Installation Instructions for the Walking Beam Interlock for N-Frame Series C Circuit Breakers and Molded Case Switches

WARNING

DO NOT ATTEMPT TO INSTALL OR PERFORM MAINTENANCE ON EQUIPMENT WHILE IT IS ENERGIZED. DEATH, SEVERE PERSONAL INJURY, OR SUBSTANTIAL PROPERTY DAMAGE CAN RESULT FROM CONTACT WITH ENERGIZED EQUIPMENT. ALWAYS VERIFY THAT NO VOLTAGE IS PRESENT BEFORE PROCEEDING WITH THE TASK, AND ALWAYS FOLLOW GENERALLY ACCEPTED SAFETY PROCEDURES.

CUTLER-HAMMER IS NOT LIABLE FOR THE MISAPPLICATION OR MISINSTALLATION OF ITS PRODUCTS.

The user is cautioned to observe all recommendations, warnings, and cautions relating to the safety of personnel and equipment as well as all general and local health and safety laws, codes, and procedures.

The recommendations and information contained herein are based on Cutler-Hammer experience and judgement, but should not be considered to be all-inclusive or covering every application or circumstance which may arise. If any questions arise, contact Cutler-Hammer for further information or instructions.

1. Introduction

General Information

The walking beam interlock (Fig. 1-1) provides mechanical interlocking between two adjacent circuit breakers of the same pole configuration to prevent both circuit breakers from being turned “ON” at the same time. The walking beam interlock assembly is bolted to the rear of a customer-supplied mounting panel. The circuit breakers are then secured to the mounting panel with plungers inserted through access holes in the mounting panel and base of each circuit breaker. The plungers are attached to each end of the beam assembly and may require adjustment to suit variations in the panel thickness being used. Customer-supplied mounting panels of one inch thickness are recommended for use with the walking beam interlock.

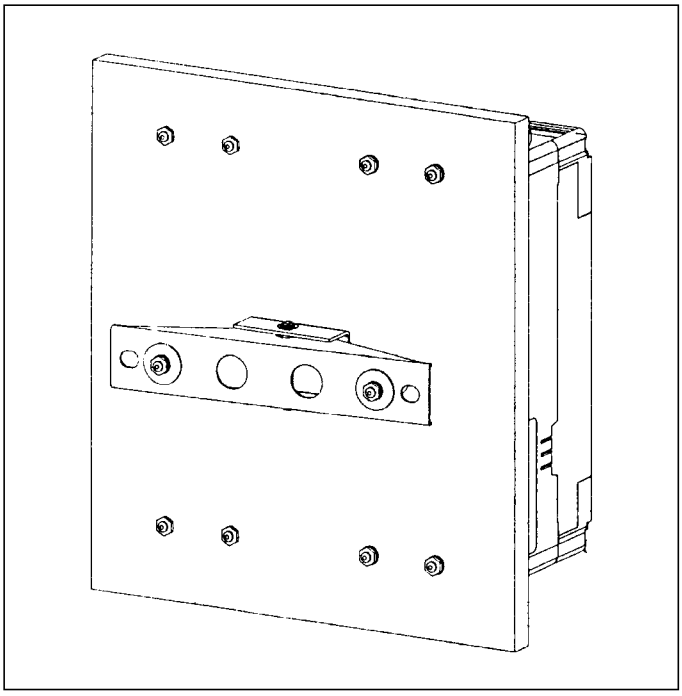

Fig. 1-1. Walking Beam Interlock Installed Between Two 3-Pole N-Frame Series C Circuit Breakers

The walking beam interlock is UL listed for field installation per UL File E64983.

Note: Factory modified circuit breakers must be ordered to install the walking beam interlock.

This instruction leaflet (IL) gives detailed procedures for installing the walking beam interlock.

2. Installation

The walking beam interlock must be mounted before the circuit breakers are connected to an electrical system. Installation consists of drilling mounting panel to accept circuit breakers and walking beam assembly, securing circuit breakers to mounting surface, and installing walking beam. To install the walking beam interlock, perform the following steps.

