



# **SERVICE MANUAL**

## **FOR**

### **473X3A7665**



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## I. WARNINGS

### IMPORTANT NOTICE

These instructions are for the use of qualified individuals specially trained and experienced in installation of this type equipment and related system components.

Installation and service personnel are required by some states to be licensed. PERSONS NOT QUALIFIED SHALL NOT SERVICE THIS EQUIPMENT.

## II. INDIVIDUAL ELECTRICAL COMPONENT CHECKOUTS

### WARNING

**CAREFULLY FOLLOW ALL INSTRUCTIONS AND WARNINGS IN THIS BOOKLET TO AVOID DAMAGE TO THE EQUIPMENT, PERSONAL INJURY OR FIRE.**

#### Overload Switch

The switch is connected in series with common so if the switch opens, it will cut the power to the compressor motor. The switch will open as a result of either or both of two conditions that could be harmful to the compressor.

a) High Amperes (Current)

The switch contains a heater which increases in temperature as the current increases. The higher temperature warps the switch and will cause it to open before the windings reach a dangerous temperature.

b) High Temperature (Thermal)

The switch is clamped tightly against the compressor housing and located close to the windings. Therefore, as the windings reach a higher temperature, it takes less current to cause the switch to open.

As can be seen, the switch is always affected by a combination of current to the compressor and winding temperature.

### Run Capacitors

The purpose of the run capacitors is to improve motor efficiency during running. The run capacitors are always connected between the start and run or main terminals of the motor.

### III. SERVICE PROBLEMS AND POSSIBLE SOLUTIONS

**Problem: Unit does not start**

| <u>Likely Causes</u>                    | <u>Correction</u>                                                                                                                                   |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Main power supply                       | Check circuit breaker and ensure that there is power to the unit.                                                                                   |
| Power at unit                           | Unscrew and disconnect ceiling assembly (see installation manual). Check to ensure that there is power at the main power cable going into the unit. |
| Blower or Compressor                    | The fault is in either the indoor blower or compressor. Check to see which part is defective.                                                       |
| Compressor check<br>Compressor windings | Main Winding – 2.9 Ohms @ 25C<br>Start Windings – 4.1 Ohms @ 25C<br>Replace if faulty.                                                              |

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**Problem: Unit powers up but compressor does not start**

| <u>Likely Causes</u> | <u>Correction</u>                                                                                               |
|----------------------|-----------------------------------------------------------------------------------------------------------------|
| Run Capacitor        | Check run capacitor inside of electrical box situated under condenser fan (See Figure 2). Replace if defective. |
| Compressor Overload  | Check compressor overload switch on compressor. Replace if defective.                                           |

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**Problem: Low air flow from ceiling assembly  
No air flow from ceiling assembly**

| <u>Likely Causes</u> | <u>Correction</u>                                                                                                                                                                                                                                                                                          |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Indoor Blower        | Power off unit, remove shroud, inspect wiring and check that the amp draw (see data sticker for amp draw).<br><br>Power off unit, remove shroud, inspect wiring and check that there is power arriving at the motor. Check capacitor and replace if defective. If capacitor is good, replace blower motor. |

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**Problem: Poor performance in cooling mode**

| <u>Likely Causes</u>                                             | <u>Correction</u>                                     |
|------------------------------------------------------------------|-------------------------------------------------------|
| Outdoor coil is partially blocked by debris such as leaves, etc. | Power off unit, remove shroud and clean outside coil. |

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**Problem: Poor performance in heating mode**

| <u>Likely Causes</u> | <u>Correction</u>                                                                                                                                                                        |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Indoor blower        | Power off unit, remove shroud, inspect wiring and check that there is power arriving at the motor. Check capacitor and replace if defective. If capacitor is good, replace blower motor. |

