



2-35kV Insulator Change Out on 8' Fiberglass Arm

Mean Time: 8 minutes

Drop Dead: 12 minutes

Chief Judge: Nick Short, *Lakeland Electric*

Event Summary:

In this event the two phase conductors (#2 AAAC) are considered dead and grounded. The existing 8 ft. fiberglass arm has a damaged insulators on both ends and must be changed out. A complete set of all necessary hardware will be available on the ground at each event pole. The material may be rigged during set up time. The apprentice will take a hand line up the pole. A nose bag with the insulators and tie wires must be attached to the hand line. The apprentice must raise the new hardware in the bag by himself. The apprentice must lower the old hardware in the bag safely to the ground. The apprentice must notify judge before railroading block and dropping out the handline. Time will stop when apprentice returns to the ground and has made up the handline.

Event Specifics:

1. See General Rules.
2. Apprentice will be allowed a 5-minute setup time before starting the event.
3. Time starts at the judge's signal.
4. The new insulator will already be rigged.
5. Conductor can be floated.
6. Conductors are secured on the 35kV porcelain insulator with #2 AAAC wrap lock ties. (A screwdriver may be used to remove wrap lock tie, no knives or pliers.)
7. After new insulator is installed, the conductor must be re-secured with wrap-lock tie. (A screwdriver may be used to install wrap lock ties, no knives or pliers.)
8. Grommet must be changed, there is no penalty if old grommet is dropped as long as headache is called.
9. All work on the ground must be done with gaff guards on (if a gaff guard falls of it will be a 2 point deduction) if you choose to not take your tools off.

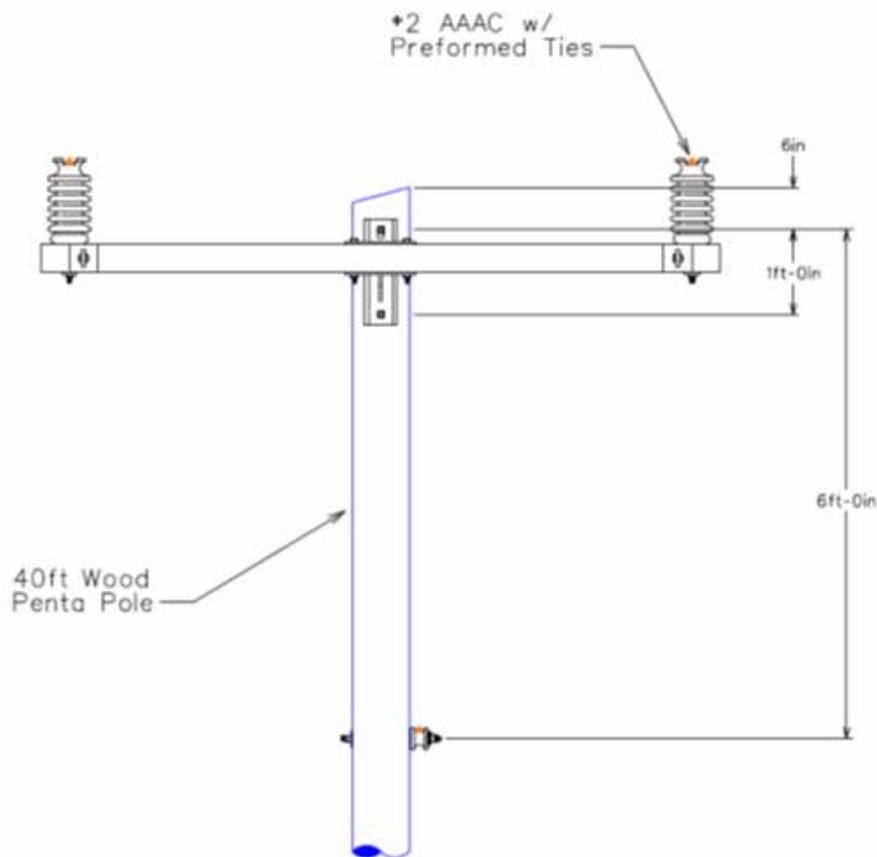
Apprentices will provide their own:

- Handline
- Nose bag
- Climbing tools



2-35kV Insulator Change Out on 8' Fiberglass Arm

NONE	NON-STANDARD 8-FT FG DE CROSSARM 2-35kV POST INSULATORS	ASSEMBLY
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3-PH, 8-ft FG DE Crossarm, 35kV Post Insulators

Drafted By: BRS	10/30/18	OVERHEAD DISTRIBUTION SECTION	
Revision By: Hrc			
Approved By:			
Manager of Engineering			



A.G.S. Installation

Mean Time: 12 minutes

Drop Dead: 15 minutes

Chief Judge: Maurice Bacon, *Fort Pierce Utilities Authority*

Event Summary:

The Apprentice will remove 394.5 AAC conductor from traveler and properly install "Armor Grip Suspension" (AGS) and secure to a 46kV insulator at the top of a 40' wood pole.