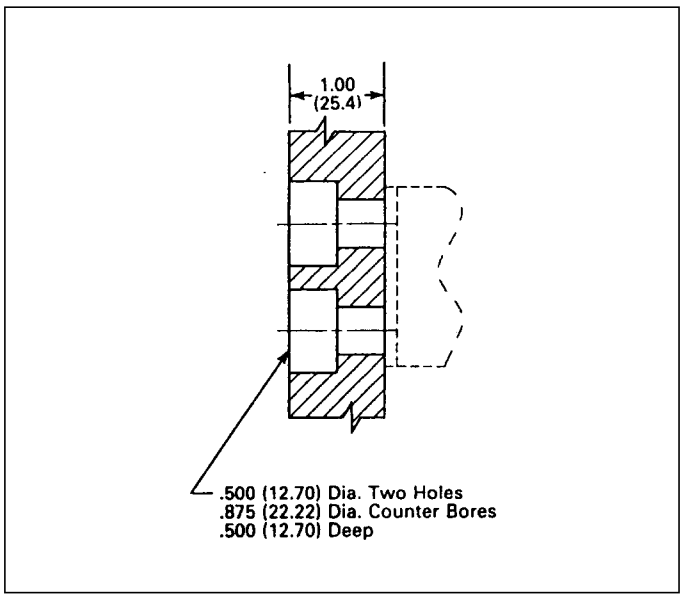

Fig. 2-1. Hole Sizes for Installing Walking Beam Mounting Bracket

WARNING

BEFORE ATTEMPTING ANY WORK ON CIRCUIT BREAKERS INSTALLED IN AN ELECTRICAL SYSTEM, MAKE SURE THE CIRCUIT BREAKERS ARE SWITCHED TO THE *OFF* POSITION AND THAT THERE IS NO VOLTAGE PRESENT WHERE WORK IS TO BE PERFORMED. SPECIAL ATTENTION SHOULD BE PAID TO REVERSE FEED APPLICATIONS TO ENSURE NO VOLTAGE IS PRESENT. THE VOLTAGES IN ENERGIZED EQUIPMENT CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

2-1. Predrill circuit breaker mounting panel. Fig. 2-2 N-frame, (3-pole) and Fig. 2-3 N-frame, (4-pole) show mounting panel hole sizes and dimensions for Series C circuit breaker configurations. Dimensions are in inches and (millimeters).

2-2. Assemble plunger and socket assemblies to the walking beam with 3/8-16 locknuts, lockwashers, and large washers provided. Make sure that the plunger pivot pins must be in line with center line of breaker as shown in Fig. 2-4.

2-3. Install the walking beam interlock assembly to back of customer-supplied mounting panel using two 3/8 x 1.0 long screws, lockwashers, flat washers, and nuts provided.

2-4. Mount circuit breakers to front surface of mounting panel using hardware supplied with the circuit breakers. Make sure that both circuit breakers are in the OFF position and the plunger access holes in the back of the circuit breakers line-up with and go over the plungers of the walking beam interlock.

3. Adjustment

The walking beam interlock must be adjusted before the circuit breakers are connected to an electrical system. All adjustments should be made at the installation as shown in Fig. 2-4. Carry out adjustment procedure as follows:

3-1. Turn one circuit breaker to the ON position and the other to the OFF position.

3-2. Adjust the 3/8-16 locknuts that hold plungers to beam to give 1/8-3/8 (3.2-9.5) of free travel, making sure that the plunger pivot pins are correctly aligned with the breaker's centerline (Fig. 2-4).

3-3. Carry out a functional check as follows:

a. Begin with both breakers open (“OFF”).

b. Turn one breaker “ON”. Attempt to throw the other breaker “ON”. It should NOT close.

c. Reverse the open and close operation to check that neither breaker can close as long as the other is “ON”.

3-4. Connect circuit breakers electrically as required.

