



RECORD THIS UNIT INFORMATION FOR
FUTURE REFERENCE:
Model Number _____
Serial Number _____
Date Purchased _____

530715, 530716, 59156, 630045

Series Heat Pump

Used With Part No.

3309697.013 Digital Control Kit, Cool/Furnace/Heat Pump

Ducted Installation

And One

3105007 Return Air Grill Or

3105935 Quick Cool Grill Or

3308120 Genesis Air Filtration System

**THIS UNIT IS DESIGNED FOR OEM INSTALLATION
ALL INITIAL INSTALLATIONS MUST BE APPROVED BY
DOMETIC CORPORATION**

USA

SERVICE OFFICE
Dometic Corporation
2320 Industrial Parkway
Elkhart, IN 46516
574-294-2511

CANADA

Dometic Corporation
46 Zatonski, Unit 3
Brantford, ON N3T 5L8
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519-720-9578

For Service Center

Assistance Call:
800-544-4881

⚠ WARNING

This manual must be read and understood before installation, adjustment, service, or maintenance is performed. This unit must be installed by a qualified service technician. Modification of this product 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 de cet appareil doit être effectuée par un réparateur qualifié. Toute modification de cet appareil peut être extrêmement dangereuse et entraîner des blessures ou dommages matériels.

INSTALLATION INSTRUCTIONS

Model

530715.501	530716.506
530715.506	530716.701
530715.701	530716.706
530715.706	59156.331
530716.301	59156.531
530716.306	59156.731
530716.501	630045.331

REVISION:

Form No. 3311267.029 4/08
(Replaces 311267.011)
(French 3311268.027)
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LaGrange, IN 46761

3311267.029

**Important: These instructions must
stay with unit. Owner read carefully.**

SAFETY INSTRUCTIONS

This manual has safety information and instructions to help users eliminate or reduce the risk of accidents and injuries.

RECOGNIZE SAFETY INFORMATION



This is the safety-alert symbol. When you see this symbol in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating instructions.

UNDERSTAND SIGNAL WORDS

A signal word, **WARNING** OR **CAUTION** is used with the safety-alert symbol. They give the level of risk for potential injury.

⚠ WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION indicates a potentially hazardous situation which, if not avoided may result in minor or moderate injury.

CAUTION used without the safety alert symbol indicates, a potentially hazardous situation which, if not avoided may result in property damage.

Read and follow all safety information and instructions.

GENERAL INFORMATION

A. Product features or specifications as described or illustrated are subject to change without notice.

B. This Air Conditioner Is Designed For:

1. Installation on a recreational vehicle during the time the vehicle is manufactured.
2. Mounting on the roof of a recreational vehicle.
3. Roof construction with rafters/joists on minimum of 16 inch centers.
4. Minimum of 2.00 inches and maximum of 5.50 inches distance between roof to ceiling of recreational vehicle. Alternate installation methods will allow for roofs more than 5.50 inches thick.

C. 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:

1. Parking the RV in a shaded area
2. Using window shades (blinds and/or curtains)
3. Keeping windows and doors shut or minimizing usage
4. Avoiding the use of heat producing appliances

Operation on High Fan/Cooling mode will give optimum or maximum efficiency in high humidity or high outside temperatures.

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.

For a more permanent solution to high heat gain, accessories like A&E outdoor patio and window awnings will reduce heat gain by removing the direct sun. They also add a nice area to enjoy company during the cool of the evening.

D. Condensation

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.

