# 3M™ Cold Shrink QT-II Silicone Rubber Indoor Termination Kits

## With High-K Stress Relief
## For Tape Shield, Wire Shield and UniShield®

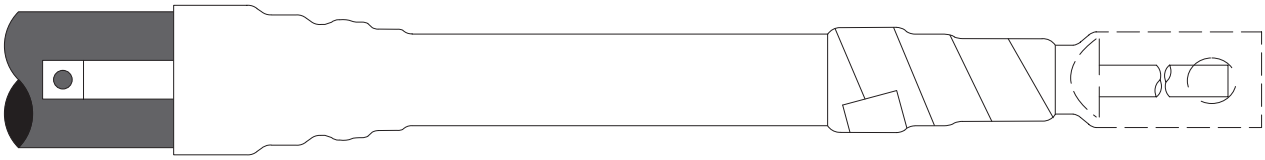
## 5621K, 5622K, 5623K, 5624K, 5625K

## Instructions

**IEEE Std. No. 48**
Class 1 Termination
8 kV Class, 95 kV BIL: 5621K, 5622K
15 kV Class, 110 kV BIL: 5623K, 5624K, 5625K

**⚠ CAUTION**

Working around energized systems may cause serious injury or death. Installation should be performed by personnel familiar with good safety practice in handling electrical equipment. De-energize and ground all electrical systems before installing product.



*March 2017*
*78-8096-5064-7 Rev F*

3M

# 1.0 Kit Contents

3 High-K, Tracking Resistant, Silicone Rubber Terminations
3 Mechanical Ground Strap Assemblies
9 Strips Scotch® Mastic Strip 2230 (black with white release liners, bagged)
3 Strips Scotch® Electrial Shielding Tape 24 (Used for Wire Shielded Cable only)
3 Strips Scotch® Self-Fusing Silicone Rubber Electrical Tape 70 (except 5625-K Kit which has one roll)
3 3M EMI Copper Foil Shielding Tape 1181 Strips, 1/2" x 10"
3 Packs of Silicone Grease
1 3M Cable Cleaning Preparation Kit CC-2
1 Instruction Manual

*NOTE: Do Not use knives to open plastic bags.*

## Kit Selection Table

*NOTE: Final determination factor is cable insulation diameter.*

| Kit Number | Cable Insulation O.D. Range | Conductor Size Range (AWG & kcmil) | | | | |
|---|---|---|---|---|---|---|
| | | 5 kV 100% | 5 kV 133%<br>8 kV 100% | 8 kV 133% | 15 kV 100% | 15 kV 133% |
| **5621K** | 0.32” – 0.46”<br>(8,1 – 11,7 mm) | 8-4<br>(10 - 16 mm²) | 8-6<br>(10 - 14 mm²) | 8<br>(10 mm²) | — | — |
| **5622K** | 0.44” – 0.65”<br>(11,2 – 16,5 mm) | 2-2/0<br>(35 - 60 mm²) | 4-1/0<br>(22 - 50 mm²) | 6-1<br>(14 - 38 mm²) | — | — |
| **5623K** | 0.56” – 0.87”<br>(14,2 – 22,1 mm) | 2/0-250<br>(70 - 120 mm²) | 1/0-4/0<br>(60 - 100 mm²) | 1-3/0<br>(50 - 80 mm²) | 4-2/0<br>(22 - 60 mm²) | 4-1<br>(22 - 38 mm²) |
| **5624K** | 0.78” – 1.30”<br>(19,8 – 33,0 mm) | 300-750<br>(185 - 325 mm²) | 250-750<br>(150 - 325 mm²) | 4/0-600<br>(120 - 300 mm²) | 2/0-500<br>(70 - 250 mm²) | 1-350<br>(50 - 150 mm²) |
| **5625K** | 1.09” – 1.80”<br>(27,7 – 45,7 mm) | 600-1500<br>(325 - 725 mm²) | 600-1500<br>(325 - 725 mm²) | 500-1250<br>(300 - 625 mm²) | 500-1250<br>(300 - 625 mm²) | 350-1000<br>(185 - 500 mm²) |

Table 1

# Instructions for Tape Shielded Cable

## 2.0 Prepare Cable

2.1 Check to be sure cable size fits within the kit range as shown in the Kit Selection Table (*Table 1*).

2.2 Prepare cable using dimensions shown in Figure 1 and Table 2. BE SURE TO ALLOW FOR DEPTH OF TERMINAL LUG Dimension [B] and see the NOTE below concerning Aluminum Lug and Connector growth allowances. If necessary to prevent tape shield from unrolling, hold down edge with a single wrap of 3M EMI Copper Foil Shielding Tape 1181.

*NOTE: Provide additional exposed conductor distance to account for growth during crimping of ALUMINUM lugs or connectors as follows:*

| **Aluminum Lug and Connector Growth Allowance** | 2 - 350<br>1/4” (6 mm) | 400 - 650<br>1/2” (13 mm) | 750–1000<br>3/4” (19 mm) | 1250 - 2000<br>Field determined |
|---|---|---|---|---|

*NOTE: It is imperative to remove all remnants of the semi-con layer, even if the semi-con layer comes off as one layer. There should not be any remaining black areas, or particles, on the cable insulation layer.*

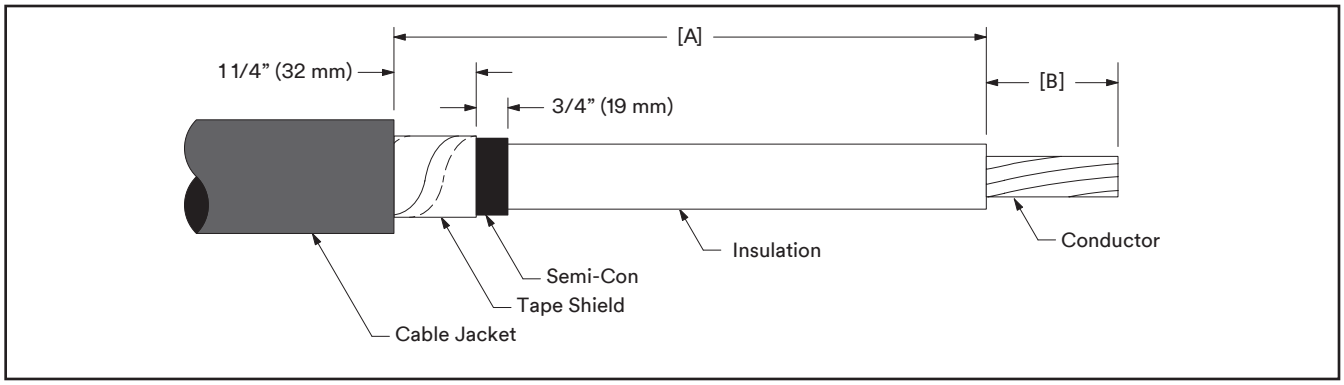



Figure 1

| Kit Number | Dimension [A]<br>(Jacket Removal Length) | Dimension [B] |
|---|---|---|
| 5621K | 7 1/2” (191 mm) | Depth of Terminal Lug Barrel<br>(plus Aluminum Lug and Connector growth allowance) |
| 5622K | 7 1/2” (191 mm) | |
| 5623K | 9” (229 mm) | |
| 5624K | 9” (229 mm) | |
| 5625K | 9” (229 mm) | |

Table 2

2.3 Clean cable using standard practice:

a. Wipe cable insulation with one of the solvent saturated pads from the 3M Cable Cleaning Preparation Kit CC-2, or with an approved cable cleaner/solvent. **DO NOT ALLOW SOLVENT TO TOUCH SEMI-CON INSULATION SHIELD!**

b. If abrasive must be used:
   a. Use on insulation only. **DO NOT USE ABRASIVE ON SEMI-CON INSULATION SHIELD!**
   b. Use only aluminum oxide abrasive; grit 120 or finer, included in the 3M Cable Cleaning Preparation Kit CC-2.
   c. Be careful not to reduce the cable insulation diameter below that allowed by the kit.

# 3.0 Install Ground Strap

3.1 Unwrap 1 to 2 inches (25 to 51 mm) of coil.

3.2 Lay ground strap along cable with the extended coil facing downward (away from you) (*Figure 2*).

*NOTE: Coil needs to make full contact with the metallic Tape Shield, close to the cable jacket edge.*

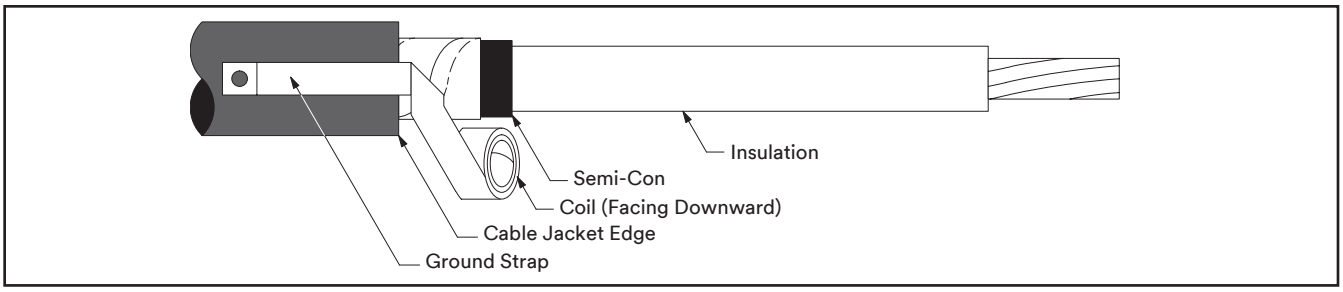



Figure 2

3.3 Hold coil in place with thumb. Pull coil around the cable allowing it to unwrap and rewrap around the shielding and itself (*Figure 3*).

