

# Instructions



## Quick Term II

### Silicone Rubber Termination (with High-K Stress Relief)

IEEE Std. No. 48-1990

Class 1 Termination

25 Class

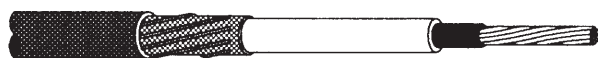
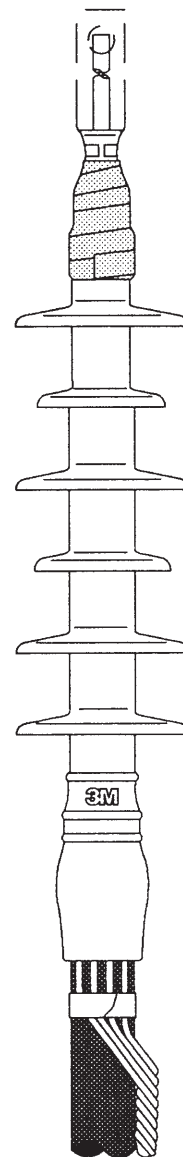
150 kV BIL

### Kit Contents

- 1 Hi-K Silicone Rubber Termination
- 2 Scotch™ 70 Silicone Rubber Tape Strips  
(Gray with clear release liners)
- 2 Mastic Seal Strips  
(Black with white release liners, bagged)
- 1 Pack of Silicone Grease  
(Clear 5cc tube with green letters)
- 1 Instruction Sheet

Kit Selection Table

Kit Number	Primary Insulation O.D. Range	Jacket O.D. Range	Conductor Size Range (AWG & kcmil)	
			15 kV	25/28 kV
5651	.637 – 1.12" (16 – 28 mm)	.93 – 1.35" (24 – 34 mm)	#2 – 2/0	#2 – 1/0
5652	.84 – 1.38" (21 – 35 mm)	1.19 – 1.72" (30 – 44 mm)	3/0 – 350	1/0 – 250
5653	1.08 – 1.80" (27 – 46 mm)	1.37 – 2.02" (35 – 51 mm)	400 – 700	250 – 500
5654	1.31 – 2.10" (33 – 53 mm)	1.62 – 2.55" (41 – 65 mm)	750 – 1500	500 – 1250



Jacketed Concentric Neutral (JCN)

