Team Underarm Switch Changeout

Mean Time = 18 minutes   Dead Time = 20 minutes

Event Description: This event is designed to allow the teams the opportunity to demonstrate their skills in changing an underarm disconnect switch. The situation will be changing an underarm disconnect on a de-energized structure. This will involve good planning, communication and skill. The event will be done on a 40' class 3 pole with S2.21 framing (2 phase). All poles must be sound checked before climbing and teams will be given up to a 5-minute set-up time to ask questions and get items prepared. Sound check can happen during set-up time.
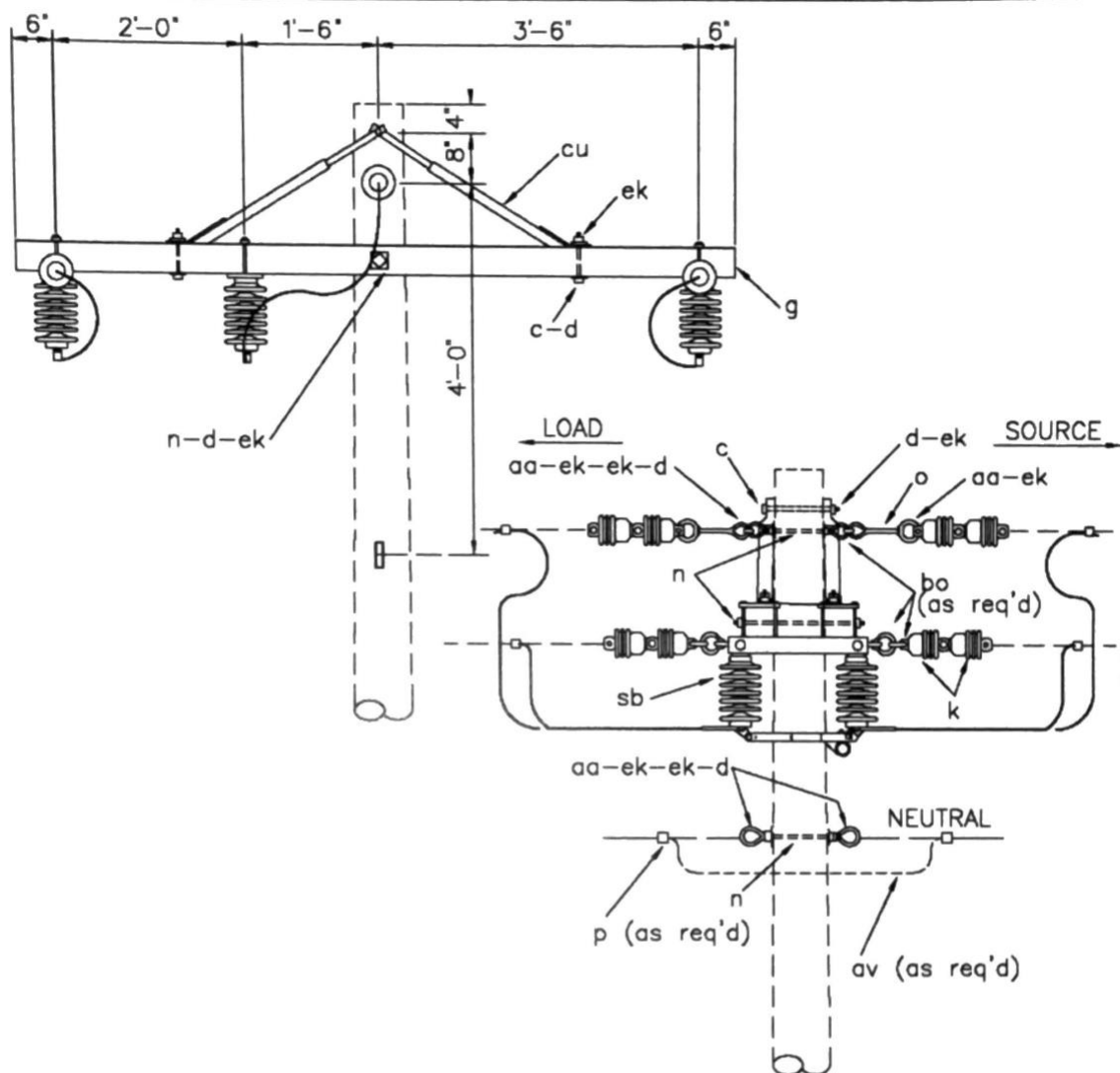
Basic Outline:

1. Time starts when the judges say "GO" "Ready, Set, Go"
2. Team will ascend pole
3. Teams will test and place grounds on each side of the work area
4. Rubber gloves must be worn until the line has been grounded
5. Ascend into position to change switch (Only 1 switch will be present on pole)
6. Remove jumpers from switch
7. Remove switch lowering it to the ground (controlled lower)
8. After the switch touches the ground, ground personnel will yell "New Switch" then the switch can be raised back up to be re-installed
9. Re-install switch and jumpers
10. Descend to height to remove grounds, rubber gloves must be worn to remove grounds
11. Railroad handline
12. Descend pole
13. Time will stop when the last climber touches the ground and all equipment is back on the tarp. (Grounds and Shotguns)

Possible Deductions (2pts.):
1. Dropping hardware or equipment
2. Improper installation of grounds or equipment
3. Failure to wear rubber gloves when required and or closed glove bag when not in use
4. Infractions of any rules listed in the General Rules

Other Notes I Reminders:
1. Participants may use leather gloves for this event after the line is grounded.
2. Participants shall furnish their own 8' shotgun sticks (max. 2 allowed).
3. Participants shall furnish their own handline.
4. Extra rigging equipment (rope/slings,etc.) will be allowed to be used to control and stabilize switch for lowering and raising

NOTE: For 2-phase installations, omit switch and related items on center phase and designate as 'S2.21'.

ITEM	QTY	MATERIAL
c	4	Bolt, machine, 1/2" x req'd length
c	1	Bolt, machine, 5/8" x req'd length
d	4	Washer, round, 1 3/8"
d	11	Washer, square, 2 1/4"
d	4	Washer, square, 3", curved
g	2	Crossarm, 3 5/8" x 4 5/8" x 8'-0"
k	12	Insulator, suspension, 4 1/4"
n	5	Bolt, double arm, 5/8" x req'd length

ITEM	QTY	MATERIAL
o	2	Bolt, eye, 5/8" x req'd length
p		Connectors, compression as required
aa	6	Nut, eye, 5/8"
av		Jumpers, as required
bo	6	Shackle, anchor
cu	2	Brace, wood, 60" span
sb	3	Switch, disconnect, 15 kV,
		with mounting hardware

DISCONNECT SWITCHES
(TWO or THREE SINGLE-PHASE)

APRIL 2005		S2.21,S2.31
RUS	12.47/7.2 kV	(M3-2A),(M3-3A)