*NOTE: Cinch (tighten) the applied coil after final wrap.*

3.4 Wrap two highly stretched half-lapped layers of electrical grade vinyl tape around the coil and exposed tape shield (Figure 3). DO NOT tape onto the cable jacket.

*NOTE: Take care not to cover exposed semi-con insulation shield. A minimum of 3/4" (19 mm) must be exposed. (VERIFY THIS MEASUREMENT)*

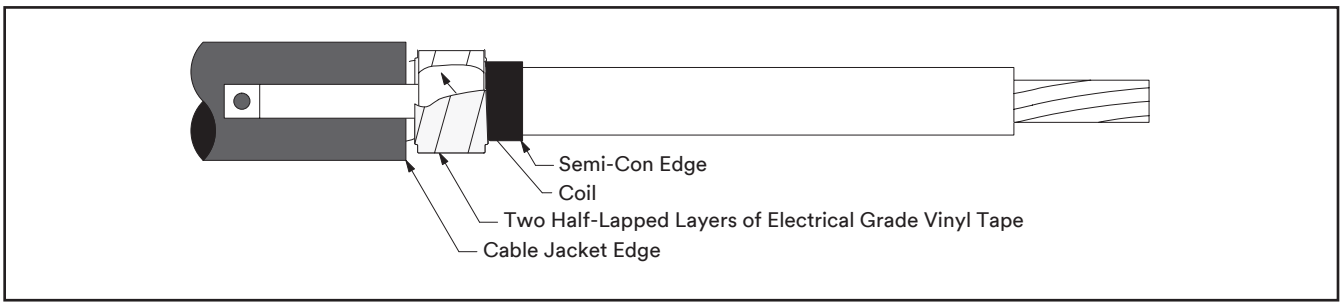



Figure 3

# 4.0 Install Termination

4.1 Place a marker tape 3" (76 mm) back from the semi-con step using vinyl tape (Figure 4).

4.2 Apply a liberal coating of silicone grease over the edge of the semi-con step (Figure 4).

*NOTE: The silicone grease does not serve as a lubricant; it is used to fill the step at the leading edge of the semi-con step. Spread remaining silicone grease over exposed primary insulation.*

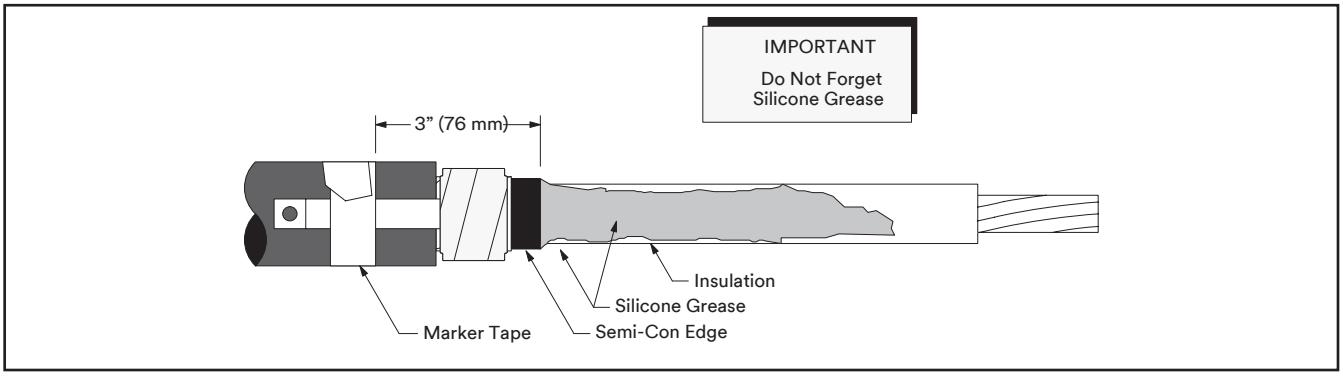



Figure 4

4.3 Slide termination onto cable (loose core end extending out toward cable lug end), aligning base with previously applied marker tape (*Figure 5*).

4.4 Remove the core. Pull while unwinding, counterclockwise, starting with the loose end (Figure 5). Make sure the termination body (not the core) is butted up to the edge of the vinyl tape marker previously applied (Figure 5).

*NOTE: Once the termination body makes contact, there is no need to continue supporting the assembly. DO NOT PUSH OR PULL THE TERMINATION ASSEMBLY WHILE UNWINDING THE CORE.*

*TIP: An occasional tug of the core strand while unwinding will aid in core removal.*

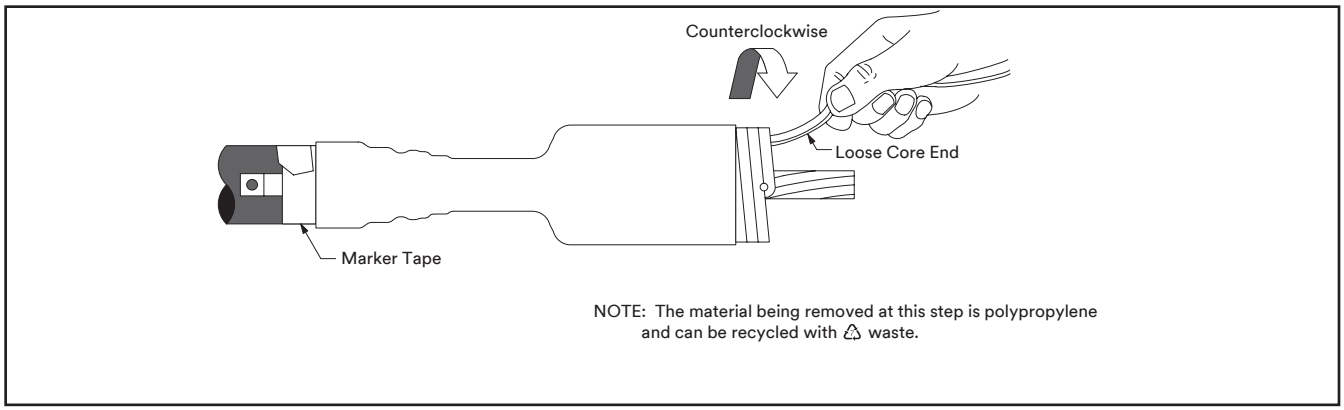



Figure 5

# 5.0 Install Lug

5.1 For 3M Compression Lugs and 3M Stem Connectors:
a. Refer to the final pages of this Instruction document for 3M Connector and Lug crimping information.
b. For Aluminum Conductors - Thoroughly wire brush conductor strands to remove aluminum oxide layer. Insert conductor into lug or connector and then remove conductor. This will transfer some of the antioxidant paste onto the conductor. Wire brush the antioxidant paste into the strands. Immediately insert conductor into lug or connector barrel as far as it will go.
c. Position connector or lug and crimp according to manufacturer's directions. Remove excess oxide inhibitor and sharp crimp flashings following crimping.

*NOTE: Die/crimper head rotation between consecutive crimps is RECOMMENDED.*

# 6.0 Apply Top and Bottom Seals

6.1 TOP SEAL:
Apply 1 half-lapped layer of Scotch® Self-Fusing Silicone Rubber Electrical Tape 70 over at least 1/2" (13 mm) of lug barrel and onto the termination insulator for 1" (25 mm) (*Figure 6*).

*NOTE: For the 5625K Termination, apply 2 half-lapped layers of Scotch Self-Fusing Silicone Rubber Electrical Tape 70.*

6.2 BOTTOM SEAL:
**NOTE: To attain a Class 1 Termination , this step is NOT optional.**

a. Remove marker tape.

b. Bend the Ground Strap away from the cable jacket, towards the bottom of the installed termination body, to about a 90 degree angle. (Figure 6).

c. Select a Scotch® Mastic Strip 2230 from kit and remove white release liners. Using light tension, apply a **SINGLE WRAP** of mastic around the cable jacket directly against the bottom of the termination body
(Figure 6). Cut off excess.

d. Bend the Ground Strap against the cable jacket and onto the mastic.

e. Select second Scotch® Mastic Strip 2230 from kit and remove white release liners. Using light tension, apply a **SINGLE WRAP** of mastic over previously applied mastic. Add another **SINGLE WRAP** of mastic adjacent to the second wrap of mastic that was just applied, directly on top of the termination body (Figure 7). Cut off excess.

f. Wrap two highly stretched half-lapped layers of electrical grade vinyl tape around mastic seal (Figure 8). Overlap the edges of the mastic seal by 1/2" (13 mm) minimum.

