



## **INSTALLATION INSTRUCTIONS**

**FOR**

**7330\*5511 OR 7330\*5512 MOUNTING KIT**

**7330B751 CONTROL BOX KIT (12 VDC COOL ONLY)**

**7530B750 CONTROL BOX KIT (24 VAC COOL ONLY)**

**8330A751 ZONE CONTROL KIT (12 VDC COOL ONLY)**

**8530B751 ZONE CONTROL KIT (12 VDC HEAT PUMP)**

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## 1. 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.**

### WARNING

Improper installation may damage equipment, can create a hazard and will void the warranty.

The use of components not tested in combination with these units will void the warranty, may make the equipment in violation of state codes, may create a hazard and may ruin the equipment.

### WARNING - SHOCK HAZARD

To prevent the possibility of severe personal injury or equipment damage due to electrical shock, always be sure the electrical power to the appliance is disconnected.

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

### NOTE

**The words “Shall” or “Must” indicate a requirement which is essential to satisfactory and safe product performance.**

**The words “Should” or “May” indicate a recommendation which is not essential and not required, but which may be useful or helpful.**

## 2. GENERAL INFORMATION AND REQUIREMENTS

This mount kit is designed to provide fore and aft (straight through) ducting. It is applicable to **6797 and 6799 Series Roof Top Units Only**. The control box mounts inside the upper unit return air opening. Minimum recommended duct size is 2 1/2" x 6". Supply registers should have an accumulated minimum discharge area of 48 square inches. The manufacturer supplied ducting must be insulated and

covered with a vapor barrier to prevent ceiling condensate staining. Insulation above the duct will minimize heat gain from the roof. The minimum recommended roof thickness with this system is 3 1/2". The upper unit and ceiling assembly mount on a square roof opening 14" to 15" on a side. The roof must be capable of supporting 110 pounds of static load. Keep in mind that dynamic loads exist in recreation vehicles.

### 3. PACKAGE CONTENTS

The mounting kit package contains the following:

- 1) Welded steel mount frame assembly (insulated)
- 2) Fiberglass divider board
- 3) Insulated supply duct
- 4) Supply duct lower insulation seal strip
- 5) Small parts package consisting of:
  - a) Flat washer (x4)
  - b) Mounting Spring (x4)
  - c) Mounting bolt (x4)
  - d) Supply duct mount screws (x2)
  - e) Wirebox strain relief (x1)

### 4. SYSTEM MATCH-UPS, GRILLES AND FILTERS

**For All 6799 Series Upper Units Only**

| Ceiling Assembly Desired Function | Control Box Kit | Wall Thermostat           |
|-----------------------------------|-----------------|---------------------------|
| 12 VDC Control Cooling Only       | 7330B751        | 7330D3351                 |
| 24 VAC Control Cooling Only       | 7530B750        | 7330-3241<br>Or 8330-3241 |
| 12 VDC Zone Control Cooling Only  | 8330A751        | 8330-335                  |

**For All 6797 Series Upper Units Only**

| Ceiling Assembly Desired Function | Control Box Kit | Wall Thermostat |
|-----------------------------------|-----------------|-----------------|
| 12 VDC Zone Control Heat Pump     | 8530B751        | 8330-335        |

18" Grilles and Filters

- |           |                        |
|-----------|------------------------|
| 6798-3091 | White Grille           |
| 6798-3092 | White Grille (25 Pack) |
| 6798-3101 | Beige Grille           |
| 6798-3102 | Beige Grille (25 Pack) |
| 6798-3751 | Filter                 |
| 6798-3752 | Filter (25 Pack)       |

△ Use sub-base if thermostat is to operate 12 VDC furnace (See Notes)

16" Grilles and Filters

- |           |                        |
|-----------|------------------------|
| 6798-3041 | White Grille           |
| 6798-3042 | White Grille (25 Pack) |
| 6798A3761 | Filter                 |
| 6798A3762 | Filter (25 Pack)       |

### 5. CONTROL BOX KITS

**I. 7330B751 12 VDC Controlled, Cool Only**

This kit consists of a control box assembly and a loose packed wiring diagram. The evaporator freeze sensor is attached to the assembly. A length of edge liner is included in the kit.

**II. 7530B750 24 VAC Controlled, Cool Only**

This kit is similar to the 7330B751 with the exception of a transformer that is attached to the box assembly, and the freeze sensor is shipped in an envelope for installation by quick connects to terminal strip "F and F". A length of edge liner is included in the kit.