**Problem: No heating but fan is running**

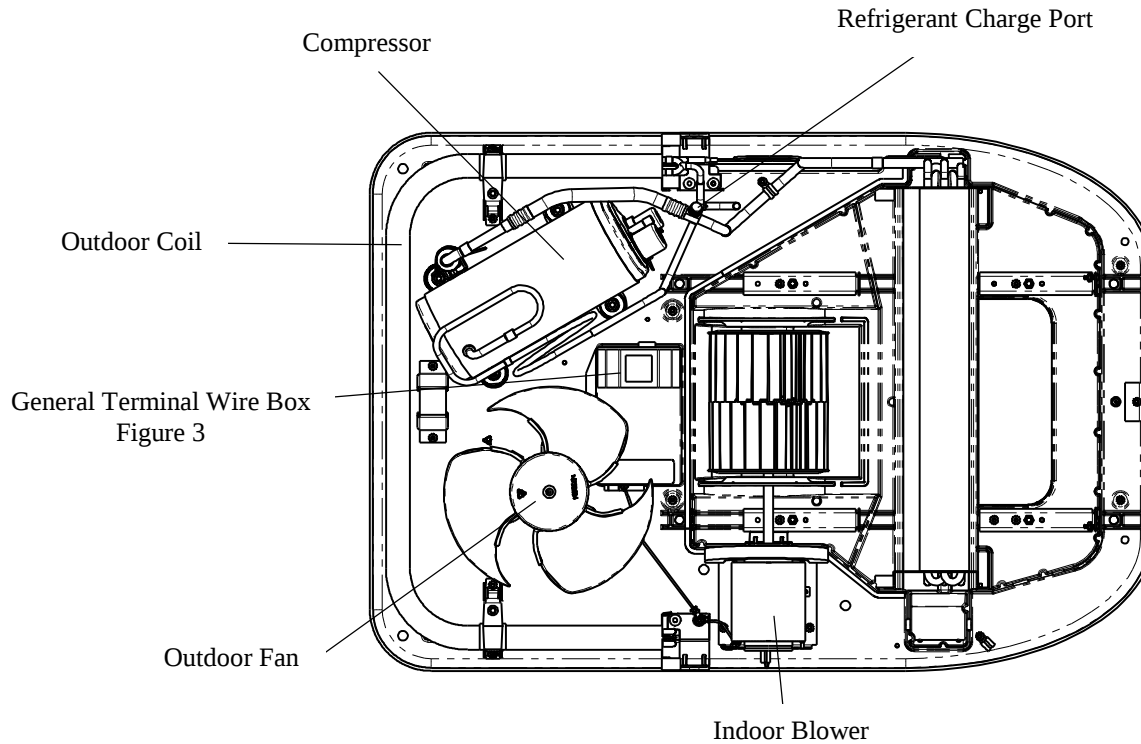
Likely Causes

Correction

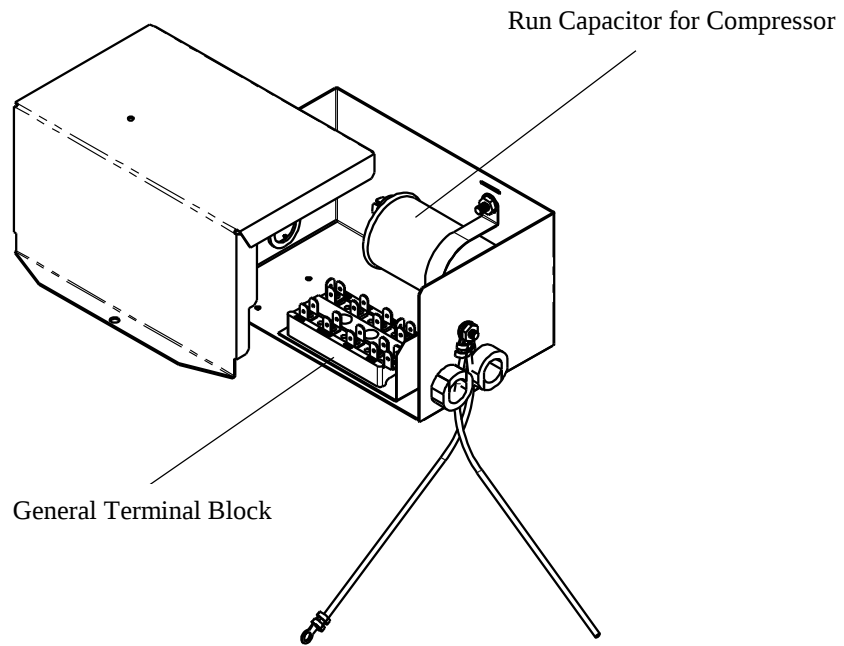
Heater Element

Power off unit, remove shroud and evaporator cover. Check that the heater element is plugged into the ceiling assembly. If the heater is plugged in, check that the heater element is functioning properly. Replace if defective.