**Quick Term II** **3M**  
**Silicone Rubber Terminations**  
For  
**Jacketed Concentric Neutral Cable (JCN)**

5651      5653  
5652      5654

**78-8092-1527-6**

NUMBER OF PAGES: 8

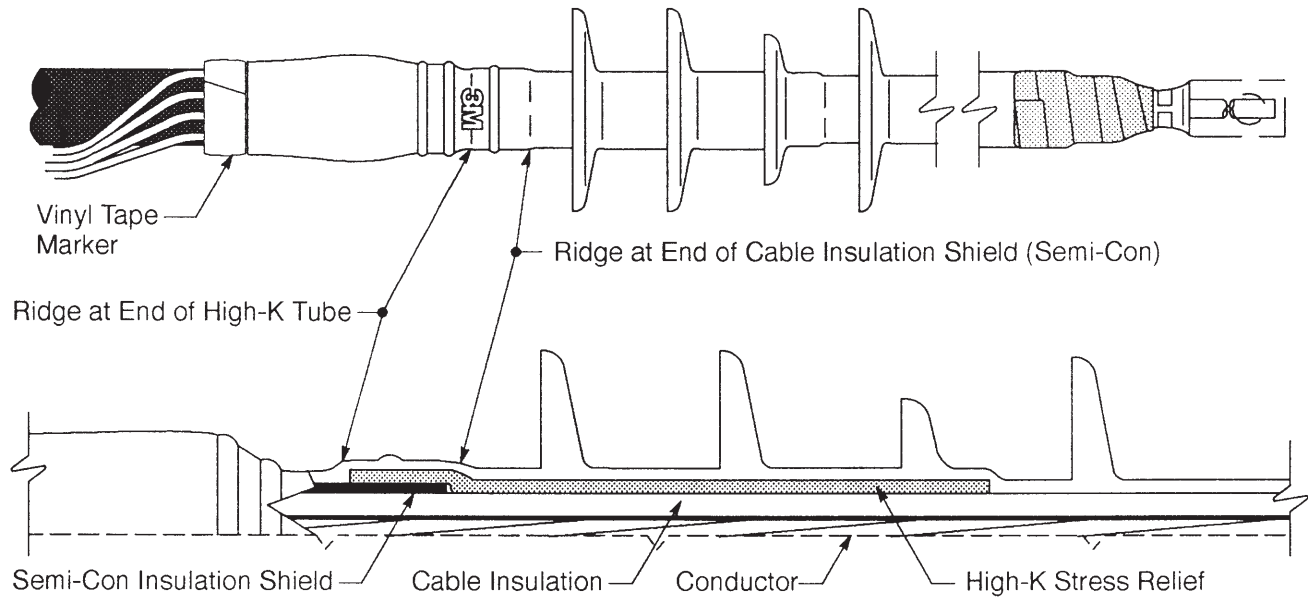
SCALE: Not to scale

ISSUE DATE: February 2014

ISSUE: Rev E

MAY - 2 1994

## Correct Installation of Termination



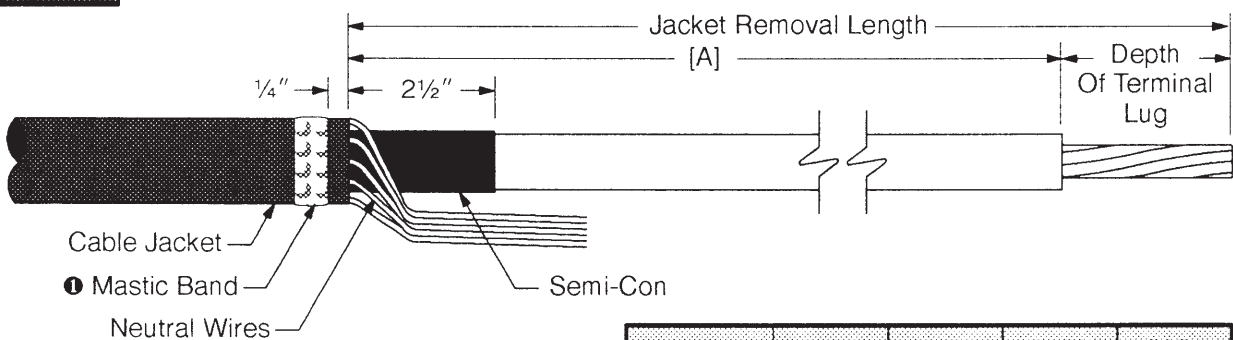
### A. Prepare Cable

1. Check to be sure cable size fits within kit range as shown in Kit Range table (cover page).
2. Train cable into position and cut to length required for installation. Allow sufficient neutral wire length for grounding connection.
3. Prepare cable using dimensions shown in (Figure 1). **Be sure to allow for depth of terminal lug.**

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

Barrel Depth ⊕	2/0 – 350 1/4"	400 – 650 1/2"	750 – 1000 3/4"	1250 – 2000 Field Determined
----------------	-------------------	-------------------	--------------------	---------------------------------

**Figure 1**



Dimension [A]	5651	5652	5653	5654
	10 1/2"	10 1/2"	11"	11"