## 6. WALL THERMOSTATS

1. Locate and install the thermostat per instructions found with the thermostat.
2. For 12 VDC thermostats, it is required that the thermostat 12 volt negative connection be routed directly from the converter or battery. It is highly desirable to provide 12 volt control power from the battery side of the converter. These precautions should prevent control problems.
3. For the 24 VAC thermostat, keep in mind that if the application will involve operation while in motion or subject to vibration, the 7330-3241 thermostat must not be used as electromechanical contacts will “chatter” the compressor relay if used in high vibration applications. For applications subject to vibration, an electronic wall thermostat must be used. RV Products part number is 8330-3241.

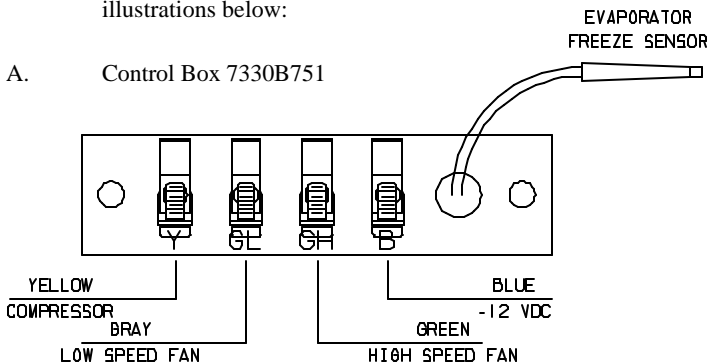
## 7. INSTALLING THE CONTROL BOX

All control boxes install the same way.

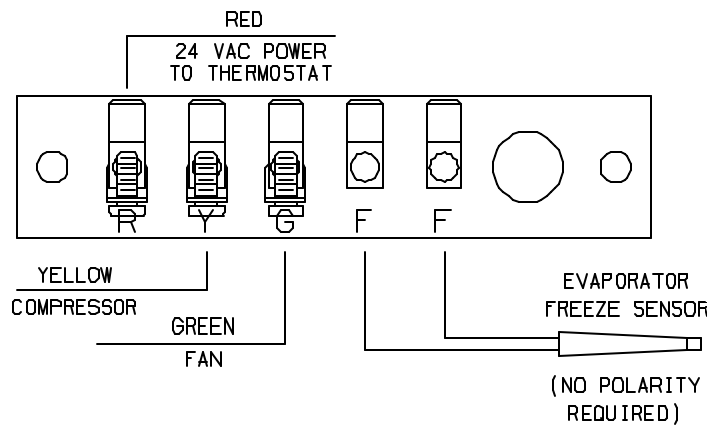
Note: To install Zone Thermostat system, skip to Section 8Z.

1. Remove the control box assembly cover which is held by two sheet metal screws. Feed the field lead wires and ground through the strain relief found with the mounting kit.
2. Attach black 12 gauge field power conductor to printed circuit board lug identified as “BLACK”.
3. Attach white 12 gauge field power conductor to printed circuit board lug identified as “WHITE”. This must be the neutral wire of any circuit having a neutral.
4. Attach the grounding wire to the printed circuit board lug identified as “GND”.
5. Insure that no bare wires can come into contact with live electrical parts and that wires cannot be pinched between the control box sides and lid. Insert the strain relief into the control box entry hole to secure the field wiring. Reinstall the control box lid.
6. Attach the thermostat wires to the control box per illustrations below:

A. Control Box 7330B751



B. Control Box 7530B750



7. Locate the two threaded studs in the evaporator cover. Assemble the control box over the threaded studs and secure using the two wing nuts provided with the control box. See Figure 1.

