

50 Amp Transfer Relay

Intellitec's 50 Amp Transfer Relay is designed to automatically transfer the electrical power from two separate power sources, such as generator and shore power, to an electrical load. The unit is responsive to one of the loads, typically the generator, and has a built in 15 second delay to allow that source to start without an immediate load being introduced.

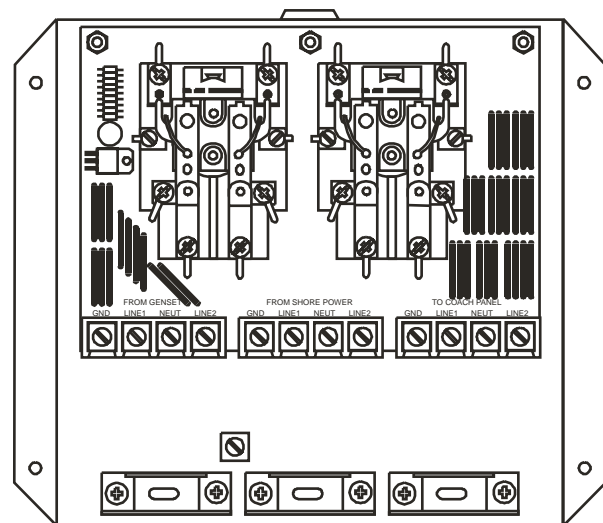
The mechanical design on this Transfer Relay is what is so unique about this unit. Contrary to the traditional design where all the connections are made inside a box with a cover, Intellitec's Transfer Relay's box IS the cover. This allows for easy installation with easy access to all the connections.

The connections are made via screw down connectors, eliminating the need for unreliable crimp type connections and the cost of special connectors. All of the internal connections are made via a PC board which eliminates any wiring errors in our assembly and assures a reliable, long lasting product.

The actual transferring is done by two double pole double throw relays with 50 amp contacts. The neutral leg would be split between two of the contacts, allowing it to carry as much as 100 amps. The relays themselves are DC coils which eliminate any chatter which may occur in low voltage situations.



Box with cover



Cover removed
(inside view)



