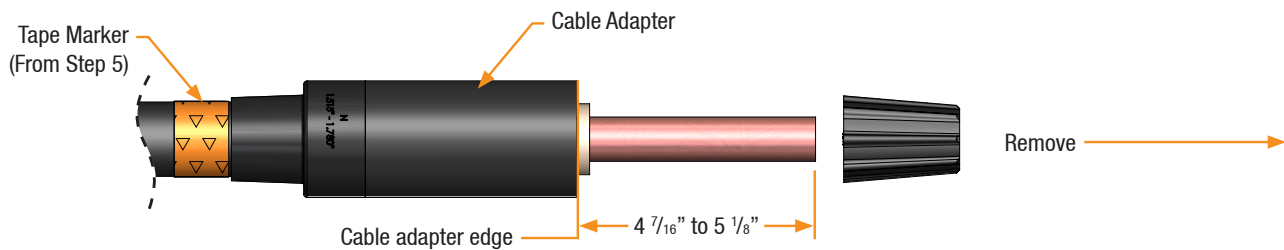
8

Installing Cable Adapter

- A. Slide cable adapter assembly aid up to insulation.
- B. Clean insulation with approved cleaning wipes by wiping in direction of semi-conductive shield.
- C. Apply silicone lubricant to cable insulation, cable adapter assembly aid, and inside of cable adapter as shown.
- D. Slide cable adapter onto cable until the cable adapter sits flush with the leading edge of the tape marker as shown.



- E. Remove cable adapter assembly aid.
- F. Confirm cable adapter is positioned as shown below.



- G. Trim insulation to be flush with end of cable adapter.

CHECK: Confirm that edge of cable adapter is flush with tape marker as shown.

CHECK: Confirm that the distance from the cable adapter to the end of the conductor satisfies criteria shown above.

9

Installing Retaining Ring

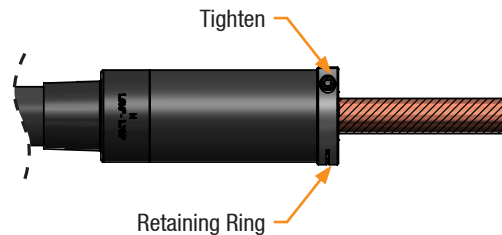
- A. Install retaining ring over conductor firmly against cable adapter.



WARNING: Retaining ring **MUST** be flush against cable adapter or the adapter can shift during installation of the sleeve.

- B. Tighten ring with wrench supplied until wrench twists.

NOTE: Wrench will twist before ring is damaged.



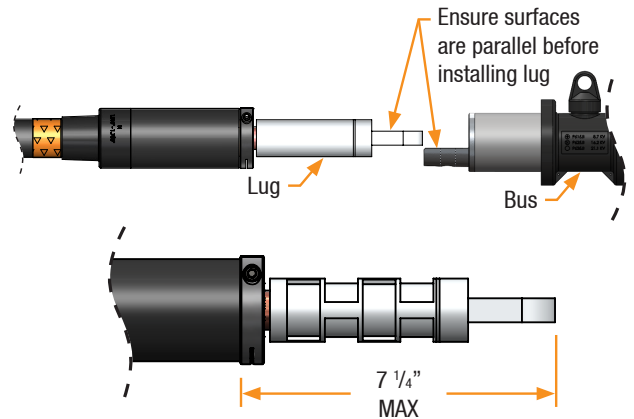
10

Installing Lug

- Clean conductor of any debris. For aluminum conductor, wire brush and immediately insert lug onto conductor. Slide lug until the conductor is fully seated within the lug barrel.
- Rotate lug so that spade is parallel to the contact face of the bus as shown.
- For Shear Bolt Connectors:** Install lug using separate instructions provided with lug.
For Crimp Connectors: Select correct tool and die using crimp chart supplied with lug. Crimp lug (min. number indicated in crimp chart) starting just below knurl line adjacent to pad. Carefully wipe any excess inhibitor from lug and cable insulation.



