Troubleshooting flow charts

CM-52

Figure 1. Fail to Close
Figure 2. Solid Yellow Float LED ON

1. Solid Yellow Float LED ON?
   - Yes
   - No
   - Retest

2. Flashing Float Light?
   - Yes
   - No
   - Retest

3. Relay in Programming Mode, Reinsert Programming Tool and Save Setting
   - Yes
   - Retest

4. Check the Following:
   - 1) Incorrect Rotation Set in Relay
   - 2) Test Set Phasing Leads Crossed
   - 3) Test Set Power Leads Crossed
   - 4) Potential Voltage Missing
   - Yes
   - Replace Relay
   - No
   - Retest

5. MPCV Relay Failure LED ON?
   - Yes
   - Check Potentials at Relay: (All Should be 125V)
     - Points 5–6 = VNA
     - Points 5–7 = VTA
     - Points 5–18 = VNB
     - Points 5–17 = VTB
     - Points 5–13 = VNC
     - Points 5–12 = VTC
     - Retest
   - No
   - Replace Relay

6. Green Trip LED ON Solid?
   - Yes
   - Check Potentials at Test Phasing Block for Missing Phase (Blown Fuse or Continuity) Crossed or Rolled; All Six Should be 125 Vac Nominal to Ground
   - No
   - Retest

7. Power at Relay
   - Yes
   - Check for Damaged Wiring and Repair
   - No
   - Retest

8. Does not Meet MPCV Set Point Criteria; Increase Phasing Voltage Value on Test Set to Meet MPCV ML Setting
Figure 3. Is Wiring to Motor OK?

Figure 4. Is Wiring to Spring Release OK?
Fail to Trip

Is MPCV Relay Failure LED ON?

Yes → Replace Relay

No

Is IDM “Trip Actuator OK” LED ON?

Yes

No → Troubleshoot Trip Circuit (Check Voltage at IDM, J1-4 to J1-5 Should be 125 Vdc)

Is there 125 Vac at #1 Point on MPCV Relay?

Yes

No → Check Fuses in Lower Relay Drawer and Check Wiring

Is MPCV Calling for a Trip at Correct Trip Current?

Yes

No → Check Trip Actuator and/or Wiring

Verify Test Set is Putting Out Current on All Three Phases

Figure 5. Fail to Trip
Remote racking

NOTE: Breaker MUST be OPEN and the manual protector handle in the OPEN position for remote racking operation.
NOTE: The 5/16 Allen adapter must be used for cranking manually from the TEST position to the DISCONNECTED position and from the DISCONNECTED position to the TEST position. You will need to push in to disengage the clutch; make sure you re-engage the clutch after you reach the TEST position.

NOTE: The manual crank is not designed to be used from the TEST position to the CONNECT position.

1) Remove the black cap on the top left-hand side of the R/R unit
2) Press the Learn button inside and release; the R/R will make two revolutions CCW then start turning CW until it reaches the CONNECT position (Red). The Learn LED will flash and start turning CCW. Once the TEST position window (Yellow) becomes full, you must manually press the Learn button again. This will complete the learning process.
3) R/R is ready for use. Press IN to go from TEST to CONNECT and OUT to go from CONNECT to TEST for operation verification.

Figure 6. Remote Racking Operation
Troubleshooting flow charts

NPARMS

Figure 7. ARMS Activation