SPECIFICATIONS

Model No.	Nominal Capacity (BTU/HR) Cooling	Electrical Rating	Compressor Rated Load Amps	Compressor Locked Rotor Amps	Fan Motor Rated Load Amps	Fan Motor Locked Rotor Amps	SCFM Max / Min	Total Static Max / Min W.C.	Refrigerant R-22 (Oz.)	Minimum Wire Size*	AC Circuit Protection ***User Supplied	Installed Weight (Pounds)	Minimum Generator Size** 1 Unit / 2 Units	
530715.501 530715.506 530715.701 530715.706 530716.301	13,500 13,500 13,500 13,500 15,000	120 VAC, 60 Hz., 1 PH	10.3 10.3 12.2 12.2 13.2	62.0 62.0 58.0 58.0 60.0	3.0 3.0 3.0 3.0 2.8	8.5 8.5 8.5 8.5 7.6	375 / 275 375 / 275 375 / 275 375 / 275 375 / 275	0.55 / 1.10 0.55 / 1.10 0.55 / 1.10 0.55 / 1.10 0.70 / 0.90	17.5 17.5 17.5 17.5 29.5	12AWG Copper Up To 24*	20 Amp 20 Amp 20 Amp 20 Amp 20 Amp	92 93 92 93 107	3.5 KW / 5.0 KW 3.5 KW / 5.0 KW 3.5 KW / 5.0 KW 3.5 KW / 5.0 KW 3.5 KW / 5.0 KW	
530716.306 530716.501 530716.506 530716.701 530716.706	15,000 15,000 15,000 15,000 15,000		13.2 13.2 13.2 13.2 13.2	60.0 79.0 79.0 62.0 62.0	2.8 2.8 2.8 2.8 2.8	7.6 7.6 7.6 7.6 7.6	375 / 275 375 / 275 375 / 275 375 / 275 375 / 275	0.70 / 0.90 0.70 / 0.90 0.70 / 0.90 0.70 / 0.90 0.70 / 0.90	29.5 29.5 29.5 29.5 29.5		20 Amp 20 Amp 20 Amp 20 Amp 20 Amp	108 106 107 106 107	3.50KW / 5.0 KW 3.5 KW / 5.0 KW 3.5 KW / 5.0 KW 3.5 KW / 5.0 KW 3.5 KW / 5.0 KW	
59156.331 59156.531 59156.731 630045.331	15,000 15,000 15,000 13,500		12.7 12.9 12.7 12.4	60.0 71.0 62.0 60.0	2.5 2.5 2.2 3.5	6.0 6.0 6.0 10.0	350 / 250 350 / 250 350 / 250 335 / 250	0.40 / 1.10 0.40 / 1.10 0.40 / 1.10 0.12 / 0.65	34.0 31.5 31.5 23.5		20 Amp 20 Amp 20 Amp 20 Amp	105 105 105 95	3.5 KW / 5.0KW 3.5 KW / 5.0 KW 3.5 KW / 5.0 KW 3.5 KW / 5.0 KW	

* For wire length over 24 ft., consult the National Electric Code for proper sizing.

** Dometic Corporation 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. Keep in mind generators lose power at high altitudes and from lack of maintenance.

*** CIRCUIT PROTECTION: Time Delay Fuse or HACR Circuit Breakers Required.

INSTALLATION INSTRUCTIONS

A. Precautions

⚠ WARNING

Improper installation may damage equipment, could endanger life, cause serious injury and/or property damage.

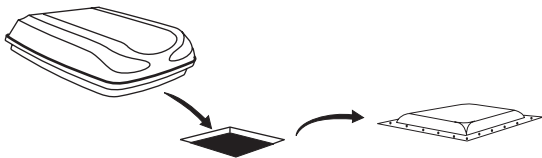
1. Read Installation and Operating Instructions carefully before attempting to start your air conditioner installation.
2. Dometic Corporation will not be liable for any damages or injury incurred due to failure in following these instructions.
3. Installation must comply with the National Electrical Code ANSI/NFPA-70 and CSA Standard C22.1 (latest edition and any State or Local Codes or regulations).
4. **DO NOT** add any devices or accessories to this air conditioner except those specifically authorized by Dometic.
5. This equipment must be serviced by qualified personnel and some states require these people to be licensed.

B. Choosing Proper Location For The Air Conditioner

This air conditioner is specifically designed for installation on the roof of a recreational vehicle (RV). When determining your cooling requirements, the following should be considered:

- Size of RV;
 - Window area (increases heat gain);
 - Amount of insulation in walls and roof;
 - Geographical location where the RV will be used;
 - Personal comfort level required.
1. Normal Location-The air conditioner is designed to fit over an existing roof vent opening.

