

## Cold shrink retractor

### Metallic tape shield adaption kit installation instructions



# EATON

*Powering Business Worldwide*

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Safety for life



Eaton meets or exceeds all applicable industry standards relating to product safety in its Cooper Power™ series products. We actively promote safe practices in the use and maintenance of our products through our service literature, instructional training programs, and the continuous efforts of all Eaton employees involved in product design, manufacture, marketing, and service.

We strongly urge that you always follow all locally approved safety procedures and safety instructions when working around high-voltage lines and equipment, and support our “Safety For Life” mission.

Safety information

The instructions in this manual are not intended as a substitute for proper training or adequate experience in the safe operation of the equipment described. Only competent technicians who are familiar with this equipment should install, operate, and service it.


A competent technician has these qualifications:

- Is thoroughly familiar with these instructions
- Is trained in industry-accepted high- and low-voltage safe operating practices and procedures
- Is trained and authorized to energize, de-energize, clear, and ground power distribution equipment
- Is trained in the care and use of protective equipment such as arc flash clothing, safety glasses, face shields, hard hats, rubber gloves, clampsticks, hotsticks, etc.


Following is important safety information. For safe installation and operation of this equipment, be sure to read and understand all cautions and warnings.

Hazard statement definitions


This manual may contain four types of hazard statements.

 **DANGER**

INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

 **WARNING**

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

 **CAUTION**


INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY.

**NOTICE**


INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN EQUIPMENT DAMAGE ONLY.

Safety instructions


Following are general caution and warning statements that apply to this equipment. Additional statements, related to specific tasks and procedures, are located throughout the manual.

 **DANGER**


HAZARDOUS VOLTAGE. CONTACT WITH HAZARDOUS VOLTAGE WILL CAUSE DEATH OR SEVERE PERSONAL INJURY. FOLLOW ALL LOCALLY APPROVED SAFETY PROCEDURES WHEN WORKING AROUND HIGH- AND LOW-VOLTAGE LINES AND EQUIPMENT.

 **WARNING**


BEFORE INSTALLING, OPERATING, MAINTAINING, OR TESTING THIS EQUIPMENT, CAREFULLY READ AND UNDERSTAND THE CONTENTS OF THIS MANUAL. IMPROPER OPERATION, HANDLING, OR MAINTENANCE CAN RESULT IN DEATH, SEVERE PERSONAL INJURY, AND EQUIPMENT DAMAGE.

 **WARNING**


THIS EQUIPMENT IS NOT INTENDED TO PROTECT HUMAN LIFE. FOLLOW ALL LOCALLY APPROVED PROCEDURES AND SAFETY PRACTICES WHEN INSTALLING OR OPERATING THIS EQUIPMENT. FAILURE TO COMPLY CAN RESULT IN DEATH, SEVERE PERSONAL INJURY, AND EQUIPMENT DAMAGE.

 **WARNING**

POWER DISTRIBUTION AND TRANSMISSION EQUIPMENT MUST BE PROPERLY SELECTED FOR THE INTENDED APPLICATION. IT MUST BE INSTALLED AND SERVICED BY COMPETENT PERSONNEL WHO HAVE BEEN TRAINED AND UNDERSTAND PROPER SAFETY PROCEDURES. THESE INSTRUCTIONS ARE WRITTEN FOR SUCH PERSONNEL AND ARE NOT A SUBSTITUTE FOR ADEQUATE TRAINING AND EXPERIENCE IN SAFETY PROCEDURES. FAILURE TO PROPERLY SELECT, INSTALL, OR MAINTAIN POWER DISTRIBUTION AND TRANSMISSION EQUIPMENT CAN RESULT IN DEATH, SEVERE PERSONAL INJURY, AND EQUIPMENT DAMAGE.

 **WARNING**

ALL ASSOCIATED APPARATUS MUST BE DE-ENERGIZED DURING ANY HANDS-ON INSTALLATION OR MAINTENANCE. FAILURE TO COMPLY COULD RESULT IN DEATH, SEVERE PERSONAL INJURY, AND EQUIPMENT DAMAGE.

