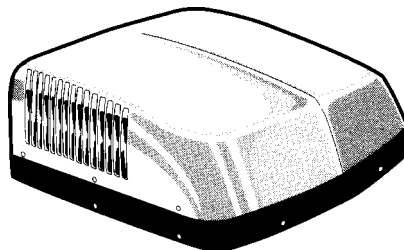


DUO-THERM®
by Dometic

RECORD THIS INFORMATION FOR FUTURE REFERENCE
BEFORE INSTALLING THE UNIT:

Model Number _____
Serial Number _____
Date Purchased _____
Place of Purchase _____



MODEL 74013 SUNCHASER®

ROOF TOP AIR CONDITIONER

USA
SERVICE OFFICE
The Dometic Corp.
509 So. Poplar St.
LaGrange, IN 46761
(219) 463-4858

CANADA
Dometic Dist.
866 Lings Dr.
Cambridge, Ontario
CANADA N3H 2N7
(519) 653-4390

For Service Center
Assistance Call:
800-544-4881

LR 23565



! WARNING

This Manual should be read and understood before installation, adjustment, service or maintenance is performed. This unit must be installed and serviced by a qualified serviceman. Modification of this appliance can be extremely hazardous and could result in personal injury or property damage.

! AVERTISSEMENT

Lire et comprendre ce manuel avant de procéder à l'installation, à des réglages, de l'entretien ou des réparations. L'installation et l'entretien de cet appareil doivent être effectués par un réparateur qualifié. Toute modification de cet appareil peut être extrêmement dangereuse et entraîner des blessures ou dommages matériels.

INSTALLATION & OPERATING INSTRUCTIONS

MODEL
74013.601
74013.602
74013.603
74013.503

1. SPECIFICATIONS

MODEL NUMBER	74013.503	74013.601	74013.602
Nominal Capacity (BTU/HR)	13,000		
Electrical Rating	115 VAC, 60 Hz., 1 PH.		
Compressor Rated Load Amps	12.1	11.0	
Fan Motor Rated Load Amps	2.5		
Compressor Locked Rotor Amps	59.0	54.4	
Fan Motor Locked Rotor Amps	5.8		
Refrigerant (R22) oz.	16.5	16.0	16.5
Minimum Wire Size *	12 AWG Copper up to 24 ft.		
Circuit Protection	20 Amp Time Delay Fuse or HACR Circuit Breaker		
Installed Weight (Pounds)	82		
Minimum Generator Size **	1 UNIT	3.5 KW	
	2 UNITS	5.0 KW	

* For lengths over 24 ft., consult the National Electrical Code.

** The Dometic Corp. gives **general** guidelines for generator requirements. These guidelines come from experiences people have had in actual applications. When sizing the generator, the **total** power usage of your recreational vehicle must be considered. Also keep in mind generators lose power at high altitudes and from lack of maintenance.

2. PRECAUTIONS



IMPROPER INSTALLATION MAY DAMAGE EQUIPMENT, COULD ENDANGER LIFE, CAUSE SERIOUS INJURY AND/OR PROPERTY DAMAGE.

- Read Installation and Operating instructions carefully before attempting to start your air conditioner.
- The Dometic Corporation will not be liable for any damages or injury incurred due to failure in following these instructions.
- Installation **MUST** comply with the National Electrical Code and any State or Local Codes or regulations.
- DO NOT add any devices or accessories to this air conditioner except those specifically authorized by Dometic.
- This equipment must be serviced by qualified personnel and some states require these people to be licensed.

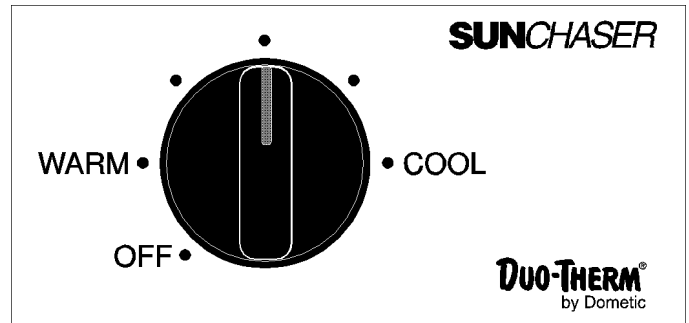
3. OPERATING INSTRUCTIONS

- This air conditioner has one control.
 - This control acts as the OFF switch and temperature control of the unit.
 - The thermostat portion of the control cycles the compressor and fan ON and OFF in the temperature range of 65°F on the cold side to 90°F on the warm side.
- Operation of Control
 - Set the thermostat knob to the desired temperature level. The compressor and fan will now cycle ON and OFF to maintain the selected temperature.

