Removal and replacement of replaceable stud in bushing well installation instructions

Powering Business Worldwide

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Contents

Safety for life

Eaton meets or exceeds all applicable industry standards relating to product safety in its Cooper Power™ series products. We actively promote safe practices in the use and maintenance of our products through our service literature, instructional training programs, and the continuous efforts of all Eaton employees involved in product design, manufacture, marketing, and service.

We strongly urge that you always follow all locally approved safety procedures and safety instructions when working around high voltage lines and equipment, and support our "Safety For Life" mission.

Safety information

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 arc flash clothing, safety glasses, face shield, hard hat, rubber gloves, clampstick, 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.

Safety instructions

Following are general caution and warning statements that apply to this equipment. Additional statements, related to specific tasks and procedures, are located throughout the manual.

DANGER

Hazardous voltage. Contact with hazardous voltage will cause death or severe personal injury. Follow all locally approved safety procedures when working around high- and low-voltage lines and equipment. G103.3

WARNING

Before installing, operating, maintaining, or testing this equipment, carefully read and understand the contents of this manual. Improper operation, handling or maintenance can result in death, severe personal injury, and equipment damage. G101.0

WARNING

This equipment is not intended to protect human life. Follow all locally approved procedures and safety practices when installing or operating this equipment. Failure to comply can result in death, severe personal injury and equipment damage. G102.1

WARNING

Power distribution and transmission equipment must be properly selected for the intended application. It must be installed and serviced by competent personnel who have been trained and understand proper safety procedures. These instructions are written for such personnel and are not a substitute for adequate training and experience in safety procedures. Failure to properly select, install or maintain power distribution and transmission equipment can result in death, severe personal injury, and equipment damage. G122.3

Product information

Introduction

Eaton's Cooper Power™ series removable stud bushing well is designed for termination of primary winding leads at the front plate of fluid-filled apparatus. The stud is externally removable in accordance with the following instructions to allow for easy replacement of a broken stud.

Read this manual first

Read and understand the contents of this manual and follow all locally approved procedures and safety practices before installing 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 representative.

Acceptance and initial inspection

Each bushing well is in good condition when accepted by the carrier for shipment. Upon receipt, inspect the shipping container for signs of damage. Unpack the bushing well 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 bushing well to minimize the possibility of damage. If the bushing well is to be stored for any length of time prior to installation, provide a clean, dry storage area.

Standards

ISO 9001 Certified Quality Management System

Tools required

- Socket wrench with 5/8" socket. The socket should either be a deep socket or standard size socket with a socket wrench extension (3" minimum length).
- 7/64" Allen wrench

⚠ CAUTION

The bushing well is designed to be operated in accordance with normal safe operating procedures. These instructions are not intended to supersede or replace existing safety and operating procedures. Terminators must be de-energized during maintenance. Removal and replacement of the bushing well stud should only be by personnel familiar with good safety practices and the handling of high-voltage equipment.

Stud removal

Typical stud breakage is shown in Figure 2. One half of the stud will be left in the well and one half in the insert or feedthru.

⚠ CAUTION

Be careful not to damage inside walls of well. Scratches and indentations can contribute to premature product failure.

Step 1

To remove stud from bushing well, use a 5/8" socket and engage 5/8" flange of stud inside the well. See Figure 2 (c).

Turn the socket counterclockwise until replaceable stud is completely unthreaded. Discard broken stud.

Step 2

To remove stud from bushing well insert or feedthru, use a 7/64" Allen wrench to back the broken stud piece out of the insert or feedthru. See Figure 2 (b). Discard broken stud.

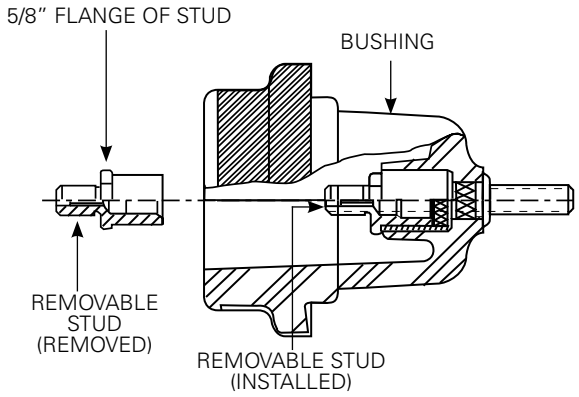

Figure 1. Removable stud bushing well shown with the removable stud both installed and removed.

Stud replacement

For installation into the bushing well, the new replaceable stud must be started onto the receiving stud in the bushing well by hand. After thread engagement is made and threaded clockwise 2 to 3 revolutions by hand, use a 5/8" socket to complete this installation. The replaceable stud is to be tightened to 15 ft.-lbs.

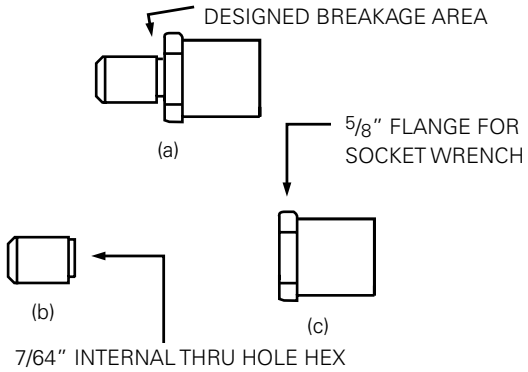

Figure 2. Removable Stud (a). Broken into two sections (b) and (c).

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