Intellitec

131 Eisenhower Lane North
Lombard, IL 60148
630.268.0010 / 1.800.251.2408
FAX 630.916.7890

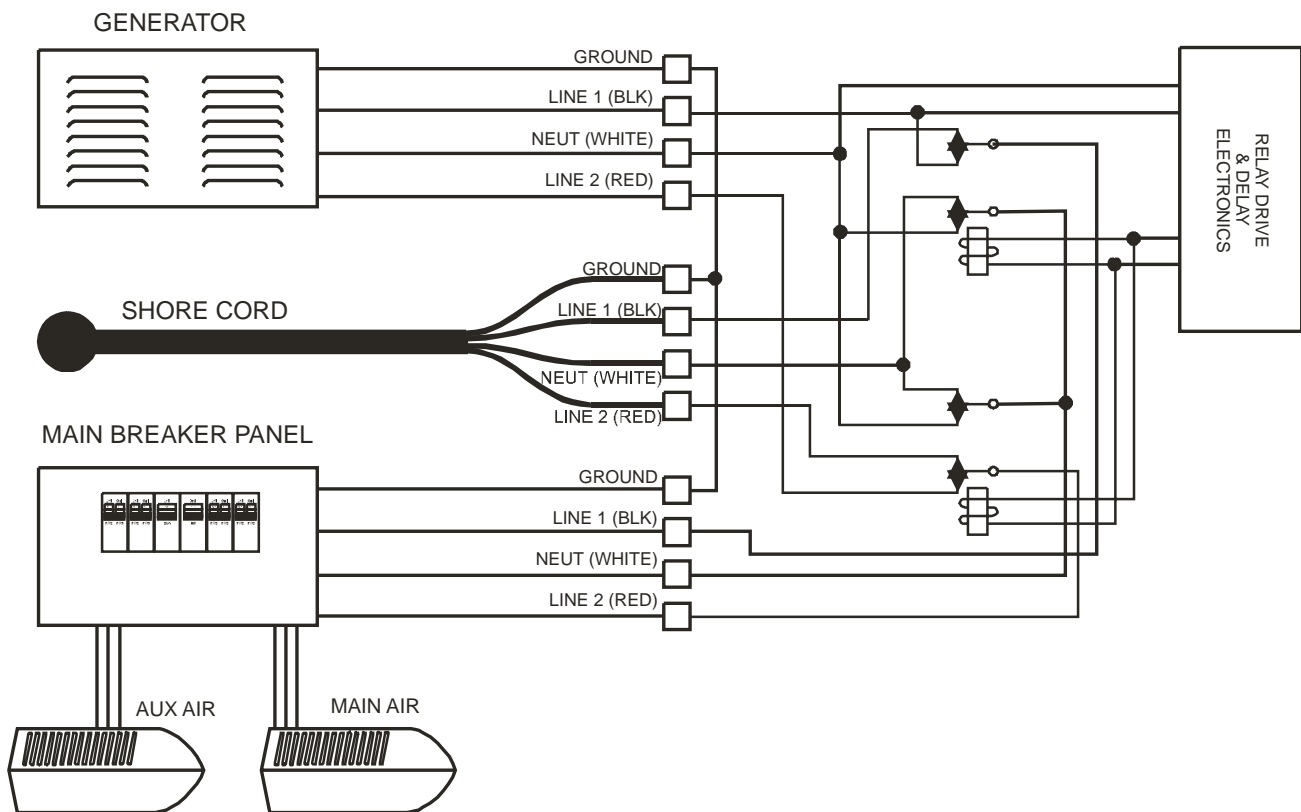
50 Amp Transfer Relay

The **Intellitec 50 Amp** change over operates by sensing the voltage from the generator. When the generator is turned on, a timing circuit is initialized. After approximately 15 seconds, the relays are engaged the power will be directed from the generator.

SPECIFICATIONS

Part Number	00-00768-000
Maximum continuous carry current per line	50 Amps
Maximum continuous carry current on neutral	100 Amps
Maximum ambient temperature	185 Degrees

TYPICAL 50 AMP SERVICE CONNECTIONS



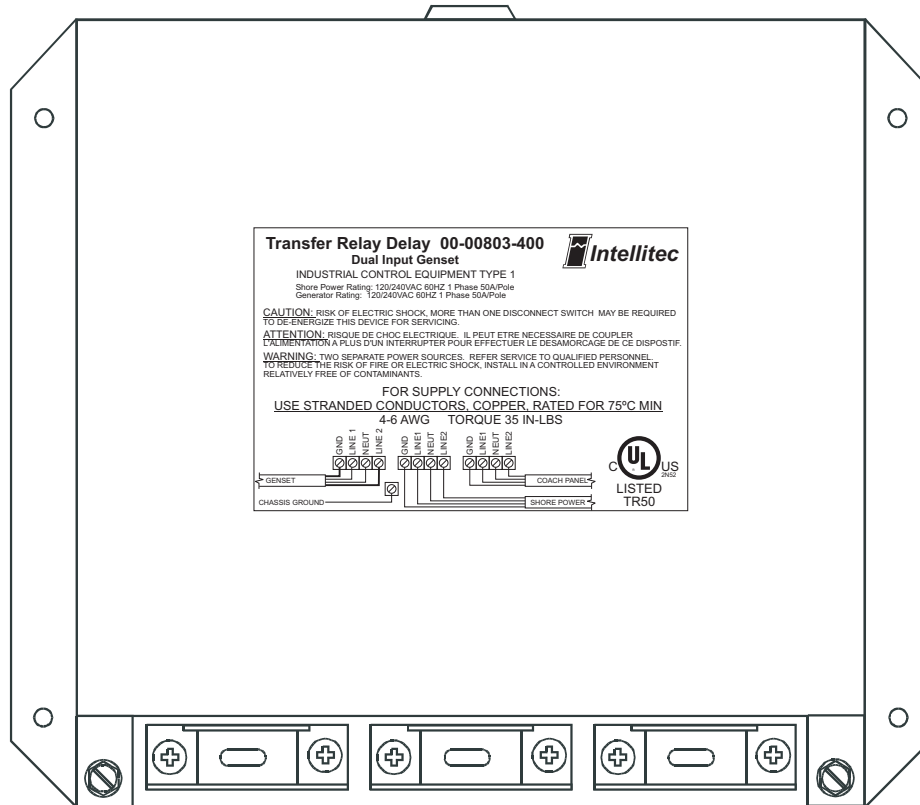
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P/N 53-00768-000 Rev. B 111504

