

⚠ DANGER

This quick operation guide is not a replacement for adequate training and safety procedures for this product. Read S&C Instruction Sheet 681-510 thoroughly and carefully before using this quick operation guide. **Failure to have adequate training and understanding of these instructions will likely result in serious personal injury or death if the instructions, including recommended precautions, are not followed.**

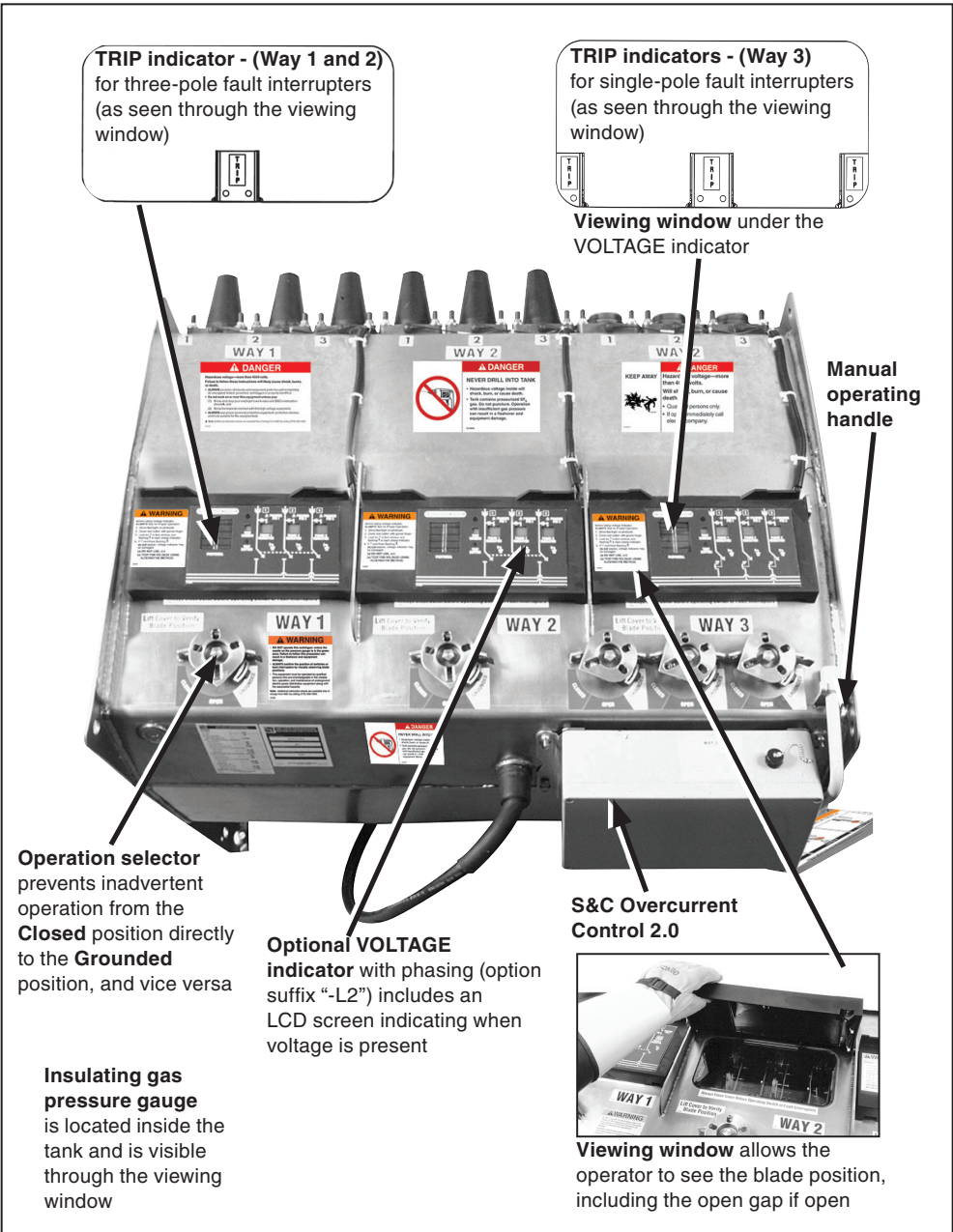


Figure 1. Top of switchgear.