- Set the control knob to the OFF position. This will shut the air conditioner OFF so it will not operate.



AFTER SHUTTING THE AIR CONDITIONER DOWN WITH EITHER PLACING THE KNOB IN THE OFF POSITION OR THERMOSTAT, WAIT AT LEAST TWO (2) MINUTES BEFORE RESTARTING.



4. MAINTENANCE

A. AIR FILTER

An air filter can be added to this air conditioner to prevent dirt and dust from plugging the evaporator coil. See the following instructions to add an air filter if you so desire.

- 1/8" to 1/4" thick foam filter material may be purchased at most hardware stores. 7-1/2" x 14" size is required.
- To install, remove the control knob and then the return air grille.
- Place the filter on the back of grille.
- Install rubber bands in an "X" pattern across pegs on back of grille to hold filter in place.
- Replace grille into cover and reinstall control knob.

B. RETURN AIR COVER

Clean cover with a soft cloth dampened with a mild detergent. Never use furniture polish or scouring powders.

C. FAN MOTOR

The fan motor is factory lubricated and requires no service under normal use.

D. FROST FORMATION ON COOLING COIL

Air conditioners have a greater tendency to frost when the outside temperature is relatively low. Frosting may be prevented by adjusting the thermostat to a warmer setting. Should frosting continue, turn the control to the OFF position and allow the frost to melt from the surface of the evaporator coil before operating again.

Under certain conditions, frost may form on the evaporator coil. If this should occur, inspect the air filter, if installed, and the surface of the evaporator coil and clean if dirty. Make sure the air louvers in rear of cover are not obstructed.

5. GENERAL INFORMATION

The ability of the air conditioner to maintain the desired inside temperature depends on the heat gain of the RV. Some preventative measures taken by the occupants of the RV can reduce the heat gain and improve the performance of the air conditioner. During extremely high outdoor temperatures, the heat gain of the vehicle may be reduced by:

- A) Parking the RV in a shaded area
- B) Using window shades (blinds and/or curtains)
- C) Keeping windows and doors shut or minimizing usage
- D) Avoiding the use of heat producing appliances.

Starting the air conditioner early in the morning and giving it a "head start" on the expected high outdoor ambient will greatly improve its ability to maintain the desired indoor temperature.

NOTE: The manufacturer of this air conditioner will not be responsible for damage caused by condensed moisture on ceilings or other surfaces. Air contains moisture and this moisture tends to condense on cold surfaces. When air enters the RV, condensed moisture may appear on the ceiling, windows, metal parts, etc. The air conditioner removes this moisture from the air during normal operation. Keeping doors and windows closed when this air conditioner is in operation will minimize condensed moisture on cold surfaces.

6. SERVICE - Unit Does Not Operate

If your unit fails to operate or operated improperly, check the following before calling your service center.

- A. If RV connected to motor generator, check to be sure motor generator is running and producing power.
- B. If RV connected to power supply by a land line, check to be sure line is sized properly to run air conditioner load and it is plugged into power supply.
- C. Check your fuse or circuit breaker to see if it is open.
- D. After the above checks, call your local service center for further help. This unit must serviced by qualified service personnel only.

When calling for service, always give the air conditioner Model Number and Serial Number. This information can be found on unit rating plate located on the base pan near the return air opening. Return air grille must be removed from air box to view.

7. INSTALLATION INSTRUCTIONS

A. CHOOSING LOCATION FOR AIR CONDITIONER



IMPROPER INSTALLATION MAY DAMAGE EQUIPMENT, COULD ENDANGER LIFE, CAUSE SERIOUS INJURY AND/OR PROPERTY DAMAGE.

This air conditioner is specifically designed for installation on the roof of a recreational vehicle (RV).

1. NORMAL LOCATIONS:

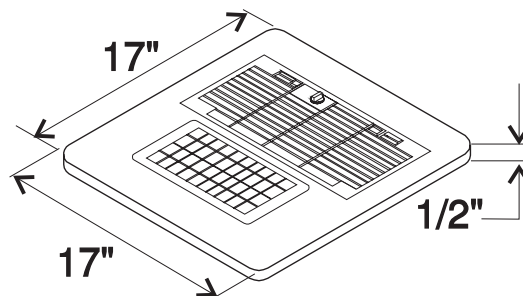
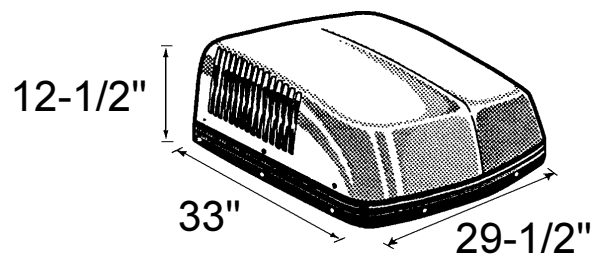
The air conditioner is designed to fit over an existing roof vent opening. When the vent is removed, it normally creates a 14" x 14" opening.

