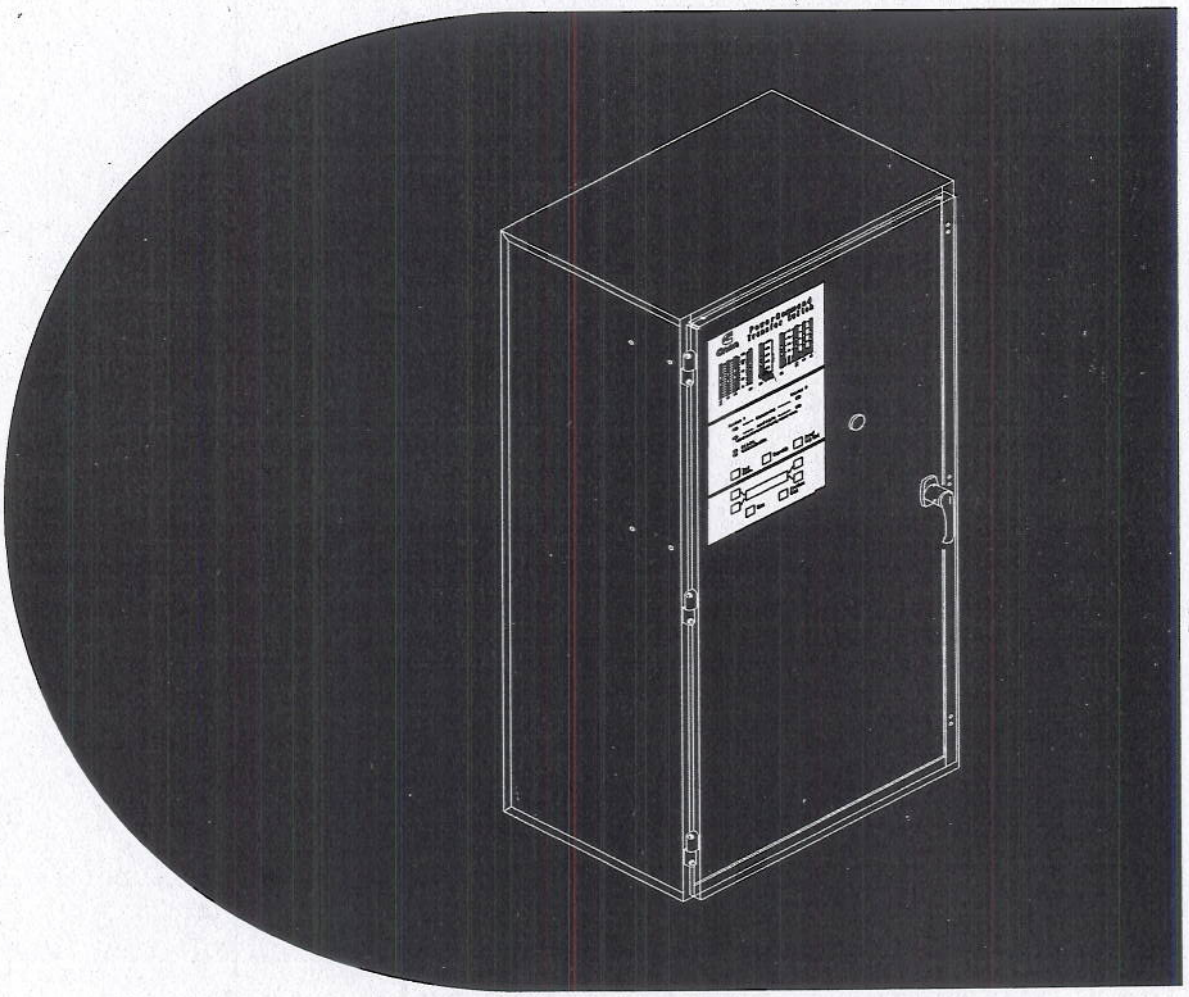
Cummins Power Generation

# Operator's Manual

## OTPC
## Transfer Switch
## 40 to 3000 Amperes



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# 2. Description

The OTPC transfer switch is available in two control package options: Level 1 and Level 2. Level 1 has the standard feature set and Level 2 has an extended set of features and applications. This section describes the standard and optional control features.