Event Specifics:

1. The Apprentice is permitted to ask any questions and put on his/her tools during the 5 minute set up time.
2. The Apprentice will adhere to the General Rules as outlined in the packet.
3. A new AGS unit and rod will be located at each station; A new rod will be used for each competitor
4. The time will start when the Apprentice first ascends the pole.
5. The Apprentice must carry a hand line with them in order to pull up the materials needed to secure the wire.
6. The materials must come up and down in a bag.
7. The Apprentice will remove the conductor, install the AGS and secure the assembly in the insulator.
8. If a rod is bent during application so that it cannot be properly installed, the rod shall be left out and 2 points will be deducted. Rods must be centered with less than ¼" deviation of any strand toward the end out on the line.
9. Time will stop when the Apprentice is satisfied that the conductor has been properly installed and informs the judge he/she is finished.
10. The Apprentice will disassemble the parts and place them back in the bag and lower it to the ground. The Apprentice must railroad the hand line and make it up once he/she has reached the ground.
11. The old armor rods must be discarded and replaced with new ones before leaving the event area. The Judge will have new rods to give to the Apprentice.
12. Though the time has stopped the Apprentice will still be judged during the time of putting the event back in order for the next competitor.

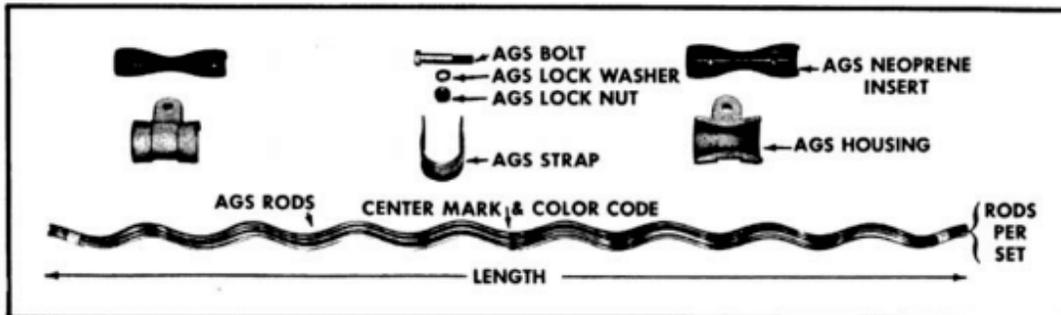


A.G.S. Installation

APPLICATION PROCEDURE & SAFETY CONSIDERATIONS **PREFORMED LINE PRODUCTS** **ARMOR-GRIP. Suspension**

NOVEMBER 1996

Completely read and understand this procedure before applying product. Special attention should be given to the Safety Considerations located on the last page. We advise the reader to review those considerations now, and then again during the general review of this procedure.



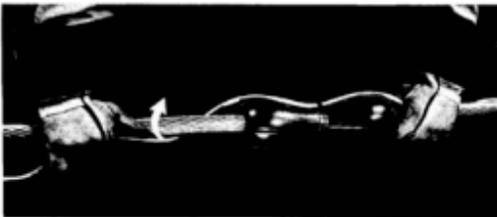
1. ARMOR-GRIP Suspension nomenclature.



2. Plumb insulator string and mark conductor at center of sheave. Use felt marking pen or lumber crayon; do not scratch conductor. Lift the conductor beyond the ends of the rods to allow enough clearance for the application.

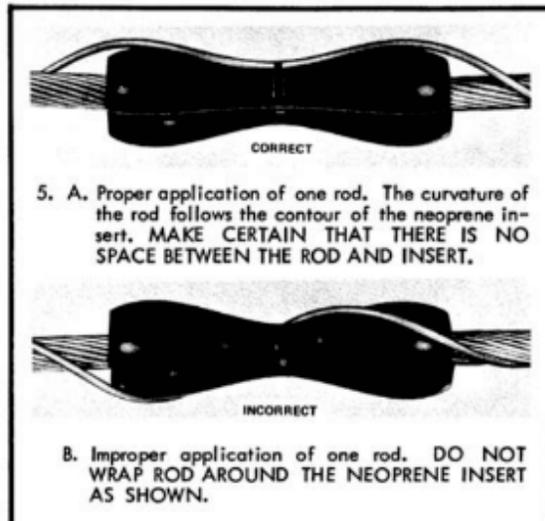


3. Align center marks of AGS Neoprene Inserts with center mark on conductor and tape in place with a thin layer of tape.



4. Center the AGS Rod on the insert. Apply sufficient length of rod (approximately two wraps) so that it will stay on the conductor.