 **CAUTION**

CERTAIN KITTED COMPONENTS MAY CONTAIN SHARP EDGES. EXERCISE CAUTION WHILE HANDLING. IMPROPER HANDLING OF SHARP EDGES CAN LEAD TO INJURY.

## Product information

### Introduction

The Eaton cold shrink rejacket metallic tape shield adapter kits contain a single-piece EPDM cold shrink sealing tube and supporting accessories to perform metallic shield adaption. The cold shrink rejacket is expanded on to a removeable core, providing quick and reliable installation. Installing the cold shrink rejacket over power cable provides users with a watertight seal throughout the lifespan of the product.

### Read this manual first

Read and understand the contents of this manual and follow all locally approved procedures and safety practices before installing or operating this equipment.

### Additional information

These instructions cannot cover all details or variations in the equipment, procedures, or process described nor provide directions for meeting every possible contingency during installation, operation, or maintenance. When additional information is desired to satisfy a problem not covered sufficiently for the user's purpose, please contact your Eaton representative.

### Acceptance and initial inspection

Each cold shrink rejacket metallic tape shield adapter kit is completely inspected and tested at the factory. It is in good condition when accepted by the carrier for shipment. Upon receipt of a cold shrink rejacket kit, inspect the cold shrink thoroughly for damage and loss of parts incurred during shipment. If damage or loss is discovered, file a claim with the carrier immediately.

## Handling and storage

If the cold shrink rejacket kit is to be stored for an appreciable time before installation, provide a clean, dry storage area. Locate the cold shrink so as to minimize the possibility of physical damage.

## Kit selection and identification

**Table 1. Kit minimum and maximum jacket diameters**

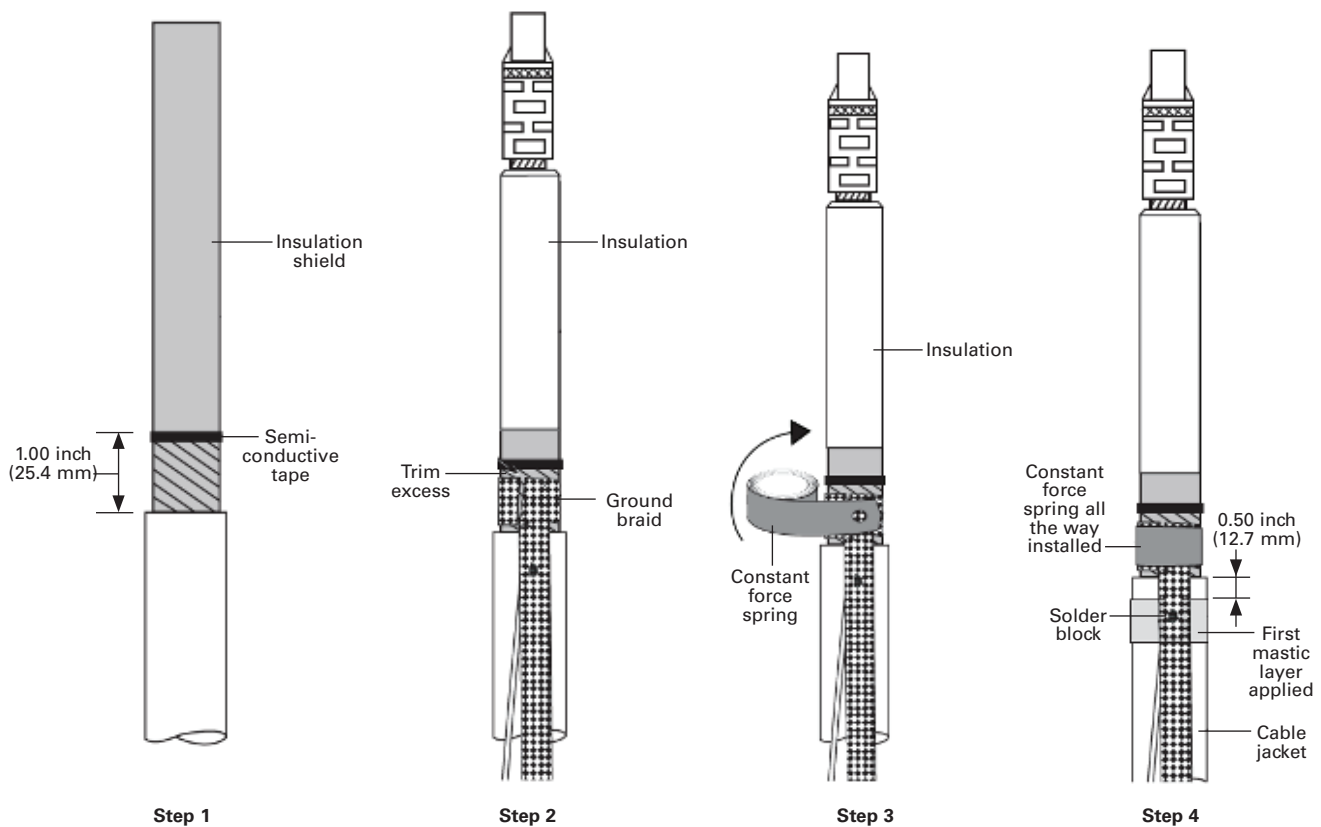
| Kit | Minimum jacket diameter |      | Maximum jacket diameter |      |
|-----|-------------------------|------|-------------------------|------|
|     | In                      | mm   | In                      | mm   |
| SA1 | 0.59                    | 15.0 | 1.05                    | 26.0 |
| SA2 | 0.83                    | 22.0 | 1.64                    | 41.0 |
| SA3 | 1.27                    | 33.0 | 2.17                    | 55.0 |
| SA4 | 1.60                    | 41.0 | 2.60                    | 66.0 |