## CABINET

The standard cabinet meets the requirements for a UL Type 1 cabinet. This type is designated as a general-purpose, indoor cabinet. Figure 2-1 shows the control with optional features.

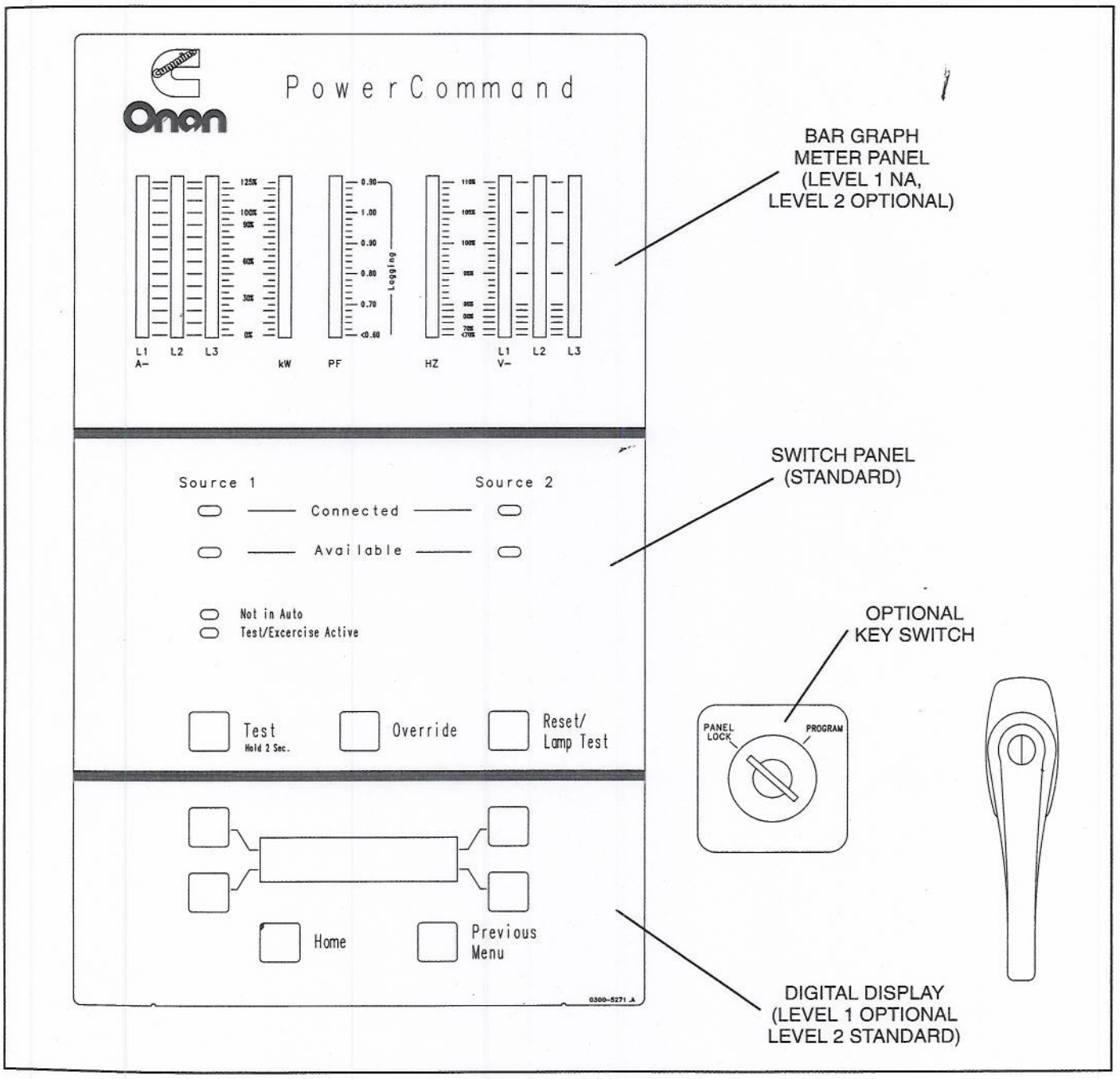


**FIGURE 2-1. CABINET WITH OPTIONS**

## Auxiliary Contacts

Auxiliary contacts are provided on the Source 1 and Source 2 sides of the transfer switch. They are actuated by operation of the transfer switch during transfer and retransfer. The Source 1 auxiliary contact switch is actuated when the transfer switch is in the Source 1 position. The Source 2 auxiliary contact switch is actuated when the transfer switch is in the Source 2 position. The auxiliary contacts have current ratings of 10 amperes at 250 VAC. The contacts are wired to terminal block TB1.