⚠ WARNING

S&C Manual Vista Underground Distribution Switchgear must be installed, operated, and maintained by qualified persons knowledgeable in underground electric power distribution equipment and the associated hazards. For more information on the requirements of a qualified person, see the "Introduction" section of S&C Instruction Sheet 681-510. These instructions are not intended to be a substitute for adequate training and experience in safety procedures for this type of equipment. **Failure to follow these operating and safety procedures can result in serious injury.**

Understanding the Gas-Pressure Gauge

Vista switchgear uses a temperature-compensated gas-pressure gauge inside the tank to display the insulating gas pressure. The gauge includes four color-coded zones. If the needle is in a zone, it denotes the following:

Green zone:

The Vista switchgear unit is OK to operate.

Green/Yellow zone:

The Vista switchgear unit may have lost some gas but is still OK to operate.

Red zone:

Do not operate. The insulating gas may be below the minimum operating pressure for the gear. Contact S&C for assistance.

Orange zone:

The Vista switchgear unit has been overfilled or has a defective pressure gauge. For SF₆ models and field-accessible ports, an external gauge can be used instead to verify the gas pressure before device operation. Contact S&C for assistance.

NOTICE

Rapid temperature fluctuations may temporarily cause high pressure indication. See S&C Instruction Sheet 681-510 for more information.

Field Filling

For SF₆ models: The Vista switchgear unit should be evaluated to determine whether it needs to be refilled with SF₆ gas via the field-accessible fill port and be repaired accordingly. Contact S&C for assistance.

For Vista Green switchgear models: Vista Green switchgear models are hermetically sealed. The gas-fill port is not accessible in the field as standard. Contact S&C for assistance.

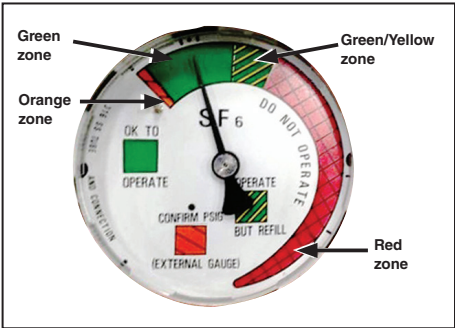


Figure 2. Internal gas-pressure gauge. SF₆ gauge is shown. Gauges for 15-kV, 12-kA sym. models and Vista Green switchgear models are similar.

Pre-Operation Checks

⚠ WARNING

Do not operate this switchgear if the gas-pressure gauge is in the Red zone. **Failure to follow this precaution can result in a flashover, injury, and equipment damage.**

STEP 1. Make sure the gas-pressure gauge is in the Green zone (or the Green-and-Yellow striped zone) by lifting the viewing window cover over Way 1. See Figure 2.

STEP 2. Open the viewing window cover and confirm the position of the load-interrupter switch or fault interrupter by visually observing the position of the blades. See Figure 4.

For most Vista switchgear model fault interrupters, confirm the position of the trip flags. For "R1" suffix models, confirm the position of the disconnect switch blade through the viewing window.

Also, inspect the current-carrying components inside the tank specifically for dislodged hardware, signs of arcing, and significant blade misalignment.

⚠ WARNING

Do not operate the energized load-interrupter switch or fault interrupter with dislodged hardware or obvious signs of arcing or significant blade misalignment. **Equipment damage and personal injury may result.**

STEP 3. If the Operation selector is blocking the operation, rotate the selector out of the way. The Operation selector prevents inadvertent operation directly from the **Closed** position to the **Grounded** position and vice versa.