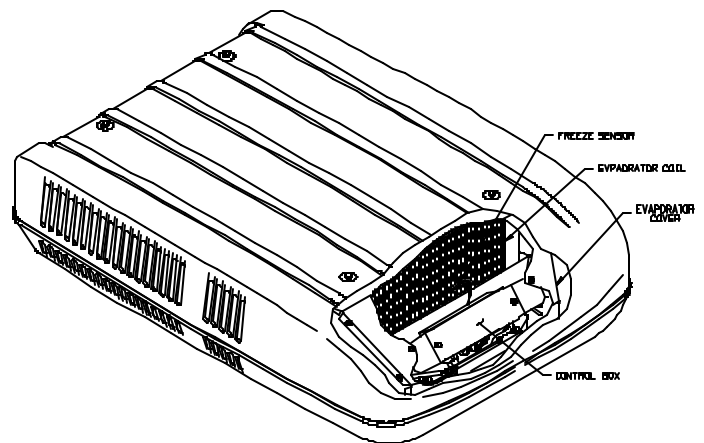


FIGURE 1

8. Insert the evaporator freeze sensor between evaporator fins near the bottom center of the evaporator and between the bottom two tubes. Insert straight in until contacting the staggered tube directly in back of the insertion point. When contact

has been made, elevate the exposed end of the sensor approximately 45 degrees, then continue insertion at a 45 degree angle until the sensor is completely embedded into the evaporator. See Figure 1.

## 8Z. ZONE - CONTROL BOX KITS

### 1. 8330A751 12 VDC Zone Controlled, Cool Only

This kit consists of a control box assembly. The evaporator freeze sensor is shipped in an envelope for installation by quick connects to terminal strip marked "FREEZE".

### 2. 8530B751 12 VDC Zone Controlled, Heat Pump

This kit consists of a control box assembly. The evaporator freeze sensor is shipped in an envelope for installation by quick connects to terminal strip marked "FREEZE".

## 9Z. ZONE - WALL THERMOSTATS

1. Following the instructions packed with the thermostat, determine a location and install the Zone thermostat.

- B. Route the thermostat control wiring from the thermostat into the front of the ceiling plenum opening.

2. Following RV Products low voltage wiring specifications and all local and national electrical codes:

These wires are as follows:

- A. Route the thermostat 12 VDC supply wiring from the power source to the thermostat mounting location.

- (1) Purple wire to communications signal (Sig).
- (1) Any color for optional auto generator start (Gen).
- (2) Any color for room temperature sensor (Zone 1 optional, required for other zones).
- (1) For each heating appliance (up to 4)
- (2) Any color for cool load shed (optional)
- (2) Any color for heat load shed (optional)

Two wires are required:

One supply lead must be +12 VDC and red in color (Pin 1).

The second supply lead must be -12 VDC and blue in color (Pin 3).

See Figure 4 for wiring requirements for multiple zones.

3. Programming instructions for the Zone Thermostat can be found in the installation instructions packed with the thermostat.

## 10Z. ZONE - INSTALLING THE ZONE CONTROL BOX

All control boxes install by one of two methods.

1. Remove the control box assembly's cover which is held by two sheet metal screws.
2. Set the "zone" jumper to the proper zone position for the particular position the air conditioner or heat pump will be in the coach (Refer to Figure 2 - Zone 1 is shown). Note: Zones should be numbered from the front to the back of the coach with Zone 1 in front.

3. Set the "HP"/"NON HP" jumper to "HP" if the unit is a heat pump or to "NON HP" if the unit is not a heat pump (Refer to Figure 2 - Non HP is shown).
4. Feed the field lead wires and ground through the strain relief found with the control box then through the 7/8" hole in the side of the box.

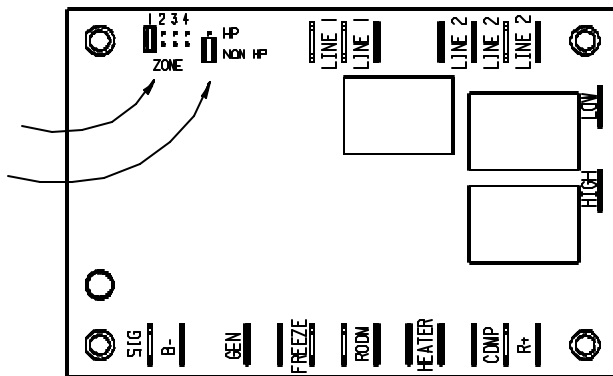
5. Wire nut the ground field power conductor to the stripped green ground wire in the control box.
6. Wire nut the white 12-gauge field power conductor to the stripped white 12-gauge wire in the control box.
7. Wire nut the black 12-gauge field power conductor to the stripped black 12-gauge wire in the control box.
8. Insure that no bare wires can come into contact with live electrical parts and that wire cannot be pinched between the control box sides and lid. Insert the strain relief into the control box entry hole to secure the field wiring. Reinstall the control box lid.