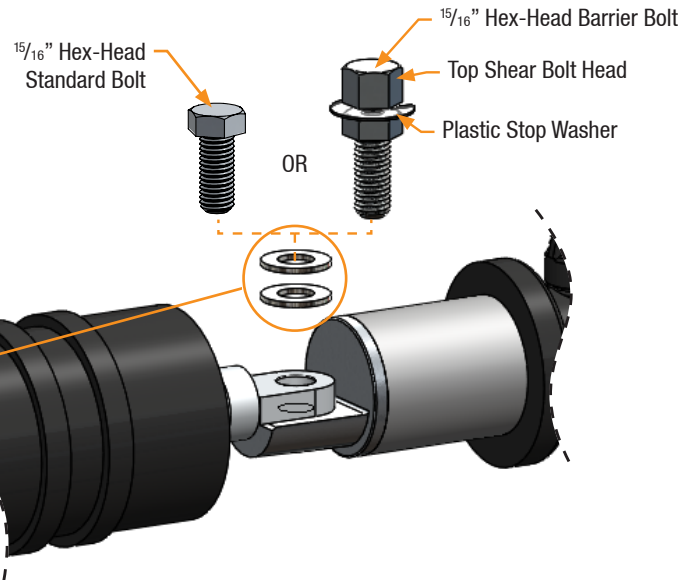
Confirm that the distance from the end of the lug to the cable adapter after installing is as shown. Otherwise redo assembly.



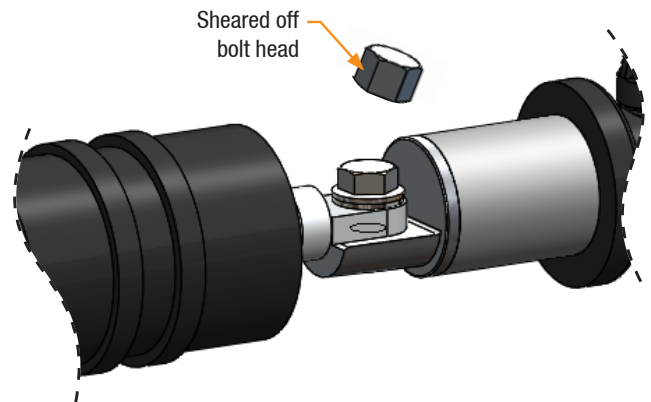
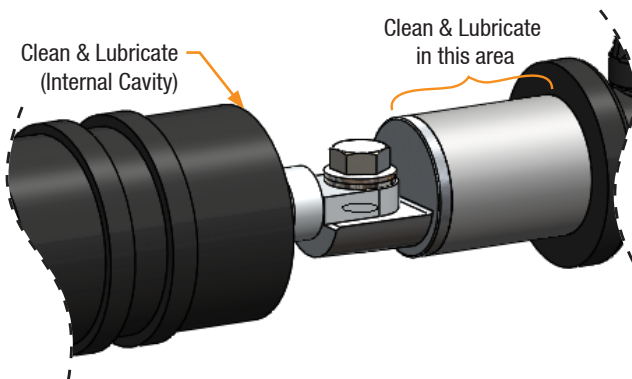
11

Installing Sleeve

- Position belleville washer and flat washer on bolt as shown.
- Insert bolt through lug and hand-tighten bolt to ensure all cables fit on bus.
- For Standard Bolt:** Tighten to 50-60 ft lbs.
For Barrier Bolt: Tighten the top shear bolt head until it shears off.
- Clean and lubricate (using supplied or approved silicone grease) sleeve interface and bus interface as shown.



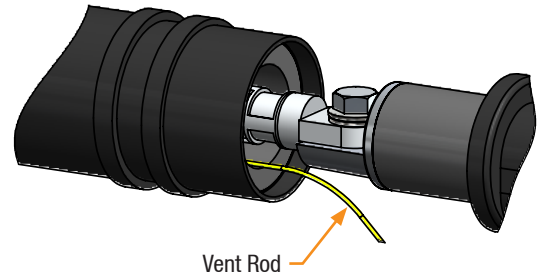
For Barrier Bolts



12

Inserting Vent Rod

- A. Insert vent rod as shown.