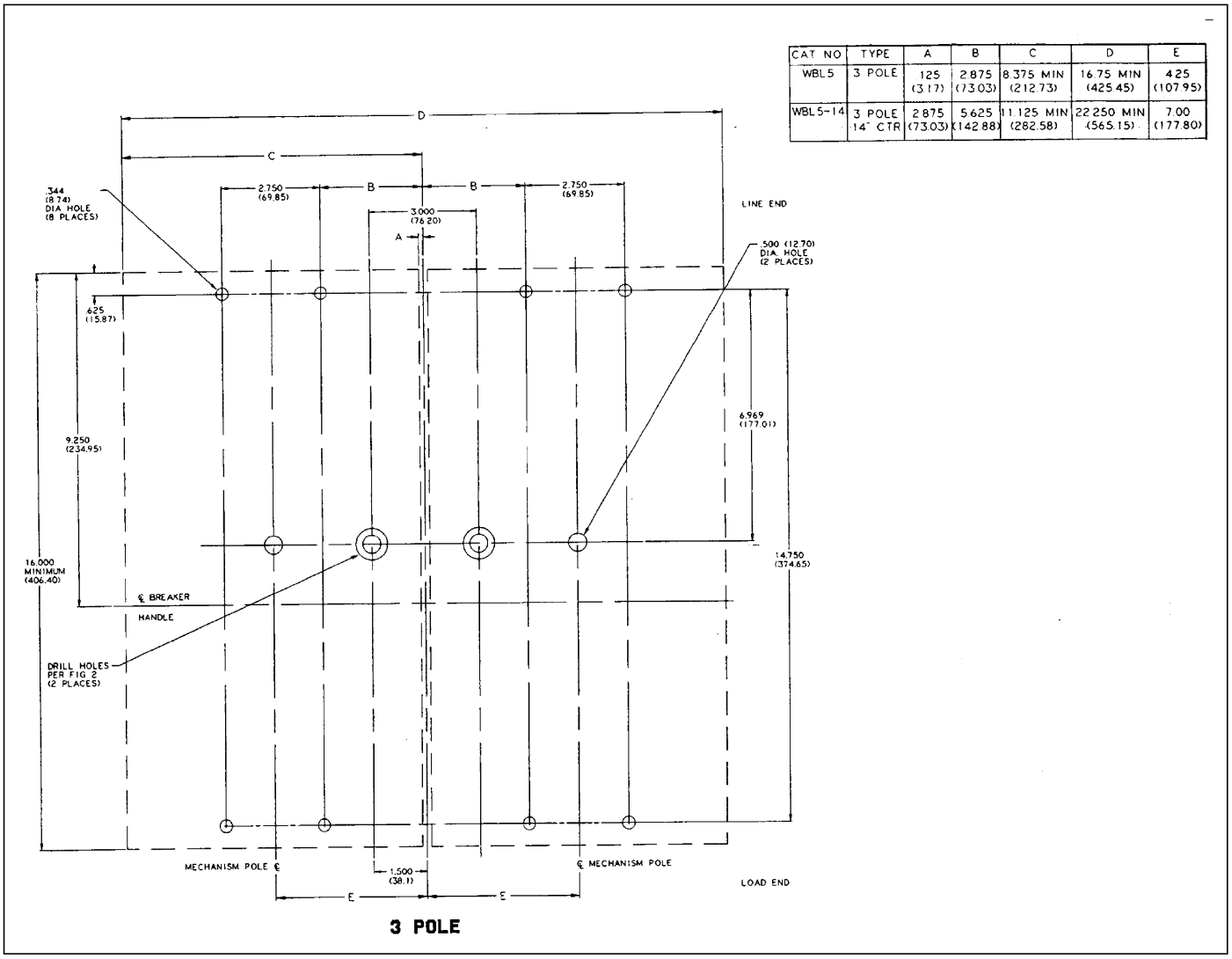

Fig. 2-2. N-Frame 3-Pole Circuit Breaker Mounting Panel Hole Sizes, and Dimensions