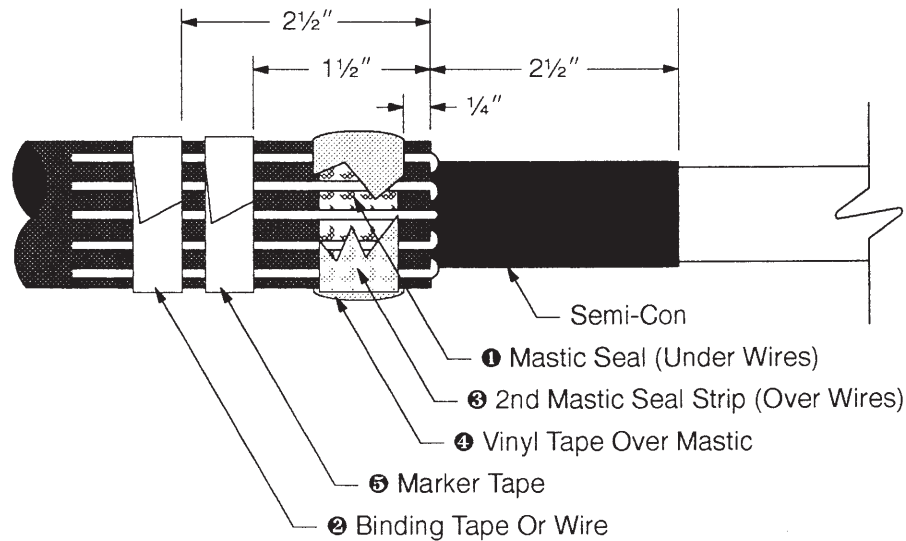
4. Select one of two mastic strips from kit and remove white release liners. Using light tension, wrap a band of mastic around the cable jacket 1/4" (6 mm) from cut edge ❶ (Figure 1). Cut off excess.
5. Bend neutral wires back over applied sealing mastic and secure to cable jacket 2 1/2" (64 mm) below cut edge using vinyl tape or binding wire ❷ (Figure 2).
6. Select second mastic strip from kit and remove white release liners. Apply a second mastic band over the neutral wires and previously applied mastic ❸ (Figure 2). Cut off excess.
7. Compress neutral wires into mastic by over-wrapping seal strip with two highly stretched layers electrical grade vinyl tape ❹ (Figure 2).

## Prepare Cable (continued)

**NOTE:** Do not extend vinyl tape wrapping more than ¼" (6 mm) beyond mastic strip.

8. Place a marker tape 1½" (38 mm) back from the jacket cut edge ⑤ (Figure 2).

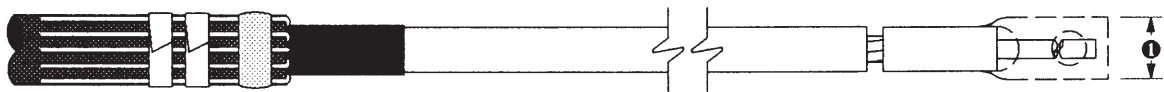
**Figure 2**



## B. Install Lug or Connector

1. The termination assemblies are designed to fit over Scotchlok™ and 3M copper and aluminum lugs. If other lugs ① (Figure 3) will not fit through the termination core, clean the insulation (per Step C.) and slide termination on cable before installing lug. **Do not remove core at this time.**

**Figure 3**



**NOTE:** Refer to pages 6 and 7 for 3M lug/connector crimping information.

2. Position connector/lug and crimp according to manufacturers directions. Remove excess oxide inhibitor and sharp crimp flashings following crimping.

## C. Clean Cable Insulation and Lug Barrel Using Standard Practice

1. Wipe the cable insulation with an approved solvent. **Do not allow solvent to touch semi-con insulation shield!**
2. 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.
  - c. Be careful not to reduce the cable insulation diameter below that allowed by the kit.

