

Team - Suspension Insulator and Neutral Spool Change

Mean Time = 18 minutes ~ Dead Time = 23 minutes

Event Description: The object of this event is to change out all of the primary polymer suspension insulators and the polymer neutral spool on a 40-foot, VC-5.21, 8' cross arm, #2 acsr.

Basic Outline:

- 1. The line will be simulated de-energized and grounds will be installed.**
- 2. All tools and materials shall be located on tarp at start of event.**
- 3. Competitors will start the event with tools on.**
- 4. Time starts at the judge's signal of ready, set, go.**
- 5. The first lineman that ascends the pole shall take the handline.**
- 6. The team will change out all 3 polymer suspension insulators, polymer neutral spool, and preformed neutral wrap. Refer to attached spec for framing.**
- 7. Time will stop when second lineman's first foot hits the ground, but the team will continue to be judged until all material is neatly placed on tarp.**
- 8. Teams shall provide their own hoists, slings, material bucket, and 1 handline.**
- 9. Judging will continue until all material is picked up and the event site is restored to the original condition.**

Possible Deductions (2pts.):

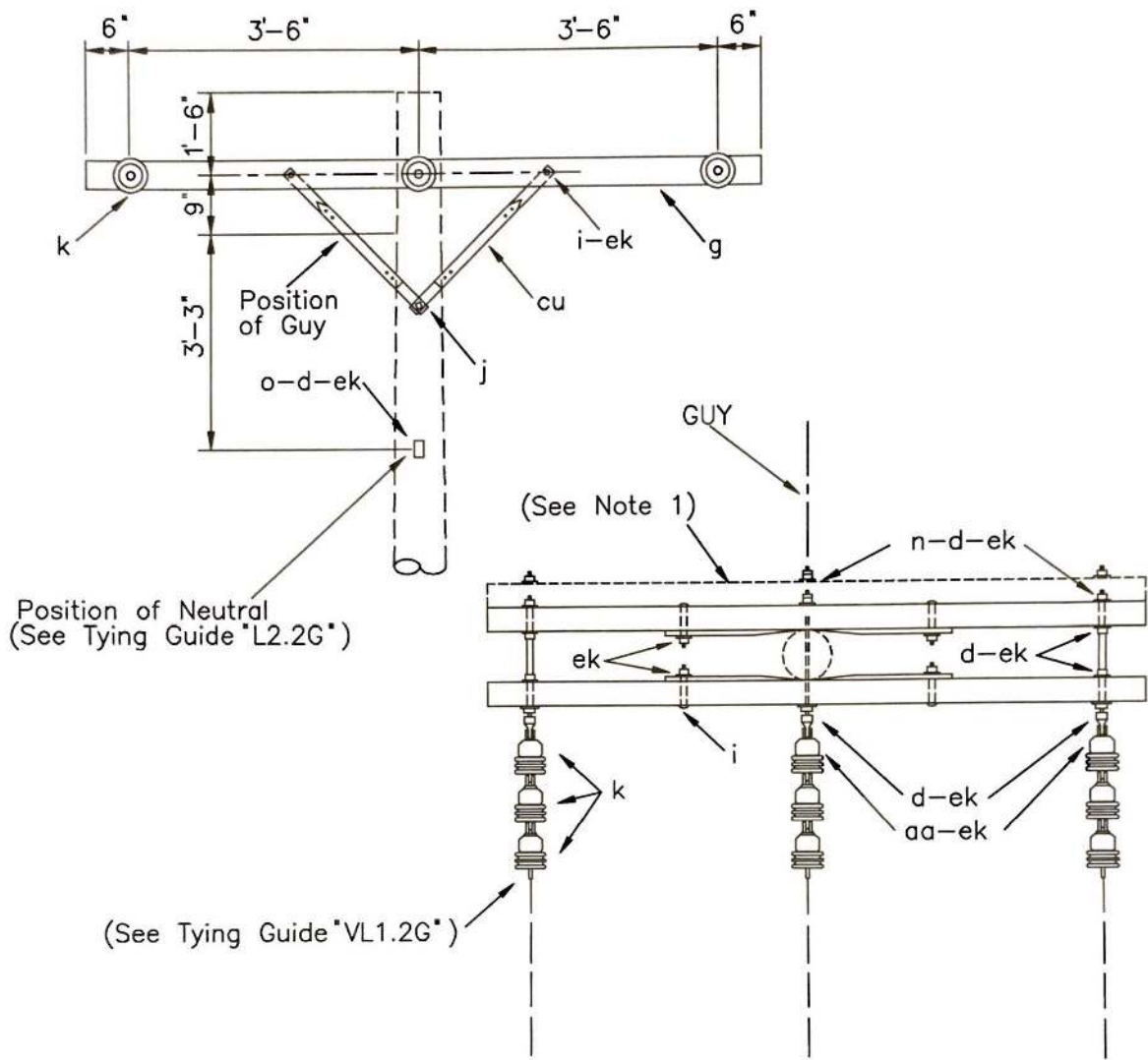
- 1. Infractions of any rules listed in the General Rules**
- 2. Improper securement of hoists to crossarm or pole while unsecuring conductors.**

Materials and equipment furnished

1. Teams will provide hoists, slings, material bucket, and 1 handline for this event.
2. All material for the event will be furnished.

Other Notes

1. No pole or guy grounds will be connected to the neutral.
2. Suspension insulators will be single polymers, not 3 bell porcelain.
3. The neutral will be dead ended with a preformed wrap and 3-inch polymer spool in a clevis.



PLAN

TEM	QTY	MATERIAL
d	11	Washer, square, 2 1/4"
g	2	Crossarm, 3 5/8" x 4 5/8" x 8'-0"
i	4	Bolt, carriage, 3/8" x 4 1/2"
j	2	Screw, lag, 1/2" x 4"
k	9	Insulator, suspension, 4 1/4"
n	3	Bolt, double arming, 5/8" x req'd length
o	1	Bolt, eye, 5/8" x req'd length
aa	3	Nut, eye, 5/8"
cu	4	Brace, 28"
ek	18	Locknuts

- NOTES:
1. Designate as VC5.31 for assembly with three crossarms.
 2. Neither assembly suitable for Grade B construction.
 3. Double arming eye bolt, item "dy," may be used instead of double arming bolt, item "n," and eye nut, item "aa."

DESIGN PARAMETERS:
 ALLOWABLE LONGITUDINAL
 LOADING (lbs./conductor) =
 VC5.21: 2,000 (#2 ACSR)
 VC5.31: 3,000 (#2/0 ACSR)

SINGLE DEADEND ON CROSSARMS

DEC 1998	3 - PHASE PRIMARY	VC5.21
RUS	24.9/14.4 kV	VC5.31