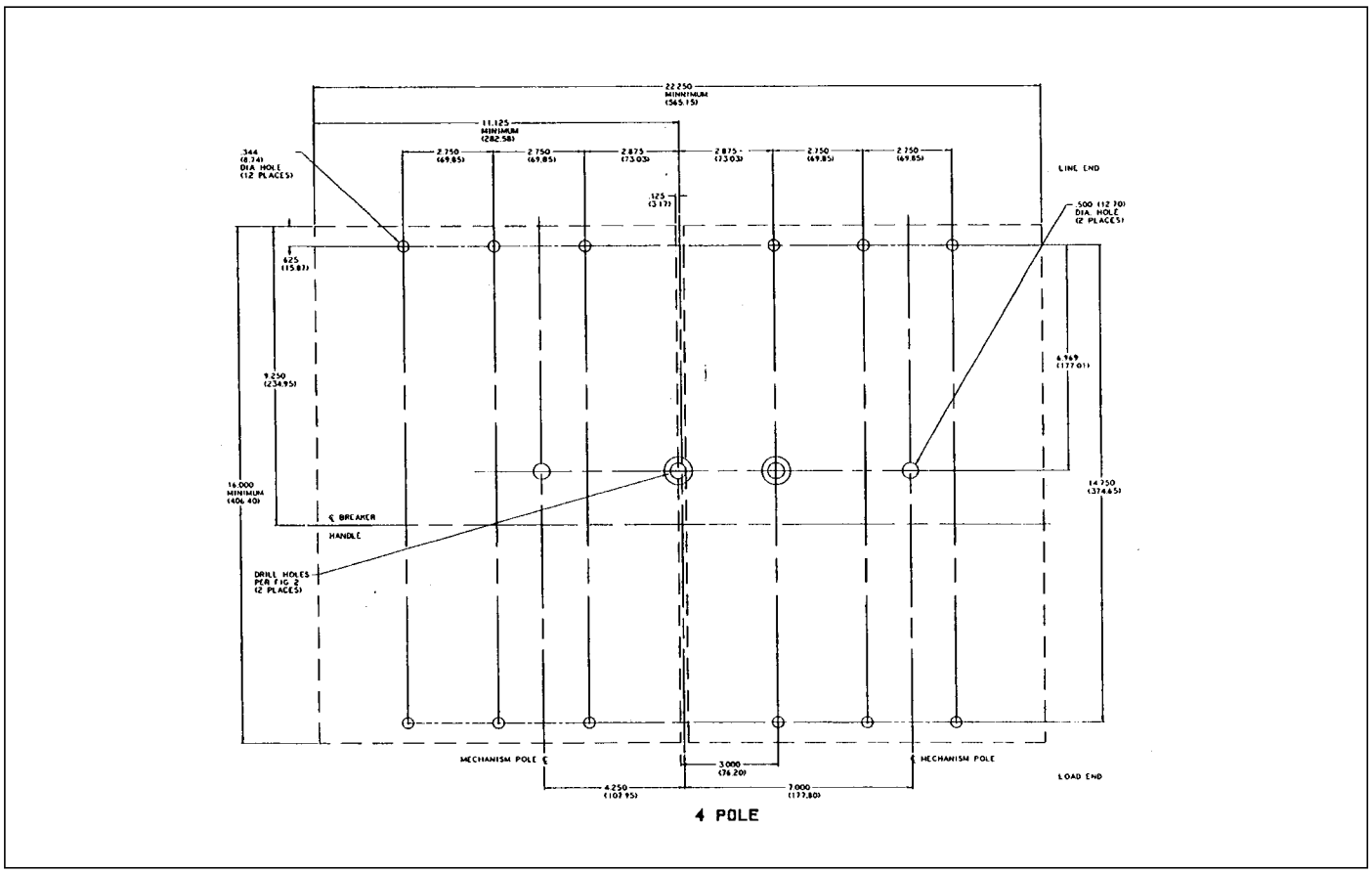

Fig. 2-3 N-Frame 4-Pole Circuit Breaker Mounting Panel Holes Sizes and Dimensions