50 AMP TRANSFER RELAY DELAY - DUAL INPUT GENSET

SERVICE MANUAL



Part Number 00-00803-400

CAUTION

The 50 Amp Transfer Relay connects the power from the shore cord or the generator to the coach's distribution panel. Power from both these sources is fed into the box. The full power of these sources is available within this box. Inadvertent shorts inside this box could result in severe damage and/or injury.

All servicing within this box should be done only by a qualified Service Technician.

Tools Required:

Accurate Voltmeter (*digital read-out preferred*).

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SERVICE MANUAL

HOW IT WORKS

The 50 Amp Transfer Relay is used to transfer the power source of a coach between the shore power and the generator. Power from the shore power cord is fed to the normally closed contacts of two contactors. This allows the power from both lines of the shore cord to pass through into the coach distribution panel.

Power from the generator is fed to the normally open contacts and to a delay circuit on the printed circuit board. When the power from the generator is applied, the delay circuit senses the power from Line 1 and applies DC power to the contactor coils, after approximately 15 seconds. This pulls in the two contactors, applying the power from the generator to the coach.

Typical connections for 50 Amp service are shown in Figure 3.

The unit can also be wired to act as a transfer between both lines of a 5.5 KW or 6.5 KW generator and a 30 Amp shore power cord. *The connection diagram for this unit is shown in Figure 4.*

SERVICING

There are no dealer serviceable parts in this box.
Replacement of a defective box is the only way to correct a failed unit.

CAUTION

To gain access to the connections:

BEFORE ATTEMPTING TO REMOVE THE COVER, BE SURE THE POWER FROM BOTH THE SHORE CORD AND GENERATOR ARE OFF. Remove the two hex head screws at either side of the row of connectors. Pull the cover forward and lifting up, remove the cover to expose the interior of the unit. **All servicing within this box should be done only by a qualified Service Technician.**

REMOVAL AND REPLACEMENT

IMPORTANT: Remove the cover to gain access to the connections.
Make a diagram of the all the connections before removing any wires.

First, unscrew the six cable clamp screws releasing the cables, *then* loosen the set screws of the 12 connectors along the field wiring side of the terminal blocks, in order. This will allow the cables to be removed. *Lastly*, loosen the ground connector screw to remove the safety ground from the unit. Unscrew the four mounting screws and remove the unit from the coach.

IMPORTANT!