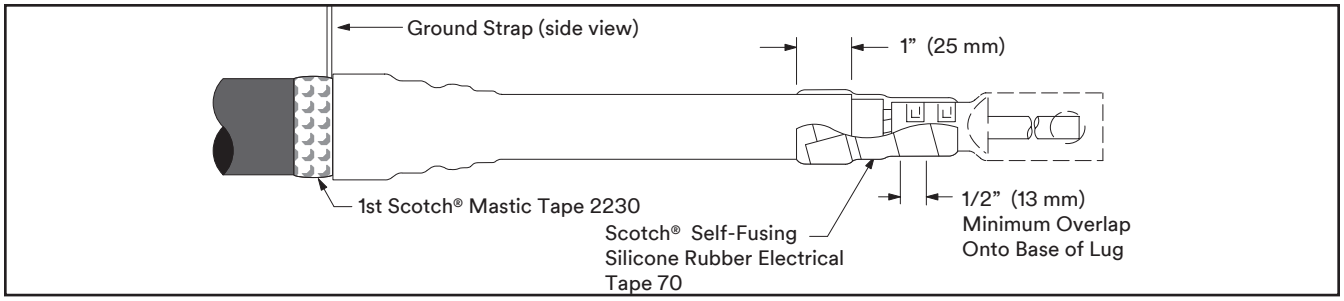



Figure 6

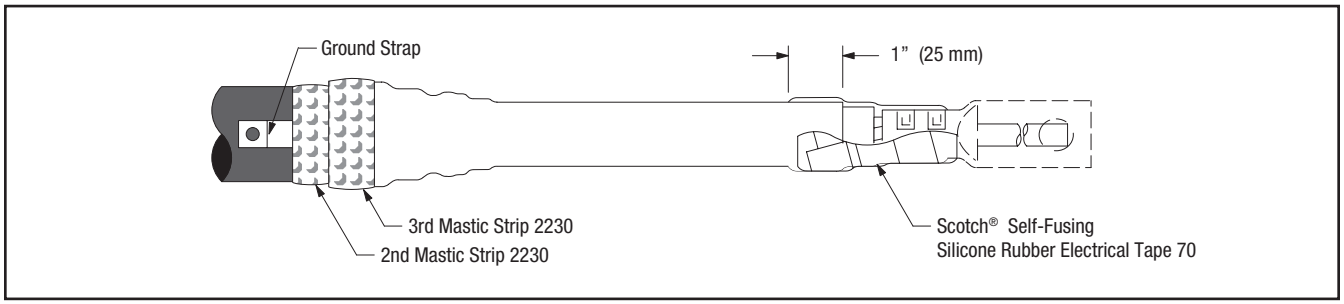



Figure 7

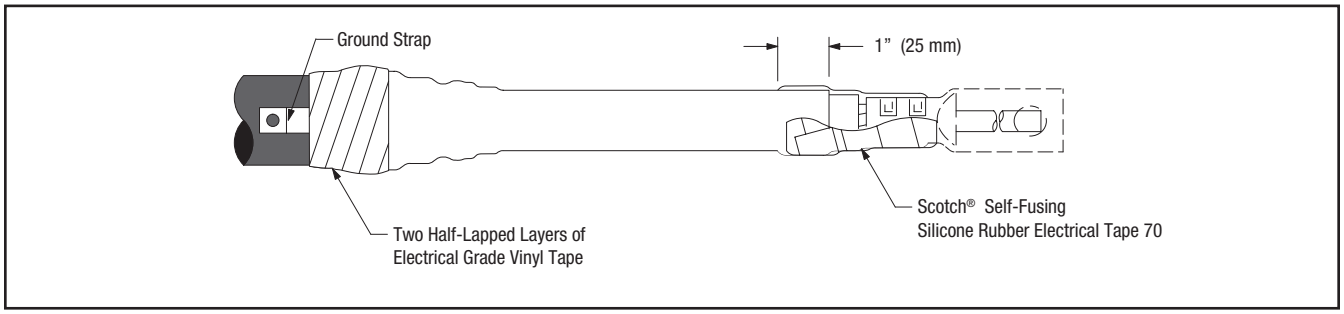



Figure 8

# 7.0 Connect Termination and Ground Strap

7.1 Connect termination according to standard practice.

7.2 Connect ground strap to system ground according to standard practice.

# Instructions for Wire Shielded Cable

## 8.0 Prepare Cable

8.1 Check to be sure cable size fits within the kit range as shown in Kit Selection Table (Table 1)

8.2 Remove jacket as shown in *Figure 9* and *Table 3*. **BE SURE TO ALLOW FOR DEPTH OF TERMINAL LUG Dimension [B] and see the NOTE below concerning Aluminum Lug and Connector growth allowances.**

*NOTE: Provide additional exposed conductor distance to account for growth during crimping of ALUMINUM lugs or connectors as follows:*

| **Aluminum Lug and Connector Growth Allowance** | 2 - 350<br>1/4” (6 mm) | 400 - 650<br>1/2” (13 mm) | 750–1000<br>3/4” (19 mm) | 1250 - 2000<br>Field determined |
|---|---|---|---|---|

*NOTE: It is imperative to remove all remnants of the semi-con layer, even if the semi-con layer comes off as one layer. There should not be any remaining black areas, or particles, on the cable insulation layer.*

8.3 Wrap 2 full wraps of Scotch® Electrial Shielding Tape 24 over shielding wires at jacket edge. Cut off excess Scotch® 24 Shielding Tape (*Figure 9*).

8.4 Bend shielding wires back over Scotch® Electrial Shielding Tape 24 and cut off excess at jacket edge (*Figure 9*).

8.5 Remove cable semi-con as shown in *Figure 9*.

8.6 Remove cable insulation for depth of terminal lug barrel or connector, plus Aluminum Lug and Connector growth allowance, Dimension [B], *Table 3*.

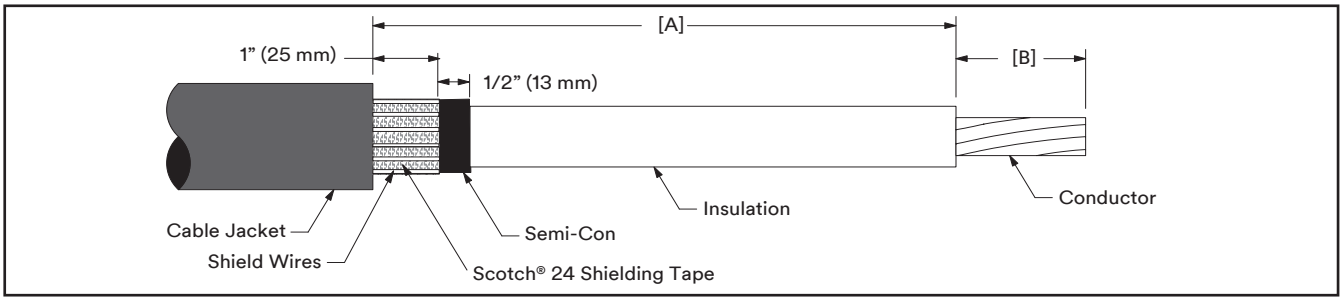



Figure 9

| Kit Number | Dimension [A]<br>(Jacket Removal Length) | Dimension [B] |
|---|---|---|
| 5621K | 7 1/2” (191 mm) | Depth of Terminal Lug Barrel<br>(plus Aluminum Lug and Connector growth allowance) |
| 5622K | 7 1/2” (191 mm) | |
| 5623K | 9” (229 mm) | |
| 5624K | 9” (229 mm) | |
| 5625K | 9” (229 mm) | |

Table 3

8.7 Clean cable using standard practice:

a. Wipe cable insulation with one of the solvent saturated pads from the 3M Cable Cleaning Preparation Kit CC-2, or with an approved cable cleaner/solvent. **DO NOT ALLOW SOLVENT TO TOUCH SEMI-CON INSULATION SHIELD!**

b. If abrasive must be used:
   a. Use on insulation only. **DO NOT USE ABRASIVE ON SEMI-CON INSULATION SHIELD!**
   b. Use only aluminum oxide abrasive; grit 120 or finer, included in the 3M Cable Cleaning Preparation Kit CC-2.
   c. Be careful not to reduce the cable insulation diameter below that allowed by the kit.

