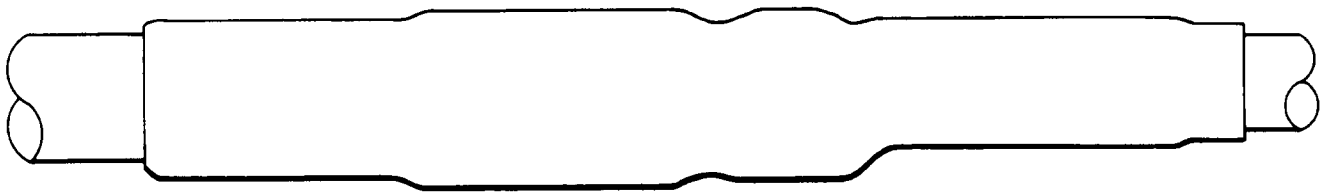
3M
Motor Lead Inline Splices
for 1000 Volts (or less) Non-Shielded Cables

Instruction Sheet

Kit Contents:

1 Instruction Sheet
1 Splice Body
3 Adpaters (except 5412, which contains only 2)
1 Silicone Grease Tube (except 5414 which contains 3)



Kit Number	Cable Size Range (AWG/kcmil)		Maximum Bolt Length
	Feeder	Motor Lead	
5311	#10 - #4	#12 - #4	1/2 inch
5312	#2 - 1/0	#4 - 1/0	3/4 inch
5313	1/0 - 250	#2 - 250	3/4 inch
5314	250 - 500	4/0 - 500	1 1/4 inch

Table 1

Adapter Selection Chart for Cable Size Ranges			
Kit Number	Adapter Size Length x I.D.	Cable Range (AWG/kcmil)	Insulation O.D. Range
5311	1 3/4 in. x 0.14 in. I.D.	#12 - #8	0.17 - 0.24 in.
	1 1/2 in. x 0.24 in. I.D.	#8 - #4	0.30 - 0.36 in.
5312	1 1/2 in. x 0.30 in. I.D.	#4 - 1/0	0.34 - 0.54 in.
5313	1 1/2 in. x 0.50 in. I.D.	#2 - 1/0	0.40 - 0.54 in.
	1 3/4 in. x 0.42 in. I.D.	1/0 - 250	0.52 - 0.80 in.
5314	1 3/4 in. x 0.60 in. I.D.	4/0 - 350	0.67 - 0.91 in.
	2 in. x 0.84 in. I.D.	350 - 500	0.90 - 1.05 in.

Table 2

Technical Information:
for use on Non-Shielded Feeder Cables
1000 Volts (or less)

Cable Size Range:
Feeder: #10 AWG - 500 kcmil
Motor Lead: #12 AWG - 500 kcmil

Copper Conductors

Number of Pages: 3	Scale: Not to Scale
Issue Date: 12/9/96	Issue: B

Motor Lead Inline Splices
for 1000 Volts or Less

5311 5313
5312 5314

78-8117-0911-8

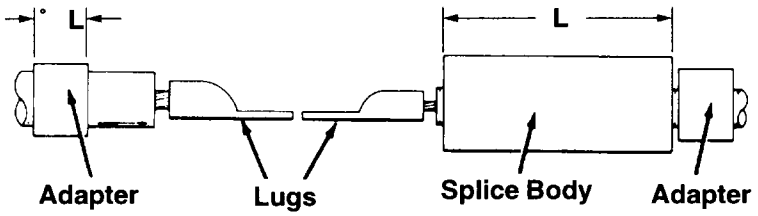
A. Prepare Cables According to Standard Procedures

1. Check to be sure the cable sizes fit within cable kit range as show in Table 1 (first page).
2. Remove cable insulation for length recommended by terminal lug manufacturer; if no information is available, remove for depth of lug barrel.
3. Clean insulation for approximately 6" (152mm).