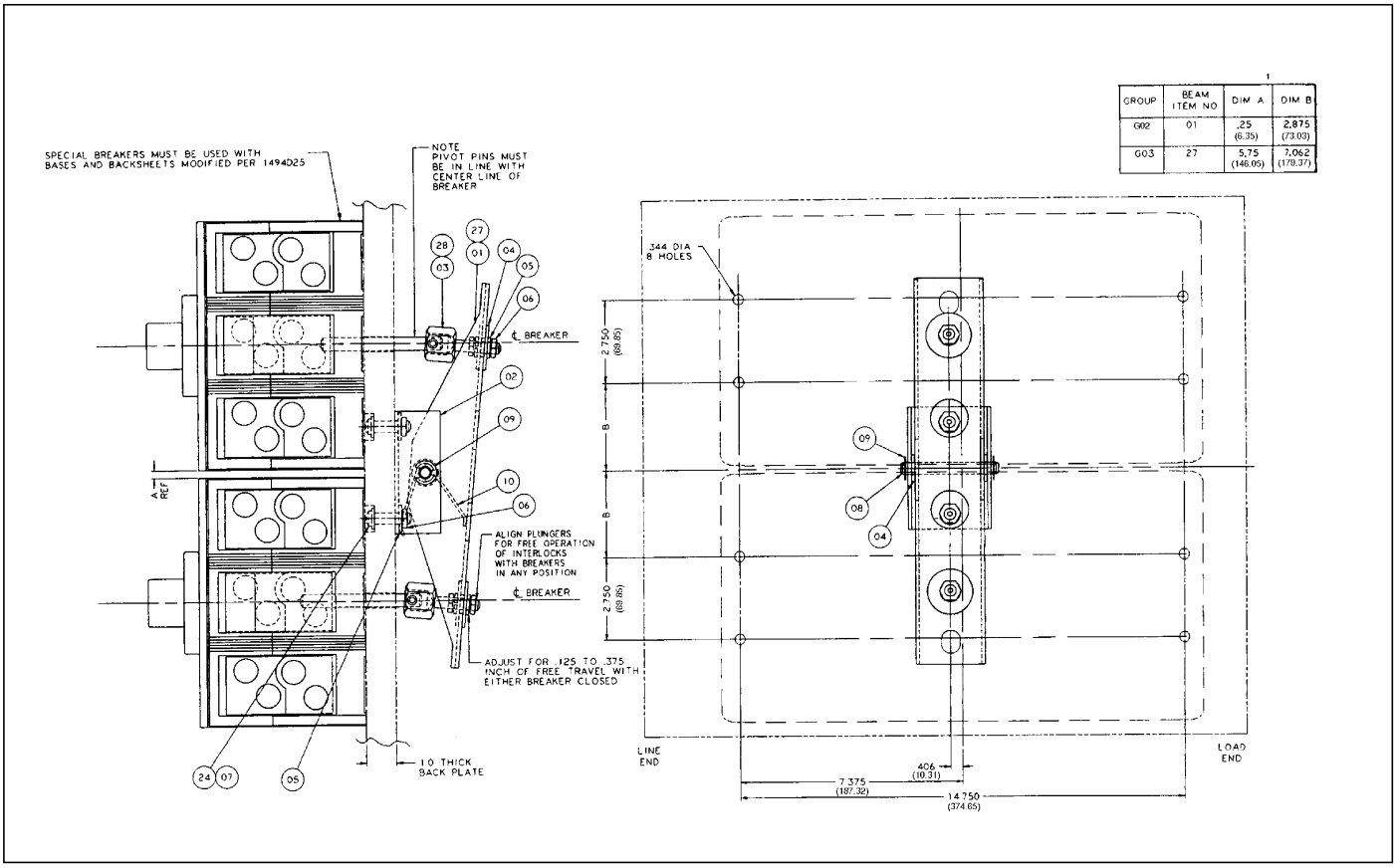

Fig. 2-4 Walking Beam Plunger Adjustment on 3-pole N-Frame Circuit Breaker

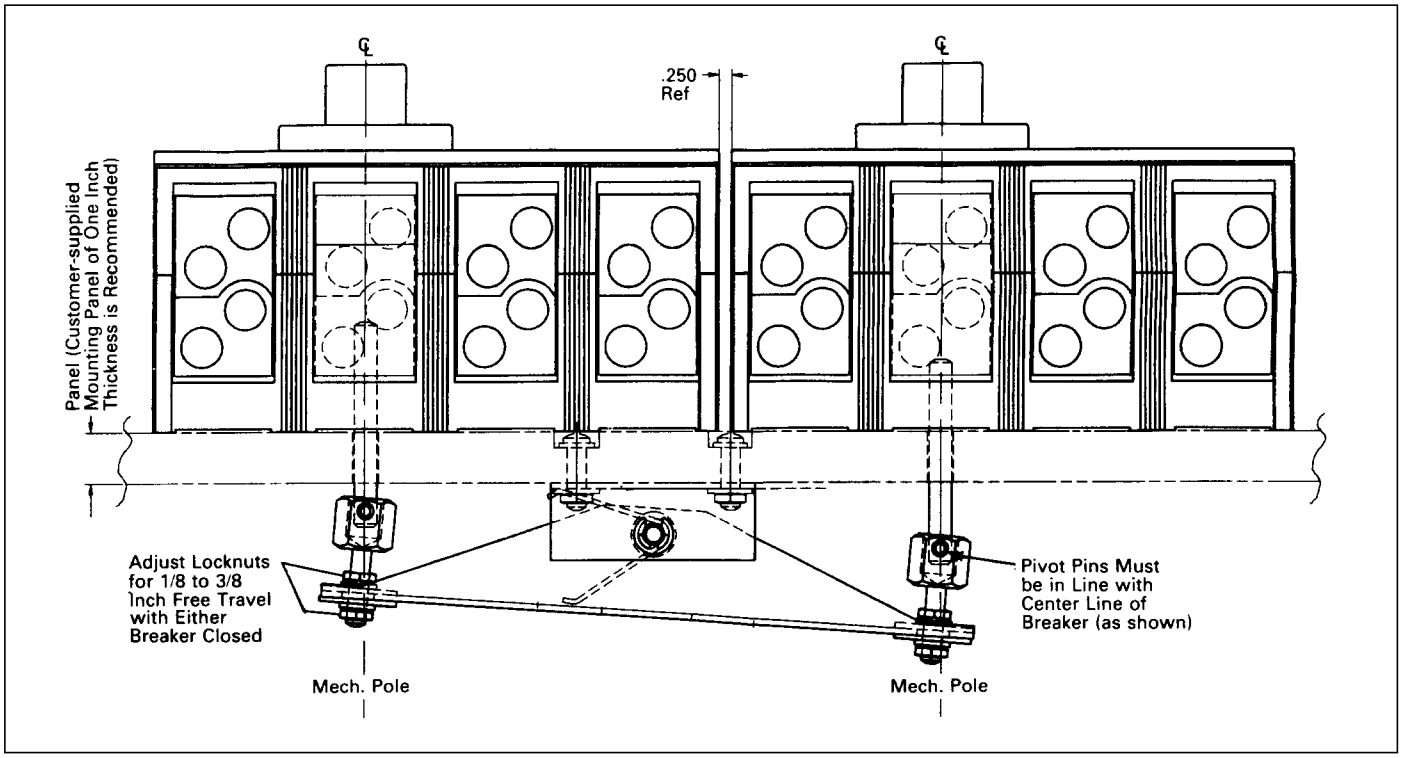

Fig. 2-5 Walking Beam Plunger Adjustment on 4-Pole N-Frame Circuit Breaker

NOTES

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