2. OTHER LOCATIONS:

When no roof vent is available or another location is desired, the following is recommended:

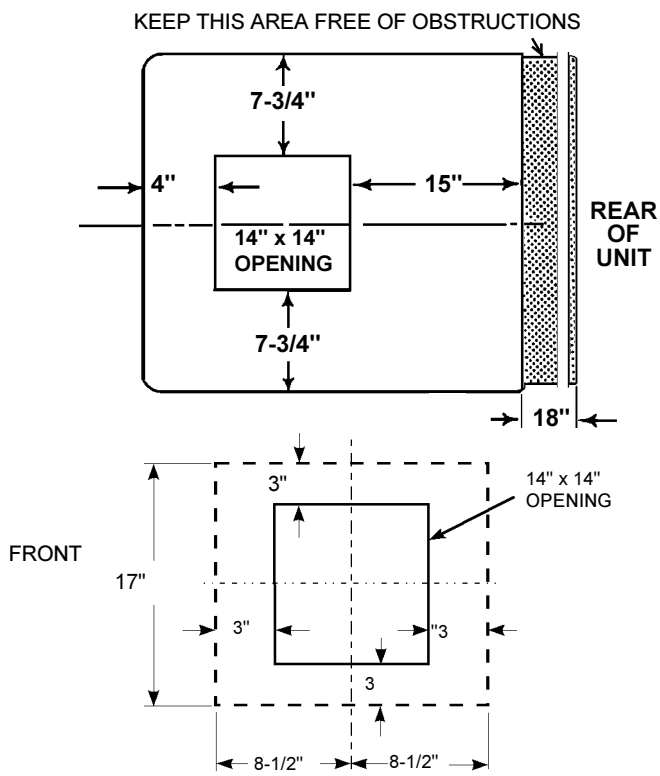
- a. For one unit installation: The air conditioner should be mounted slightly forward of center (front to back) and centered from side to side.
- b. For two unit installations: Install one air conditioner 1/3 and one air conditioner 2/3's from front of RV and centered from side to side.

It is preferred that this air conditioner be installed in a relatively flat and level roof section measured with the RV parked on a level surface; however, up to 15° slant to either side, or front-to-back, is acceptable.



3. AFTER LOCATION SELECTION:

- Check for obstructions in the area where air conditioner will be installed.
- The roof must be designed to support 130 pounds when the RV is in motion. Normally a 200 lb. static load design will meet this requirement.
- Check inside the RV for air box obstructions. (i.e. door openings, room dividers, curtains, ceiling fixtures, etc.)



B. ROOF PREPARATION

1. ROOF VENT REMOVAL:

- Unscrew and remove the roof vent.
- Remove all caulking compound around opening.
- Seal all screw holes and seams where the roof gasket will be located. Use a good grade of all weather sealer.

2. NEW OPENING:

(Installations Other Than Vent Openings)

! WARNING

DISCONNECT ALL POWER SUPPLIES AND THE POSITIVE (+) TERMINAL FOR THE SUPPLY BATTERY. FAILURE TO FOLLOW THIS INSTRUCTION MAY CREATE A SHOCK HAZARD.

- A 14" x 14" opening must be cut through the roof and ceiling of the RV. It is recommended this opening be located between roof reinforcing members.

- Mark a 14" x 14" square on the roof and carefully cut the opening.
- Using the roof opening as a guide, cut the matching hole in the ceiling.

! CAUTION

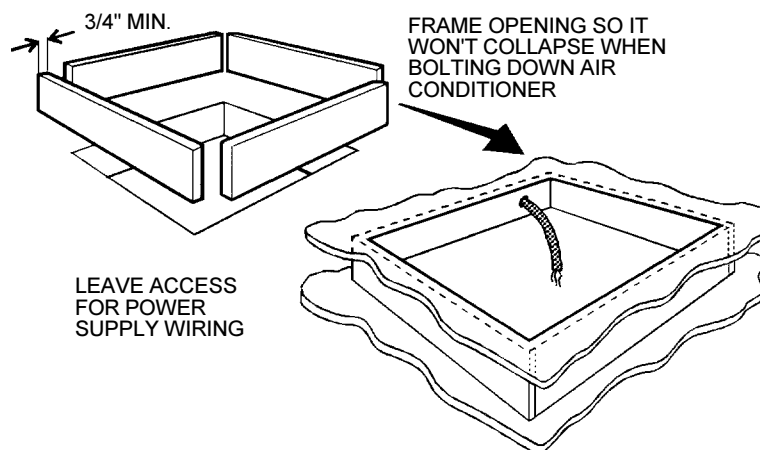
There may be electrical wiring between the roof and ceiling.

