



Service Manual

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**Power
Generation**

Automatic Transfer Switch

60/100/200 Amps

RST (Spec A-B)

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⚠WARNING

INCORRECT SERVICE OR REPLACEMENT OF PARTS CAN RESULT IN DEATH, SEVERE PERSONAL INJURY, AND/OR EQUIPMENT DAMAGE. SERVICE PERSONNEL MUST BE QUALIFIED TO PERFORM ELECTRICAL AND/OR MECHANICAL SERVICE.

Safety Precautions

This manual includes the following symbols to indicate potentially dangerous conditions. Read the manual carefully and know when these conditions exist. Then take the necessary steps to protect personnel and the equipment.

⚠ DANGER *This symbol warns of immediate hazards that will result in severe personal injury or death.*

⚠ WARNING *This symbol refers to a hazard or unsafe practice that can result in severe personal injury or death.*

⚠ CAUTION *This symbol refers to a hazard or unsafe practice that can result in personal injury or product or property damage.*

High voltage in transfer panel components presents serious shock hazards that can result in severe personal injury or death. Read and follow these suggestions.

Keep the transfer panel cabinet closed and locked. Make sure only authorized service personnel have access to the cabinet.

Due to the serious shock hazard from high voltages within the cabinet, all service and adjustments to the transfer panel must be performed only by an electrician or authorized service personnel.

Instructions to Authorized Service Personnel

If the cabinet must be opened for any reason:

1. Move the operation selector switch on the generator set to OFF.

If the transfer panel is equipped with the 3-Wire Start Option, move the toggle switch to the Stop position.

2. Remove the AC power source to the cabinet.
3. Disconnect the starting batteries of the generator set (remove the ground [-] lead first).

Place rubber insulative mats on dry wood platforms over metal or concrete floors when working on any electrical equipment. Do not wear damp clothing (particularly wet shoes) or allow skin surfaces to be damp when handling any electrical equipment.

Jewelry is a good conductor of electricity and should be removed when working on the electrical equipment.

Do not work on this equipment when mentally or physically fatigued, or after consuming alcohol or any drug that makes the operation of equipment unsafe.

1. Introduction

ABOUT THIS MANUAL

This manual provides information necessary for service and includes models produced under the Cummins®/Onan® and Cummins Power Generation brand names.

This manual contains service procedures to service the RST transfer panel. Refer to the schematic and wiring diagram package that was shipped with the transfer panel for specific information about its configuration.

Use all normal and necessary safety precautions before starting any service procedures. Identify all hazards by referring to the Safety Precautions and observe all warnings and cautions within the manual. Whenever troubleshooting, remember that the generator set, transfer panel, and utility power source are all interdependent.

This transfer panel is available with two control packages: control package A has the standard feature set, and control package B has a higher level of features. This manual covers both control packages.

TRANSFER PANEL APPLICATION

Transfer panels are an essential part of a building's standby or emergency power system. The Normal power source, commonly the utility line, is backed up by an Emergency power source, often a generator set. The transfer panel supplies the electrical load with power from one of these two power sources.

The load is connected to the common of the transfer switch (Figure 1-1). Under normal conditions, the load is supplied with power from the Normal source (as illustrated). If the Normal power source is interrupted, the load is transferred to the Emergency power source. When Normal power returns, the load is retransferred to the Normal power source. The transfer and retransfer of the load are the two most basic functions of a transfer panel.

TRANSFER PANEL FUNCTION

Automatic transfer panels, capable of automatic operation without operator involvement, perform the following basic functions:

1. Senses the interruption of the Normal power source.
2. Sends a start signal to the generator set (Emergency power source).
3. Transfers the load to the Emergency power source
4. Senses the return of the Normal power source.
5. Retransfers the load to the Normal power source.
6. Sends a stop signal to the generator set.

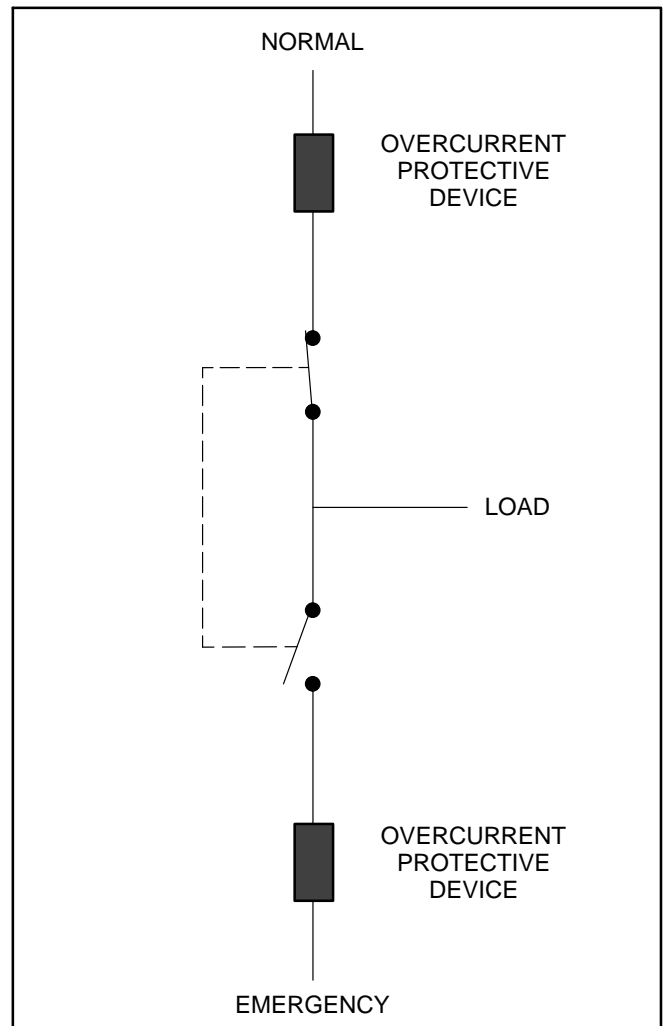


FIGURE 1-1. LOAD TRANSFER PANEL (TYPICAL FUNCTION) TRANSFER PANEL PROTECTION

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