# 9.0 Install Ground Strap

9.1 Unwrap 1 to 2 inches (25 to 51 mm) of coil.

9.2 Lay ground strap along cable with the extended coil facing downward (away from you) (*Figure 10*).

*NOTE: Coil needs to make full contact with shielding wires and Scotch® Electrial Shielding Tape 24 close to the cable jacket edge.*

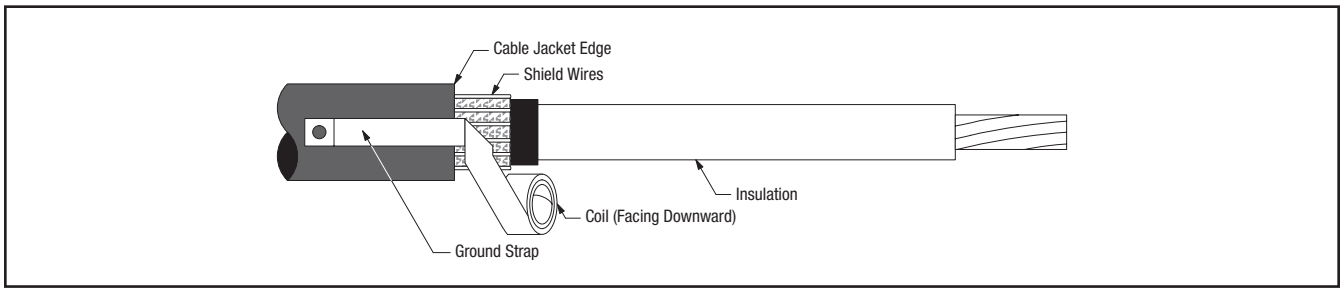



Figure 10

9.3 Hold coil in place with thumb. Pull coil around the cable allowing it to unwrap and rewrap around the shielding and itself (*Figure 11*).

9.4 Wrap two highly stretched layers of electrical grade vinyl tape around the coil (Figure 11). DO NOT tape onto the cable jacket.

*NOTE: Take care not to cover exposed semi-con insulation shield. A minimum of 3/4" (19 mm) must be exposed. (VERIFY THIS MEASUREMENT)*

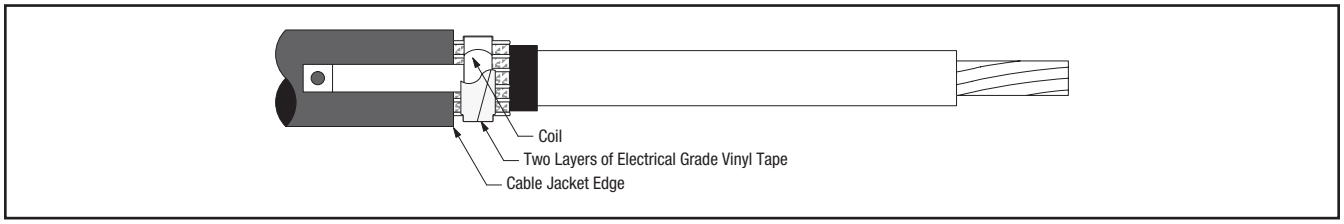



Figure 11

# 10.0 Install Termination

10.1 Place a marker tape 3" (76 mm) back from semi-con step using vinyl tape (Figure 12).

10.2 Apply a liberal coating of silicone grease over the semi-con step (Figure 12).

*NOTE: The silicone grease does not serve as a lubricant; it is used to fill the step at the leading edge of the semi-con step. Spread remaining silicone grease over exposed primary insulation.*

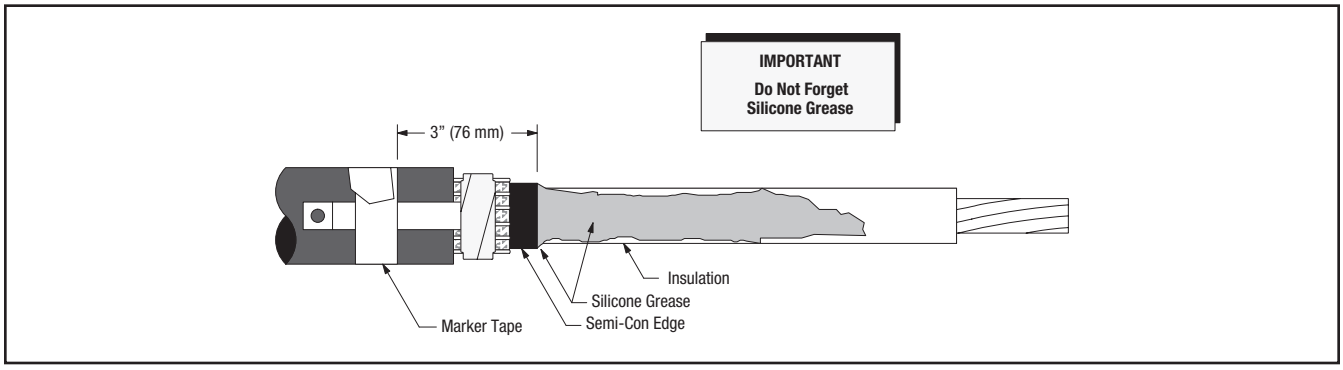



Figure 12

10.3 Slide termination onto cable (loose core end extending out toward cable lug end), aligning base with previously applied marker tape (*Figure 13*).

10.4 Remove the core. Pull while unwinding, counterclockwise, starting with the loose end (Figure 13). Make sure the termination body (not the core) is butted up to the edge of the vinyl tape marker previously applied (Figure 13).

*NOTE: Once the termination body makes contact, there is no need to continue supporting the assembly. DO NOT PUSH OR PULL THE TERMINATION ASSEMBLY WHILE UNWINDING THE CORE.*

*TIP: An occasional tug of the core strand while unwinding will aid in core removal.*

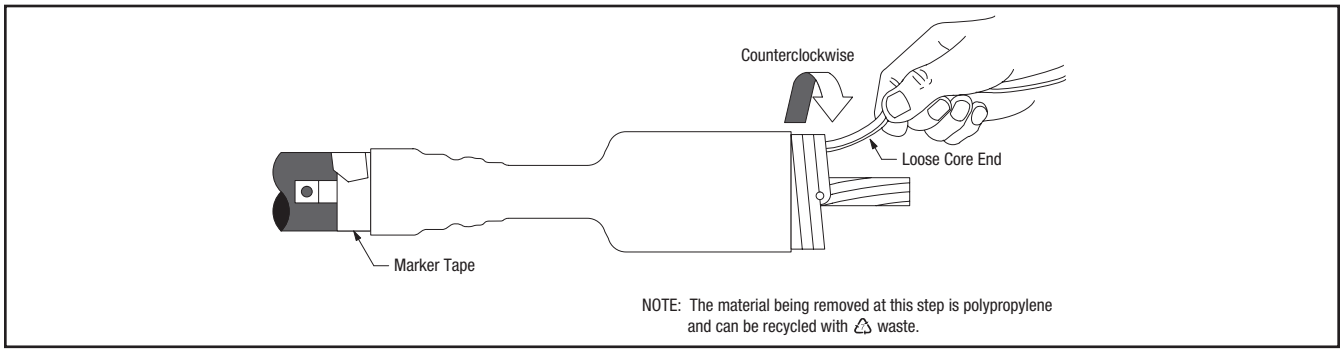



Figure 13

# 11.0 Install Lug

11.1 For 3M Compression Lugs and 3M Stem Connectors:
a. Refer to the final pages of this Instruction document for 3M Connector and Lug crimping information.
b. For Aluminum Conductors - Thoroughly wire brush conductor strands to remove aluminum oxide layer. Insert conductor into lug or connector and then remove conductor. This will transfer some of the antioxidant paste onto the conductor. Wire brush the antioxidant paste into the strands. Immediately insert conductor into lug or connector barrel as far as it will go.
c. Position connector or lug and crimp according to manufacturer's directions. Remove excess oxide inhibitor and sharp crimp flashings following crimping.

*NOTE: Die/crimper head rotation between consecutive crimps is RECOMMENDED.*

# 12.0 Apply Top and Bottom Seals

12.1 TOP SEAL:
Apply 1 half-lapped layer of Scotch® Self-Fusing Silicone Rubber Electrical Tape 70 over at least 1/2" (13 mm) of lug barrel and onto the termination insulator for 1" (25 mm) (*Figure 14*).

*NOTE: For the 5625K Termination, apply 2 half-lapped layers of Scotch® Self-Fusing Silicone Rubber Electrical Tape 70.*

12.2 BOTTOM SEAL:
**NOTE: To attain a Class 1 Termination , this step is NOT optional.**

a. Remove marker tape.

b. Bend the Ground Strap away from the cable jacket, towards the bottom of the installed termination body, to about a 90 degree angle. (Figure 14).

c. Select a Scotch® Mastic Strip 2230 from kit and remove white release liners. Using light tension, apply a **SINGLE WRAP** of mastic around the cable jacket directly against the bottom of the termination body (Figure 14). Cut off excess.

d. Bend the Ground Strap against the cable jacket and onto the mastic.

e. Select second Scotch® Mastic Strip 2230 from kit and remove white release liners. Using light tension, apply a **SINGLE WRAP** of mastic over previously applied mastic. Add another **SINGLE WRAP** of mastic adjacent to the second wrap of mastic that was just applied, directly on top of the termination body (Figure 15). Cut off excess.

f. Wrap two highly stretched half-lapped layers of electrical grade vinyl tape around mastic seal (Figure 16). Overlap the edges of the mastic seal by 1/2" (13 mm) minimum.