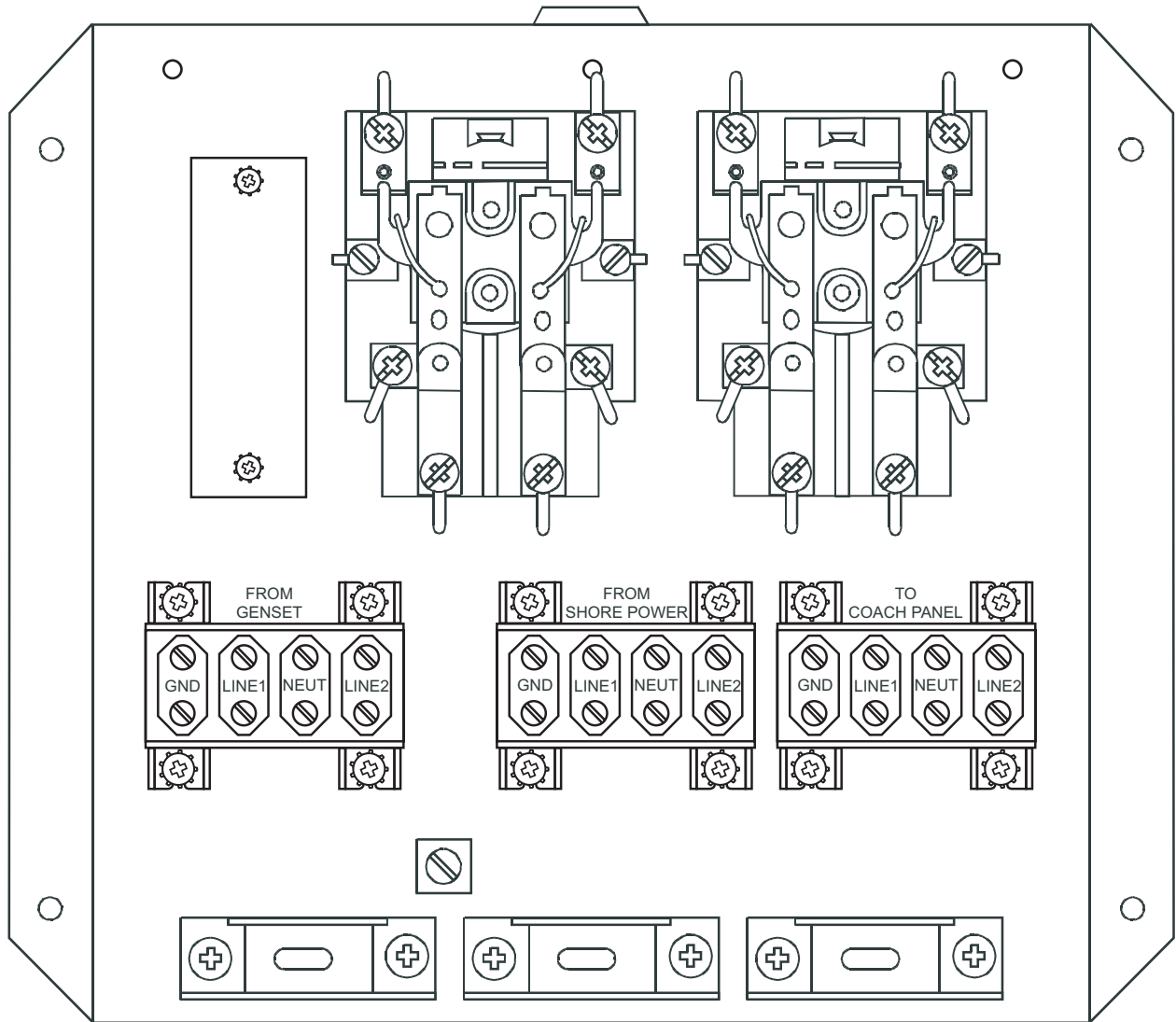
**During installation, wire per the wiring diagram and instructions printed on the box cover.
The field wiring screws must be tightened to 35 in-lbs to insure a tight connection.**