## Installation procedures

### Installation procedures

A complete cold shrink re-jacket metallic tape shield adaption kit contains:

- EPDM cold shrink tube
- Mastic tape
- Instruction sheet
- Constant force spring
- Ground strap
- Elbow drain wire
- Semi-conductive tape



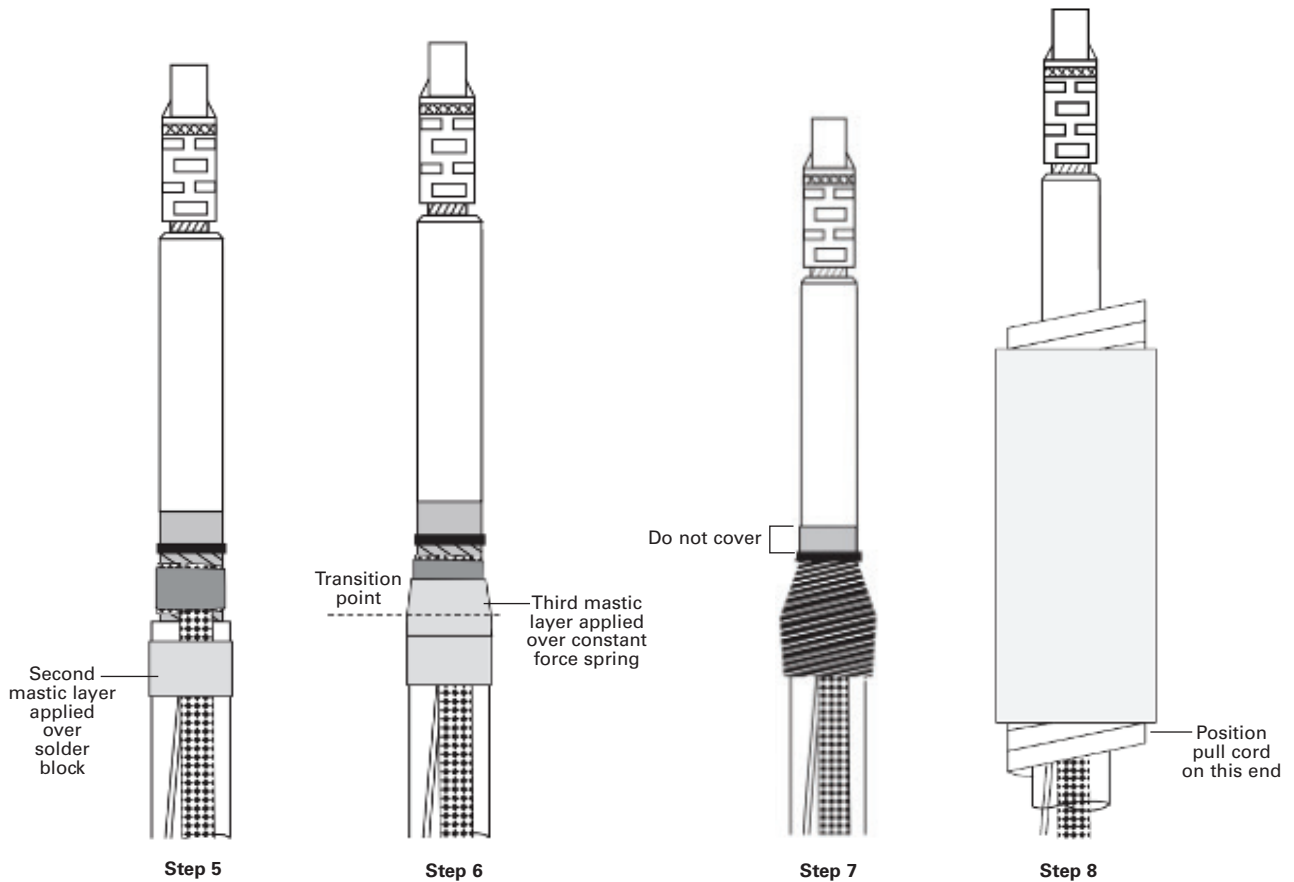
### Preparation of tape shield, longitudinally corrugated, and wire shield cable