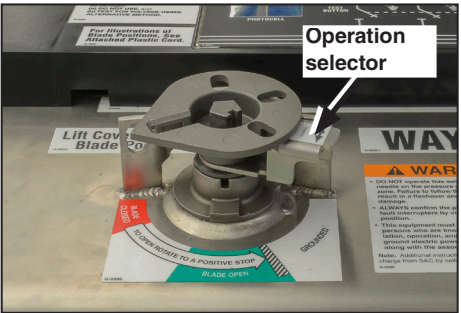


Figure 3. The Operation selector.

⚠ WARNING

Always confirm the switches or fault-interrupter positions by visually observing the blade position. **Failure to follow this precaution can result in an injury or equipment damage.**



Figure 4. Confirming the load-interrupter switch or fault interrupter blade position.

Operation Selector Function


The Operation selector prevents the inadvertent switchgear operation directly from the **Closed** position to the **Grounded** position and vice versa. This blocks operations that could cause arcing and damage to the switchgear.

Four operating actions are possible:

1. Closed to Open
2. Open to Closed
3. Open to Grounded
4. Grounded to Open

The Operation selector should be swung out of the way before attempting an operation. In Figure 3, for example, the two operating actions available with the Operation selector in the far right position are Open to Closed and Closed to Open. To operate the switch from the **Open** to **Grounded** position, the operating handle must be removed and the Operation selector moved to the far left.


Operating from Closed to Open Position

 **WARNING**

Make sure to complete pre-operational checks. **Failure to do so can result in equipment damage and personal injury.**

- STEP 1.** Make sure to complete Steps 1 through 3 in the “Pre-Operation Checks” section on page 1.
- STEP 2.** Insert the manual operating handle into the notch of the operating mechanism. See Figures 5 through 7.
- STEP 3.** Rotate the manual operating handle in the counterclockwise direction to the **Open** position to open the load-interrupter switch or fault interrupter.
- STEP 4.** When operating from the **Closed to Open** position, the operating handle must be rotated all the way to the **Stop** position, as shown on the label, to open (and recharge) the mechanism. For three-pole fault interrupters, the operating handle cannot be removed until the mechanism is fully charged.
- STEP 5.** Open the viewing window cover and confirm the load-interrupter switch or fault-interrupter position by visually observing the position of the blades. See Figure 4 on page 1.

Operating from Open to Grounded Position


 **WARNING**

Make sure to complete pre-operational checks. **Failure to do so can result in equipment damage and personal injury.**

- STEP 1.** Make sure to complete Steps 1 through 3 in the “Pre-Operation Checks” section on page 1.

- STEP 2.** Make sure the cables connected to the load interrupter switch or fault interrupter are de-energized. Check for voltage using the optional VOLTAGE indicator (option suffix “-L1” or “-L2”), as instructed in the “Checking for Voltage Using Optional Voltage Indicator” section in Instruction Sheet 681-510, or use an alternate method.
- STEP 3.** Insert the manual operating handle into the notch of the operating mechanism. See Figure 7.
- STEP 4.** Rotate the manual operating handle in the counterclockwise direction and stop in the **Grounded** position.
- STEP 5.** Open the viewing window cover again and confirm the position of the load-interrupter switch or fault interrupter by visually observing the position of the blades. See Figure 4 on page 1.


Operating from Grounded to Open Position

 **WARNING**

Make sure to complete pre-operational checks. **Failure to do so can result in equipment damage and personal injury.**

- STEP 1.** Make sure to complete Steps 1 through 3 in the “Pre-Operation Checks” section on page 1.
- STEP 2.** Insert the manual operating handle into the notch of the operating mechanism. See Figure 7.
- STEP 3.** Rotate the manual operating handle in the clockwise direction and stop in the **Open** position to open the load-interrupter switch or fault interrupter.
- STEP 4.** Open the viewing window cover and confirm the load-interrupter switch or fault interrupter position by observing the blade positions. See Figure 4 on page 1.


Operating from Open to Closed Position

 **WARNING**

Make sure to complete pre-operational checks. **Failure to do so can result in equipment damage and personal injury.**

- STEP 1.** Make sure to complete Steps 1 through 3 in the “Pre-Operation Checks” section on page 1.
- STEP 2.** Insert the manual operating handle into the notch of the operating mechanism. See Figure 7.
- STEP 3.** Rotate the manual operating handle in clockwise and stop in the **Closed** position to close the load-interrupter switch or fault interrupter.
- STEP 4.** Open the viewing window cover and confirm the load-interrupter switch or fault-interrupter position by visually observing the position of the blades. See Figure 4 on page 1.

