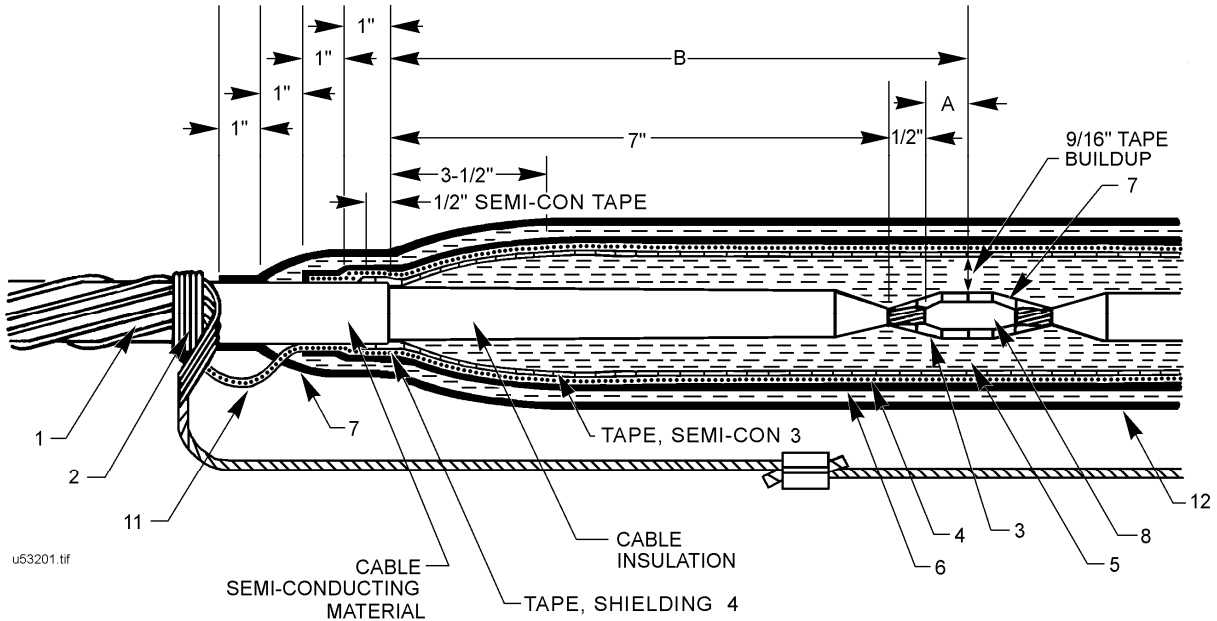


**CONSTRUCTION GUIDELINE**

**SPLICE, STRAIGHT, 28 KV, XLP OR EPR INSULATED CABLE\***



Can be used for concentric neutral or tape shielded 6 conductor (3 neutral) cable.

**MATERIAL LIST**

Item	Quantity	Description	Stock No.
2	As req'd.	WIRE, Bare Copper, #14	610218E
3	2 RL	TAPE, Electrical, Semi-conducting 3/4"	736670
	5 RL	TAPE, Electrical, Semi-conducting 1"	736671
4	As req'd.	TAPE, Shielding	736244
5	3 RL	TAPE, High Voltage Insulating, linerless 3/4"	736503
	18 RL	1"	736504
		1-1/2"	736505
5	3 RL	TAPE, High Voltage Insulating, with liner 3/4"	736502
	18 RL	1"	736500
		1-1/2"	736501
6	1 RL	TAPE, Plastic, low temperature	736655E
7	As req'd.	SEALANT, Red, heat shrink strip	686541
8		CONNECTOR, Compression, Aluminum #1	650631
		350 kcmil	650637
10	As req'd.	CLEANER, Electrical insulation	726157E
11	2 FT	WIRE, Tinned Copper braid, 5/8" x 3/64"	618625
12	As req'd.	TUBING, Heat shrink, medium wall 0.65" - 1.70"	737622
		1.00" - 2.90"	737623
-	As req'd.	SOLDER, Rosin core, 50/50	728504
-	As req'd.	CLOTH, Aluminum Oxide, 150 grit	722344
-	As req'd.	WIRE, Bare Copper, #2	610434

\* XLP = Cross-linked Polyethylene Insulated. EPR = Ethylene Propylene Rubber Insulated.

ORIGINATOR	STANDARDS COORDINATOR	STANDARDS SUPERVISOR	UNIT DIRECTOR
<i>Jim S. Horn</i>	<i>Charles L. Shaffer</i>	<i>John Chinner</i>	<i>Betty Robm</i>