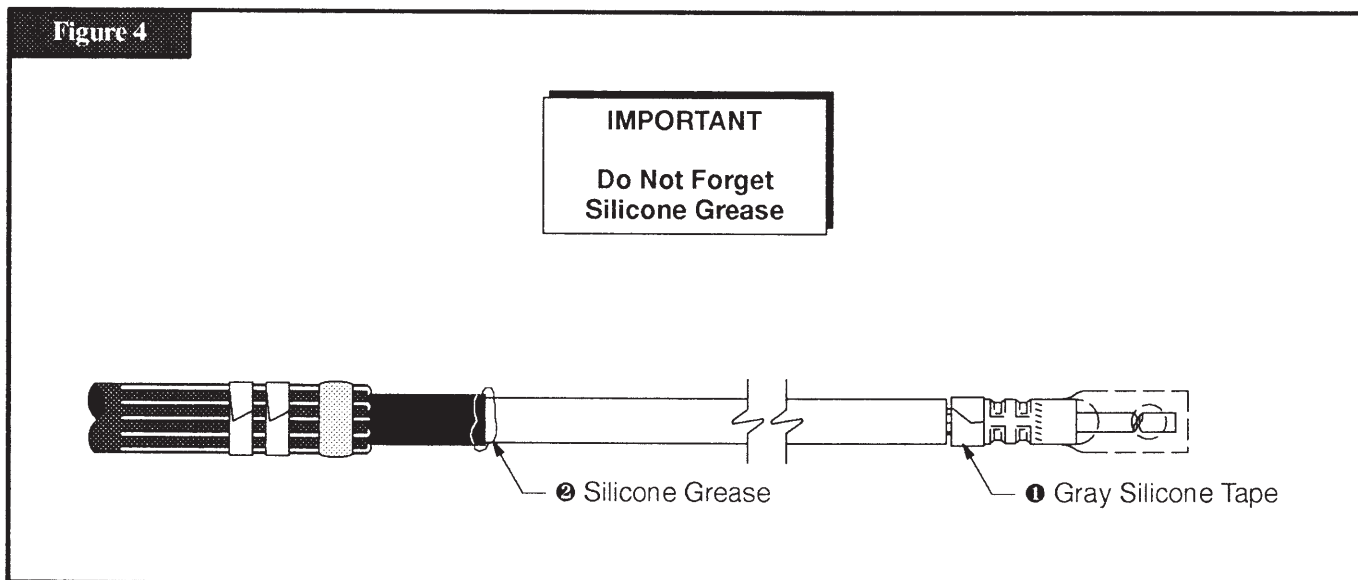
## D. Install Termination

1. **IMPORTANT:** If a 3M designed stem connector is not used. A track resistant moisture seal must be made between termination insulator and lug/connector using gray Scotch™ No. 70 Silicone Rubber Electrical Tape strip (contained in kit). After removing the two clear release liners, wrap a band of silicone tape around the base of the terminal lug ❶ (Figure 4).

**NOTE: (IMPORTANT)**

- a. If barrel diameter is equal to or greater than cable primary insulation, the tape band should not exceed 2 layers.
  - b. If barrel diameter is smaller than the cable primary insulation, use one full tape strip to form the tape band.
2. Cover the edge of the semi-con insulation shield with a liberal coating of Silicone Grease ❷ (Figure 4). On this product the Silicone Grease does not serve as a lubricant. It must be used to fill the step at the semi-con cutoff.

