

Eaton Corporation's Family of Manual Transfer Switches for Residential and Light Commercial Applications



Instruction and Operation Manual for Eaton Emergency Generator Panel Model Numbers:

- CH10GEN5030SN
- CH10GEN5030RSN
- CH10GEN5050SN
- CH10GEN5050RSN

Introduction

The Eaton 10 Circuit Manual Transfer Switch is intended to be used with Eaton generators but may be used with any generators. These Manual Transfer Switches are rated for 50 amp utility input and 30 amp or 50 amp generator input respectively at 240 Vac. These devices come equipped to power nine emergency circuits. There are eight single-pole emergency circuit breakers and one 2-pole emergency circuit breaker included.

These devices are intended for use with generators that are wired as either Separately Derived systems (neutral and ground bonded together at the generator – typically protected by a GFCI, ground fault circuit interrupter, on the generator) or Non-Separately Derived systems (neutral and ground are NOT bonded at the generator). Refer to the NFPA 70, National Electrical Code, for proper connection and further definition.

Contact the generator manufacturer if you are unsure how the generator is configured (Separately Derived or Non-Separately Derived). It is extremely important that you know this information prior to connecting the generator to this or any other transfer switch.

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Figure 1. Manual Transfer Switch with Door Open.

These Manual Transfer Switches utilize 3-pole switching devices to determine which power source, utility or generator, are powering the nine emergency circuits. The 3-pole switching devices are interlocked via a manual slide type interlock. The intent of the interlock is to ensure that only ONE source is powering the emergency circuits and to prevent back feeding of the utility with the generator or inadvertent paralleling of the utility and generator sources.

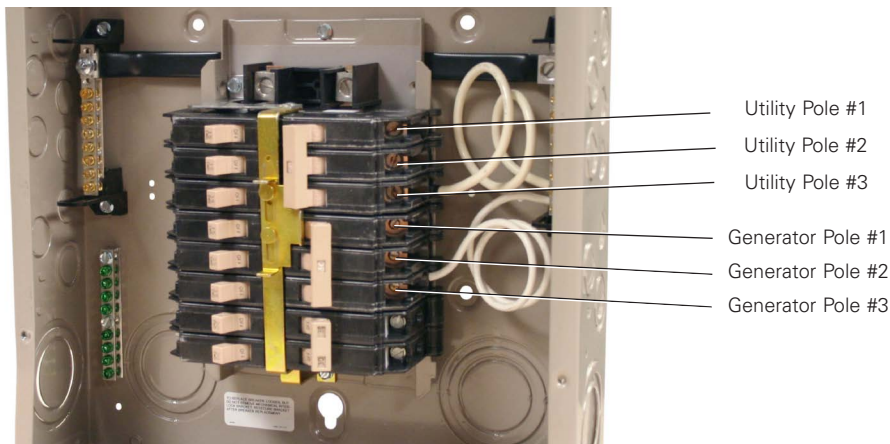


Figure 2. Connection Locations for a Separately Derived System.

Connection for a Separately Derived System:

1. For generators that are configured as a **Separately Derived** system. These units typically contain GFCI protection on the generator.
 - a. Connect the two hot wires from the utility to the utility breaker poles #1 and #2. Connect the utility neutral to the utility breaker pole #3. See Figure 2 for clarification.
 - b. Connect the two hot wires from the generator to the generator breaker poles #1 and #2. Connect the generator neutral to the generator breaker pole #3. See Figure 2 for clarification.

⚠ CAUTION

FOR A SEPARATELY DERIVED SYSTEM FAILURE TO CONNECT AS DESCRIBED IN THESE INSTRUCTIONS WILL RESULT IN NUISANCE TRIPPING OF THE GENERATOR GFCI CIRCUIT BREAKER.