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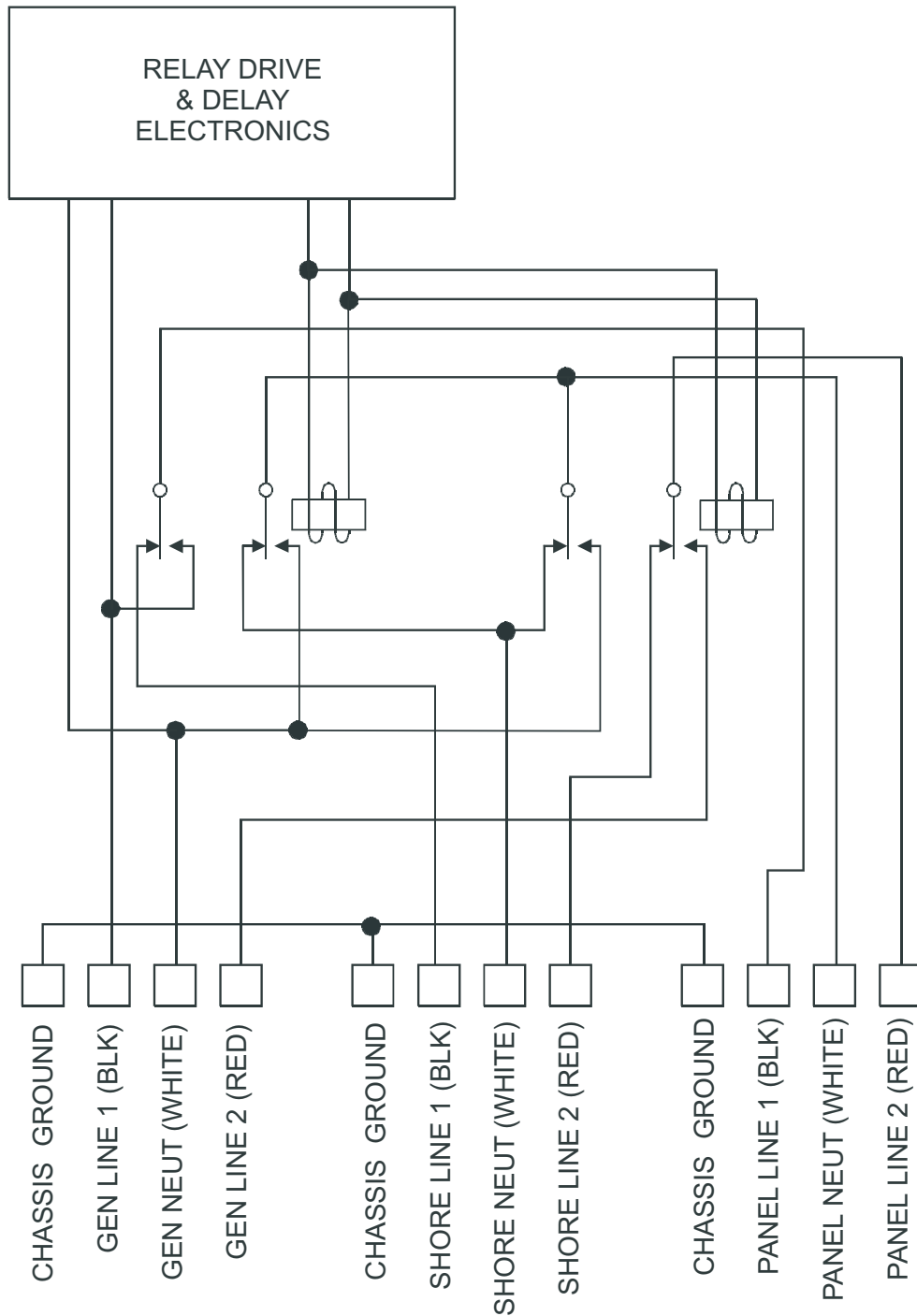


Cover removed
(INSIDE VIEW)

FIGURE 1

50 AMP TRANSFER RELAY DELAY - DUAL INPUT GENSET

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Equivalent Circuit
FIGURE 2

50 AMP TRANSFER RELAY DELAY - DUAL INPUT GENSET

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TYPICAL 50 AMP SERVICE CONNECTIONS