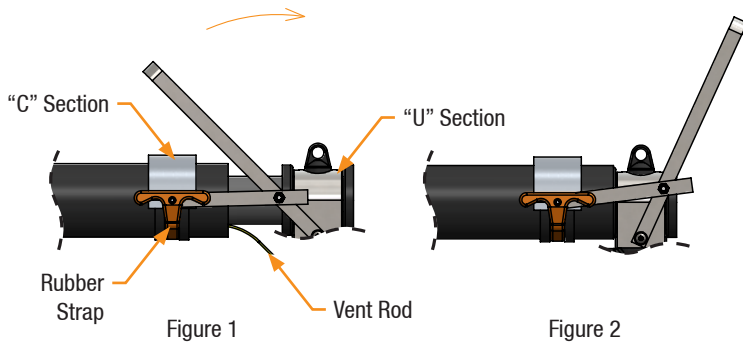


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Assembling Joint Sleeve

Using the P6JAT1 Assembly Tool

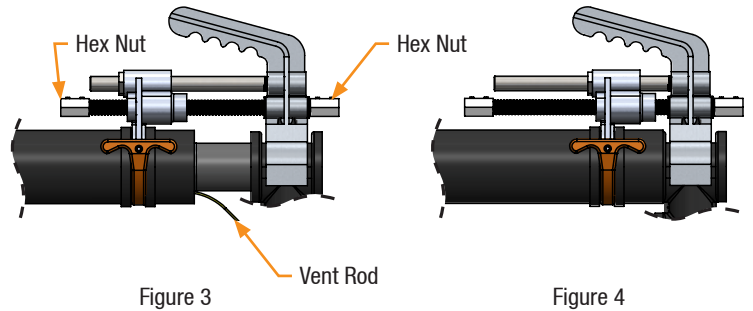
- A. Attach the P6JAT1 tool with the “U” section over the disconnectable joint and the “C” section over the joint sleeve. Secure “C” section to joint sleeve with rubber strap as shown in Figure 1.
- B. Slowly raise the handle to slide the joint sleeve over the disconnectable joint until fully seated as shown in Figure 2.
- C. Remove the vent rod.



Using the P6JAT3 Assembly Tool

- A. Place P6JAT3 tool as shown in Figure 3.
- B. Turn one hex nut on either side of the tool to slide the joint sleeve over the disconnectable joint until fully seated as shown in Figure 4.
- C. Remove the vent rod.

NOTE: A gap may occur exposing threads even when joint sleeve is fully seated.



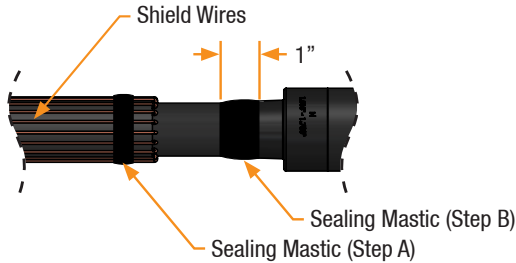
Confirm the cable adapter is in the proper location and the vent rod is removed.

14

Applying Sealing Mastic

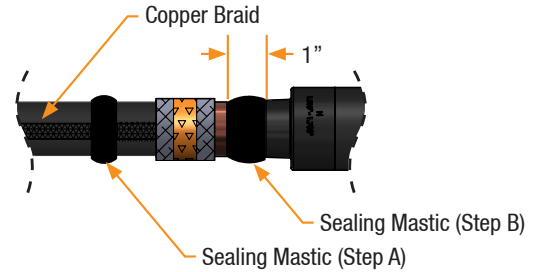
For Strap/Wire Shielded Cable

- Apply sealing mastic over previously applied mastic and on top of folded back neutral wires by stretching and wrapping with light tension.
- Apply sealing mastic by stretching and wrapping with light tension fully around nose of cable adapter for a width of 1" as shown below.



For Metallic Tape/LC Shielded Cable

- Apply sealing mastic over previously applied mastic and on top of solder block by stretching and wrapping with light tension.
- Apply sealing mastic by stretching and wrapping with light tension fully around nose of cable adapter for a width of 1" as shown below.

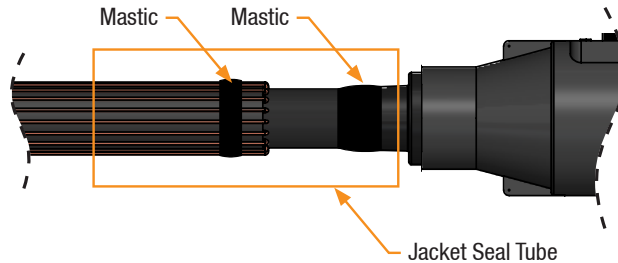


15

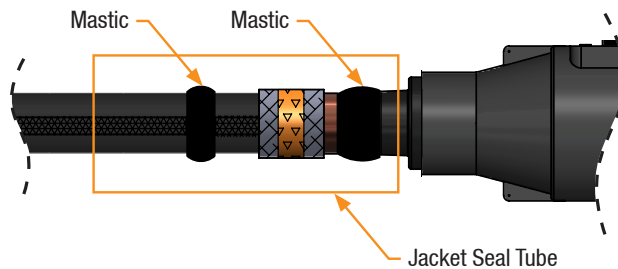
Applying Jacket Seal Tube

- Beginning with the side closer to the cable adapter, deploy the jacket seal in area shown below ensuring both mastics are completely covered.