3. OPENING PREPARATION:

- If the opening exceeds 14-1/2" x 14-1/2", it will be necessary to install spacers.
- If the opening is less than 14" x 14", it must be enlarged.
- Route a copper 12 AWG, with ground, supply line from the fuse or circuit breaker box to the roof opening.
 - The power supply must be on a separate 20 amp Time Delay Fuse or HACR Circuit Breaker.
 - Wiring must comply with all National, State and Local wiring codes.
 - Make sure at least 20" of wire extend into the roof opening. This insures easy air conditioner attachment.
 - If vent fan was removed, the existing wire may be used provided it is of proper size and correctly fused.
- The opening must be framed to provide adequate support and prevent air from being drawn from the roof cavity. Lumber 3/4" thick or more and long enough to bridge the opening must be used. Remember to provide an entrance hole for the power supply wire.

NOTE: NEVER create a LOW SPOT on the roof where water will collect. Water standing around the air conditioner may leak into the RV interior.

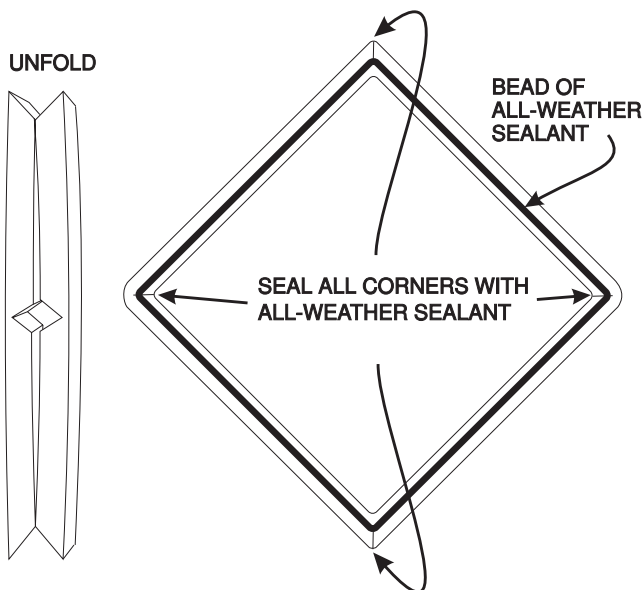
- The 14" x 14" roof opening is part of the return air duct and must be finished in accordance with NFPA standard 501C, Standard for Recreational Vehicles, Section 2-7.



4. ROOF GASKET INSTALLATION

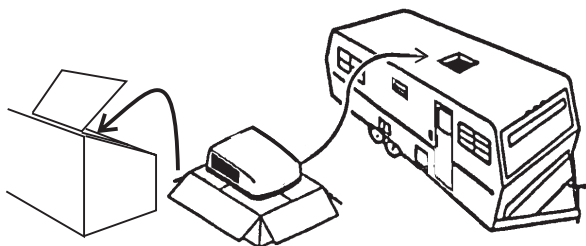
The roof gasket is used to seal the outside portion of the air conditioner to the exterior of the RV and prevent the elements from entering the interior of the RV. It is critical to make this seal weather-tight to prevent damage to the interior of the RV.

- The roof gasket comes packed in the top of the carton, in a folded position, with the air conditioner.
- Remove the gasket from the carton and unfold.
- Place silicone sealant or some other type of all-weather sealant in each corner.
- Place bead of sealant around the bottom flat surface of the gasket.
- Place the gasket over the prepared 14" opening, sealant side toward the roof.



C. PLACING THE AIR CONDITIONER ON THE ROOF

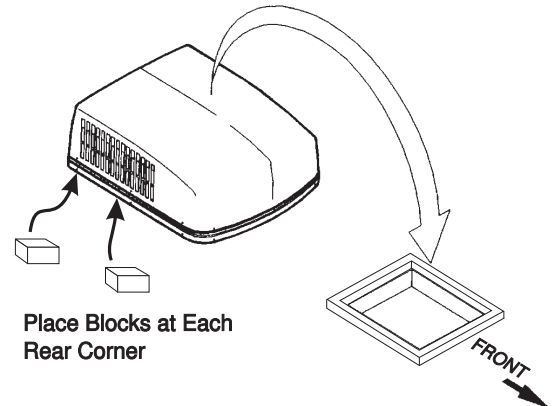
- Remove the Air Conditioner from the carton and discard the carton.
- Place the air conditioner on the roof.