B. Slide on Adapters and Splice Body

1. Determine proper adapter size for each cable from Table 2 (first page).
2. Apply silicone grease to the inside end of adapters and slide, using twisting motion, onto proper cables. Position the one on the larger cable back approximately 1/2 the length of the splice body. Position the one on the smaller cable back the length of the splice body (*Figure 1*).
3. Slide the splice body onto the smaller cable (*Figure 1*).

Figure 1

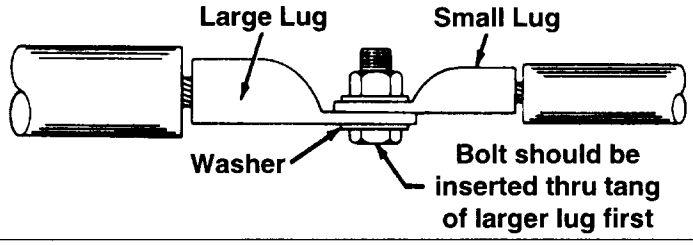


Note: ***For renewal (lugs already installed) slide adapters and splice body over lugs. HINT: When installing Adapters and splice body, the use of clean cloths or rags to grip them will aid in their movement.***

C. Install Lugs

1. Remove silicone from conductors. Install and crimp lugs per manufacturer's direction. See page 3 if 3M lugs are used.
2. Be sure lugs are free of silicone grease. Bolt lugs together (see Table 1 for maximum bolt length) see Figure 2 for proper lug/bolt arrangement.

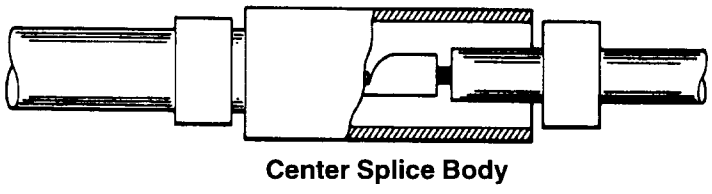
Figure 2



D. Installation

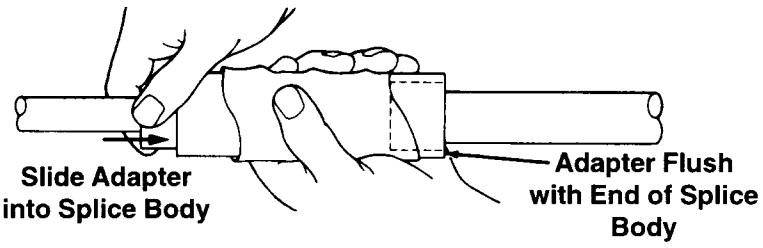
1. Center splice body over connected lugs. Apply silicone grease if necessary (*Figure 3*).

Figure 3



2. Apply light coating of silicone grease to outside surface of adapters. Grasp center of splice body with one hand (using cloth) and with other hand (using twisting motion), slide adapters into the ends of the splice body until it is flush with end (*Figure 4*).

Figure 4

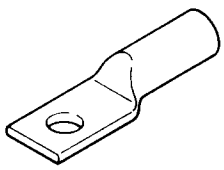


NOTICE: The splice body length is designed for two hole lugs. It can be shortened (if necessary because of tight space for splice) by cutting with knife or scissors. It must, however, be long enough to overlap the insulation on each cable by one inch; measure by temporarily positioning lugs in bolted position.