**Step 1.** Prepare the cable in accordance to cable accessory manufacturer's instructions. Leave approximately 1.00 inch (25.4 mm) of metallic shield remaining. Bind end of metallic shield with two highly stretched wraps of semi-conductive tape.

**Step 2.** Position preformed ground braid with long end along cable jacket. Wrap braid around the cable metallic/wire shield and cut off excess (do not overlap braid onto itself).

**Step 3.** Secure in place with constant force spring supplied. Cinch (tighten) last lap of spring.

**Step 4.** Remove liner from mastic tape and wrap one layer around the cable jacket 0.50 inch (12.7 mm) from the cut edge of the jacket, underneath the solder block area of the braid. Do not stretch the mastic tape while applying and do not overlap.



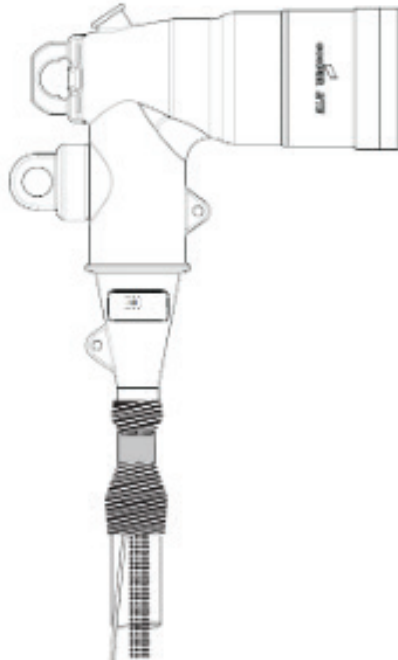
**Step 5.** Apply a second layer of mastic tape over the solder block and first layer of mastic tape.

**Step 6.** Wrap a third layer of mastic tape at the transition point of the cable jacket and braided ground strap/constant force spring. Press in place.

**Step 7.** Start at the end of the metallic shield and apply two half-lapped layers of vinyl tape (not supplied) over the constant force spring and mastic seal. Extend the tape application onto the cable jacket 0.25 inch (6.4 mm) beyond the mastic seal.

