

ELECTRICAL DIAGNOSTICS

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Reviewed By:

Approved By:

Signature & Date

Signature & Date

REQUIRED PERSONAL PROTECTIVE EQUIPMENT

- 1. Hard Hat Insulated
- 2. Safety Glasses with side shields
- 3. Hearing Protection
- 4. V-rated Safety Boots
- 5. V-rated Gloves
- 6. Fire Resistant Clothing
- 7. V-rated Tools
- 8. Ladder with non-conductive side rails

STANDARD SAFETY RULES

- 1. Do not operate any equipment unless you have been trained and are authorized
- 2. Read and follow all posted warning signs
- 3. Review all applicable MSDS and follow all recommendations
- 4. Wear appropriate apparel and footwear for conditions
- 5. Don't leave equipment running when unattended
- 6. Use proper lifting techniques at all times
- 7. Do not operate equipment under the influence of drugs, alcohol or medication
- 8. Do not use damaged or modified tools

CAUTION

**THIS PROCEDURE APPLIES ONLY TO ENERGIZED WORK PERFORMED
IN THE NOMINAL VOLTAGE RANGE OF 50V TO 750V.
NO WORK SHALL BE PERFORMED ABOVE 750V UNLESS AUTHORIZED BY THE
MAINTENANCE MANGER & EFFECTIVE PROCEDURES HAVE BEEN ESTABLISHED.**

SEQUENCE OF BASIC JOB STEPS

PRE-OPERATION

1. Talk to operator to ascertain problem.

Potential Hazard and Precautions: Inadvertent startup. Notify operator that you will be performing electrical diagnostics on the equipment and that the equipment will be energized. – post signs/tags, or use barrier tape to secure all startup points.

2. Check condition of PPE.

Potential Hazard and Precautions: PPE damaged or inadequate. Ensure that PPE is in good condition and is rated for the type of work being performed. (V-rated gloves – V-rated tools – Fire Resistant Clothing).

3. Remove all conductive materials from your person.

Potential Hazard and Precautions: Electrical Contact Hazard. Remove all jewelry, metal frame glasses and clothing with conductive thread, etc.

OPERATION

1. Establish boundary for unqualified personnel.

Potential Hazard and Precautions: Electrical Shock/Arc Flash/Burns/Fire/Explosion. Establish Limited Approach Boundary of 3.5 ft. to prevent approach of unqualified persons.

NOTE: If there is a need for an unqualified person to enter the Limited Approach Boundary, a qualified person must advise them of the possible hazards and remain with the unqualified person at all times. Under no circumstances will the unqualified person be allowed to enter the Restricted Approach Boundary.

2. Establish boundary for qualified personnel.

Potential Hazard and Precautions: Electrical Shock/Arc Flash/Burns/Fire/Explosion. Establish Restricted approach Boundary and remain outside 1 ft. zone while conducting work on energized systems.

3. Turn power off and open panel.

Potential Hazard and Precautions: Electrical Shock/Arc Flash/Burns/Fire/Explosion. Remain alert at all times when working near live parts – refer to SOP 1054 for proper Lockout Procedure

4. Visually check parts and use ohm meter while de-energized.

Potential Hazard and Precautions: Electrical Shock/Arc Flash/Burns/Fire/Explosion. Use only v-rated tools – **NEVER** reach blindly into areas where electrical hazards exist – **DO NOT** allow any part of your person to come within the PROHIBITED APPROACH BOUNDARY (1 inch.)

5. Restore power to panel.

Potential Hazard and Precautions: Electrical Shock/Arc Flash/Burns/Fire/Explosion. Let operator know that power is being restored and keep unqualified personnel outside Limited Approach Boundary – refer to SOP 1054 for proper procedure for restoring power.

6. Have operator engage controls.

Potential Hazard and Precautions: Inadvertent startup. Maintain good communication with operator and coordinate activities closely.

7. Visually check parts and use volt meter to trace problem while energized.

Potential Hazard and Precautions: Electrical Shock/Arc Flash/Burns/Fire/Explosion. Use only v-rated tools – **NEVER** reach blindly into areas where electrical hazards exist – **DO NOT** allow any part of your person to come within the PROHIBITED APPROACH BOUNDARY (1 inch.)

POST OPERATION

1. Lockout equipment.

Potential Hazard and Precautions: Unplanned energy release. Refer to SOP 1054 Lockout Procedure – Lockout all potential sources of energy release prior to doing maintenance or repair