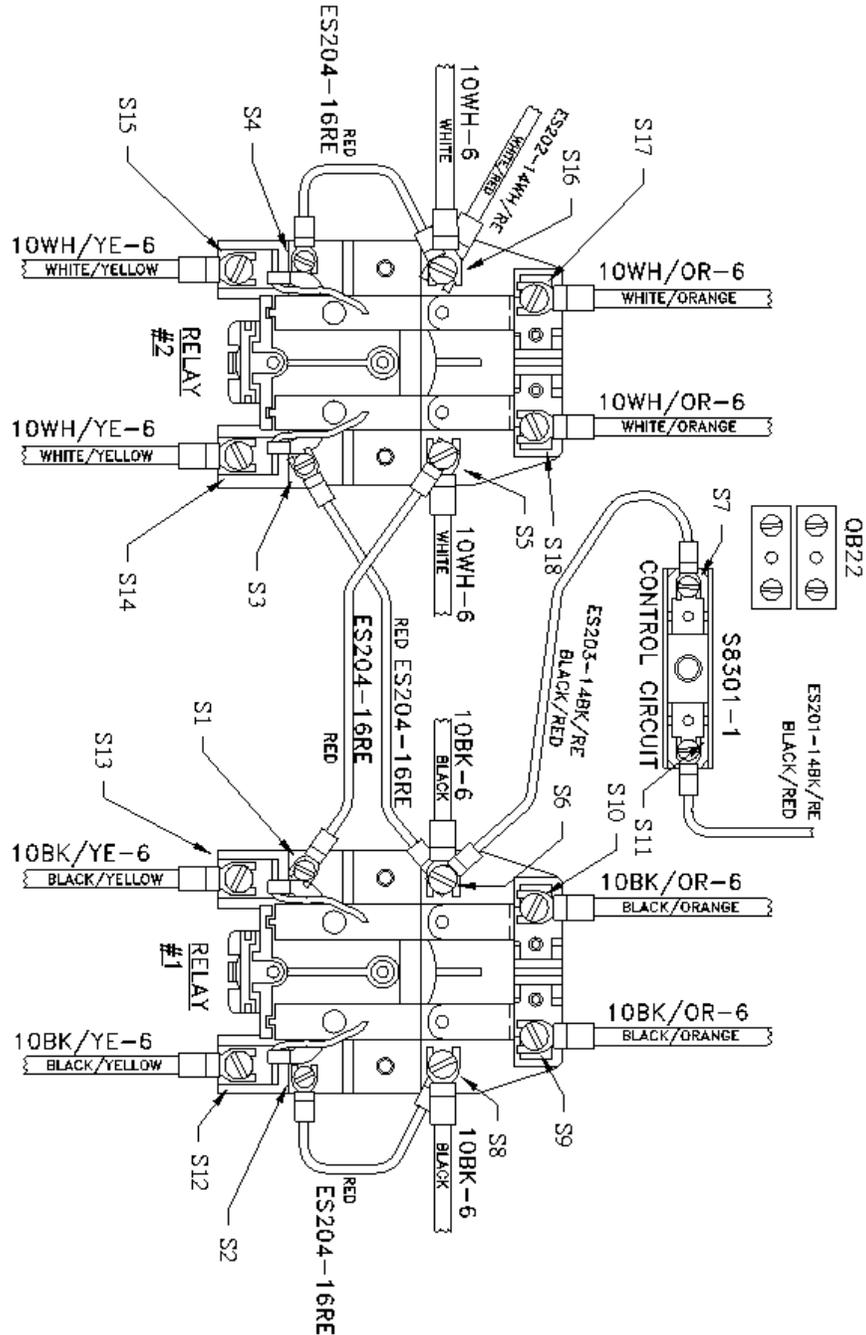




TROUBLE SHOOTING AND REPAIR OF ES3030I



THIS SHOULD ONLY BE DONE BY A QUALIFIED ELECTRICIAN!!!

The following is a list of common problems that occur at the installation and field operation.

I. POWER CONTACTOR WILL NOT OPERATE

- A. Are the power leads hooked up to the two solid white and two solid black leads? If the power leads are hooked up, measure the voltage between the solid white and black leads. It should read between 110 to 130 VAC.
- B. Check the red jumper leads. See wiring diagram. Make sure all wires are securely fastened. This should be done with the power off.
- C. This must be done with the power off. Take 110V power test leads and place one lead on screw S1 and the other on screw S2. With power on the test leads, this should operate the coil on relay 1. Repeat the same test for screws S3 & S4. This should operate the coil for relay 2. If not, the relay(s) has a burned out coil and needs to be replaced. Refer to parts list. If contactors worked, repeat steps A & B.

II. NO INVERTER POWER

- A. Are the inverter power leads securely fastened to the two white w/orange strip and two black w/orange stripe leads? With a load turned on, measure the power between the wire w/orange stripe and black w/orange stripe leads. This should measure between 110 to 130 VAC. If no voltage, go to step B. If voltage, go to step C.
- B. With power off, check relay contacts and be sure they are in their normal closed condition and not stuck in the open position. Also check to see if the contacts are not pitted. If any of the above is correct, replace relay(s). If the relays check good, go to C.
- C. Check the connections to the power panel. These are the two white w/yellow stripe and two black w/yellow stripe leads. You should get a volt reading of 110 to 130 VAC. If no voltage, repeat step B and check wiring to the inverter and check the inverter.

III. RELAYS HUM OR CHATTER WHEN IN OPERATION

- A. This may be caused by dust or moisture in the relays. Make sure all power sources are off. Using an air hose with a light rag over the end of hose to prevent moisture from being blown into the relays, blow out the relay enclosure.
- B. Low voltage on the main power source will make the relays chatter if 95 volts or below. Check voltage at screws S5, S6, S8, S16 and red control wires to be sure they are secured.

IV. TO REPLACE & INSTALL RELAYS (Disconnect all power sources)

- A. Disconnect all power source leads and load leads. Remove total enclosure from the RV. If only replacing one relay, disconnect the wires on that relay and drill the rivets out of that relay from the back side. If replacing both relays, remove wire at screw S7 and drill out four rivets that hold the relays from the back side. This will allow the wires to stay on the relay and be easier to duplicate the wiring on the new relays. Install the new relay(s) with rivets of the same size removed. Replace wires according to wiring diagram.

V. NO CONTROL SIGNAL POWER

- A. You should have power at the white w/red stripe wire and black w/red stripe wire when the main power source is on. This voltage should be between 110V – 130V AC. Check the following:
1. Check wires at screws S6, S7, S11 & S16. Make sure wires are secured and screws are tight.
 2. Check fuse at the fuse block. Use a 3AMP 125V glass type fuse.

PART #	DESCRIPTION	QUANTITY
QB22	GROUND BAR	2
S8301-1	FUSE BLOCK	1
AGC3	GLASS FUSE	1
ES201-14BK/RE	CONTROL WIRE	1
ES202-14WH/RE	CONTROL WIRE	1
ES203-14BK/RE	CONTROL WIRE	1
20241-83	110VAC DPDT RELAY	2
10BK-6	MAIN POWER WIRES	2
10WH-6	MAIN POWER WIRES	2
10BK/OR-6	INVERTOR POWER WIRES	2
10WH/OR-6	INVERTOR POWER WIRES	2
10BK/YE-6	LOAD POWER WIRES	2
10WH/YE-6	LOAD POWER WIRES	2
ES204-16RE	COIL CONTROL WIRES	4
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