DO NOT DISTORT RODS.



5. A. Proper application of one rod. The curvature of the rod follows the contour of the neoprene insert. **MAKE CERTAIN THAT THERE IS NO SPACE BETWEEN THE ROD AND INSERT.**

B. Improper application of one rod. **DO NOT WRAP ROD AROUND THE NEOPRENE INSERT AS SHOWN.**



6. Apply all remaining rods evenly around neoprene insert. **MAKE SURE THAT NO RODS ARE CROSSED.** Each AGS Rod can be applied completely, or all rods can be applied partially as shown above. Make sure that all rod ends are snapped into place.



Hurtman Rescue

Mean Time: 4 minutes

Drop Dead: 6 minutes

Chief Judge: Kevin Griffin, *Clay Electric Cooperative*

Event Summary:

This event will be simulated dead. Time starts at the judge's signal with apprentice standing at least an arm's length from pole in any direction.

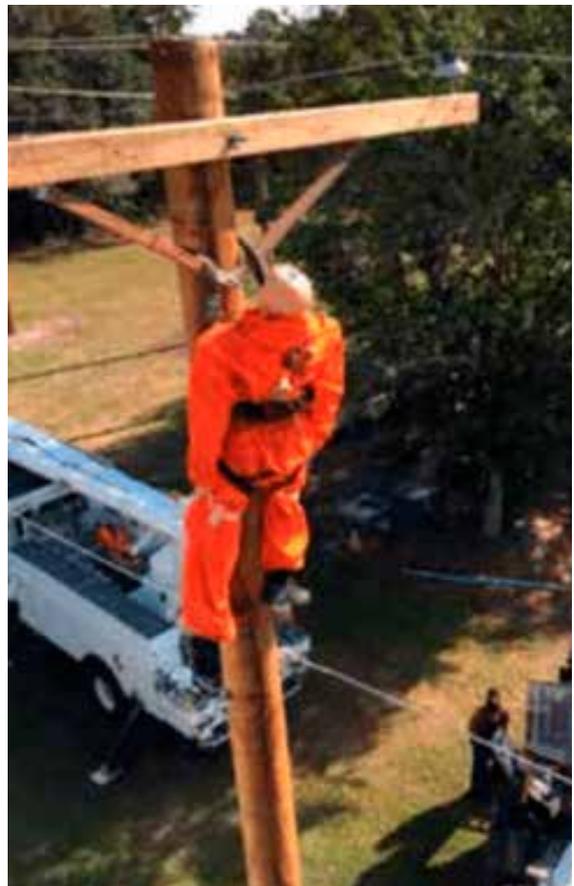
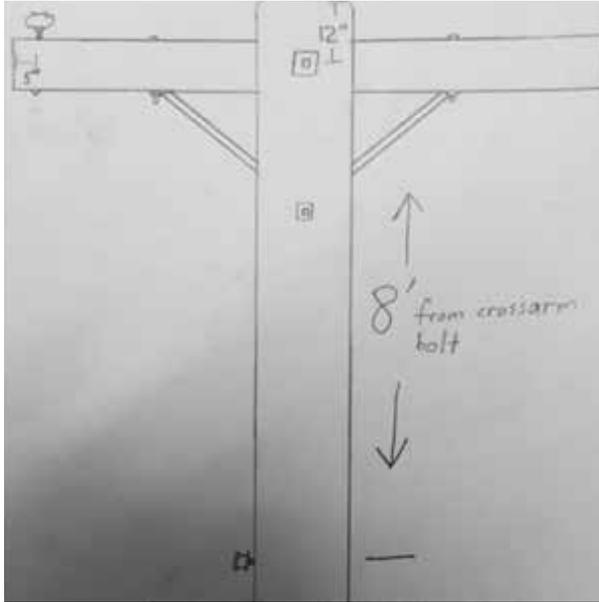
Note: The lineman's belt, hooks and rubber gloves in bag will be lying on the ground at arm's length from the pole. (You may tool up bare handed).

