SF₆ gas Top-Off kit, KPA-1043-1 or KPA-1043-2 operation instructions
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The instructions in this manual are not intended as a substitute for proper training or adequate experience in the safe operation of the equipment described. Only competent technicians who are familiar with this equipment should install, operate, and service it.

A competent technician has these qualifications:

- Is thoroughly familiar with these instructions.
- Is trained in industry-accepted high and low-voltage safe operating practices and procedures.
- Is trained and authorized to energize, de-energize, clear, and ground power distribution equipment.
- Is trained in the care and use of protective equipment such as flash clothing, safety glasses, face shield, hard hat, rubber gloves, hotstick, etc.

Following is important safety information. For safe installation and operation of this equipment, be sure to read and understand all cautions and warnings.

Hazard Statement Definitions

This manual may contain four types of hazard statements:

![DANGER]

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

![WARNING]

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

![CAUTION]

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

![CAUTION]

Indicates a potentially hazardous situation which, if not avoided, may result in equipment damage only.
Product information

Introduction

Service Information MN285010EN provides connection and operation instructions for the SF₆ Gas Top-Off kit. Before installing or operating this kit, carefully read and understand the contents of this manual.

Read this manual first

Read and understand the contents of this manual and follow all locally approved procedures and safety practices before connecting or operating this equipment.

Additional information

These instructions cannot cover all details or variations in the equipment, procedures, or process described, nor provide directions for meeting every possible contingency during installation, operation, or maintenance. For additional information, contact your Eaton representative.

Acceptance and initial inspection

Each SF₆ Gas Top-Off kit is completely assembled and inspected at the factory. It is in good condition when accepted by the carrier for shipment.

Upon receipt, inspect the carton for signs of damage. Unpack the kit and inspect it thoroughly for damage incurred during shipment. If damage is discovered, file a claim with the carrier immediately.

Handling and storage

Be careful during handling and storage of the control to minimize the possibility of damage. If the kit is to be stored for any length of time prior to installation, provide a clean, dry storage area.

Quality standards

ISO 9001 Certified Quality Management System.

Description

The SF₆ Gas Top-Off kit is for use with VFI and RVAC Padmounted Switchgear tank. It is used to Top-Off the SF₆ gas in the switchgear tank to the desired pressure.

Read and understand the MN285004EN Installation, Operation, and Maintenance manual before using the SF₆ Gas Top-Off Kit with Type VFI padmounted switchgear. Read and understand the MN285003EN Installation, Operation, and Maintenance manual before using the SF₆ Gas Top-Off Kit with Type RVAC padmounted switchgear.

Operation

Connecting to the SF₆ cylinder

Note: A pressure regulator must be used to Top-Off the SF₆ gas. The SF₆ Gas Top-Off kit can be ordered with or without a regulator. A regulator ordered with the Gas Top-Off kit has a separate operating manual. Please consult that manual for correct operation of the regulator.

1. Connect the flexible hose to the pressure regulator if it was not ordered as part of the kit. See Figure 2.
2. Close the outlet valve of the regulator.
3. Open the SF₆ cylinder valve.
4. The high-pressure gauge of the regulator indicates the SF₆ cylinder gas pressure. Set the fill pressure limit on the low-pressure gauge with the pressure adjusting knob. Refer to the chart on the switchgear tank to determine the desired fill pressure for the current ambient temperature. See Figure 3.

Evacuating the fill line

Follow these steps to evacuate the air from the fill line. Do this to ensure that only SF₆ Gas is put into the switchgear tank.

1. Connect 3/8” tubing from a vacuum pump to the hose adapter. See Figure 2.
2. Open the vacuum valve.
3. Run the vacuum pump for 15 seconds and then close the vacuum valve.
4. Open the outlet valve of the regulator for a few seconds to fill the line with SF₆ gas.
Connecting to the switchgear tank
Connect the coupling valve (see Figure 2) to the fill valve of the SF₆ switchgear tank (see Figure 3).

Topping off the SF₆ gas
1. Verify the quality of SF6 gas in the cylinder to be used.
2. Slowly open the outlet valve of the regulator. See Figure 2.
3. Refer to the chart on the switchgear tank to determine the maximum fill pressure for the current ambient temperature. See Figure 3. When the pressure gauge of the switchgear tank indicates the maximum pressure, close the outlet valve of the regulator.

Disconnecting switchgear tank
1. Close all the valves of the SF₆ Gas Top-off kit and the SF₆ cylinder. See Figure 2.
2. Remove the coupling valve from the switchgear tank.
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