**TIE ALL WIRING TO INSURE NO CONTACT WITH SHARP EDGES. KEEP IN MIND THAT HIGH VELOCITY AIR WILL BE ENCOUNTERED IN THIS AREA.**

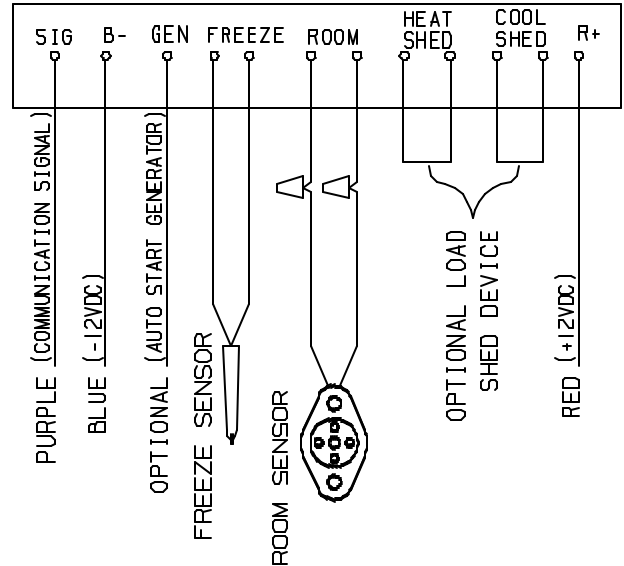
9. Locate the two threaded studs in the evaporator cover. Assemble the control box over the threaded studs and secure using the two wing nuts provided with the control box. See Figure 1.
10. Insert the evaporator freeze sensor between evaporator fins near the bottom center of the evaporator and between the bottom two tubes. Insert straight in until contacting the staggered tube directly in back of the insertion point. When contact has been made, elevate the exposed end of the sensor approximately 45 degree, then continue insertion at a 45 degree angle until the sensor is completely embedded into the evaporator. See Figure 1.

Gently fold all wiring into the electrical box while verifying that it is not either pinched or cut.

Attach the thermostat wires to Zone 1 control box per the illustration below (Refer to Figure 3):



**FIGURE 2**



**FIGURE 3**

**NOTE**

GEN terminal is provided to allow interface with an automatic start generator system. Refer to installation instructions provided with the automatic start generator system for installation procedures.

HEAT SHED and COOL SHED terminals are provided to allow interface with load shed equipment. For strip heat, the jumper wire on heat shed is removed and discarded and connected to N.C. contacts on load shed equipment.

For A/C application, the jumper wire on cool shed is removed and discarded and connected to N.C. contacts on load shed equipment. For Heat Pump application, the jumper wire on cool shed and heat shed is removed and discarded and each connected to N.C. contacts on load shed equipment.

Refer to installation instructions provided with the load shed equipment for installation procedures.