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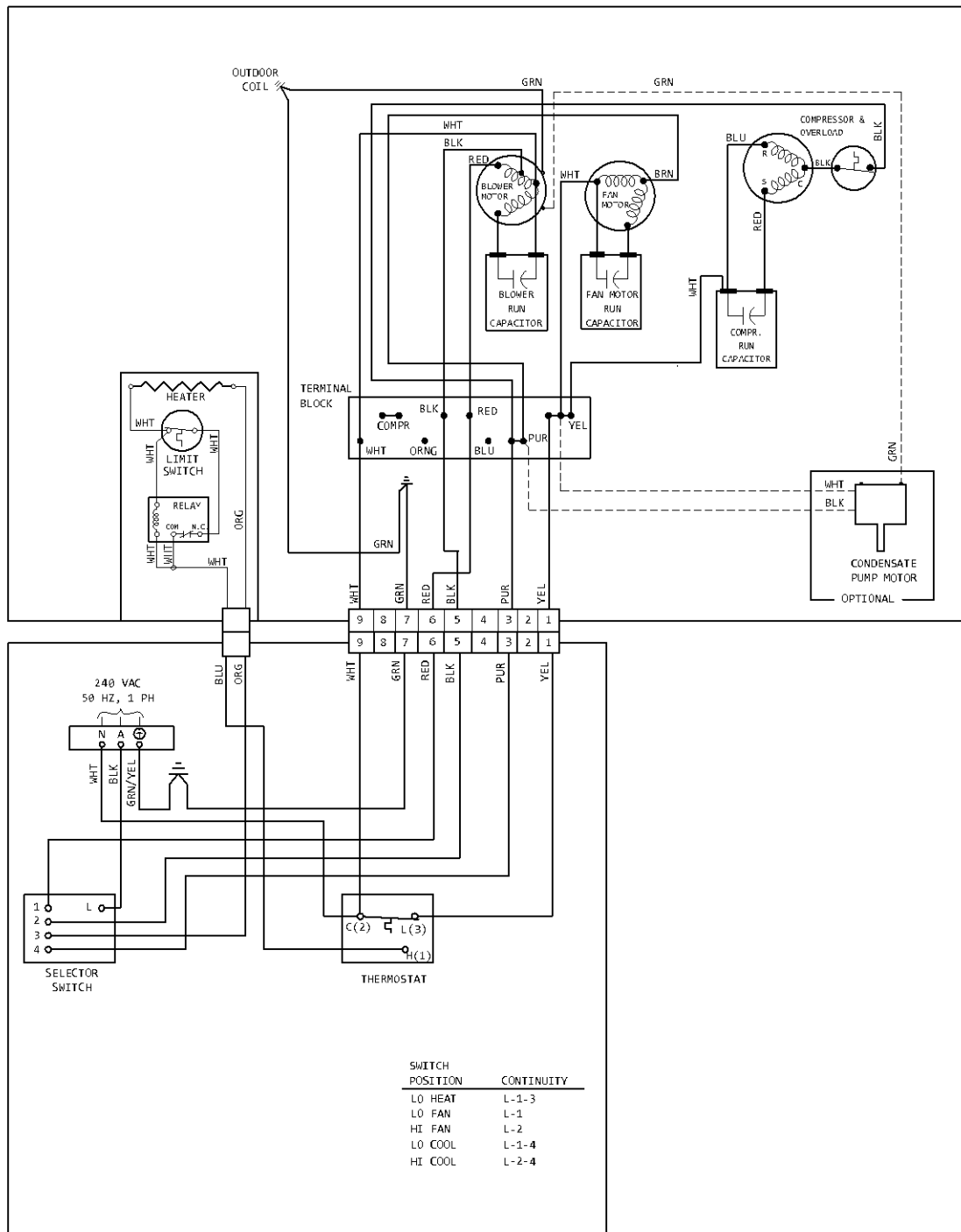
**FIGURE 1**



**FIGURE 2**

# IV. SYSTEM WIRING DIAGRAM

## SYSTEM WIRING DIAGRAM



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Follow proper safety practices. If in doubt, consult a professional RV technician.