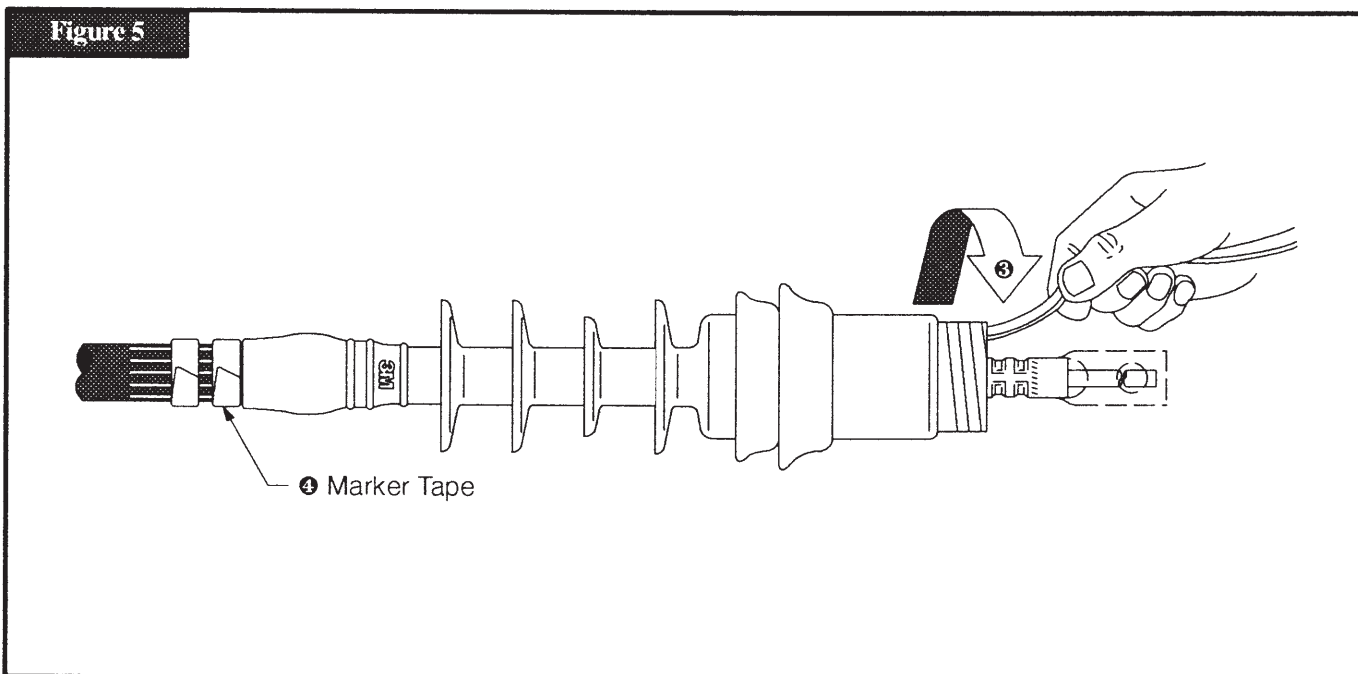
Figure 4



3. Slide the termination body onto the cable and remove core. Pull while unwinding, counter-clockwise, starting with the loose end ❸ (Figure 5). Make sure the termination body (not the core) is butted up to the edge of the marker tape ❹ (Figure 5).

**NOTE:** Once the termination insulator has made contact over the mastic seal area, there is no need to continue supporting the assembly. Do not push or pull on the termination assembly while removing the core material.

