

BATTERY DISCONNECT 200AMP "BIG BOY"

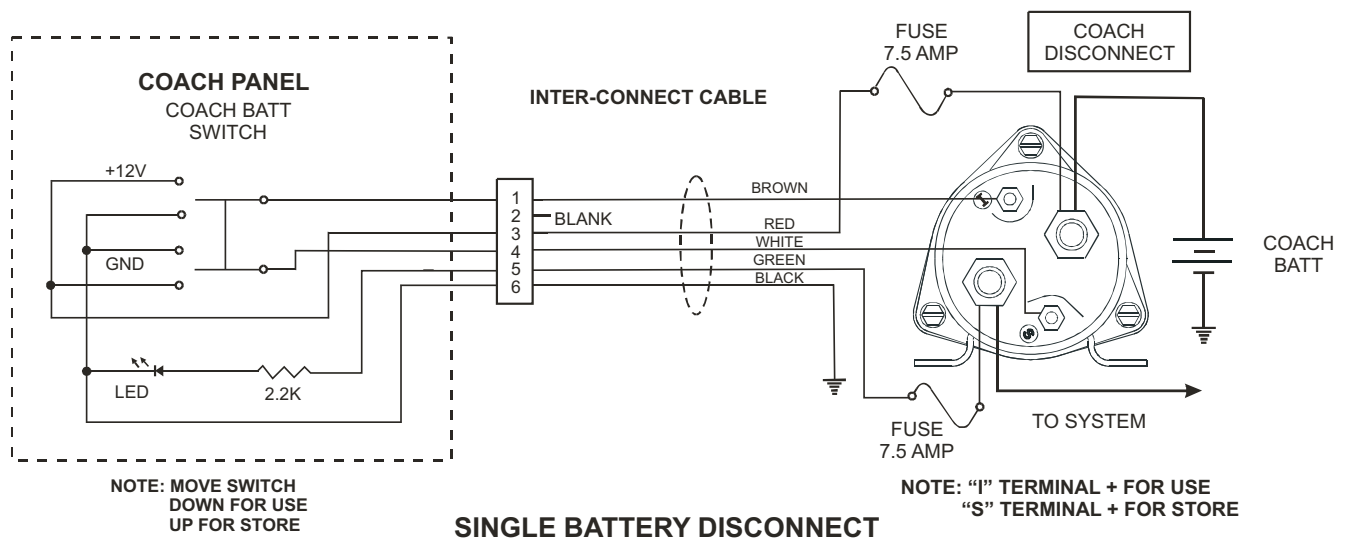
SERVICE MANUAL

THE RELAY - How It Works

The Battery Disconnect Relay is a mechanically latching switch. It operates by the momentary application of battery voltage to the coil terminals in one direction for latching (closed), or the other direction for unlatching (open).

To close the relay, +12 volts is applied to the "I" terminal and ground to the "S" terminal of the relay. When this is done, the plunger is magnetically pulled into the solenoid coil and the contact washer connects to the contact studs, making electrical connection. While this happens, the rod magnet, suspended below the plunger in a plastic holder, is attracted (opposite poles attract) to the plunger, by the magnetic field. It swings into position at the end of the plunger (See *FIGURE 1*). When the voltage is removed from the coil, the plunger gets pushed back by the return spring, but is blocked by the magnet holder. The contacts remain CLOSED.

To open the relay, +12 volts is applied to the "S" terminal and ground on the "I" terminal. When this is done, the plunger is again pulled into the coil. However, since the magnetic polarity of the coil is reversed, the rod magnet is repelled (like poles oppose), and swings out of the way (See *FIGURE 2*). When the voltage is removed from the coil, the plunger gets pushed out by the return spring, breaking the connection between the two large terminals.