Event Specifics:

1. Looking at the pole from the 8' cross arm side, the hand line will be hung on the right side simulating an injury to a right-handed person. The hurt man will hang on the cross arm side of the pole with both ends of the safety straps through the braces. The Neutral will be on the same side of the pole where the hand line will be hung. Note: The "OX Block" will be utilized with a minimum of two full wraps or three clicks on the fiction bar. The OX Block will be attached to the arm just outside of the cross arm brace.
2. Mannequin should be tied under arms with three half hitches. Note: (eye splice should not be used as part of the hitches). The half hitch is the only acceptable knot. A 4"conduit will be used to measure tightness of knot.
3. Be sure to call out "headache" loudly when you drop out the split hand line.
4. A Bashlin belt 57-N will be used on the mannequin. You must cut the Bashlin 57-A insert. There will be a 10-point deduction for cutting the belt in the wrong place.
5. Mannequin must be lowered smoothly to the ground without coming into contact with the pole and must be **completely stopped** within 5 feet of the ground then laid gently on the trap. If the mannequin is not completely stopped there will be a 2 point deduction.
6. Time will stop when the mannequin is on the ground and there is slack in the hand line. Note: There must be one gaff in the pole at all times when climbing down the pole and proper belt adjustment maintained as you will be judged until you leave the event.
7. The mean time for this event is 4 minutes. The drop dead time is 6 minutes.
8. The apprentice must use the hand-line provided.
9. Rubber gloves will be required for this event. Gloves must be worn ground to ground.
10. Deductions will be subtracted from 100, resulting in the final score.



Hurtman Rescue





Mystery Event

Mean Time: ? minutes

Drop Dead: ? minutes

Chief Judge: Chris Henry, *Ocala Electric Utility*

Event Summary:

Event summary and specifics will be presented to all competitors after registration on March 1.

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Single Phase Dead End Transfer

Mean Time: 8 minutes

Drop Dead: 10 minutes

Chief Judge: Leonard Holton, JEA

Event Summary:

The Apprentice will be required to transfer a single phase #2 AL primary and #2 neutral dead-end from an existing pole onto a new pole set 4' to the side. Both primary and neutral conductors will be moved to the new pole. This event will be considered dead and not grounded.

Event Specifics:

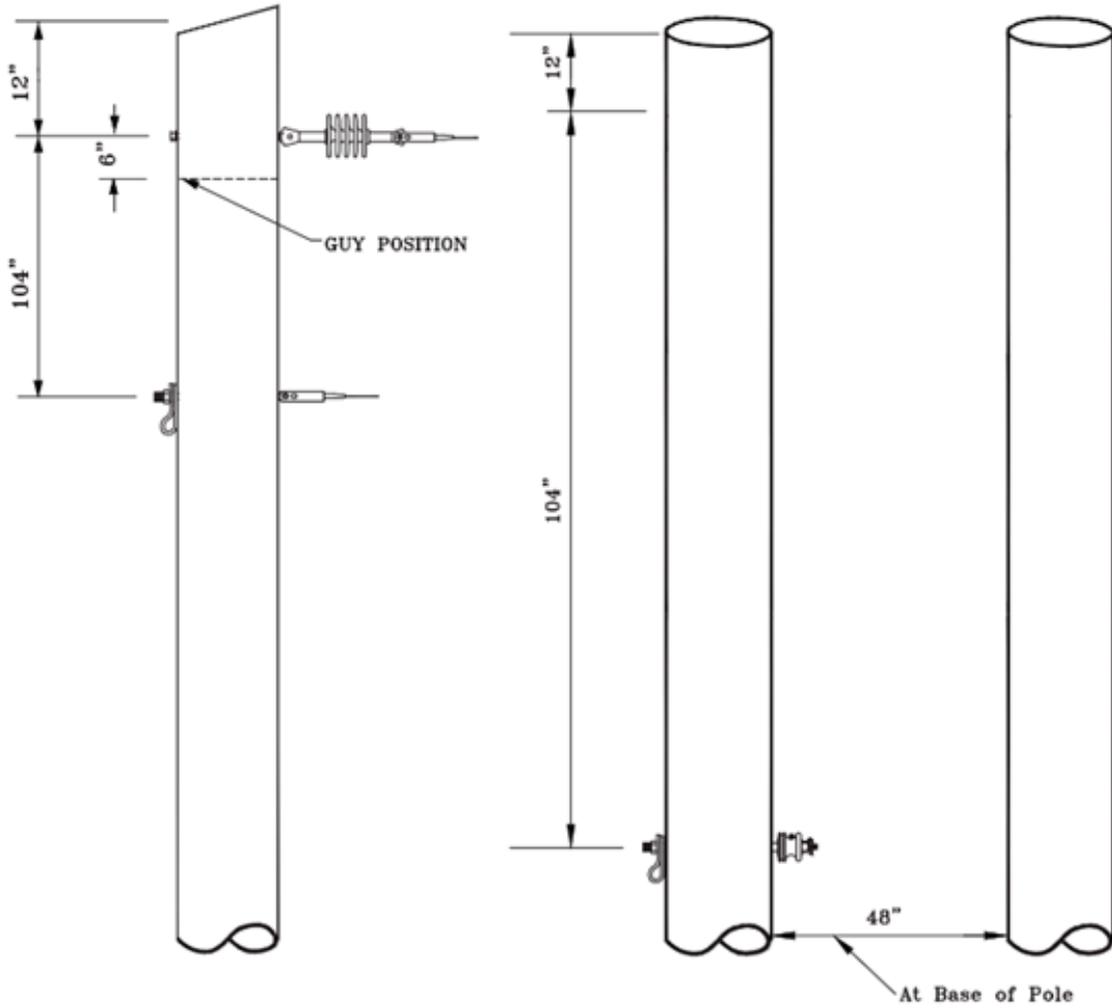
1. Apprentice will have 5 minutes to setup and ask questions.
2. Class 2 Rubber gloves must be worn ground to ground.
3. The apprentice must carry a handline to pull up a grunt sack with rigging and new primary dead-end insulator and shoes. The bag may be secured on the pole while work is being performed.
4. The new pole will have a down guy and an eye bolt in the primary and neutral position.
5. The apprentice will install the primary dead-end insulators and neutral shoe on the new pole. The pins must be installed with the cotter keys facing inwards toward the opposite pole.
6. Approved type of rigging that will be allowed is a minimum of 2 points of control on the conductor at all times when not pinned in its permanent position. Grips must be spring loaded.
7. The primary and neutral conductor shall be removed from the existing dead end shoe and re-secured into the new dead end shoe on the new pole.
8. When the transfer of both conductors has been completed, the primary insulator and neutral shoe must be removed from the eye bolts of the old pole and sent to the ground with rigging.
9. Time will stop when the apprentice is on the ground and fall arrest is detached from the pole.
10. Material must be left out at the base of the pole with the pins properly installed in the dead-end shoe prior to leaving the event. Points will be deducted if any material is missing or taken from the event area.

Minimum List of Tools for Event:

- Handline
- Grunt Sack
- Slack blocks or hoists and grip
- 9/16" wrench



Single Phase Dead End Transfer





Written Test

Mean Time: 30 minutes

Drop Dead: 36 minutes

Chief Judge: David Sparks, Gainesville Regional Utilities

Event Specifics:

1. The written test will take place Friday afternoon at 4:00 PM
2. There will be fifty questions worth 2 points each.
3. The questions will come from the 15th Edition of the APPA SAFETY MANUAL.

Definitions

Section 114: Cardiopulmonary Resuscitation (CPR), First Aid, and Automated External Defibrillators (AEDs)

Section 503.1 – 503.7: Vehicle Operations

Section 506: Tools and Equipment

Section 507: Overhead Distribution and Transmission

Section 509: Underground Lines and Equipment

4. This will **not** be an open book test.
5. No notes, cell phones or other electronic devices will be allowed.
6. You will be able to find out your score on Saturday after completing your events.
7. Your test score will **not** be averaged in with the events on Saturday, however;
8. A perfect field score of 500 will be the only way for the bonus points to exceed 500
9. Competitors with less than a perfect 500 field score can only be brought up the 500 mark.
10. Ties at 500 will then go back to time for breaking ties.

Example – A competitor with a 498 field score can only be brought up to 500 even if he makes the top grade. If a competitor scores 500 he can receive the 3 bonus points, 2 or 1 bonus above 500.

The top Three written test scores will be awarded as follows.

- 1st place will be awarded five points toward their overall score on Saturday.
- 2nd place will be awarded four points toward their overall score for Saturday.
- 3rd place will be awarded three points toward their overall score for Saturday.

If the apprentices' utility does not currently use the APPA Safety Manual, copies may be purchased by contacting APPA's publications department at (202) 467-2926 or by visiting APPA's Product Store at www.PublicPower.org/Store.

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