⚠ WARNING

Use care in lifting- this unit weighs approximately 100 pounds.

- Find two (2) white foam blocks in the parts bag. Peel backing paper off and stick them to the underside, bottom rear corners of the base pan. These blocks support the rear of the air conditioner.
- Lift and place the unit over the prepared opening using the gasket on unit as a guide. The open blunt end goes toward the rear of the RV.



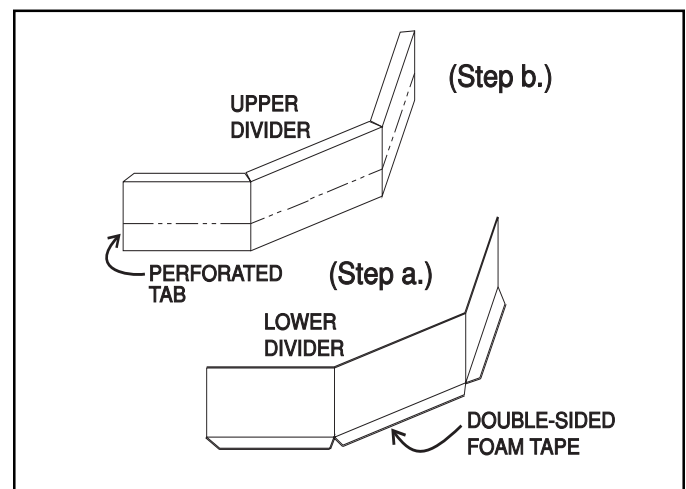
⚠ CAUTION

DO NOT slide the unit. This may damage the gasket and create a leaky installation.

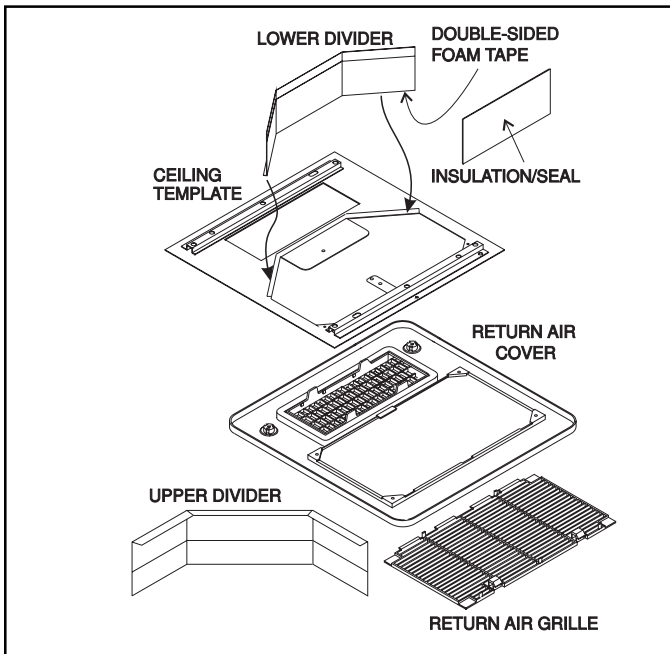
This completes the outside work. Minor adjustments can be done from the inside of the RV if required.

D. CEILING TEMPLATE INSTALLATION

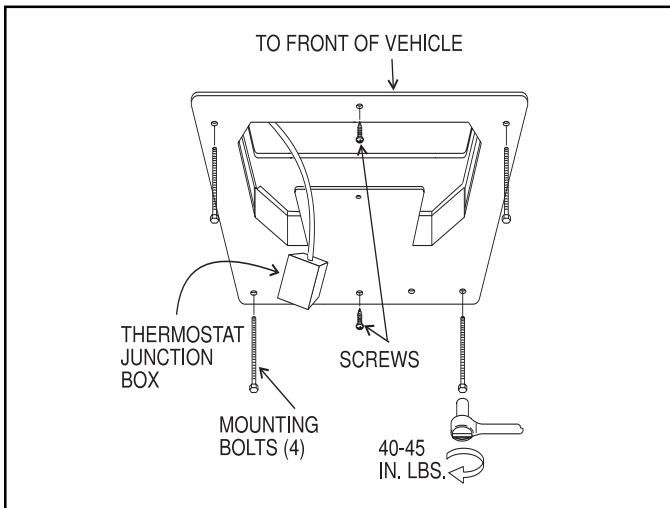
- Measure the ceiling to roof thickness:
 - If distance is 2" or less, you must trim the lower divider to the measured distance plus 1/2". (Lower divider has double-sided foam tape on bottom flange).
 - If distance is 2" to 3-3/4", you must remove the perforated tab from the upper divider.
 - If the distance is 3-3/4" to 5", remove no tabs from the upper divider.



