

## SECTION 8—INSPECTION AND MAINTENANCE

Perform inspection and maintenance on the basis of operating conditions and experience. Abnormal operation or conditions may require immediate corrective action.

### **DANGER**

#### **HAZARD OF BODILY INJURY OR EQUIPMENT DAMAGE**

- Perform inspection and maintenance only with the main sources of power disconnected and locked open with a “work” lock.
- Be sure there is no backfeed through any feeder circuit.
- Ground the main and feeder circuits before touching the main bus, bus pads, or primary contacts.

**Failure to observe these precautions will result in death, severe personal injury, or equipment damage.**

#### Main Bus Compartment

Remove the front and rear covers from each main bus compartment. Inspect the busbars, primary contact supports, and insulating barrier(s). Check all busbar connections, and torque all 1/2 inch bolts to 55 lb-ft (74.28 N•m).

Slight discoloration or tarnish of the silver plate is normal and of no concern. Severe discoloration of the silver plate is an indication of an improper or loose contact and overheating. Clean the discoloration from the contact surfaces of the busbar and primary contact. Use an abrasive pad such as Scotch Brite.

Vacuum each compartment to remove dust, spiderwebs, and so forth. Wipe off the insulation with a clean cloth.

#### Cable Compartment

Inspect the load connectors, stand-off insulators, primary contact supports, and all accessible cable terminations for indications of insulation deterioration. Vacuum each compartment and wipe off all insulation. Replace removable back covers.

#### Circuit Breaker Compartment

Withdraw each circuit breaker from its compartment, and thoroughly inspect each of the moving mechanisms in the compartment.

The shutters should raise and lower smoothly with no indication of binding, twisting, hesitation, or hang-up. Inspect the shutter hardware. Tighten if necessary.

For the purpose of maintenance, the interlock which blocks the operation of the mechanism without a circuit breaker in the cell can be defeated by simultaneously holding the racking block lever (figure 5, item 11) down and turning the racking handle.

The primary contacts should have a silver-gray appearance, indicating good contact with the circuit breaker separable contacts. Slight discoloration or tarnish of the silver plate on the primary contact is normal. Severe discoloration of the silver plate is an indication of excessive heating and should be corrected. Typical causes are:

- poor contact between the circuit breaker separable contacts and the primary contacts
- loose hardware or otherwise improper contact at the bus connection

Clean the discoloration and tighten the contact mounting bolts to the proper torque. See Table 2, page 30. Inspect the primary contact and support insulators.

The ground contact bar should have marks indicating good contact with the circuit breaker sliding contacts. Clean the contact surfaces, removing grease and dirt buildup. Inspect and tighten the hardware and re-grease.

Inspect the stationary control power receptacle, ensuring that the molding is free of cracks, the female contacts are clean, and the assembly is free to move. Clean the front and back surfaces of the receptacle to remove any contamination buildup. Vacuum the compartment, and wipe off the primary contact high voltage insulating tubes and support insulation with a clean, dry cloth.

Lightly lubricate the primary contacts and the ground contacts with Mobilux EP 1, Square D part number 1615-100790.

Lubricate all moving joints (shutters, MOC, TOC, and so forth) with Mobilgrease 28, Square D part number 1615-100950.

Check all terminal block connections for loose hardware and crimp-on terminal conditions. Make certain that the hinge wiring to the door is not frayed and has no insulation damage. Route all wires through the hinge loop.

## Circuit Breakers

Consult the individual circuit breaker instruction and maintenance manual for cleaning, adjustment, and lubrication information.

## VT, CPT and Fuse Drawout Units

Pull the drawer to the fully withdrawn position. Inspect the moving and stationary primary and secondary contacts and the static ground contacts. Clean the contact surfaces, removing any burn or pit marks if required. Use an abrasive pad such as Scotch Brite.

Remove the current limiting fuses, and inspect the fuse clip and fuse contact surfaces. Inspect the transformer for indication of insulation deterioration. Tighten all hardware, including the secondary contact wiring terminals.

Vacuum the compartment and drawer. Wipe off the insulation and control power transformer with a clean, dry cloth.

Lightly lubricate the moving primary and secondary contacts and fingers with Mobilux EP 1, Square D part number 1615-100790.

Lubricate all rollers and sliding parts with Mobilgrease 28, Square D part number 1615-100950.

Inspect the interlock mechanism for proper operation. Replace the current limiting fuses, but leave the drawer in the withdrawn position until all the inspection and maintenance is completed.

#### Re-energizing

Insert all of the circuit breakers to the test/disconnected position with their secondary control power plugs engaged, and close the compartment doors. Connect the control power source.

Close the main source of power, and operate each circuit breaker electrically in the test/disconnected position.

If all controls are functioning properly, disconnect the secondary control plugs. Rack the circuit breakers into the connected position. Close the circuit breakers and resume normal operation.