**Note:** Do not cover the exposed insulation shield.

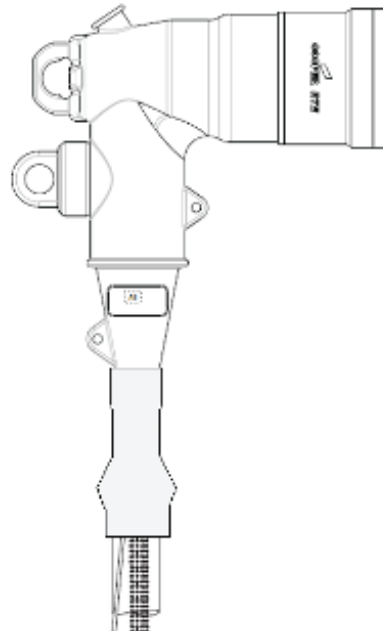
**Step 8.** Prior to installing the cable accessory, position the cold shrink tube over the cable. Orient the pull cord away from the cable accessory.



Step 9

**Step 9.** Install the cable accessory per the manufacturer's instructions. Wrap the end of the cable accessory with an additional layer of mastic and vinyl tape.

**Step 10.** Position the cold shrink tube over both layers of mastic and vinyl tape and pull the cord until the tube is fully shrunk over the installation area. Ensure that there is a minimum of 0.25 inch (6.4 mm) of the cold shrink tube shrunk beyond the edge of the tape layer.