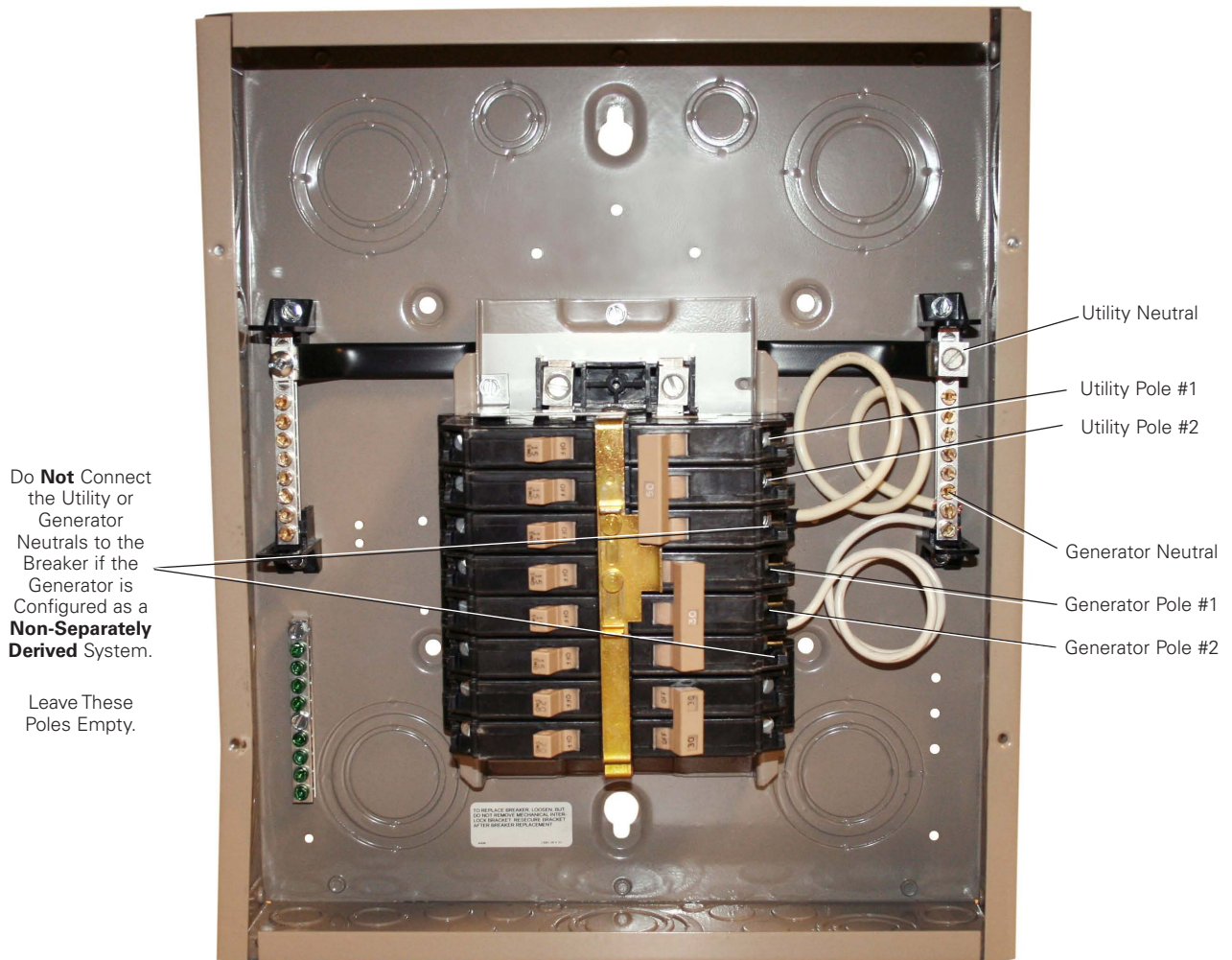


Figure 3. Connection Locations for a Separately Derived System.

Connection for a Non-Separately Derived System:

2. For portable generators that are configured as a **Non-Separately Derived** system.
 - a. Connect the two hot wires from the utility to the utility breaker poles #1 and #2. Connect the utility neutral to the utility neutral lug. See Figure 3 for clarification.
 - b. Connect the two hot wires from the generator to the generator breaker poles #1 and #2. Connect the generator neutral to the neutral bar. See Figure 3 for clarification.

⚠ DANGER

FOR A NON-SEPARATELY DERIVED SYSTEM DO NOT CONNECT THE UTILITY OR GENERATOR NEUTRALS TO THE UTILITY BREAKER OR GENERATOR BREAKER NEUTRAL POLE. THESE NEUTRALS MUST BE TIED TOGETHER AT THE NEUTRAL BAR. FAILURE TO DO SO WILL LEAD TO EQUIPMENT FAILURE, FIRE, OR POSSIBLE DEATH DUE TO A FLOATING NEUTRAL CONDITION.

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