Figure 5

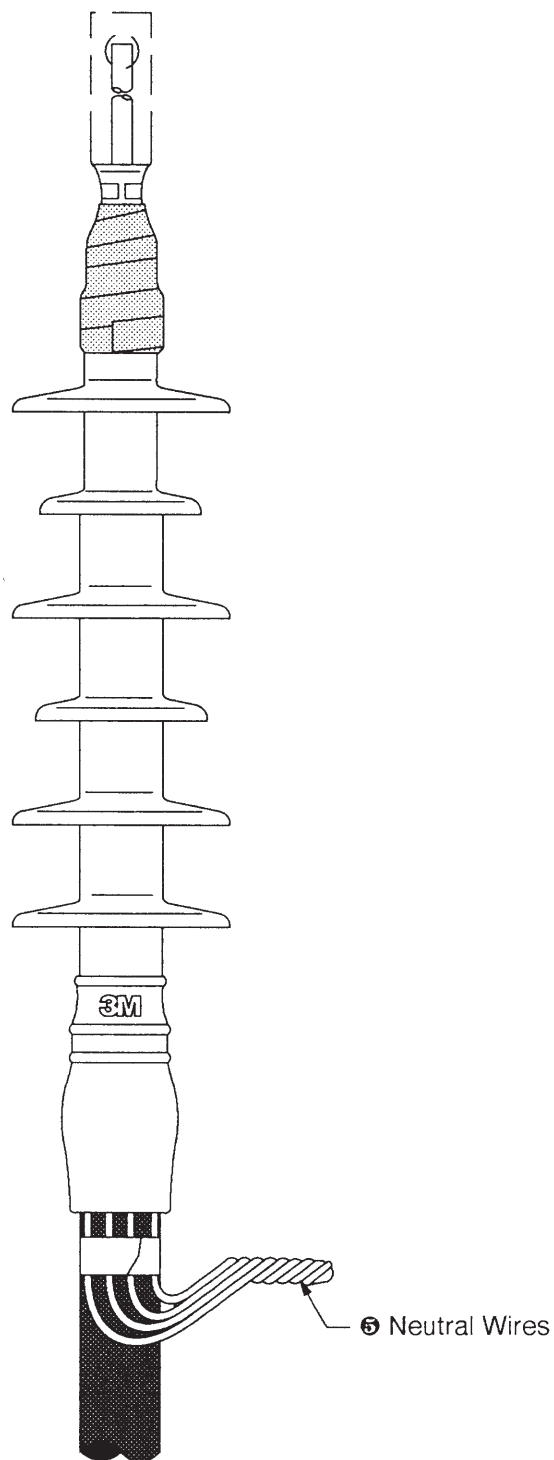


4. With termination installed, complete the lug area moisture seal using the remaining gray Scotch™ No. 70 Silicone Rubber Electrical Tape. Overlap the termination insulator by approximately 1" and extend the tape wrapping over a non-crimped region of the lug/connector barrel.

## Install Termination (continued)

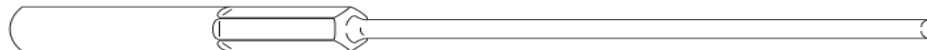
5. Collect concentric neutral wires together ⑤ (Figure 6) and connect to system ground according to standard practice.
6. Remove previously installed marker tape ④ (Figure 5).

Figure 6



# Tooling Index

Crimping Information for  
3M™ Stem Connectors  
Copper/Aluminum



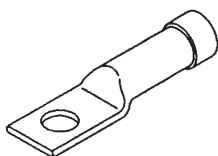
Conductor Size AWG & kcmil		3M™ Connector Number	Crimping Table For 3M™ Stem Type Connector				
Stranded	Solid		Recommended Crimping Tools				
			Manufacturer	Mech. Tool	Die (Minimum No. Crimps)	Hydraulic	Die (Minimum No. Crimps)
2, 1 4 1/0	1, 1/0 2 2/0	SC0001 SC0002 SC0010	Burndy	MD6	BG(4), W241(3)	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 3/0 4/0	3/0 4/0 —	SC0020 SC0030 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.

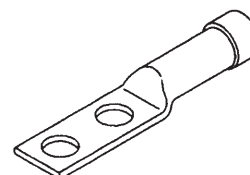
\*\* Anderson VC6 is dieless and does not require a die set.