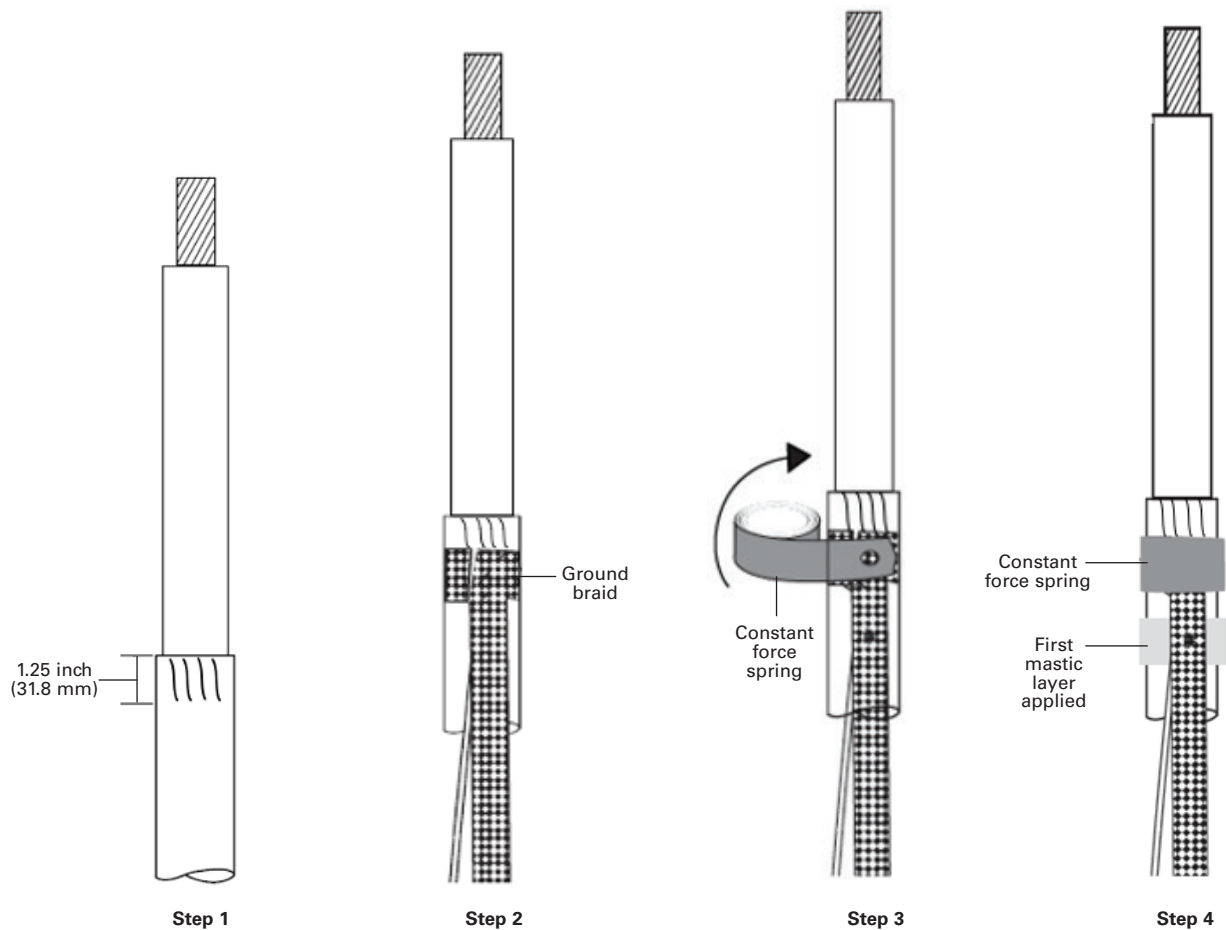
Step 10

**Step 11.** Refer to the cable accessory manufacturer's instructions to complete the remainder of the installation. Connect the drain wire to the cable accessory, and the braid to ground.

**Step 12.** Recycle the excess portion of the cold shrink core.







## Preparation of UniShield® cable

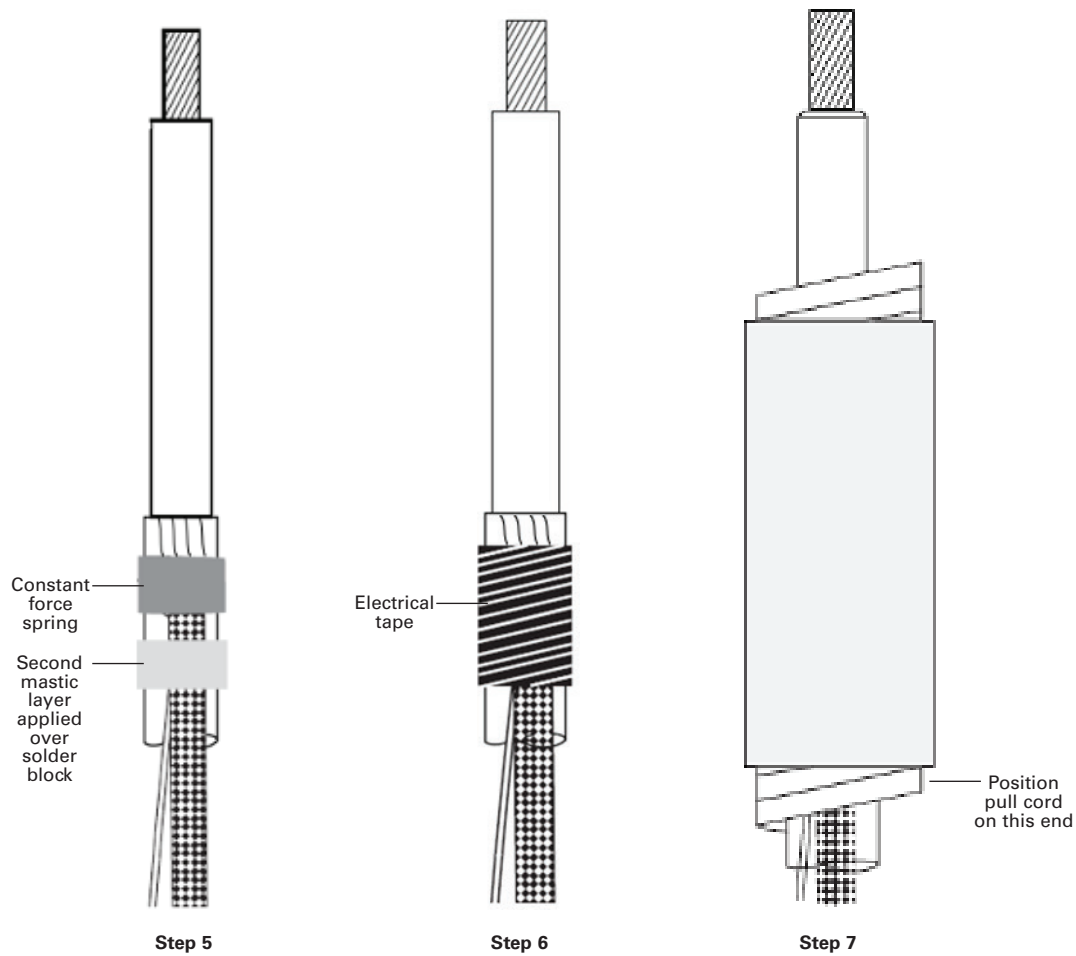
**Step 1.** Prepare the cable in accordance to cable accessory manufacturer's instructions. Leave approximately 1.25 inches (31.8 mm) of shield wires exposed.