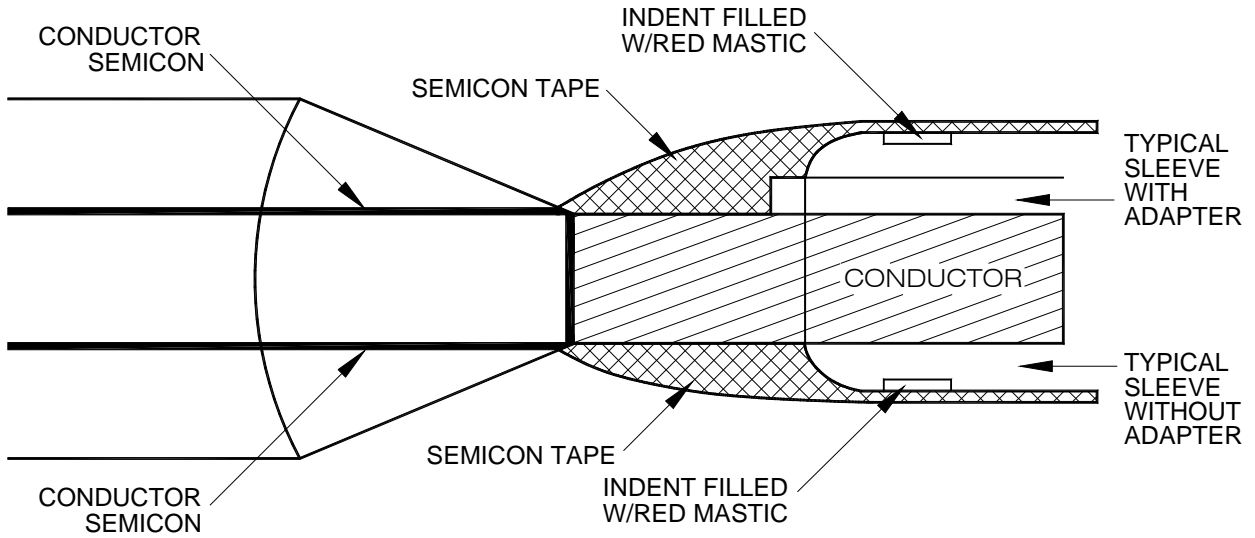
## CONSTRUCTION GUIDELINE

1. Form and shape the cables to their final position and overlap cables 12" each way from center to provide excess length of the outer concentric wires for later splicing. (If concentric neutral). If trifurcating, sand cable jacket.
2. Bind concentric wires with several turns of #14 copper wire (Stock No. 610218E) at a distance of 4-1/2" + "B" inches from center of splice. Unwrap concentric wires and twist tightly together. Bend away from splice.
3. Cut off excess cable at the splice center.
4. Remove the semi-conducting insulation shield from each cable for a distance of "B" inches, being careful not to damage cable insulation.
5. Remove the insulation from each conductor for a distance of 1/2" + "A" inches from the ends. Pencil insulation back for a minimum of 1". Slip heat shrink jacketing over cable.
6. Attach compression connector per D14-8/NSV-10.
7. Remove any oxide inhibiting compound (if aluminum) from connector or bare conductor, being careful not to get compound on the insulation. Clean entire prepared splice area, using the wipe provided with the cable cleaner. Wipe cleaner from the insulation towards the insulation semicon, then from the insulation over the penciling.
8. Sand the penciled insulation with aluminum oxide cloth. Be sure that there are no particles of semi-conducting compound left on the exposed insulation.
9. Clean the surface of the connector and exposed insulation with cable cleaner. Wipe off all excess cleaner.
10. Fill connector indents with red heat shrink sealant (Stock No. 686541) to provide a smooth surface for taping.
11. Apply electrical semi-conducting tape (Stock No. 736670) to all exposed conductor and conductor areas, overlapping conductor semicon. This tape should be half-lapped per manufacturer's instructions. Build up semicon tape on conductor as shown on drawing. See Page 3.
12. Wrap high voltage splicing tape over splice, half-lapping and stretching per manufacturer's instructions. This tape should be applied to a thickness of 9/16" over connector. It is important to follow the manufacturer's instructions which are included with each roll of tape.
13. Wrap one half-lapped layer of electrical semi-conducting tape (Stock No. 736671) over high voltage insulating tape extending it 1" beyond the end of the semi-conducting insulation shield.
14. Apply one half-lapped layer of tinned copper mesh braid (Stock No. 736244) over the semi-conducting tape to the end of the splice.
15. Solder a pigtail of copper braid (Stock No. 618625) at one end of the applied shielding tape for future connection to the concentric neutral/ground.
16. Wrap one half-lapped layer of plastic, low temperature tape (Stock No. 736655E) over entire area of shielding tape. Stretch tightly to flatten lower layer of tape. Tape from each end of splice uphill to center, slightly overlapping at center of splice.
17. Thoroughly clean semicon over insulation to a point 3" beyond the plastic tape to ensure a good bond for watertight seal. Solder block copper braid.
18. Apply sealant (Stock No. 686541) under copper braid solder block.
19. Slip heat shrink over splice and shrink.
20. Train twisted concentric wires over splice and join wires to the copper braid with compression connector (Stock No. 677326E or 669379E).
21. If one or both of the cables being spliced is a concentric neutral cable, connect the concentric neutral to ground bus with #2 bare copper wire. If both cables are tape shielded or drain wire (or one of each), connect the drain wires and or copper braid across the splice as indicated in No. 20 above, and connect to ground bus with copper braid (Stock No. 618625).

# CONSTRUCTION GUIDELINE

## SPLICE, STRAIGHT, 28 KV XLP OR EPR INSULATED CABLE

SEMICON TAPING AT CONDUCTOR SEMICON TO CONNECTOR SLEEVE



One or two half-lap layers of semicon tape over connector area.