## Lug and Crimping Information for Scotchlok™ Copper/Aluminum Lugs

40016 thru 40079  
One hole



40132 thru 40178  
Two hole



Cable Size AWG/ kcmil	Stud Size (in.)	Scotchlok™ Lug Number	CRIMPING TOOL-DIE SETS (NO. OF CRIMPS)												
			Burndy Corporation					Thomas & Betts Corporation				Square D Co. Anderson Div.		ITT Black- burn Co.	Kearne Nat'l Div.
			MD6	MY29	Y34A	Y35, 39, 45*, 46*	Y1000	TBM 5	TBM 8	TBM 12	TBM 15	VC6-3** VC6-FT**	VC8C**	OD58	TYPE 0
6	5/16	40016	W161(1)	6 AWG(1)	A6CAB(1)	U6CABT(1)	(1)	Grey(1)	Grey(1)	—	29(1)	(1)	—	BY19(3)	J(3)
4	5/16	40020	W162(3)	4 AWG(1)	A4CAB(1)	U4CABT(1)	(1)	Green(2)	Green(2)	—	37(1)	(1)	—	BY53(3)	P(3)
2	3/8 1/2	40024	W163(3)	2 AWG(1)	A2CAB(1)	U2CABT(1)	(1)	Pink(2)	Pink(2)	—	42H(2)	(1)	—	BY23(3)	1/2(3)
		40025	W163(3)	2 AWG(1)	A2CAB(1)	U2CABT(1)	(1)	Pink(2)	Pink(2)	—	42H(2)	(1)	—	BY23(3)	1/2(3)
1	3/8 1/2	40028	W163(3)	1 AWG(1)	A1CAR(1)	U1CART(1)	(1)	Gold(2)	Gold(2)	—	45(1)	(1)	—	BY23(3)	1/2(3)
		40029	W163(3)	1 AWG(1)	A1CAR(1)	U1CART(1)	(1)	Gold(2)	Gold(2)	—	45(1)	(1)	—	BY23(3)	1/2(3)
1/0	3/8 1/2 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)
		40033	W241(3)	1/0 (1)	A25AR(1)	U25ART(1)	(1)	Tan(2)	Tan(2)	—	50(1)	(1)	—	BY25(3)	5/8-1(3)
		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 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)
		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 1/2	40041	W166(4)	3/0(1)	A27AR(2)	U27ART(2)	(1)	Ruby(2)	Ruby(2)	—	60(2)	(2)	—	—	737(3)
		40141	W166(4)	3/0(1)	A27AR(2)	U27ART(2)	(1)	Ruby(2)	Ruby(2)	—	60(2)	(2)	—	—	737(3)
4/0	1/2 5/8 1/2	40045	W660(4)	4/0(2)	A28AR(2)	U28ART(2)	(1)	—	White(4)	—	66(4)	(2)	—	BY35C(4)	840(4)
		40046	W660(4)	4/0(2)	A28AR(2)	U28ART(2)	(1)	—	White(4)	—	66(4)	(2)	—	BY35C(4)	840(4)
		40145	W660(4)	4/0(2)	A28AR(2)	U28ART(2)	(1)	—	White(4)	—	66(4)	(2)	—	BY35C(4)	840(4)
250	1/2 5/8 1/2	40049	W249(3)	—	A29AR(2)	U29ART(2)	(1)	—	—	71H(4)	71H(2)	(3)	—	—	—
		40050	W249(3)	—	A29AR(2)	U29ART(2)	(1)	—	—	71H(4)	71H(2)	(3)	—	—	—
		40149	W249(3)	—	A29AR(2)	U29ART(2)	(1)	—	—	71H(4)	71H(2)	(3)	—	—	—
300	1/2 1/2	40053	—	—	A30AR(2)	U30ART(2)	(1)	—	—	76H(4)	76(2)	(3)	—	—	—
		40153	—	—	A30AR(2)	U30ART(2)	(1)	—	—	76H(4)	76(2)	(3)	—	—	—
350	1/2 5/8 1/2	40056	—	—	—	U31ART(2)	(1)	—	—	87H(4)	87H(3)	(3)	—	—	—
		40057	—	—	—	U31ART(2)	(1)	—	—	87H(4)	87H(3)	(3)	—	—	—
		40156	—	—	—	U31ART(2)	(1)	—	—	87H(4)	87H(3)	(3)	—	—	—
400	1/2	40160	—	—	—	U32ART(4)	(1)	—	—	94H(4)	94H(4)	—	(2)	—	—
500	5/8 1/2	40067	—	—	—	U34ART(4)	(1)	—	—	106H(4)	106H(3)	—	(2)	—	—
		40166	—	—	—	U34ART(4)	(1)	—	—	106H(4)	106H(3)	—	(2)	—	—
600	1/2	40170	—	—	—	U36ART(4)	(1)	—	—	—	115H(3)	—	(3)	—	—
750	5/8 1/2	40073	—	—	—	U39ART(4)	(1)	—	—	—	125H(5)	—	(3)	—	—
		40172	—	—	—	U39ART(4)	(1)	—	—	—	125H(5)	—	(3)	—	—
1000	5/8 1/2	40079	—	—	—	S44ART(4)	(1)	—	—	—	140H(4)	—	(3)	—	—
		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.

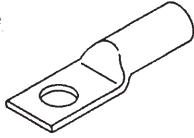
\*\* Anderson VC6-3, VC6-FT, VC8C and Burndy Y1000 require no die set.