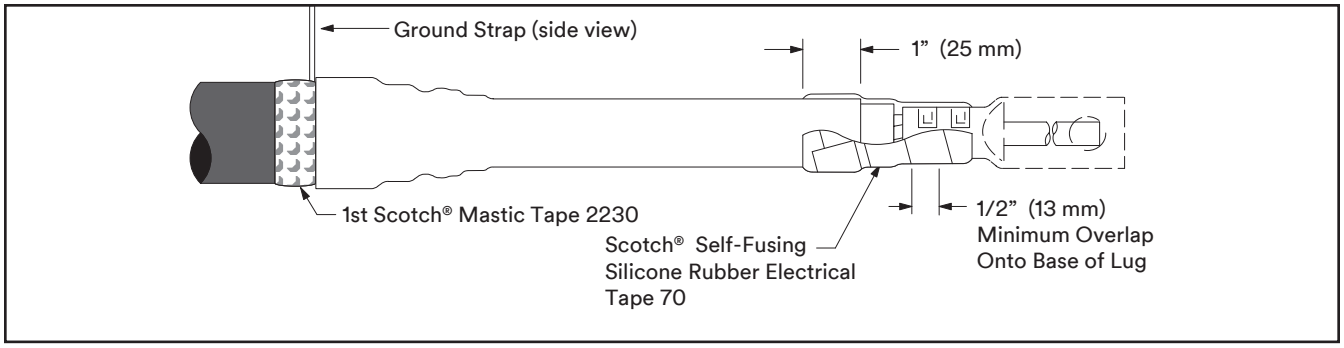



Figure 14

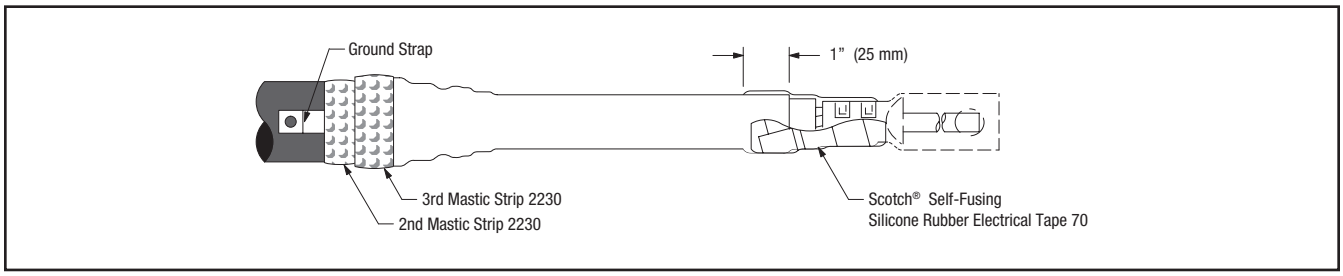



Figure 15

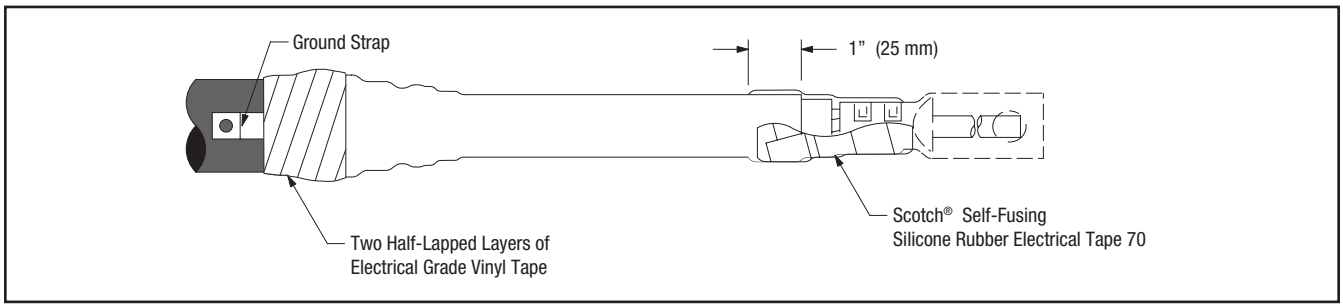



Figure 16

# 13.0 Connect Termination and Ground Strap

13.1 Connect termination according to standard practice.

13.2 Connect ground strap to system ground according to standard practice.

# Instructions for UniShield® Cable

## 14.0 Prepare Cable

14.1 Check to be sure cable size fits within the kit range as shown in Kit Selection Table (Table 1).

14.2 Remove drain wires from semi-con jacket for distance [A] + [B] + 1" (25 mm), as shown in *Figure 17 and Table 4*. **BE SURE TO ALLOW FOR DEPTH OF TERMINAL LUG Dimension [B] and see the NOTE below concerning Aluminum Lug and Connector growth allowances.**

*NOTE: Provide additional exposed conductor distance to account for growth during crimping of ALUMINUM lugs or connectors as follows:*

| **Aluminum Lug and Connector Growth Allowance** | 2 - 350<br>1/4” (6 mm) | 400 - 650<br>1/2” (13 mm) | 750–1000<br>3/4” (19 mm) | 1250 - 2000<br>Field determined |
|---|---|---|---|---|

*NOTE: It is imperative to remove all remnants of the semi-conductive jacket, even if the semi-conductive jacket comes off as one layer. There should not be any remaining black areas, or particles, on the cable insulation layer.*

14.3 Install hose clamp, or constant force spring, at dimension [A] + [B] and cut 80% through jacket (*Figure 17 and Table 4*).

14.4 Remove jacket by pulling against hose clamp, or constant force spring. DO NOT BELL SEMI-CON JACKET.

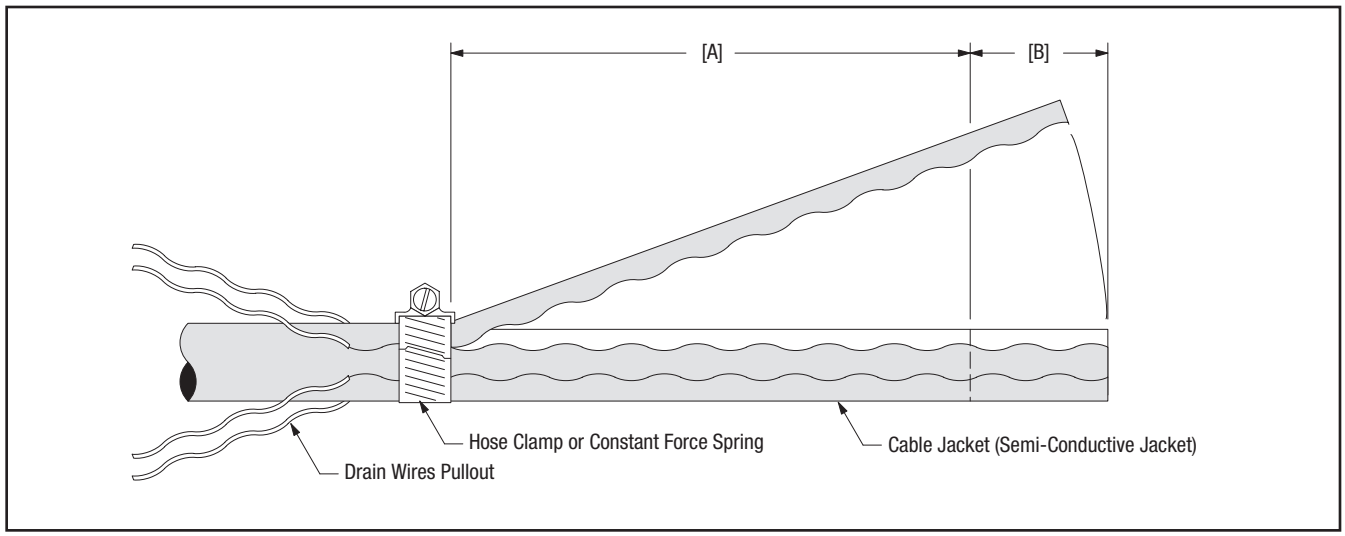



Figure 17

| Kit Number | Dimension [A] | Dimension [B] |
|---|---|---|
| 5621K | 5 1/2" (140 mm) | Depth of Terminal Lug Barrel (plus Aluminum Lug and Connector growth allowance) |
| 5622K | 5 1/2" (140 mm) | |
| 5623K | 7" (178 mm) | |
| 5624K | 7" (178 mm) | |
| 5625K | 7" (178 mm) | |

Table 4

14.5 Remove cable insulation for length of terminal lug barrel, Dimension [B] (Table 4) **PLUS** the Aluminum Lug or Connector growth allowance (from the Aluminum Lug and Connector Growth Allowance chart above), if using aluminum lugs or connectors.