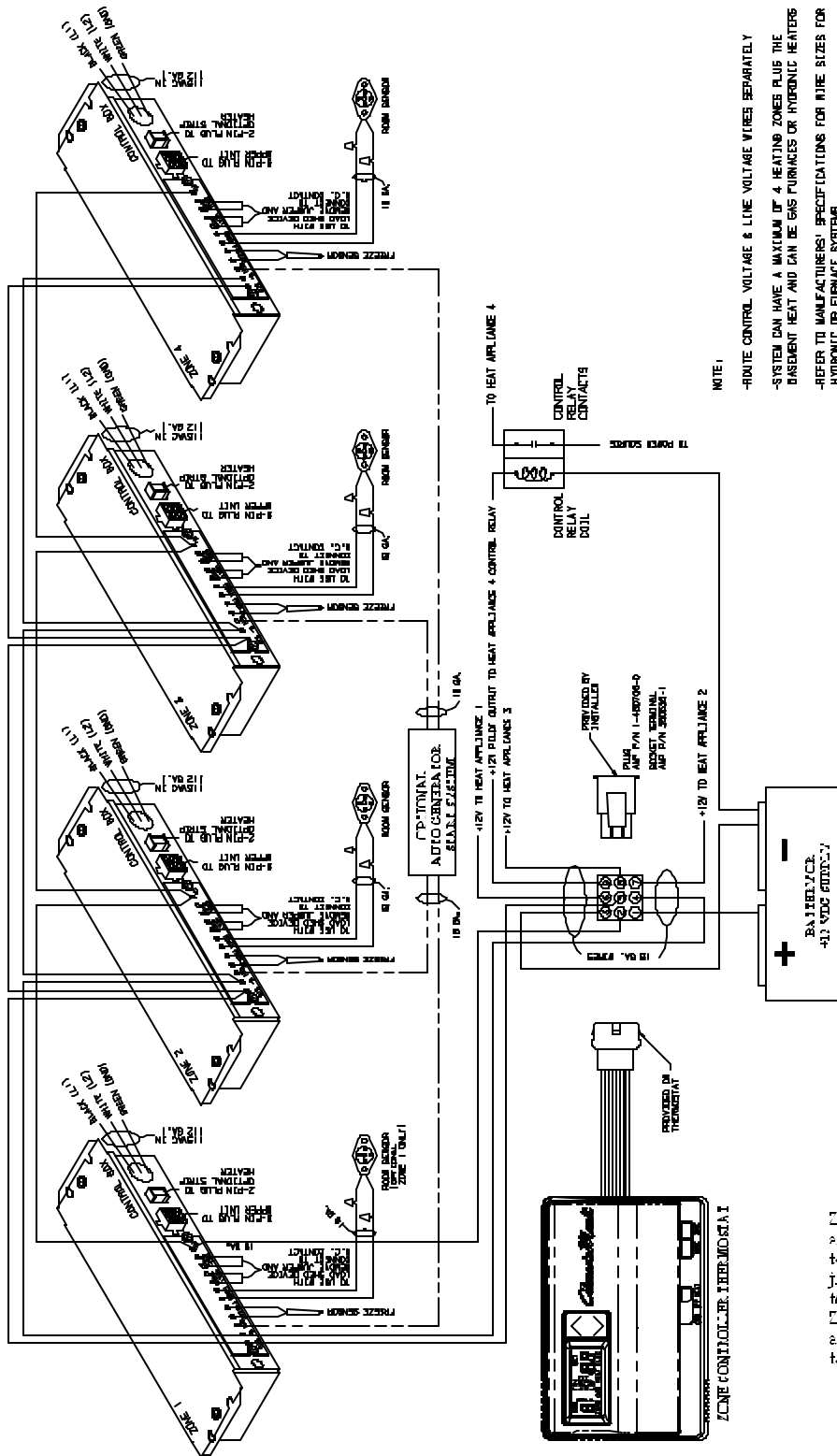


FIGURE 4

Complying with the warnings listed below, connect the 115 VAC supply wiring to its power source. Be sure all power remains off until beginning checkout procedure.