For Strap/Wire Shielded Cable



For Metallic Tape/LC Shielded Cable



Repeat Steps 1-15 for other cable(s)



Check that all vent rods have been removed. If any branches remain unused, insulate with a Joint Insulating Cap (JIC).

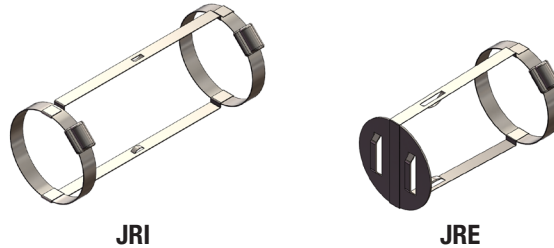
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Installing Sleeve Restraints

NOTE: This step applies for installations using sleeve restraints only. If not using sleeve restraints proceed to next step.

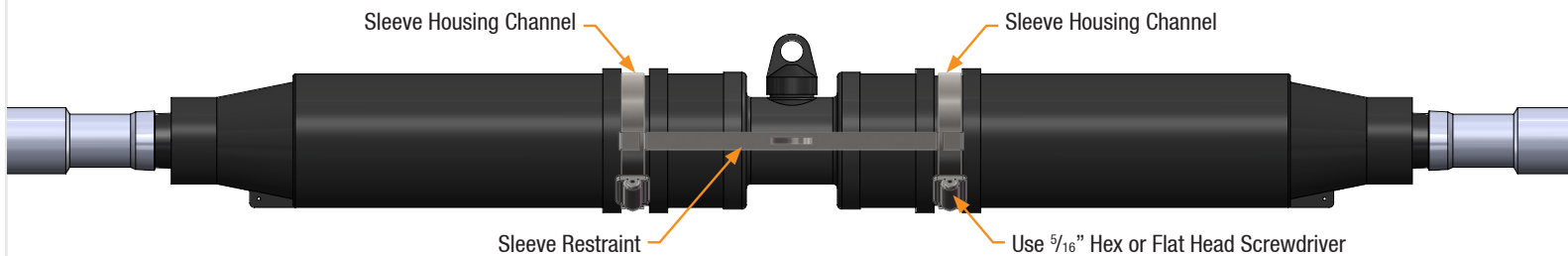
A. Seat sleeve restraints in sleeve housing channels as shown below. Apply appropriate type and number of sleeve restraints as follows:

- I Joint: (1) JRI
- Y Joint: (1) JRI, (1) JRE
- H Joint: (2) JRI
- U Joint: (2) JRE



B. Tighten all sides of sleeve restraint with a $\frac{5}{16}$ " hex or a flat head screwdriver. Fully tighten until the screw "clicks". Sleeve restraint is designed to click when fully installed and will not over-tighten.

NOTE: If sleeves are not fully seated onto joint, sleeve restraints cannot be installed.



17

Installing Interface Clamps

NOTE: This step applies to 35kV only and is only applicable if sleeve restraints were not installed in the previous step. If installation is below 35kV and/or sleeve restraints were installed in previous step, proceed to next step.

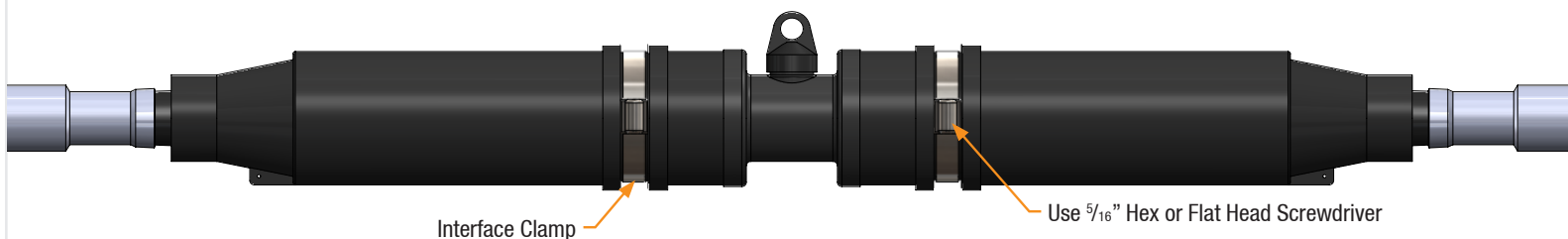


WARNING: If Sleeve Restraints are not included with kit, Interface Clamps **MUST** be installed on **EACH** sleeve.