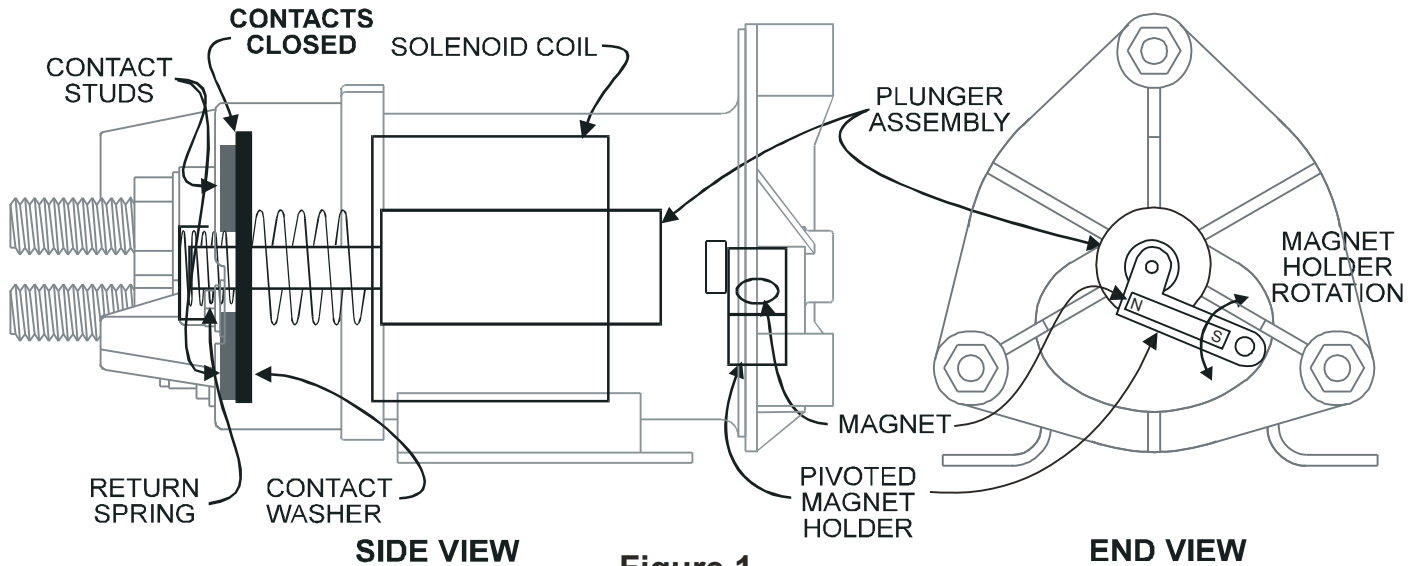
Intellitec

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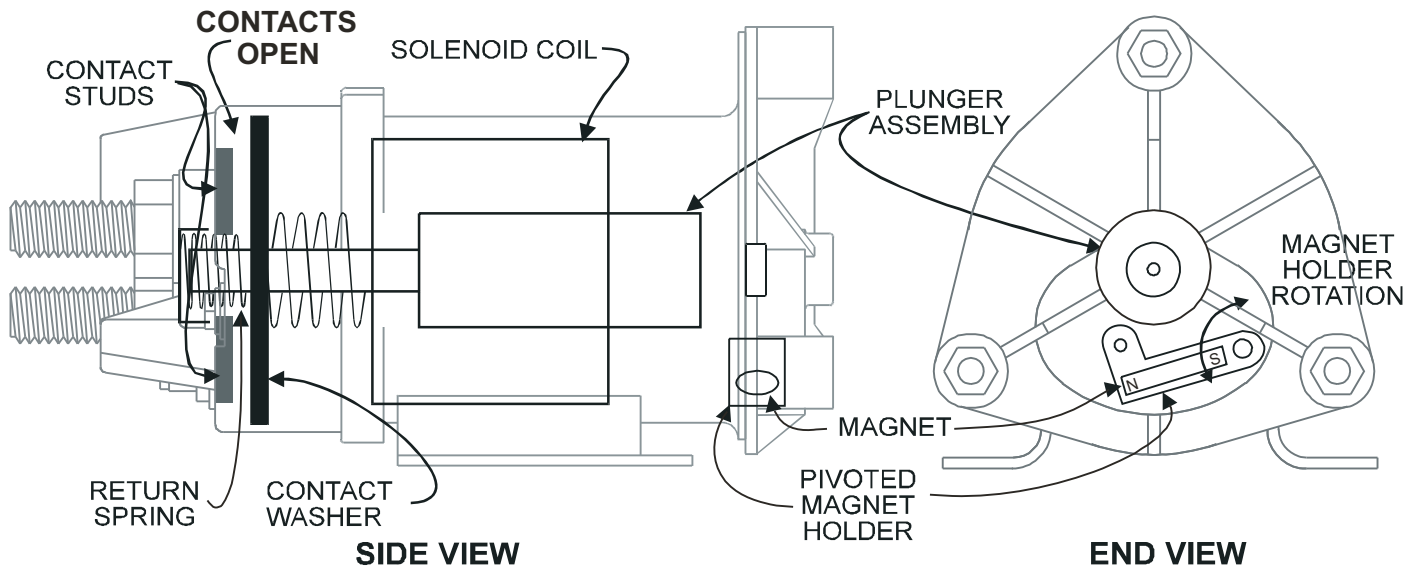
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SERVICE MANUAL

DISCONNECT CLOSED & LATCHED



DISCONNECT OPEN



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Trouble Shooting

Problem

Possible Cause/Solution

Relay won't engage

Check fuses on relay

Check battery voltage, must be greater than 10.5 volts.

While switch is engaged, check for voltage across the coil terminals (+ on the "I" terminal and ground on the "S" terminal). If 0 volts, replace panel, if + voltage, replace relay.

Check wiring

Relay won't disengage

Check fuses on relay

Check battery voltage, must be greater than 10.5 volts

While switch is engaged, check voltage across the coil terminals (+ on the "S" terminal and ground on the "I" terminal). If 0 volts, replace panel, if + voltage, replace relay.

Check wiring

Light on panel remains on although relay is off.

Is coach plugged in? Unplug coach

Is engine running? Turn engine off

Check wiring

Check fuses on relay

Check wiring

Light is off although relay is on

Replace panel assembly

Check fuses on relay

Check wiring

BD1 No voltmeter reading

Check voltage on green wire. If + voltage, replace panel

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