2. Attach lower divider to ceiling template.
 - a. Remove paper backing from foam tape on lower plate.
 - b. Press firmly onto ceiling template in location shown below. Make sure the corners of lower divider match up with ceiling template.

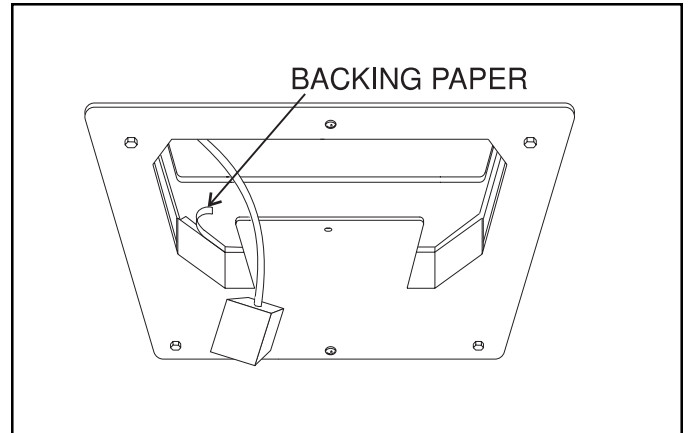


3. Install the ceiling template.
 - a. Reach up into the return air opening of the air conditioner and pull the thermostat/junction box down for later installation.
 - b. Locate 1/4" mounting bolts in the parts package.
 - c. Take the ceiling template and hold up to the 14" opening.
 - d. Start each mounting bolt through the ceiling template and up into the unit base pan by hand.
 - e. Evenly tighten mounting bolts to a torque of 40 to 45 inch pounds.



- f. This will compress the roof gasket to approximately 1/2". The bolts are self-locking so overtightening is not necessary.
 - g. Install wood screw in each end of ceiling template. This ensures a tight fit of return air cover to ceiling.

4. Installation of upper divider:
 - a. Remove the backing paper from double-sided tape located on the lower divider.

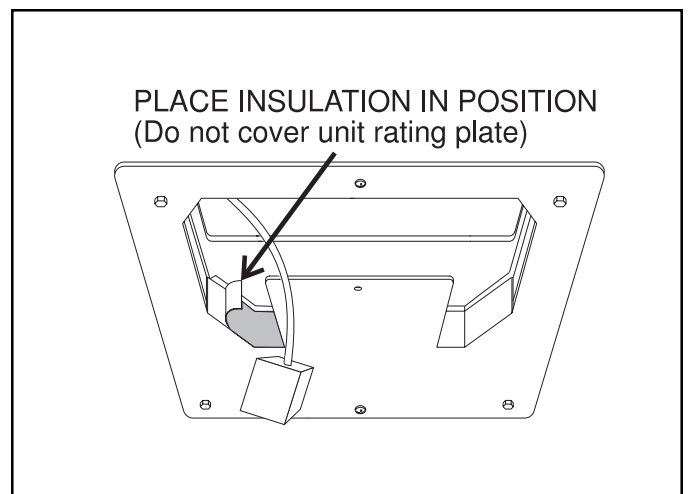


- b. Place upper divider **firmly** up to the bottom of the air conditioner base pan.

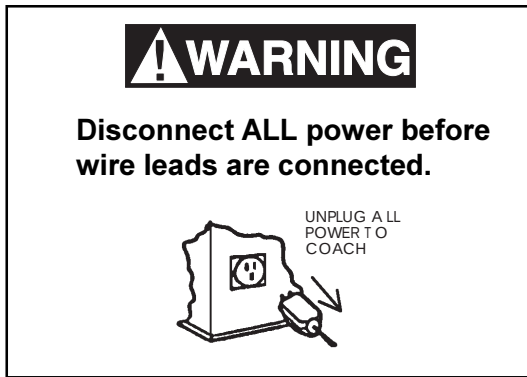
NOTE: The adhesive on the double-sided tape is extremely sticky. Divider must be properly positioned before pressing in place.
 - c. With slight pressure push upper divider against exposed double-sided tape on lower divider.
 - d. Locate the 1/8" x 7" x 18" self-adhesive insulation supplied with the return air kit.
 - e. Remove the backing paper from the insulation and carefully stick onto the ceiling template divider panel.