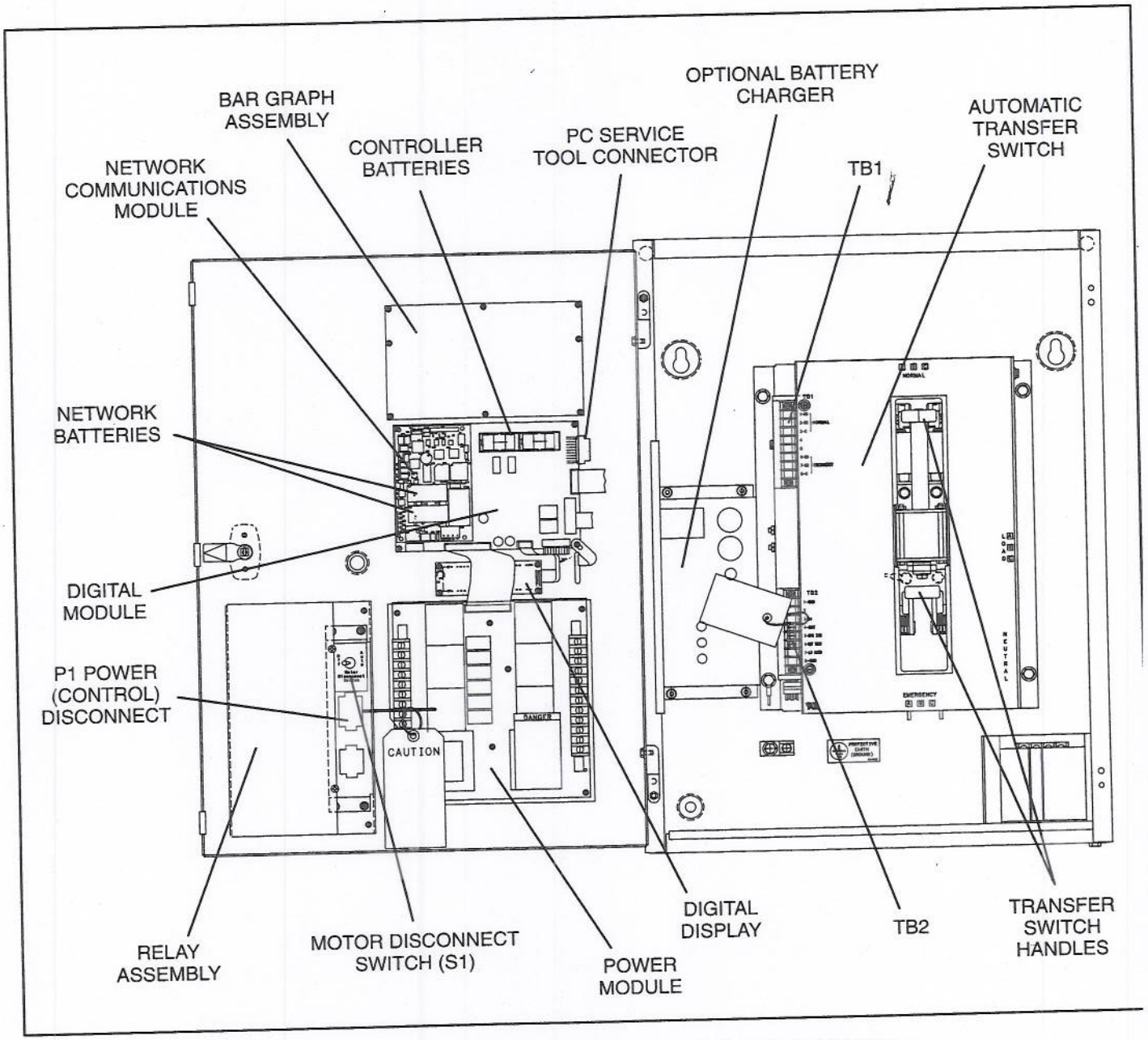


**FIGURE 2-5. INTERIOR/COMPONENTS: 40-125 AMP SWITCH**

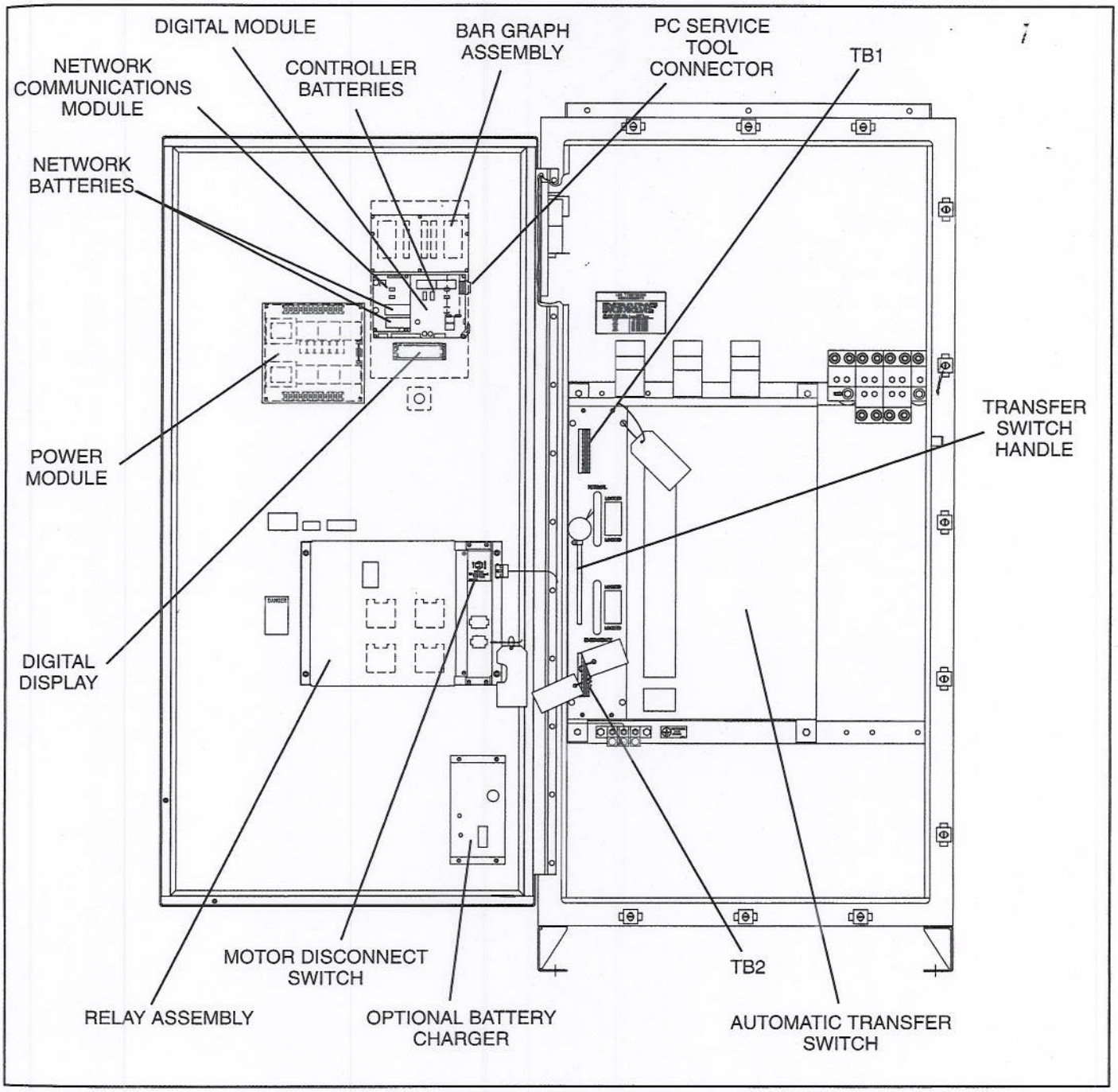


**FIGURE 2-6. INTERIOR/COMPONENTS: 1200 AMP SWITCH**

## PLANNED MAINTENANCE

Performing the annual planned maintenance procedures increases reliability of the transfer switch.

The following procedures must only be done by technically qualified personnel, according to procedures in the Service manual (40-1000 Amp Switches: 962-0516 and 1200-3000 Amp Switches: 962-0517). If repair or component replacement is necessary, call your dealer or distributor.

**⚠WARNING** ***AC power within the cabinet and the rear side of the cabinet door presents a shock hazard that can cause severe personal injury or death. Incorrect installation, service, or parts replacement can result in severe personal injury, death, and/or equipment damage. All corrective service procedures must be done only by technically qualified personnel, according to procedures in the Service manual (40-1000 Amp Switches: 962-0516 and 1200-3000 Amp Switches: 962-0517).***

**⚠WARNING** ***The transfer switch presents a shock hazard that can cause severe personal injury or death unless all AC power is removed. Be sure to set the genset operation selector switch to Stop, disconnect AC line power, disconnect the battery charger from its AC power source, and disconnect the starting battery (negative [–] lead first) before servicing.