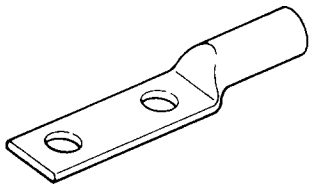
Tooling Index

Lug and Crimping Information for Scotchlok® Copper Lugs

30014 thru 30045
One hole



31145 thru 31178
Two hole



Cable Size	Stud Size	Scotchlok Copper Lug Number	CRIMPING TOOL - DIE SETS (NO. OF CRIMPS)							Square D Co. Anderson Div. VC6-3, VC6-FT**
			Burndy Corporation				Thomas & Betts Corporation			
			MD6	MY29	Y34A	Y35, Y39, Y45*, Y46*	TBM 5	TBM 8	TBM 15	
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(1)	Brown(1)	Brown(1)	33(1)	Universal(2)
1	5/16 3/8	30027 30028	----	1 AWG(1)	A1CR(1)	U1CRT(1)	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	30036	W241(2)	2/0 (1)	A26R(1)	U26RT(1)	Black(2)	Black(2)	45(2)	Universal(1)
3/0	1/2	30041	W243(2)	3/0 (1)	A27R(1)	U27RT(2)	Orange(2)	Orange(2)	50(1)	Universal(2)
4/0	1/2 1/2	30045 31145	BG(3) BG(4)	4/0 (1) 4/0 (2)		U28RT(2) U28RT(3)	Purple(2) Purple(3)	Purple(2) Purple(3)	54H(2) 54H(3)	Universal(2) Universal(3)
250	1/2	31149	W166(4)	250(2)	A29R(2)	U29RT(3)	Yellow(2)	Yellow(2)	62(2)	Universal(2)
300	1/2	31153	----	----	A30R(2)	U30RT(3)	----	White(3)	66(3)	Universal(3)
350	1/2	31156	----	----	A31R(2)	U31RT(3)	----	Red(4)	71H(3)	----
400	1/2	31160	----	----	A32R(2)	U32RT(3)	----	Blue(4)	76H(3)	----
500	1/2	31166	----	----	A34R(2)	U34RT(3)	----	Brown(4)	87H(3)	----

3M

Electrical Products Division

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78-8117-0911-8

STRUCTURAL SPECIFICATION FOR PRINTED INSTRUCTION SHEETS FOR ELPD

78 #: 78-8117-0911-8
Issue #: (B)
Date: 12/10/96

SCOPE: THIS SPECIFICATION ADDRESSES THE STRUCTURAL OPTIONS FOR THE PRINTING OF INSTRUCTION SHEETS. GRAPHIC ART, WITH A CONTROL NUMBER (78–XXXX–XXXX–X), MUST BE ATTACHED TO THIS STRUCTURAL SPECIFICATION IN-ORDER TO CREATE A MATERIAL PURCHASE SPECIFICATION.

MATERIAL: 60# OFFSET

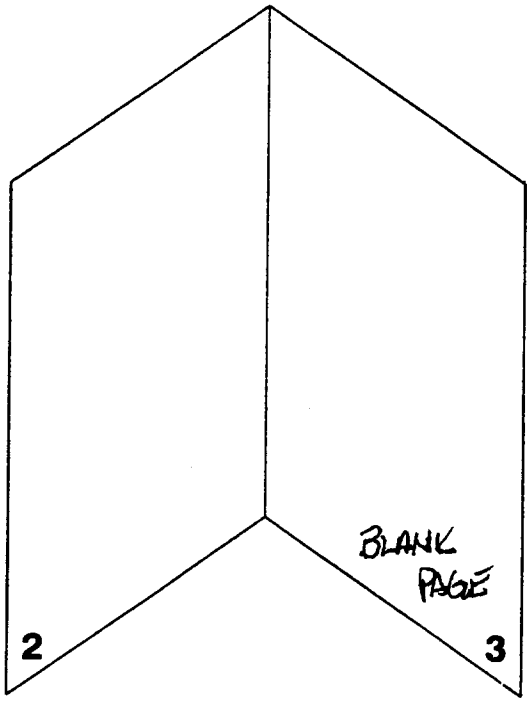
COLOR: WHITE

INK COLOR: BLACK

ADDITIONAL INFORMATION:

1. VENDOR TO MAKE PART NO. 78–8117-0911-8B PER STYLE BELOW.
2. VENDOR MAY SUBSTITUTE GLUE WHERE STITCHING IS CALLED OUT IF IT REDUCES THE COST TO 3M.

(3 or 4 page, center folded)



17″ X 11″ SHEET, PRINTED BOTH SIDES. FOLD TO 8–1/2″ X 11″ AND THEN TO 4–1/4″ X 11″ WITH TITLE BLOCK FACING OUT.

(AND THEN TO 4-1/4" x 5-1/2")