14.6 Remove hose clamp or Constant Force Spring.

14.7 Bend drain wires back over cable jacket (*Figure 18*).

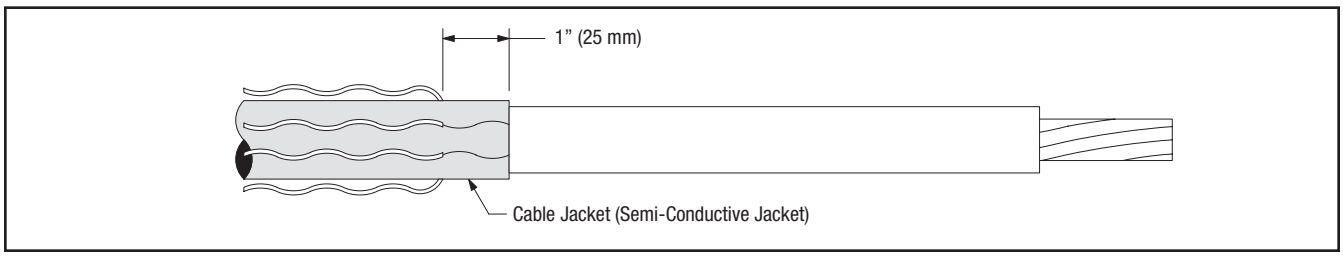



Figure 18

14.8 Clean cable using standard practice:

a. Wipe cable insulation with one of the solvent saturated pads from the 3M Cable Cleaning Preparation Kit CC-2, or with an approved cable cleaner/solvent. **DO NOT ALLOW SOLVENT TO TOUCH SEMI-CON INSULATION SHIELD!**

b. If abrasive must be used:
   a. Use on insulation only. **DO NOT USE ABRASIVE ON SEMI-CON INSULATION SHIELD!**
   b. Use only aluminum oxide abrasive; grit 120 or finer, included in the 3M Cable Cleaning Preparation Kit CC-2.
   c. Be careful not to reduce the cable insulation diameter below that allowed by the kit.

## 15.0 Install Termination

15.1 Place a marker tape 3" (76 mm) back from semi-conductive jacket step using vinyl tape (Figure 19).

15.2 Apply a liberal coating of silicone grease over the semi-conductive jacket step (Figure 19).

*NOTE: The silicone grease does not serve as a lubricant; it is used to fill the step at the leading edge of the semi-conductive jacket step. Spread remaining silicone grease over exposed primary insulation.*

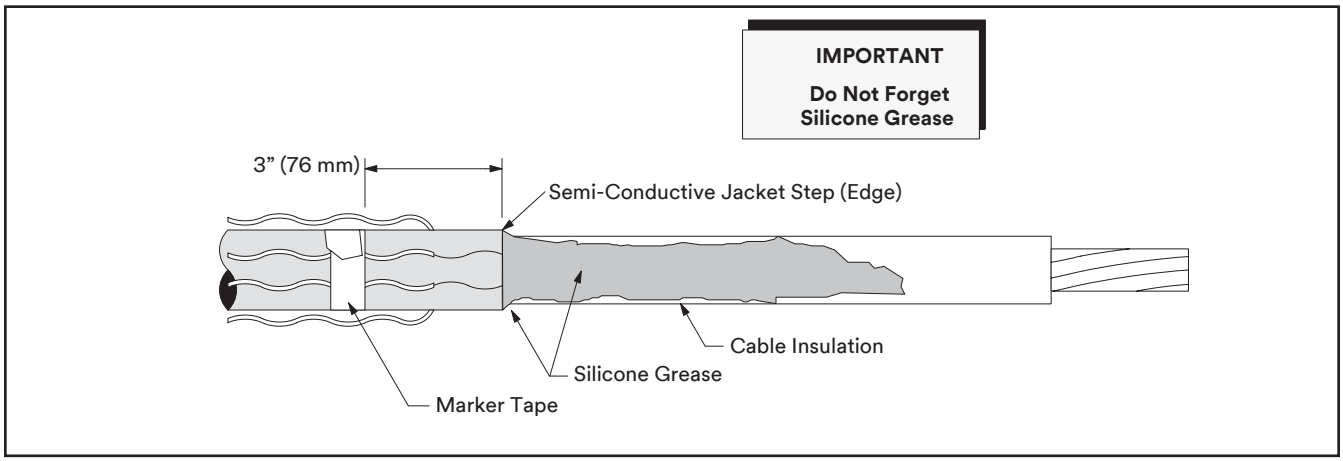


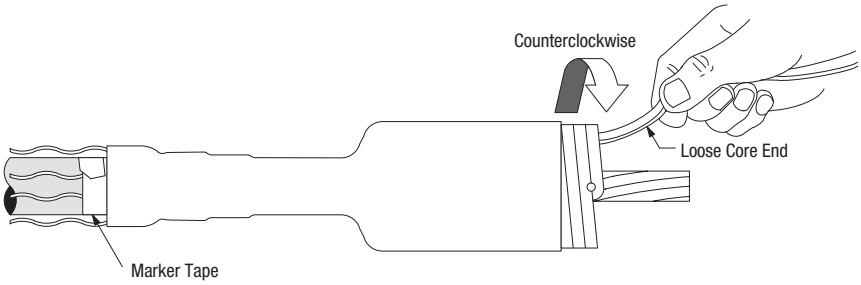

Figure 19

15.3 Slide termination onto cable (loose core end extending out toward cable lug end), aligning base with previously applied marker tape (*Figure 20*).

15.4 Remove the core. Pull while unwinding, counterclockwise, starting with the loose end (Figure 20). Make sure the termination body (not the core) is butted up to the edge of the vinyl tape marker previously applied (Figure 20).

*NOTE: Once the termination body makes contact, there is no need to continue supporting the assembly. DO NOT PUSH OR PULL THE TERMINATION ASSEMBLY WHILE UNWINDING THE CORE.*

*Tip: An occasional tug of the core strand while unwinding will aid in core removal.*




NOTE: The material being removed at this step is polypropylene and can be recycled with ♺ waste.

Figure 20

# 16.0 Install Lug

16.1 For 3M Compression Lugs and 3M Stem Connectors:
a. Refer to the final pages of this Instruction document for 3M Connector and Lug crimping information.
b. For Aluminum Conductors - Thoroughly wire brush conductor strands to remove aluminum oxide layer. Insert conductor into lug or connector and then remove conductor. This will transfer some of the antioxidant paste onto the conductor. Wire brush the antioxidant paste into the strands. Immediately insert conductor into lug or connector barrel as far as it will go.
c. Position connector or lug and crimp according to manufacturer's directions. Remove excess oxide inhibitor and sharp crimp flashings following crimping.

*NOTE: Die/crimper head rotation between consecutive crimps is RECOMMENDED.*

# 17.0 Apply Top and Bottom Seals

17.1 TOP SEAL:
Apply 1 half-lapped layer of Scotch® Self-fusing Silicone Rubber Electrical Tape over at least 1/2" (13 mm) of lug barrel and onto the termination insulator for 1" (25 mm) (*Figure 21*).

*NOTE: For the 5625K Termination, apply 2 half-lapped layers of Scotch® Self-Fusing Silicone Rubber Electrical Tape 70.*

17.2 BOTTOM SEAL:
**NOTE: To attain a Class 1 Termination , this step is NOT optional.**

a. Remove marker tape.

b. Bend all of the drain wires away from the cable jacket, towards the bottom of the installed termination body, between 45 degrees and 90 degrees (Figure 21).

c. Select a Scotch® Mastic Strip 2230 from kit and remove white release liners. Using light tension, apply a **SINGLE WRAP** of mastic around the cable jacket directly against the bottom of the termination body (Figure 21). Cut off excess.

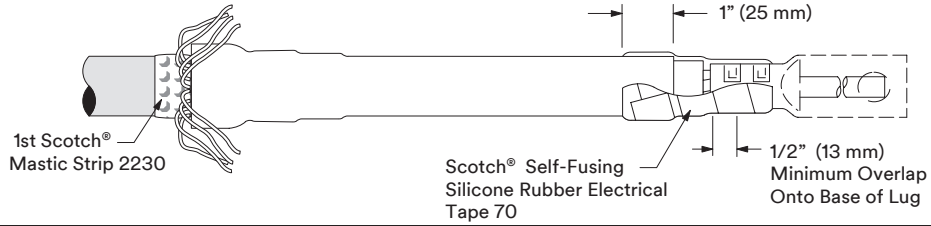



Figure 21

d. Bend all of the drain wires back towards the cable jacket and onto the mastic.

e. Select second Scotch® Mastic Strip 2230 from kit and remove white release liners. Using light tension, apply a **SINGLE WRAP** of mastic over previously applied mastic. Add another **SINGLE WRAP** of mastic adjacent to the second wrap of mastic that was just applied, directly on top of the termination body (Figure 22). Cut off excess.