NOTE: The adhesive on the insulation is extremely sticky. Be sure part is located where desired before pressing into place. We recommend pulling off part of the backing paper, locating the part and then remove backing paper as insulation is pressed into place.

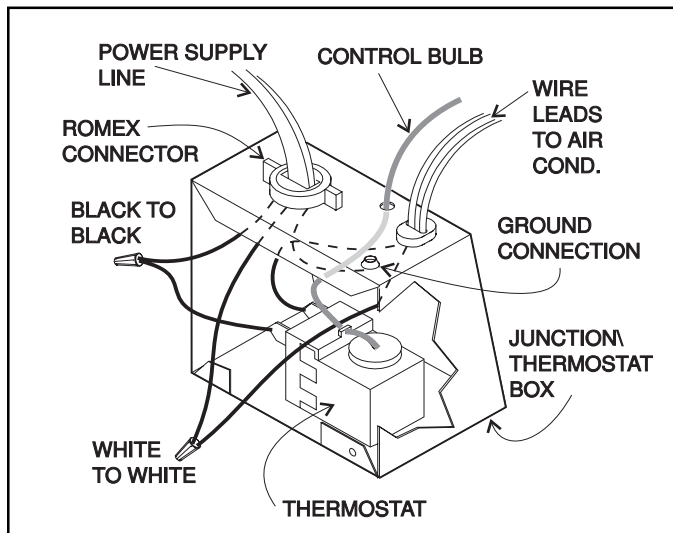
- f. Excess width is intended to seal the divider plate to the sides of the 14" opening. This is to prevent cold discharge air from circulating into the air conditioner return air opening.
 - g. If the insulation is too high, stick the excess height of insulation to the air conditioner base pan. **NOTE: DO NOT cover up the unit rating plate.**



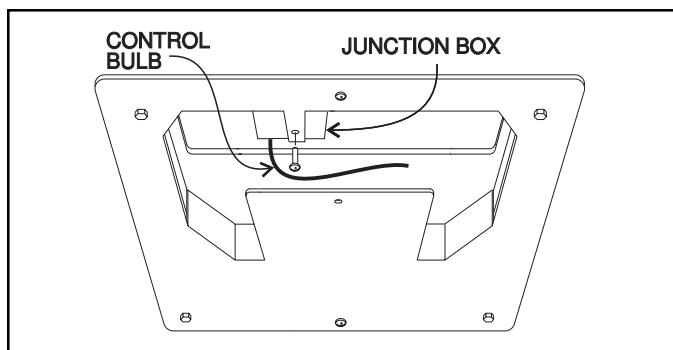
E. CONNECTION OF 115 VOLT POWER SUPPLY



1. Route supply line into junction/thermostat box through a Romex connector.
2. Connect wires: white to white, black to black, and green or bare copper wire to green ground screw. Use proper sized twist wire connectors.
3. Tighten screws on Romex connector being careful not to pinch and cut into the insulation on power supply leads.
4. Push excess wires into junction box and install junction box cover onto the junction box with #8 x 3/8" blunt pointed screw provided.



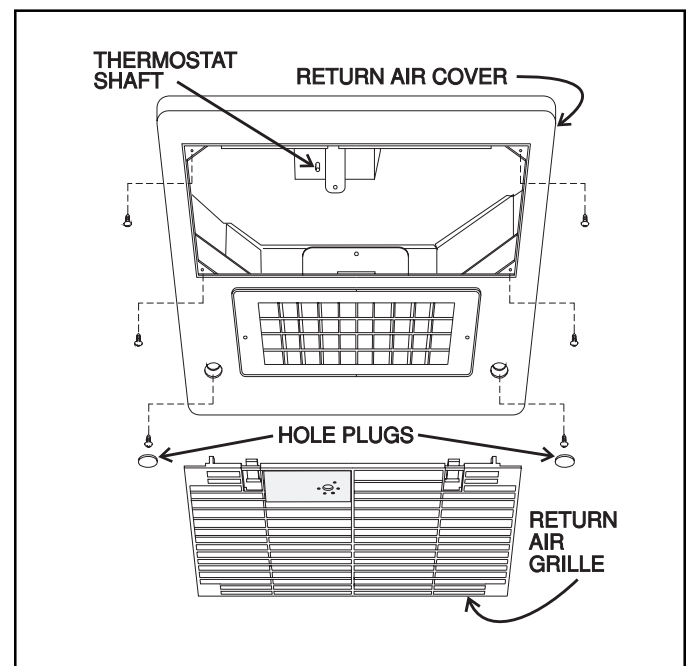
5. Place the junction/thermostat box up into the opening and attach to ceiling template with #6 x 3/8" blunt pointed screw provided. The screw goes into the thermostat base located in box.