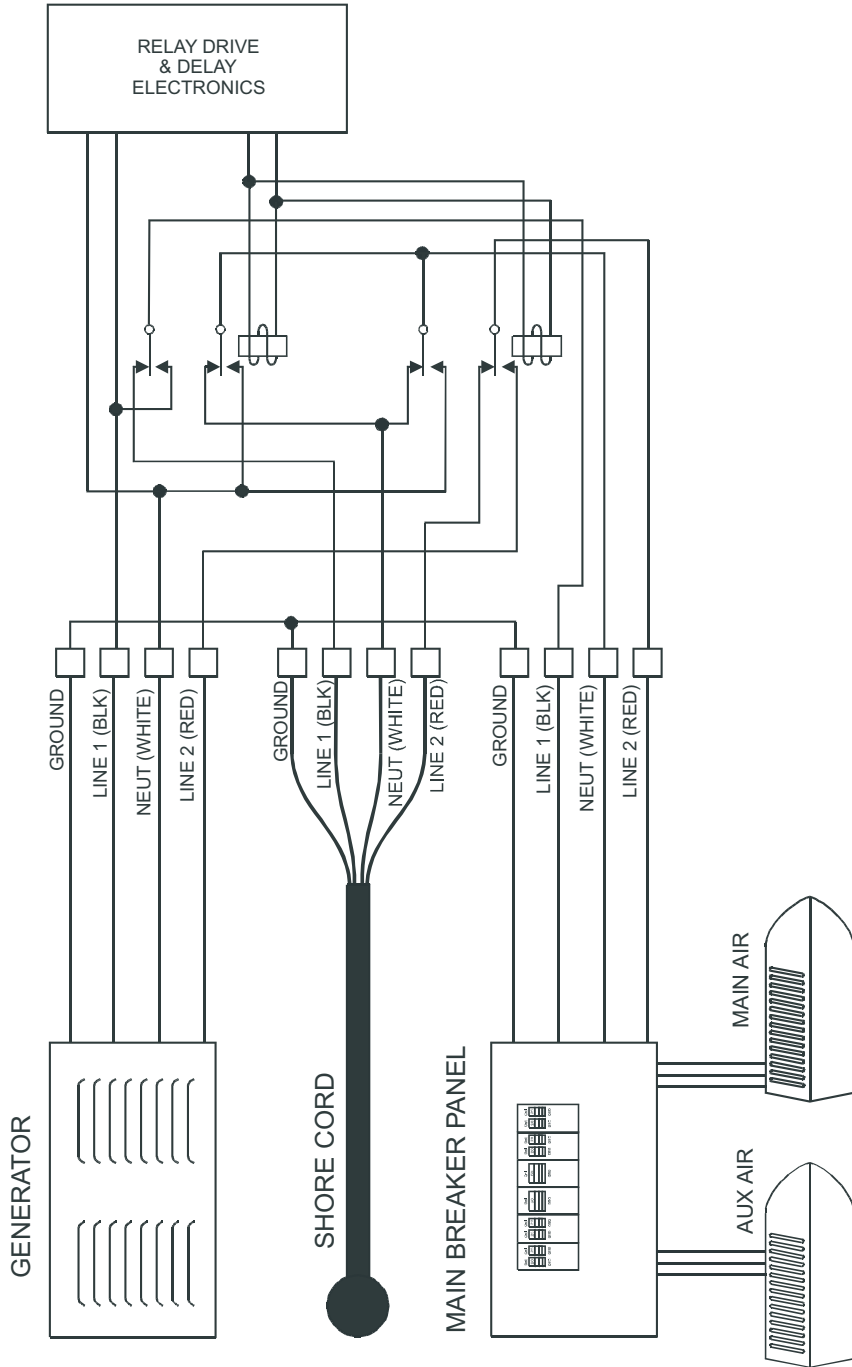


FIGURE 3

50 AMP TRANSFER RELAY DELAY - DUAL INPUT GENSET

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TYPICAL 30 AMP SERVICE CONNECTIONS