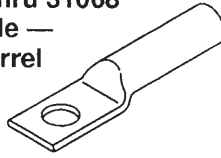
## Tooling Index

### Lug and Crimping Information for Scotchlok™ Copper Lugs

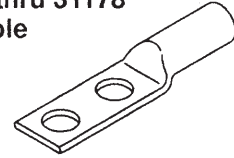
30014 thru 30045  
One hole



31036 thru 31068  
One hole —  
long barrel



31145 thru 31178  
Two hole



Cable Size AWG/ kcmil	Stud Size (in.)	Scotchlok™ Copper Lug Number	CRIMPING TOOL-DIE SETS (NO. OF CRIMPS)							
			Bumdy 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 1/4 5/16	30014 30015 30016	—	6 AWG(1)	—	U5CRT(1)	Blue(1)	Blue(1)	—	Universal(1)
4	10 1/4 3/8	30018 30019 30021	W161(1)	4 AWG(1)	A4CR(1)	U4CRT(1)	Grey(1)	Grey(1)	—	Universal(1)
2	1/4 5/16 3/8	30022 30023 30024	W162(2)	2 AWG(1)	A2CR(1)	U2CRT(2)	Brown(1)	Brown(1)	33(1)	Universal(2)
1	5/16 3/8	30027 30028	—	1 AWG(1)	A1CR(1)	U1CRT(2)	Green(1)	Green(1)	37(1)	Universal(2)
1/0	5/16 3/8	30031 30032	W163(2)	1/0(1)	A25R(1)	U25RT(1)	Pink(2)	Pink(2)	42H(2)	Universal(1)
2/0	3/8 3/8	30036 31036	W241(2) W241(3)	2/0(1) 2/0(2)	A26R(1) A26R(2)	U26RT(2) U26RT(3)	Black(2) Black(3)	Black(2) Black(3)	45(1) 45(2)	Universal(1) Universal(2)
3/0	1/2 1/2	30041 31041	W243(2) W243(3)	3/0(1) 3/0(2)	A27R(1) A27R(2)	U27RT(2) U27RT(3)	Orange(2) Orange(3)	Orange(2) Orange(3)	50(1) 50(2)	Universal(2) Universal(3)
4/0	1/2 1/2 1/2	30045 31045 31145	BG(3) BG(4) BG(4)	4/0(1) 4/0(2) 4/0(2)	A28R(2)	U28RT(2) U28RT(3) U28RT(3)	Purple(2) Purple(3) Purple(3)	Purple(2) Purple(3) Purple(3)	54H(2) 54H(3) 54H(3)	Universal(2) Universal(3) Universal(3)
250	1/2 1/2	31049 31149	W166(4)	250(2)	A29R(2)	U29RT(3)	Yellow(2)	Yellow(2)	62(2)	Universal(2)
300	1/2 1/2	31053 31153	—	—	A30R(2)	U30RT(3)	—	White(3)	66(3)	Universal(3)
350	1/2 1/2	31056 31156	—	—	A31R(2)	U31RT(3)	—	Red(4)	71H(4)	—
400	1/2 1/2	31060 31160	—	—	A32R(2)	U32RT(3)	—	Blue(4)	76H(4)	—
500	1/2 5/8 1/2	31066 31067 31166	—	—	A34R(2)	U34RT(3)	—	Brown(4)	87H(4)	—
600	1/2 1/2	31068 31168	—	—	—	U36RT(3)	—	Green(4)	94H(4)	—
750	1/2	31172	—	—	—	Y39, Y45, Y46: U39RT(5)	—	—	106H(4)	—
1000	1/2	31178	—	—	—	Y45: S44RT(6) Y46: P44RT(6)	—	—	125H(4)	—

## NOTES:

We value your experience and opinions. Please enter any ideas or recommendations, associated with this product and submit to your local 3M representative

3M, Scotch and Scotchlok are the trademarks of 3M Company

### Important Notice:

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

### Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture at the time of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**



### Electrical Markets Division

6801 River Place Blvd.  
Austin, TX 78726-9000  
800.245.3573  
Fax 800.245.0329  
[www.3M.com/electrical](http://www.3M.com/electrical)

Please Recycle. Printed in USA.  
© 3M 2014. All Rights Reserved.  
78-8092-1527-6 Rev E