6. Position the control bulb approximately one inch above ceiling template opening. Ensure this bulb is free and not laying on ceiling template metal parts.

F. INSTALLATION OF RETURN AIR COVER

1. Remove return air grille from the return air cover.
2. Place the return air cover up to ceiling template.
3. Install cover to template with (6) #8 x 1/2" sharp pointed screws provided.
4. Reinstall return air grille into return air cover.
5. Install two (2) hole plugs into screw holes in back of return air cover. Align tabs with mating notches and snap into place.
6. Place the control knob onto thermostat shaft.



This completes the installation of the air conditioner. Supply 115 volt AC power to the unit's electrical circuit and check the unit for proper operation. Refer to the front portion of this manual for a description of the air conditioner operation.

LIMITED ONE-YEAR WARRANTY SUNCHASER AIR CONDITIONER

**THE SELLER NAMED BELOW MAKES THE FOLLOWING WARRANTY WITH
RESPECT TO THE DOMETIC PRODUCT:**

1. This warranty is made only to the first purchaser (herein after referred to as the "Original Purchaser") who acquires the product for his own use and is installed and operated within the continental United States and Canada.
2. This warranty will be in effect for one year on parts, freight and labor from the date of purchase by the Original Purchaser. It is suggested that the original purchaser retain a copy of the dated bill of sale as evidence of the date of purchase.
3. This warranty covers only specified Dometic parts, which shall be free from defects in material and workmanship under normal use. This warranty does not cover conditions unrelated to the material and workmanship of the product. Such unrelated conditions include, but are not limited to: (a) damage not reported within 7 days; (b) faulty installation or installation that does not comply to the RVIA standards and any damage resulting from such; (c) the need for normal maintenance and any damage resulting from the failure to provide such maintenance; (d) failure to follow Sellers instructions for use of this product; (e) any accident to or misuse of any part of this product and any alteration by anyone other than the Seller or its authorized representative; (f) damage or failure caused by installation of accessories or parts not manufactured and marketed by the Seller will void any warranty, implied or written; (g) corrosion, salt water; (h) radio frequency interference (RFI) or electromotive interference (EMI); and (i) installation on semi trucks or offroad vehicles.
4. The specified parts covered by this warranty are as follows: switches, thermostats, relays, capacitors, motors, electronic module boards and the sealed system; compressor, evaporator coil, condenser coil, refrigerant lines, capillary tubes and reversing valve.
5. In order to obtain the benefits of this warranty, the original purchaser must return the product which is found defective to the Seller named below or to a Dometic Authorized Service Center during the period that this warranty is in effect. The original purchaser is responsible for all charges incurred in delivery of the product to the Seller or Dometic Authorized Service Center, and in pick up after the warranty service has been completed. To obtain the location of the nearest Authorized Service Center, please call 1-800-544-4881 or in Canada call 1-519-653-4390.
6. Any item returned in the manner described in paragraph 6 will be examined by the Seller or the Authorized Dometic Service Center. If it is found that the returned item was defective in material and workmanship, the Seller or the Authorized Dometic Service Center will repair the product per the terms outlined in paragraph 4. **CONFIRM THE SERVICE AGENCY IS AN AUTHORIZED DOMETIC SERVICE CENTER. DO NOT PAY THE SERVICE AGENCY FOR WARRANTY REPAIRS. SUCH PAYMENTS WILL NOT BE REIMBURSED.**
7. The Seller does not authorize any person or company to create any warranty obligations or liability on their behalf. This warranty is not extended by the length of time which you are deprived of the use of the product. Repairs and replacement parts provided under the terms of this warranty shall carry only the non-expired portion of this warranty.
8. In no event shall either seller be liable for incidental or consequential damages. This includes any damage to another product or products resulting from such a defect. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply.
9. Any implied warranty, including the implied warranty of merchantability and fitness for any purpose, is limited to the duration of this limited warranty. Some states do not allow limitations on how long an implied warranty can last, so the above limitation may not apply.
10. THIS WARRANTY GIVE SPECIFIC LEGAL RIGHTS, YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. No action to enforce this warranty shall be commenced later than ninety (90) days after the expiration of the warranty period. Claims must be submitted in writing to the Dometic Warranty Department for arbitration.
11. All products (except those specifically built for commercial use) are warranted only when installed on vehicles built to R.V.I.A and C.R.V.A, Z-240 Standards.
12. The Seller reserves the right to change the design of any product without notice and with no obligation to make corresponding changes in products previously manufactured.

WIRING DIAGRAM