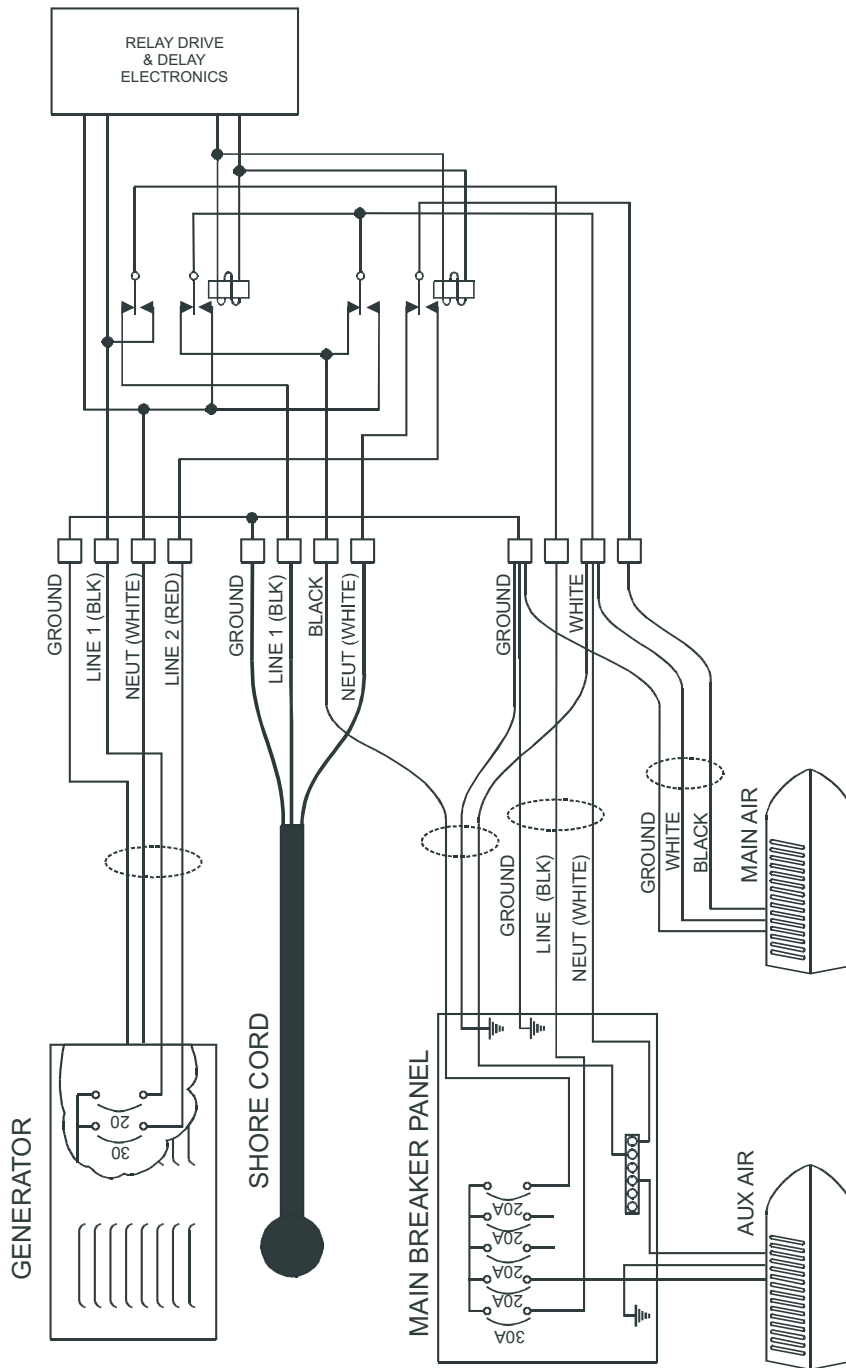


FIGURE 4

50 AMP TRANSFER RELAY DELAY - DUAL INPUT GENSET

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TROUBLE SHOOTING

No power to the coach from shore cord.

Check to be sure shore outlet has power.
Reset shore circuit breakers to be sure.
Measure the voltage from Line 1 to Neutral at the Transfer Relay terminals.

Check the circuit breakers in the coach distribution box to be sure they are not tripped.
Reset them to be sure.

Replace Transfer relay.

No power from generator.

Check to be sure generator has power. Reset the generator circuit breakers to be sure.
Measure the voltage from Line 1 to Neutral at the Transfer Relay terminals.

Check the circuit breakers in the coach distribution box to be sure they are not tripped.
Reset them to be sure.

Replace Transfer relay.

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