

## Rejuvenation Instructions

### #820 - Ammeters



#### This NRI covers the following:

- How to effectively use ammeters to identify mismarked or non-marked cables in transformers or riser poles in closed loops or at normal open points.
- The understanding that ammeters are not to be used as a safety tool. Instead they are a means for verifying quality of work.

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**WARNING:** It is dangerous working around energized high-voltage systems, pressurized systems, and chemicals. Always work in accordance to the Novinium Field Operations Safety Handbook (FOSH) or other local governing safety standards.

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## Using the ammeter

The ammeter is **not** to be used to verify if a cable is de-energized. It is only to be used as a means for identifying cables that are mismarked or not marked at all.

**The ammeter is a tool for verifying quality in work, not safety.** All safety steps during work shall be carried out in compliance with the FOSH.

There are many brands and types of ammeters on the market. It is important that users familiarize themselves with the functions of their particular model. Refer to the items instructions before use.

## Follow Commitments 1 through 6

Using the ammeter requires an adherence to Commitments 1 through 6 to protect the user from any potential incident that can occur during the identification process:

- Commitment 1: Have a plan; work the plan
- Commitment 2: Always check your PPE
- Commitment 3: Communicate with 3-Way Affirmative Acknowledgements
- Commitment 4: De-energize equipment
- Commitment 5: Always use a hot stick
- Commitment 6: Rubber up

## Starting with a closed loop (no cable is stood off)

- a. At transformer 1, place the ammeter on the cable to be stood off.
- b. Take the reading of this cable.
- c. At transformer 2, place the ammeter on the cable to be stood off.
- d. Take the reading of this cable.
- e. Compare the two readings.
  - If the two readings are within 0.5 amps, these are the same cable.
  - If they are different, repeat steps **a** through **e** and compare all cable readings in the two transformers together to find the same cable.
- f. Once the cable has been identified, stand off the cable at transformer 1.
  - Leave the ammeter on the cable at transformer 2.
  - The amperage on the cable should drop to zero, or as close as possible.
  - If the amperage does not drop, the cable at transformer 2 is wrong. Repeat steps **c** through **e** on the other cable at transformer 2.

- g. With the identified cable reading at transformer 2 at or as close to zero as can be, check to make sure the other cable in transformer 2 still reads amperage.
  - If the other cable does not read amperage, the cable at transformer 2 is wrong.
- h. Stand off the identified cable at transformer 2.

## **Starting at a normal open (cable is stood off)**

- a. Place ammeter on stood off cable.
  - The reading taken should be or close to zero amps.
- b. At the other transformer, place the ammeter on the cable that is presumed to be switched.
  - The reading taken should be zero.
  - If the reading is not zero, test the other cable.
- c. With both readings at or as close to zero as can be, stand off the cable.
  - There is a degree of confidence this is the correct cable.