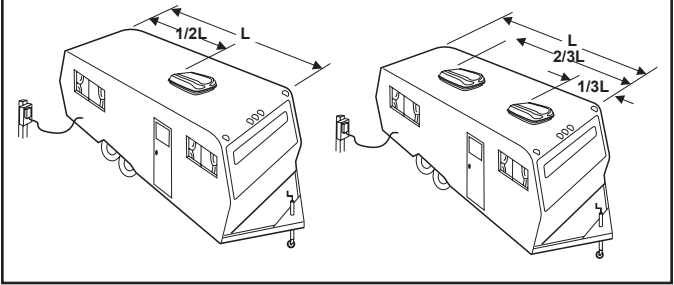
FIG. 1



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 one third and one Air Conditioner two thirds from front of RV and centered from side to side.

FIG. 2



It is preferred that the air conditioner be installed on a relatively **flat and level** roof section measured with the RV parked on a level surface.

Note: A 8° slant to **either** side, or front to back, is acceptable for 630045 units. Up to a 15° to either side or front to back is acceptable for 530715, 530716, & 59156.

3. After Location Has Been Selected:
 - a. Check for obstructions in the area where air conditioner will be installed. See FIG. 3 & 4.
 - b. 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.

CAUTION

It is the responsibility of the installer of this air conditioner system to ensure structural integrity of the RV roof. Never create a low spot on the roof where water will collect. Water standing around the air conditioner may leak into the interior causing damage to the product and the RV.

- c. Check inside the RV for return air kit obstructions (i.e. door openings, room dividers, curtains, ceiling fixtures, etc.) See FIG. 3 & 4.

FIG. 3

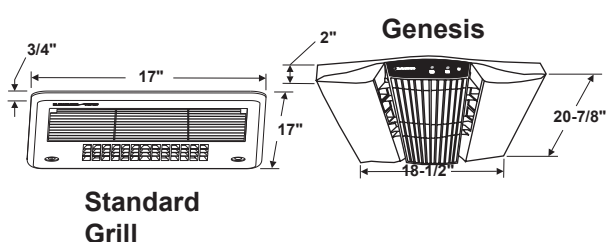
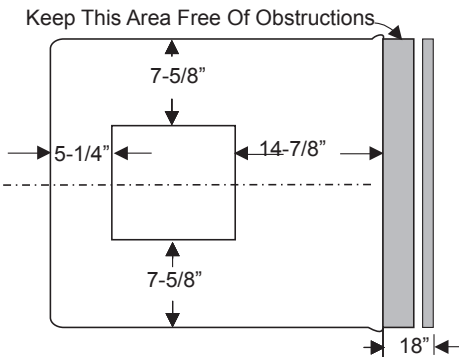
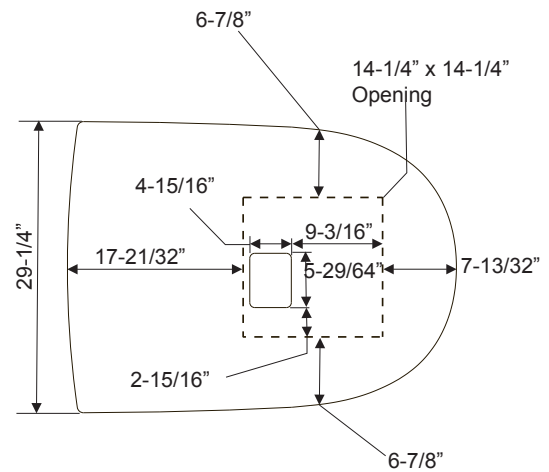


Fig. 4

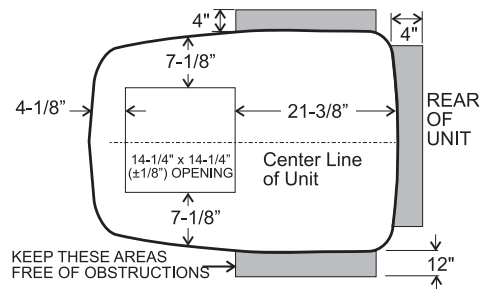
59156 Series



530 Series



630045 Series



C. Roof Preparation

1. Opening Requirements - Before preparing the ceiling opening, the type of system options must be decided upon. Read all of the following instructions before beginning the installation.
If a roof vent opening will not be used a 14-1/4" x 14-1/4" (±1/8") opening must be cut through the roof and ceiling of the RV. This opening must be located between the roof reinforcing members.

