INSTRUCTIONS
ENCLOSURE DOOR OPERATION
TYPE PSE
DEADFRONT PAD-MOUNT SWITCHGEAR
15kV • 25kV • 35kV

Figure 1. Enclosures of Federal Pacific PSE Dead-Front Pad-Mounted Switchgear include overlapping doors to provide a very secure access system. ***DO NOT USE POWER TOOLS TO OPEN THESE DOORS.***

Qualified Persons

⚠ WARNING

The equipment covered by this publication must be selected for a specific application and it must be operated and maintained by **Qualified Persons** who are thoroughly trained and knowledgeable in the installation, operation, and maintenance of underground power distribution equipment along with the associated hazards that may be involved. This publication is written only for such qualified persons and is not intended to be a substitute for adequate training and experience in safety procedures for this type of equipment. Proper installation is the responsibility of the operating and construction personnel and the utility performing and authorizing the work. Completion of these instructions implies no further warranty by the manufacturer.

A **Qualified Person** is defined in the National Electrical Code (NEC/NFPA-70) as:

One who has skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training to recognize and avoid the hazards involved.

The specific electrical safety training requirements to be considered a qualified person are detailed in **NFPA-70E, Article 110.1(D), Employee Training**. Some of the requirements from the 2012 edition are shown below. For the specific detailed training requirements for a Qualified Person make certain to refer to the most recent applicable edition.

These training requirements would include, but are not limited, to the following key points:

- The skills and techniques necessary to distinguish exposed energized parts from other parts of electrical equipment.
- The skills and techniques necessary to determine the proper approach distances corresponding to the voltages to which the qualified person will be exposed.
- The proper use of the special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools for working on or near exposed energized parts of electrical equipment.
- Tasks performed less often than once per year have additional training requirements.

These instructions are intended only for such qualified persons. They are <u>not</u> intended to be a substitute for adequate training and experience in safety procedures for this type of equipment. Additionally, the recommendations in this instruction bulletin are not intended to supersede or to take the place of established utility safety guidelines and established practices. If there is any question, consult with your foreman or supervisor, as appropriate.

Please refer to OSHA 29 CFR 1910.399 and NFPA 70E Articles 100 and 110.

⚠ CAUTION

Do not use power tools to operate the security bolt.

Enclosure Doors

Enclosures of four-compartment Federal Pacific PSE Dead-Front Pad-Mounted Switchgear include an active door and a passive door on each side that provides access to the interior. The active door overlaps the passive door. Units with two (2) compartments include only active doors. Units with six (6) compartments will have some overlapping doors and some active only doors. The features and operation of these active and passive doors are discussed in this instruction bulletin.

Active Door ("Auto-Latch Door")

The Type PSE pad-mounted switchgear incorporates an active door, which includes an automatic three-point latching system for enclosure security. The features and operation of the auto-latch active door are discussed below. See Figure 2.

Passive Door

The passive door is overlapped by the active door, ensuring that the auto-latch mechanism must be released and the active door opened before the passive door latch can be accessed. Once the active door is opened, the passive door can be released. See Figure 3.

Features of the Auto-Jet Mechanism on the Active Door

The automatic door latching system furnished on the active doors provides ease in opening and closing of the doors. Features of the Auto-latch system are:

- Automatic 3-point latching upon door closure (see Figure 2).
- After opening, the door is automatically set for latching upon door closure.
- Unlatching is only accomplished by an unrestrained rotation (approximately 60° in either direction) of the captive pentahead (or optional hexhead) actuator bolt. **DO NOT TURN THE BOLT BEYOND THE 60° STOP LIMIT.**

Figure 2. Auto-latch mechanism with 3-point latching on door closure.

Figure 3. Release passive door by simultaneously pushing on it and raising the latch bracket.

- The door padlocking provision prevents unlatching the mechanism until the padlock has been removed. Padlocking secures the door to the cabinet enclosure.
- A stainless-steel, hinged protective cover guards the padlock from tampering. Also, access to, and visibility of, the actuator bolt is only possible after the padlock has been removed.

Figure 4. Raise cover to access security bolt. Review and understand the "CAUTION" label on the underside of the cover. Do not use power tools to operate the security bolt.

*Figure 5. Use a manual wrench with pentahead or hexhead socket as applicable. As explained on the caution label, **DO NOT USE POWER TOOLS**. Rotate the security bolt clockwise or counter-clockwise to release three-point latch and charge for subsequent door closing.*

Auto-Latch Door Operation

Opening:

1. Remove padlock and raise hinged cover to expose security bolt. See Figure 4.
2. If equipped with the standard pentahead security bolt, use the standard pentahead socket (or if equipped with an optional hexhead bolt, use a 3/4" hexhead socket) to rotate the captive actuator bolt head approximately 60° in either direction until the latching mechanism has tripped to open the active door. Do not use power tools to operate the security bolt. See Figure 5.
3. Open the passive door by pushing on it and simultaneously pulling up on the latch bracket to move it off the passive-door-latch stud. See Figure 3. Secure the doors open with the stanless-steel door keepers – raise, pivot, and set each door keeper in the hole on the tab that is on the inside of the enclosure door.

Closing:

1. In turn, raise, pivot, and set each door keeper in the hole on the door-opening flange.
2. Close the passive door and secure the latch bracket onto the passive-door-latch stud.
3. Close the active door by firmly grasping it near the middle latch and briskly throwing it closed. Mechanism trip and automatically latch the door closed.
4. Close the hinged cover and install a padlock through the tabs on the cover and enclosure.