***

**⚠WARNING** ***Ignition of explosive battery gases can cause severe personal injury. Do not smoke or cause any spark, arc, or flame while servicing batteries.***

1. **Disconnect All Sources of AC Power:**

   A. Disconnect both AC power sources from the transfer switch before continuing. Turn the generator set operation selector switch to Stop. (The selector switch is located on the generator set control panel.)

   B. ***If there is an external battery charger, disconnect it from its AC power source.*** Then disconnect the set starting battery (negative [–] lead first).

2. **Clean**

   A. Thoroughly dust and vacuum all controls, meters, switching mechanism components, interior buswork, and connecting lugs.

   B. Close the cabinet door and wash **exterior** surfaces with a damp sponge (mild detergent and water). ***Do not allow water to enter the cabinet, especially at meters, lamps, and switches.***

3. **Inspect**

   A. Check buswork and supporting hardware for carbon tracking, cracks, corrosion, or any other types of deterioration. If replacement is necessary, call your dealer or distributor.

   B. Check stationary and movable contacts. If contact replacement is necessary, the procedures are described in the Service manual (for 40-1000 Amp switches: 962-0516 and for 1200-3000 Amp switches: 962-0517).

   C. Check system hardware for loose connections. Tighten as indicated in step 4.

   D. Check all control wiring and power cables (especially wiring between or near hinged door) for signs of wear or deterioration.

   E. Check all control wiring and power cables for loose connections. Tighten as indicated in step 4.

   F. Check the cabinet interior for loose hardware. Tighten as indicated in step 4.

4. **Perform Routine Maintenance**

A. Tighten buswork, control wiring, power cables, and system hardware, as necessary. Hardware torque values are given in section 4 of the Service manual (for 40-1000 Amp switches: 962-0516 and for 1200-3000 Amp switches: 962-0517). Retorque all cable lug connections. Lug torque requirements are listed in section 1 of the Service manual.

B. Replace the batteries (3V lithium) in the Digital Module and the Network Module (if applicable) every two years. See Figures 2-5 and 2-6.

5. **Connect AC Power and Check Operation**

A. Connect the set starting battery (negative [–] lead last). Connect the normal AC power source, enable the backup power source. If applicable, connect power to the battery charger.

B. Verify proper operation of the battery charger.

C. Test system operation as described in this section. Close and lock the cabinet door.