- A. Seat interface clamps in all sleeve housing channels as shown.
- B. Tighten with a $\frac{5}{16}$ " hex or a flat head screwdriver. Fully tighten until the screw "clicks". Interface clamp is designed to click when fully installed and will not over-tighten.



Interface Clamp



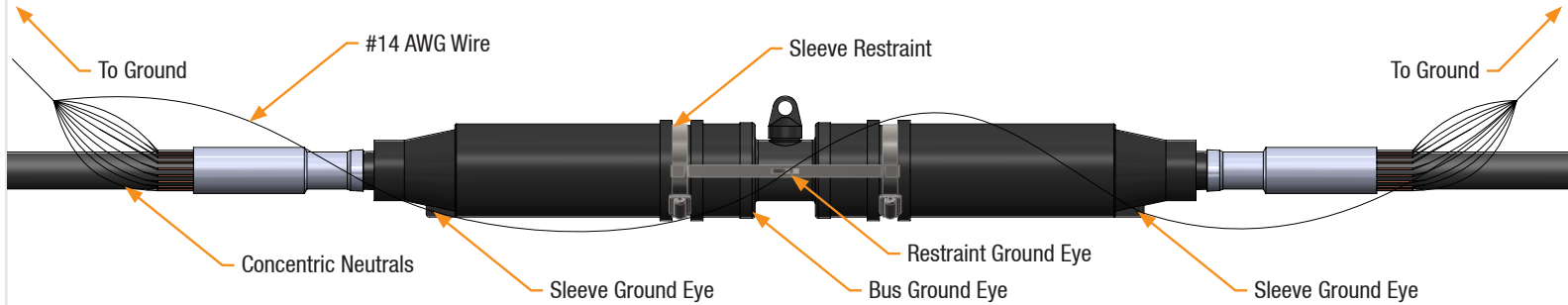
18

Connecting Disconnectable Joint to Ground

For Strap/Wire Shielded Cable

NOTE: Each component (sleeve, bus, sleeve restraints) is equipped with 1 or more ground eyes. It is important that all components are properly grounded.

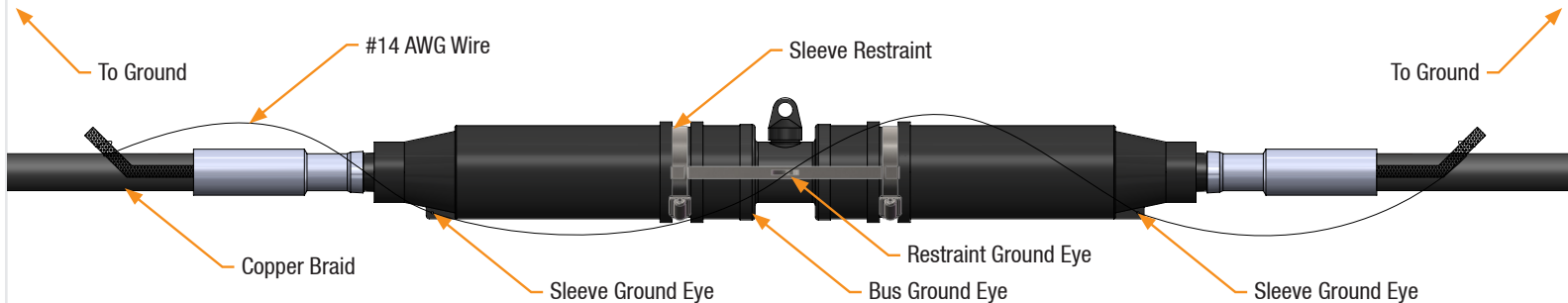
- A. Install bleeder wire (#14 AWG or larger) through ground eye of each component. If using sleeve restraint(s) connection through bus and sleeve ground eye is optional. Twist to make a snug connection, taking care not to damage or tear ground eye.
- B. Connect bleeder wire(s) to shield wires.
- C. Ground the cable shield according to appropriate/approved practice.



For Metallic Tape/LC Shielded

Note: Each component (sleeve, bus, sleeve restraints) is equipped with 1 or more ground eyes. It is important that all components are properly grounded.

- A. Install bleeder wire (#14 AWG or larger) through ground eye of each component. If using sleeve restraint(s) connection through bus and sleeve ground eye is optional. Twist to make a snug connection, taking care not to damage or tear ground eye.
- B. Connect bleeder wire(s) to copper braid.
- C. Ground the cable shield according to appropriate/approved practice.



Installation Complete