**Step 2.** Position preformed ground braid with long end along cable jacket. Wrap braid around the end of the wire pullout and cut off excess (do not overlap braid onto itself). Ensure that the wires remain separated. Trim any excess wire that is protruding from the end of the ground braid.

**Step 3.** Secure in place with constant force spring supplied. Cinch (tighten) last lap of spring.

**Step 4.** Remove liner from mastic strip and wrap one layer around the cable underneath the solder block area of the braid. Do not stretch the mastic tape while applying and do not overlap.

## Installation procedures

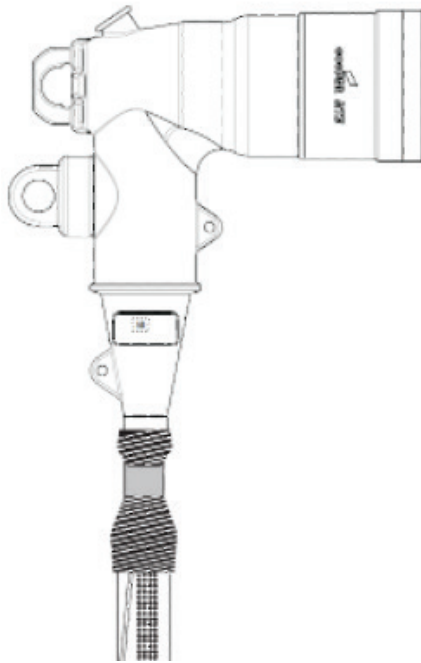


**Step 5.** Apply second layer of mastic tape directly over the solder block and first layer of mastic. Press in place.

**Step 6.** Start at the folded wires and apply two half-lapped layers of vinyl tape (not supplied) over the constant force spring and mastic seal. Extend the tape application onto the cable jacket 0.25 inch (6.4 mm) beyond the mastic seal.

**Note:** Do not cover the exposed insulation shield.

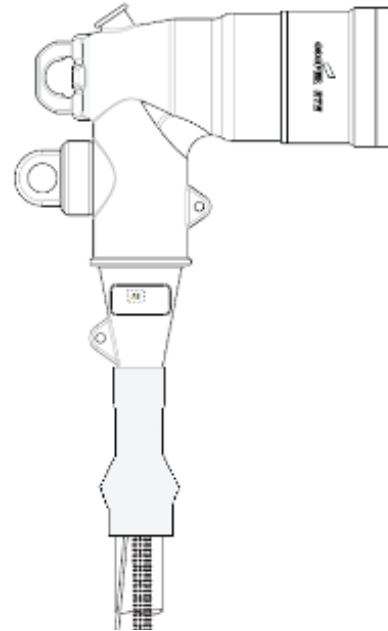
**Step 7.** Prior to installing the cable accessory, position the cold shrink tube over the cable. Orient the pull cord away from the cable accessory.



Step 8

**Step 8.** Install the cable accessory per the manufacturer's instructions. Wrap the end of the cable accessory with an additional layer of mastic and vinyl tape.

**Step 9.** Position the cold shrink tube over the two layers of mastic tape and pull the cord until the tube is fully shrunk over the installation area. Ensure that there is a minimum of 0.25 inch (6.4 mm) of the cold shrink tube shrunk beyond the edge of the tape layer.



Step 9

**Step 10.** Refer to the cable accessory manufacturer's instructions to complete the remainder of the installation. Connect the drain wire to the cable accessory and the braid to ground.

**Step 11.** Recycle the excess portion of the cold shrink core.



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