⚠ WARNING

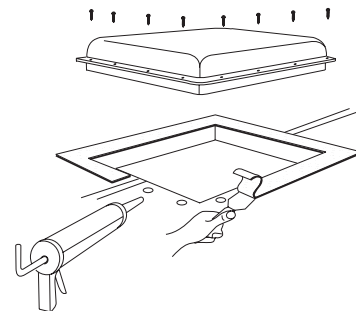
There may be electrical wiring between the roof and the ceiling. Disconnect 120 volt AC power cord and the positive (+) 12 volt DC terminal at the supply battery. Failure to follow this instruction may create a shock hazard causing death or severe personal injury.

The 14-1/4" x 14-1/4" (±1/8") opening is part of the return air system of the Air Conditioner and must be finished in accordance with NFPA Standard 501C Section 2.7.2.

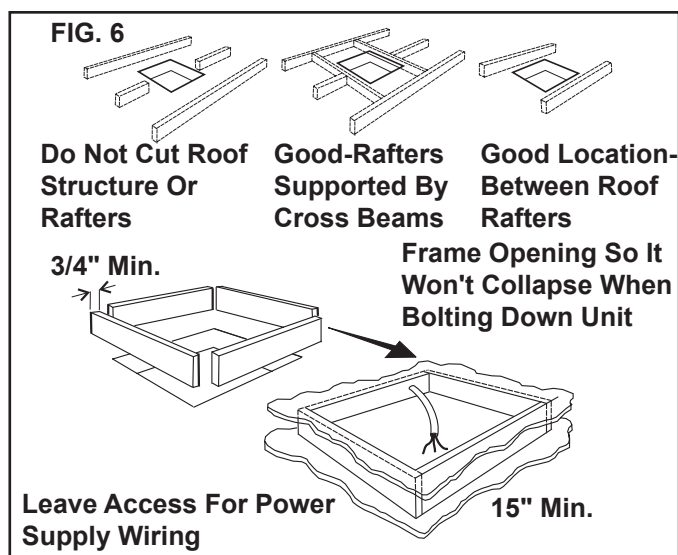
2. Roof Vent Removal

- a. Unscrew and remove the roof vent.
- b. Remove all caulking compound around opening.
- c. Seal all screw holes and seams where the roof gasket is located. Use a good grade of all weather sealant. See FIG. 5.

FIG. 5



- d. If the opening exceeds 14-3/8" x 14-3/8", it will be necessary to re-size the opening to 14-1/4" x 14-1/4" ($\pm 1/8$ ").
- e. If the opening is less than 14-1/8" x 14-1/8", it must be enlarged.
3. New Opening- (Installation Other Than Vent Opening)
 - a. Mark a 14-1/4" x 14-1/4" ($\pm 1/8$ ") square on the roof and carefully cut the opening.
 - b. Using the roof opening as a guide, cut the matching hole in the ceiling.
 - c. The opening created must be framed to provide adequate support and prevent air from being drawn from the roof cavity. Lumber 3/4" or more in thickness must be used. Remember to provide an entrance hole for power supplies, furnace wiring, and 4-conductor control cable.



CAUTION

It is the responsibility of the installer of this air conditioner system to ensure structural integrity of the RV roof. Never create a low spot on the roof where water will collect. Water standing around the air conditioner may leak into the interior causing damage to the product and the RV.

CAUTION

It is the responsibility of the installer to insure the ductwork will not collapse or bend during and after the installation. Dometic Corporation will not be liable for roof structural or ceiling damage due to improperly insulated, sealed or collapsed ductwork.