Resetting a Fault Interrupter After a Trip Operation

 **WARNING**

Make sure to complete pre-operational checks. **Failure to do so can result in equipment damage and personal injury.**

- STEP 1.** Make sure to complete Steps 1 through 3 in the “Pre-Operation Checks” section on page 1.
- STEP 2.** Insert the manual operating handle into the notch of the operating mechanism. See Figure 7.
- STEP 3.** Rotate the manual operating handle in the counterclockwise direction to move the blade to the **Open** position and reset the operating mechanism. When operating from the **Closed** to the **Open** position, the operating handle must be rotated all the way to the **Stop** position, as shown on the label, to recharge the

mechanism. See Figure 6. For three-pole fault interrupters, the operating handle cannot be removed until the mechanism is fully charged.

- STEP 4.** Open the viewing window cover and confirm the position of the load-interrupter switch or fault interrupter by visually observing the position of the blades. See Figure 4.

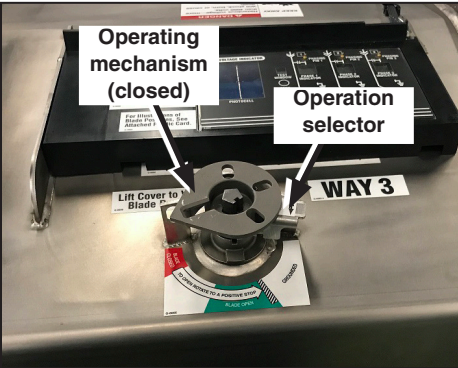


Figure 5. The load-interrupter switch or fault interrupter in the Closed position.



Figure 6. The Stop position.



Figure 7. Opening the load-interrupter switch or fault interrupter.

Locking Out Operation

The Operation selector can be locked to the locking collar to prevent closing or grounding the switch.

Locking Out of the Grounded Position

To prevent the operation of a load-interrupter switch or fault interrupter into the **Grounded** position, insert a padlock through the Operation selector and the right-side hole of the locking collar.

Locking Out of the Closed Position

To prevent the operation of a load-interrupter switch or fault interrupter into the **Closed** position, insert a padlock through the Operation selector and the left-side hole of the locking collar.

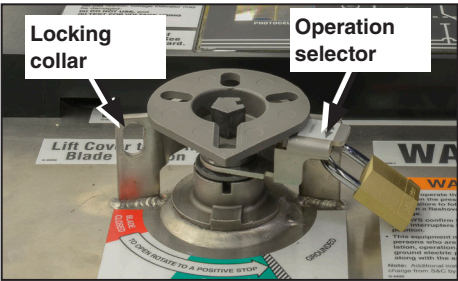


Figure 8. The Operation selector locked out of the Grounded position.

Locking In Operation

To lock a load-interrupter switch or fault interrupter into position, insert a padlock through the operating disk and the center hole in the locking collar.



Figure 9. The operating disk locked to the back of the locking collar.

Returning Equipment to Service

- STEP 1.** Make sure the load-interrupter switch and fault-interrupter grounding means are removed.
- STEP 2.** Make sure the load-interrupter switches and fault interrupters are in the correct **Open** or **Closed** position.
- STEP 3.** If a pad-mounted enclosure is furnished, close and padlock the termination compartment before energizing the circuit and operating any switching devices.
- STEP 4.** Padlock the switchgear before leaving the site even momentarily. Observe this procedure even when the gear is accessible only to qualified persons.

Voltage Testing and Phasing

For information on the optional VOLTAGE indicator and VOLTAGE indicator with phasing, see S&C Instruction Sheet 681-510.

Maintenance and Dielectric Testing

For information on maintenance and dielectric testing including routine switchgear testing, see S&C Instruction Sheet 681-510.