

# INSTRUCTIONS FOR OPERATION

## DEAD-FRONT FUSE PANEL

### TYPE PSE PAD-MOUNTED SWITCHGEAR

#### 15kV • 25kV

## **WARNING**

These instructions are provided as a quick reference and are not intended as a substitute for the detailed instructions contained in Instruction Bulletin IB-2A-210. These instructions are intended to be performed by thoroughly trained, qualified personnel that are familiar with the equipment, the operation and maintenance of the equipment and the hazards involved in performing the functions described in this document and Instruction Bulletin IB-2A-210.

## **DANGER**

Before energizing the switchgear, remove all yellow and red shipping caps on bushings and bushing wells, and replace them with a suitable system of insulated separable connectors (elbows), insulating protective covers, or plugs, as appropriate.

Failure to remove the shipping caps may result in flashover, equipment damage, serious personal injury, or death.

## **NOTICE**

Load-break inserts and load-break elbows used in combination with the Federal Pacific Dead-Front PSE Pad-Mounted Switchgear are rated for load switching of currents to 200 amperes continuous. Consequently, the 200-amp elbow may be pulled, in accordance with the elbow manufacturer's instructions, to perform the load-switching function. Pulling the energized elbow interrupts the load current connected to the associated circuit. The elbow is then parked on a standoff bushing. Then, only after the elbow has been parked, the fuse panel can be rotated (pivoted) to expose the fuse that is to be removed. With the elbow removed, rotation of the fuse panel does not involve any load switching. The removal of the fuse from the fuse panel can be accomplished using the shotgun stick or, since the fuse once exposed is completely and visibly isolated from voltage at both ends, and if standard operating practices permit, the fuse can be removed by hand when wearing gloves insulated for the voltage involved.

1. Install and secure a feed-thru stand-off bushing on the parking stand. The feed-thru device must be oriented so that it will not interfere with the operation of the hinged fuse-panel.
2. If switching of energized elbows is permitted, proceed to Step 3 below. If switching of energized elbows is NOT permitted, test the circuit in accordance with the user's standard operating practices and using equipment rated for the voltage involved to verify that the circuit is de-energized.
3. After verifying the applicable de-energized/energized condition of the elbow to be switched and following the elbow manufacturer's operating instructions:
  - a. Pull the elbow off the load-break insert and properly re-position it onto the feed-thru stand-off bushing. Make certain that the connected high-voltage cable is retained within the cable guide and moves so it is clear of the fuse panel, which must be free to pivot 90°.
  - b. Using equipment rated for the voltage involved, test the re-positioned elbow for voltage through the uncovered load-break insert of the feed-thru.
  - c. After verifying that voltage is not present, properly install the grounding elbow in accordance with the grounding-elbow manufacturer's instructions and the user's standard operating practices, first clamping the ground connector to the ground buss and then installing the grounding elbow on the unoccupied load-break insert of the feed-thru.
  - d. Ensure that the cables, feed-thru devices, and elbows are not located where they would interfere with the operation of the fuse panel. Reposition as needed.
4. With the hook of the shot-gun clamp stick secured to the interlock latch grip rod on the fuse-panel (see Figure 1), raise the latch to the horizontal position and verify that the interlock latch locking rod is free of the notched latch brackets at the sides. See Figure 2.



*Figure 1. Interlock lever being raised to unlocked position (or lowered to locked position).*



*Figure 2. Fuse mounting being lowered to access fuse (or raised to reinstall fuse).*

5. Then, pull on the latch and pivot the fuse panel down so that it is disengaged and rests on the ledge at the door opening stile and the fuse assembly is horizontal. See Figure 2. Disengage the hook from the interlock latch grip.
6. At the side of the fuse panel, use the hook on the shot-gun stick to pivot the locking bracket so that it secures the fuse panel to the ledge at the door-opening rail. See Figure 3. Disengage the hook from the locking bracket.

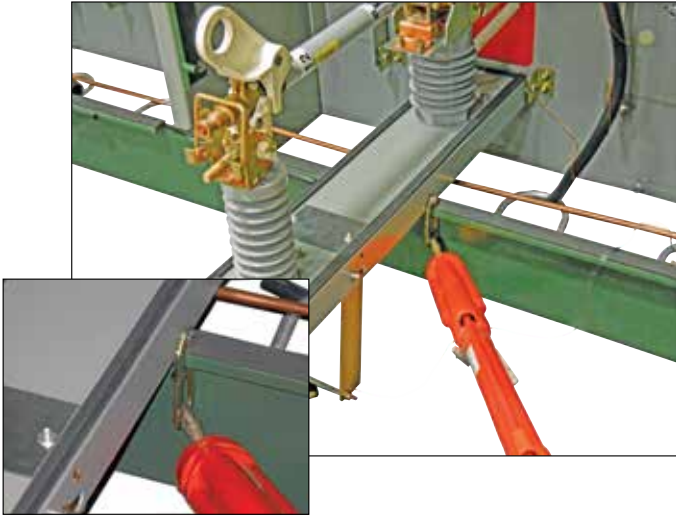
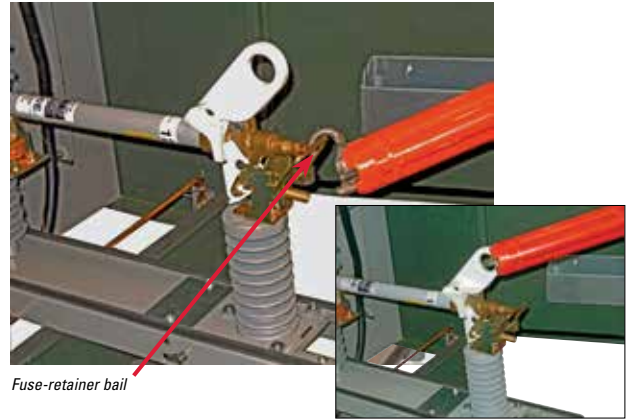


Figure 3. Locking bracket being set in place to secure fuse mounting against door rail.

7. Use the hook on the shot-gun clamp stick to move the fuse-retainer bail so that it is clear of the upper end fitting of the fuse assembly. See Figure 4.
8. The fuse assembly can be removed from the fuse panel as follows:
  - a. Secure the hook of the shot-gun clamp stick in the pull ring of the upper end fitting (see Figure 4); push on the stick to unlatch the fuse assembly from the fuse mounting; pivot the fuse assembly up to an angle of approximately 60° from the horizontal; then, with an easy pull and sliding motion remove the fuse assembly free of the fuse mounting. See Figure 5.
  - b. Alternately, since the fuse mounting is disengaged and contacts are visible at both ends, the fuse assembly is isolated from all sources of voltages and, if permitted by the user's standard operating practices and using all required personal protective equipment appropriate for the voltage and purpose, the fuse assembly can be removed with insulated-gloved hands. See Figure 6.
  - c. Store the removed fuse assembly on the optional Fuse-Storage Hooks, if furnished, or in a clean dry place.
9. After performing the required service, to restore the equipment, re-install the fuse assembly and re-position and secure the fuse-mounting panel in the reverse sequence of the above instructions.



Fuse-retainer bail

Figure 4. To release fuse latch, lower fuse-retainer bail. Secure shotgun clamp stick on fuse pull ring. Push and pull up on the fuse pull ring to release the fuse.



Figure 5. Shotgun clamp stick secured to fuse pull ring and fuse assembly being lifted from the latched position and being removed from fuse hinge.



Figure 6. Alternate method using insulating-gloved hand, if user's standard operating procedures permit, to remove or install fuse assembly of fuse mounting.