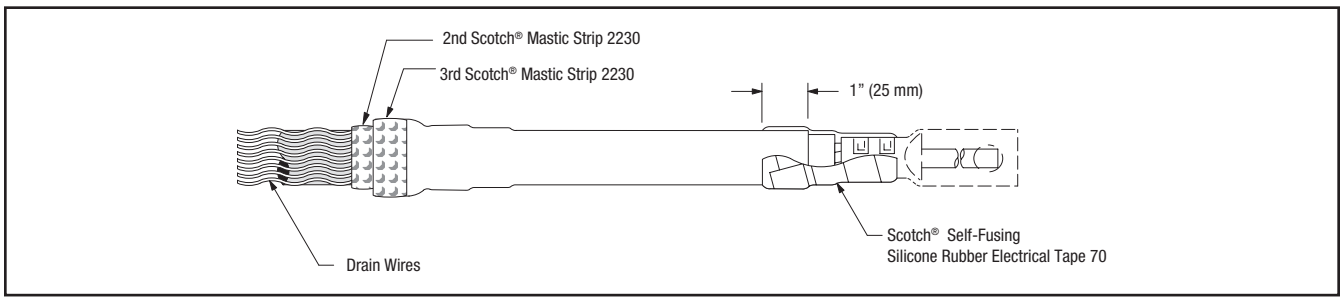



Figure 22

f. Wrap two highly stretched half-lapped layers of electrical grade vinyl tape around mastic seal (Figure 23). Overlap the edges of the mastic seal by 1/2" (13 mm) minimum.

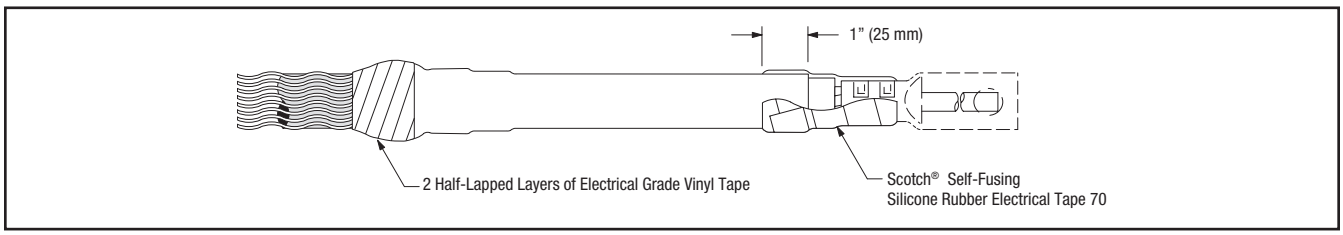



Figure 23

g. Pull all of the drain wires to one side of the cable and twist together, beginning close to base of termination (Figure 24).

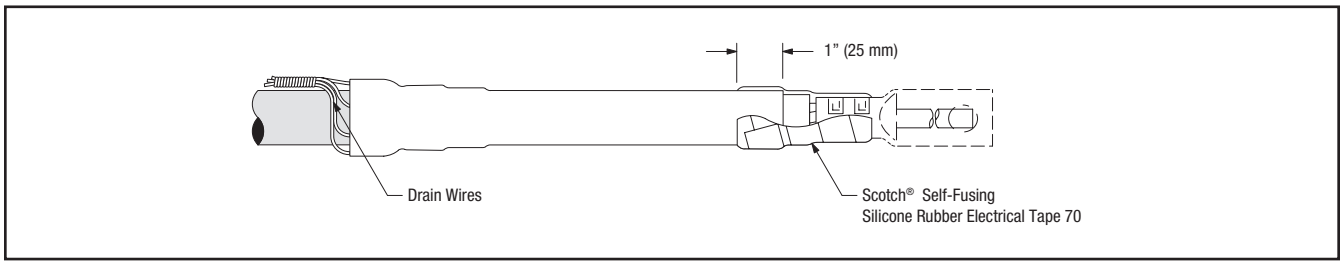



Figure 24

# 18.0 Connect Termination and Drain Wires

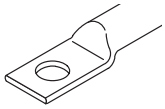
18.1 Connect termination according to standard practice.

18.2 Connect drain wires to system ground according to standard practice.

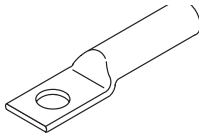
# Tooling Index

**Lug and Crimping Information for 3M™ Scotchlok™ Copper Lugs**

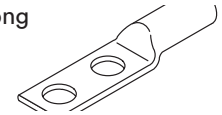
30014 thru 30045
One hole



31036 thru 31068
One hole-long barrel



31145 thru 31178
Two hole-long barrel



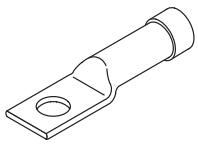
| Cable Size AWG/ kcmil | Stud Size (in.) | 3M™ Scotchlok™ Copper Lug Number | Crimping Tool-Die Sets (Minimum Number Of Crimps) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Burndy Corporation | | | | Thomas & Betts Corporation | | | Square D Co. Anderson Div. |
| | | | MD6 | MY29 | Y34A | Y35, Y39, Y45*, Y46* | TBM 5 | TBM 8 | TBM 15 | VC6–3, VC6–FT** |
| 6 | 10<br>1/4<br>5/16 | 30014<br>30015<br>30016 | – | 6AWG(1) | – | U5CRT(1) | Blue(1) | Blue(1) | – | (1) |
| 4 | 10<br>1/4<br>3/8 | 30018<br>30019<br>30021 | W161(1) | 4AWG(1) | A4CR(1) | U4CRT(1) | Grey(1) | Grey(1) | – | (1) |
| 2 | 1/4<br>5/16<br>3/8 | 30022<br>30023<br>30024 | W162(2) | 2AWG(1) | A2CR(1) | U2CRT(2) | Brown(1) | Brown(1) | 33(1) | (2) |
| 1 | 5/16<br>3/8 | 30027<br>30028 | – | 1AWG(1) | A1CR(1) | U1CRT(2) | Green(1) | Green(1) | 37(1) | (2) |
| 1/0 | 5/16<br>3/8 | 30031<br>30032 | W163(2) | 1/0(1) | A25R(1) | U25RT(1) | Pink(2) | Pink(2) | 42H(2) | (1) |
| 2/0 | 3/8<br>3/8 | 30036<br>31036 | W241(2)<br>W241(3) | 2/0(1)<br>2/0(2) | A26R(1)<br>A26R(2) | U26RT(2)<br>U26RT(3) | Black(2)<br>Black(3) | Black(2)<br>Black(3) | 45(1)<br>45(2) | (1)<br>(2) |
| 3/0 | 1/2<br>1/2 | 30041<br>31041 | W243(2)<br>W243(3) | 3/0(1)<br>3/0(2) | A27R(1)<br>A27R(2) | U27RT(2)<br>U27RT(3) | Orange(2)<br>Orange(3) | Orange(2)<br>Orange(3) | 50(1)<br>50(2) | (2)<br>(3) |
| 4/0 | 1/2<br>1/2<br>1/2 | 30045<br>31045<br>31145 | BG(3)<br>BG(4)<br>BG(4) | 4/0(1)<br>4/0(2)<br>4/0(2) | A28R(2) | U28RT(2)<br>U28RT(3)<br>U28RT(3) | Purple(2)<br>Purple(3)<br>Purple(3) | Purple(2)<br>Purple(3)<br>Purple(3) | 54H(2)<br>54H(3)<br>54H(3) | (2)<br>(3)<br>(3) |
| 250 | 1/2<br>1/2 | 31049<br>31149 | W166(4) | 250(2) | A29R(2) | U29RT(3) | Yellow(2) | Yellow(2) | 62(2) | (2) |
| 300 | 1/2<br>1/2 | 31053<br>31153 | – | – | A30R(2) | U30RT(3) | – | White(3) | 66(3) | (3) |
| 350 | 1/2<br>1/2 | 31056<br>31156 | – | – | A31R(2) | U31RT(3) | – | Red(4) | 71H(4) | – |
| 400 | 1/2<br>1/2 | 31060<br>31160 | – | – | A32R(2) | U32RT(3) | – | Blue(4) | 76H(4) | – |
| 500 | 1/2<br>5/8<br>1/2 | 31066<br>31067<br>31166 | – | – | A34R(2) | U34RT(3) | – | Brown(4) | 87H(4) | – |
| 600 | 1/2<br>1/2 | 31068<br>31168 | – | – | – | U36RT(3) | – | Green(4) | 94H(4) | – |
| 750 | 1/2 | 31172 | – | – | – | Y39, Y45, Y46<br>U39RT(5) | – | – | 106H(4) | – |
| 1000 | 1/2 | 31178 | – | – | – | Y45:<br>S44RT(6)<br>Y46:<br>P44RT(6) | – | – | 125H(4) | – |

* Y45 and Y46 accept all Y35 dies (“U” series). For Y45 use PT6515 adapter. For Y46 use PUADP adapter.
** Anderson VC6–3 and VC6–FT require no die set.