**DANGER**

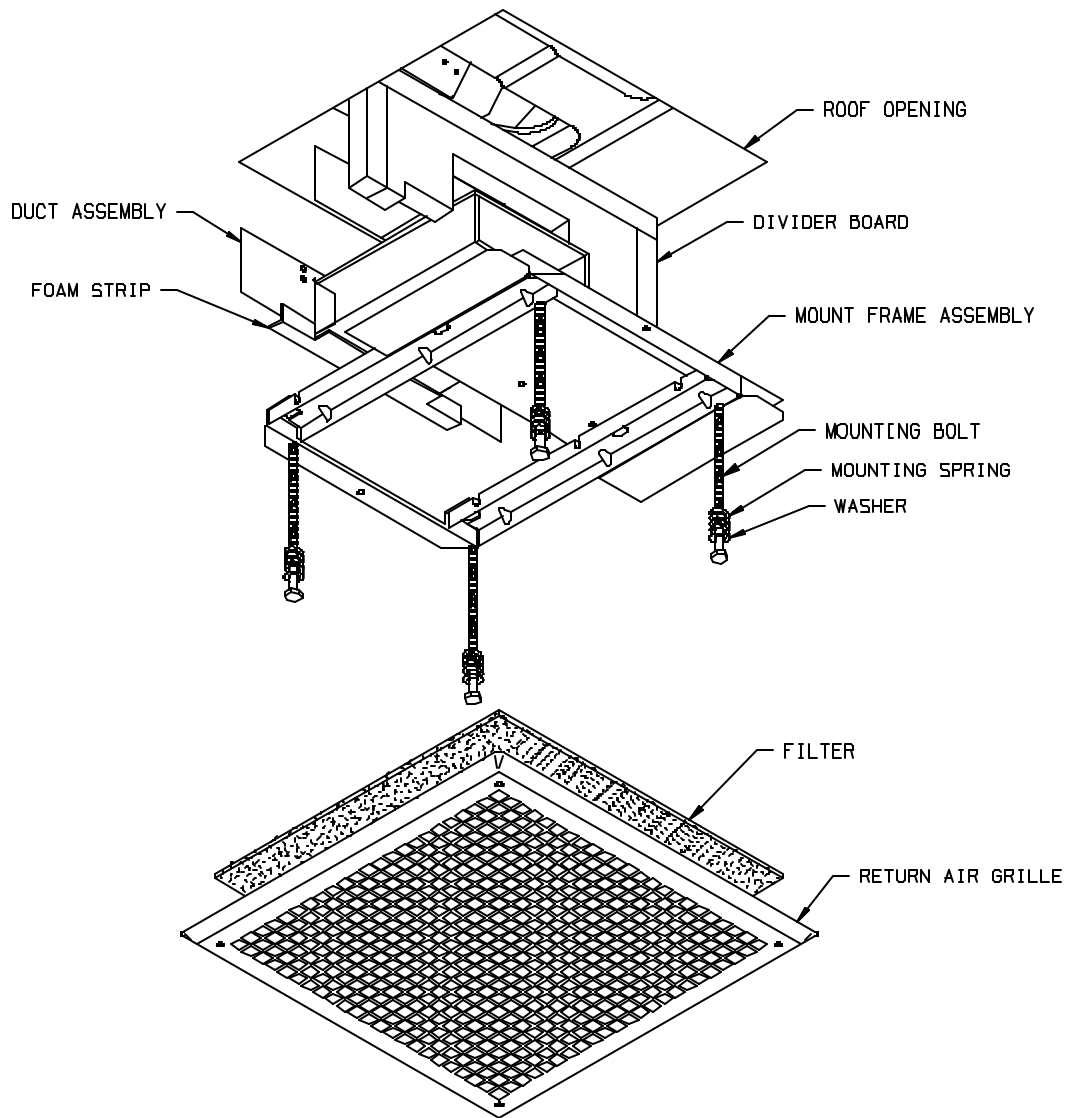
**TO PREVENT THE POSSIBILITY OF SHOCK INJURY FROM APPLIANCE OPERATION:**

**THE WHITE WIRE MUST BE CONNECTED TO NEUTRAL IN THE SERVICE BOX ENTRANCE AND THE MECHANICAL GROUND MUST BE CONNECTED TO A GROUNDING LUG IN THE SERVICE BOX OR THE MOTOR GENERATOR COMPARTMENT.**

**11. INSTALLING THE FIBERGLASS DIVIDER BOARD, SUPPLY DUCT AND MOUNT FRAME ASSEMBLY**

1. Note that the divider board has been pre-cut to conform to the contour of the mount frame assembly and the supply duct. The foam on the top and sides of the divider board allow it to fit a 14" to 15" square roof opening with a roof thickness of 4" to 5".
2. The divider board is an insulated and vapor sealed barrier to separate unit supply air from unit return air. When installed, the divider board should fit very snug all around and compress into the basepan at the top.
3. Insert the duct assembly into the divider board cutout. Gently ease the duct assembly forward until the flange contacts the front edge of the roof opening. Align the bottom of the supply duct with the bottom edge of the ceiling duct opening. Secure the duct with two screws provided in the mount kit small parts package. Using the adhesive backed foam strip found in the mount kits, seal off the gap which exists at the bottom of the duct flange where it abuts the bottom ceiling duct opening. See Figure 5.
4. Align the welded steel mount frame assembly under the opening. The insulated and closed end of the assembly must be under the upper unit blower. Install a washer and mounting spring on each mounting bolt and guide each bolt through the frame assembly channel into the threaded receivers in the upper unit basepan. The divider board should be at the very edge of the mount frame assembly and positioned to be perpendicular to the assembly. Start the bolts by hand to insure that they are not cross-threaded. Tighten the bolts in a staggered pattern until each mounting spring has just achieved closure. See Figure 5.
5. Attach the wiring diagram found with the control box kit to the bottom of the mount frame assembly, when applicable.





**FIGURE 5**

## **12. INSTALL RETURN AIR GRILLE AND FILTER**

Place filter on back side of return air grille. Lift grille into position, centered over roof opening. Insert one screw into each corner of the grille and secure to ceiling. See Figure 5.



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