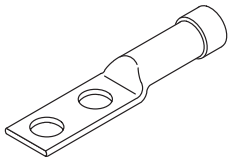
# Tooling Index

**Lug and Crimping Information for 3M™ Scotchlok™ Copper/Aluminum Lugs**

40016 thru 40079
One hole



40132 thru 40178
Two hole



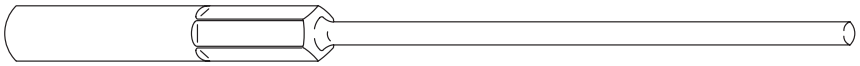
| Cable Size AWG/ kcmil | Stud Size (in.) | 3M™Scotchlok™ Lug Number | Crimping Tool-Die Sets (Minimum Number Of Crimps) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Burndy Corporation | | | | | Thomas & Betts Corporation | | | | Square D Co. Anderson Div. | | ITT Blackburn Co. | Kearny Nat'l Div. |
| | | | MD6 | MY29 | Y34A | Y35, Y39, Y45*, Y46* | Y1000 ** | TBM 5 | TBM 8 | TBM 12 | TBM 15 | VC6–3** VC6–FT** | VC8C ** | OD58 | TYPE O |
| 6 | 5/16 | 40016 | W161(1) | 6AWG(1) | A6CAB(1) | U6CABT(1) | (1) | Grey(1) | Grey(1) | – | 29(1) | (1) | – | BY19(3) | J(3) |
| 4 | 5/16 | 40020 | W162(3) | 4AWG(1) | A4CAB(1) | U4CABT(1) | (1) | Green(2) | Green(2) | – | 37(1) | (1) | – | BY53(3) | P(3) |
| 2 | 3/8 | 40024 | W163(3) | 2AWG(1) | A2CAB(1) | U2CABT(1) | (1) | Pink(2) | Pink(2) | – | 42H(2) | (1) | – | BY23(3) | 1/2(3) |
| | 1/2 | 40025 | W163(3) | 2AWG(1) | A2CAB(1) | U2CABT(1) | (1) | Pink(2) | Pink(2) | | 42H(2) | (1) | | BY23(3) | 1/2(3) |
| 1 | 3/8 | 40028 | W163(3) | 1AWG(1) | A1CAR(1) | U1CART(1) | (1) | Gold(2) | Gold(2) | – | 45(1) | (1) | – | BY23(3) | 1/2(3) |
| | 1/2 | 40029 | W163(3) | 1AWG(1) | A1CAR(1) | U1CART(1) | (1) | Gold(2) | Gold(2) | | 45(1) | (1) | | BY23(3) | 1/2(3) |
| 1/0 | 3/8 | 40032 | W241(3) | 1/0(1) | A25AR(1) | U25ART(1) | (1) | Tan(2) | Tan(2) | | 50(1) | (1) | | BY25(3) | 5/8–1(3) |
| | 1/2 | 40033 | W241(3) | 1/0(1) | A25AR(1) | U25ART(1) | (1) | Tan(2) | Tan(2) | – | 50(1) | (1) | – | BY25(3) | 5/8–1(3) |
| | 3/8 | 40132 | W241(3) | 1/0(1) | A25AR(1) | U25ART(1) | (1) | Tan(2) | Tan(2) | | 50(1) | (1) | | BY25(3) | 5/8–1(3) |
| 2/0 | 1/2 | 40037 | BG(4) | 2/0(1) | A26AR(2) | U26ART(2) | (1) | Olive(2) | Olive(2) | – | 54H(2) | (2) | – | BY31C(3) | 5/8–1(3) |
| | 1/2 | 40137 | BG(4) | 2/0(1) | A26AR(2) | U26ART(2) | (1) | Olive(2) | Olive(2) | | 54H(2) | (2) | | BY31C(3) | 5/8–1(3) |
| 3/0 | 1/2 | 40041 | W166(4) | 3/0(1) | A27AR(2) | U27ART(2) | (1) | Ruby(2) | Ruby(2) | – | 60(2) | (2) | – | – | 737(3) |
| | 1/2 | 40141 | W166(4) | 3/0(1) | A27AR(2) | U27ART(2) | (1) | Ruby(2) | Ruby(2) | | 60(2) | (2) | | | 737(3) |
| 4/0 | 1/2 | 40045 | W660(4) | 4/0 (2) | A28AR(2) | U28ART(2) | (1) | | White(4) | | 66(4) | (2) | | BY35C(4) | 840(4) |
| | 5/8 | 40046 | W660(4) | 4/0 (2) | A28AR(2) | U28ART(2) | (1) | – | White(4) | – | 66(4) | (2) | – | BY35C(4) | 840(4) |
| | 1/2 | 40145 | W660(4) | 4/0 (2) | A28AR(2) | U28ART(2) | (1) | | White(4) | | 66(4) | (2) | | BY35C(4) | 840(4) |
| 250 | 1/2 | 40049 | W249(3) | | A29AR(2) | U29ART(2) | (1) | | | 71H(4) | 71H(2) | (3) | | | |
| | 5/8 | 40050 | W249(3) | – | A29AR(2) | U29ART(2) | (1) | – | – | 71H(4) | 71H(2) | (3) | – | – | – |
| | 1/2 | 40149 | W249(3) | | A29AR(2) | U29ART(2) | (1) | | | 71H(4) | 71H(2) | (3) | | | |
| 300 | 1/2 | 40053 | – | – | A30AR(2) | U30ART(2) | (1) | – | – | 76H(4) | 76H(2) | (3) | – | – | – |
| | 1/2 | 40153 | | | A30AR(2) | U30ART(2) | (1) | | | 76H(4) | 76H(2) | (3) | | | |
| 350 | 1/2 | 40056 | | | | U31ART(2) | (1) | | | 87H(4) | 87H(3) | (3) | | | |
| | 5/8 | 40057 | – | – | – | U31ART(2) | (1) | – | – | 87H(4) | 87H(3) | (3) | – | – | – |
| | 1/2 | 40156 | | | | U31ART(2) | (1) | | | 87H(4) | 87H(3) | (3) | | | |
| 400 | 1/2 | 40160 | – | – | – | U32ART(4) | (1) | – | – | 94H(4) | 94H(4) | – | (2) | – | – |
| 500 | 5/8 | 40067 | – | – | – | U34ART(4) | (1) | – | – | 106H(4) | 106H(3) | – | (2) | – | – |
| | 1/2 | 40166 | | | | U34ART(4) | (1) | | | 106H(4) | 106H(3) | | (2) | | |
| 600 | 1/2 | 40170 | – | – | – | U36ART(4) | (1) | – | – | – | 115H(3) | – | (3) | – | – |
| 750 | 5/8 | 40073 | – | – | – | U39ART(4) | (1) | – | – | – | 125H(4) | – | (3) | – | – |
| | 1/2 | 40172 | | | | U39ART(4) | (1) | | | | 125H(4) | | (3) | | |
| 1000 | 5/8 | 40079 | – | – | – | S44ART(4) | (1) | – | – | – | 140H(4) | – | (3) | – | – |
| | 1/2 | 40178 | | | | S44ART(4) | (1) | | | | 140H(4) | | (3) | | |

* Y45 and Y46 accept all Y35 dies (“U” series). For Y45 use PT6515 adapter. For Y46 use PUADP adapter.

** Anderson VC6–3, VC6–FT, VC8C and Burndy Y1000 require no die set.

# Tooling Index

Crimping Information for
3M™ Stem Connectors
Copper/Aluminum



| Conductor Size AWG & kcmil | | 3M™ Connector Number | Crimping Table For 3M™ Stem Type Connector | | | | |
|---|---|---|---|---|---|---|---|
| | | | Recommended Crimping Tools | | | | |
| Stranded | Solid | | Manufacturer | Mech. Tool | Die (Minimum No. Crimps) | Hydraulic | Die (Minimum No. Crimps) |
| 2, 1<br>4<br>1/0 | 1, 1/0<br>2<br>2/0 | SC0001<br>SC0002<br>SC0010 | Burndy | MD6 | BG(4), W241(3) | Y35, Y39, Y45*, Y46* | U25ART(2), U243(2) |
| | | | Kearny | 0–51, 0–52 | 5/8–1 (4) | WH–1, WH–2 | 5/8–1(4) |
| | | | T & B | TBM 5 | Tan(2) | – | – |
| | | | T & B | TBM 8 | Olive(2), Tan(2) | TBM 15 | 50(2) |
| | | | Anderson | – | – | VC6** | (2) |
| 2/0<br>3/0<br>4/0 | 3/0<br>4/0<br>– | SC0020<br>SC0030<br>SC0040 | Burndy | MD6 | W249(3) | Y35, Y39, Y45*, Y46* | U28ART(2) |
| | | | Kearny | 0–51, 0–52 | 840(5) | WH–1, WH–2 | 840(2) |
| | | | T & B | TBM 8 | Red(4) | TBM 15 | 71H(3) |
| | | | Anderson | – | – | VC6** | (2) |

* Y45 and Y46 accept all Y35 dies (“U” series). For Y45 use PT6515 adapter. For Y46 use PUADP adapter.

** Anderson VC6 is dieless and does not require a die set.

**Important Notice**

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3M

**Electrical Markets Division**

6801 River Place Blvd.
Austin, TX 78726-9000
800.245.3573
Fax 800.245.0329
www.3M.com/electrical


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