4. Air Distribution System Sizing & Design

The Installer of this air conditioner system must design the air distribution system for their particular application. Several requirements for this system **MUST** be met for the air conditioner to operate properly. These requirements are as follows:

 - a. The duct material must meet or exceed any agency or RVIA Standard that may be in existence at the time the RV is produced.
 - b. All discharge air ducts must be properly insulated to prevent condensation from forming on their surfaces or adjacent surfaces during operation of the air conditioner. This insulation must be R-7 minimum.
 - c. Ducts and their joints must be sealed to prevent condensation from forming on adjacent surfaces during operation of the air conditioner.
 - d. Return air openings must have 40 square inches minimum free area including the filter.
 - e. Return air to the air conditioner must be filtered to prevent dirt accumulation on air conditioner cooling surface.
5. Air Distribution System Installation
 - a. Dometic Corporation recommends the basic configuration shown on page 7 & 8, for installing this air conditioner system. We have found by testing, that this configuration works best in most applications of this air conditioner system. It is the responsibility of the Installer of this system to review each RV floor plan and determine the following:
 - Duct size
 - Duct layout
 - Register size
 - Register location
 - Thermostat location

These items must be determined in conjunction with the Air Distribution System and Sizing and Design Requirements listed in the chart on page 7 & 8. Terminate the start of the duct at the back edge of the 14-1/4" x 14-1/4" ($\pm 1/8$ ")

AIR DISTRIBUTION DUCT SIZING & DESIGN CHART

Return Air Cover Model	3105007 3105935	3308120 Genesis Air Filtration System
Roof Cavity Depth	2.0 In. Min. - 5-1/2 In. Max.	2.0 In. Min. - 5-1/2 In. Max.
Duct Cross Sectional Area	21.0 Sq. In. Min.	32.0 Sq. In. Min.
Duct Size Depth Width Total Duct Length Duct Length (short run)	1-1/2 In. Min. - 2-1/2 In. Max. 7.0 In. Min. - 10.0 In. Max. 15.0 Ft. Min. - 40.0 Ft. Max. 1/3 Total Duct Length	2.0 In. Min. - 2-1/2 In. Max. 8.0 In. Min. - 10.0 In. Max. 15.0 Ft. Min. - 40.0 Ft. Max. 1/3 Total Duct Length
Register Requirements Number Required Per Run Register Free Air Area Distance From Duct End Distance From Elbow	4 Min. 14.0 Sq. In. 5.0 In. Min. - 8.0 In. Max. 15.0 In.	4 Min. 14.0 Sq. In. 5.0 In. Min. - 8.0 In. Max. 15.0 In.
Total System Static Air Pressure Blower at High Speed, Filter & Grill In Place	0.12 - 0.65 In. W.C. 630 Series 0.55 - 1.10 In. W.C. 530715 Series 0.7 - 0.9 In. W.C. 530716 Series 0.4 - 1.1 In. W.C. 59156 Series	0.12 - 0.65 In. W.C. 630 Series 0.55 - 1.10 IN W.C. 530715 Series 0.7 - 0.9 In. W.C. 530716 Series 0.4 - 1.1 In. W.C. 59156 Series

Note: Duct sizes listed are inside dimensions.

Important: Alternate configurations and methods may be used which still allow the air conditioner to operate properly; however, these alternate configurations and methods must be approved by the Dometic Corporation in writing. The following instructions are based upon the use of Dometic 3309697.013 Digital Thermostat Control Kit, 3309704.009 Digital Thermostat, Return Air Kits 3105007, 3105935 or 3308120 Genesis Air Filtration System. See FIG. 7A, 7B and 7C.

FIG. 7A

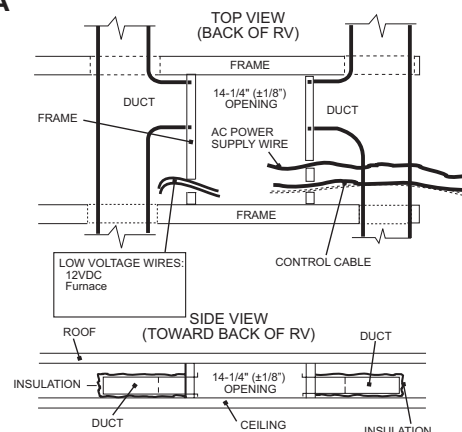
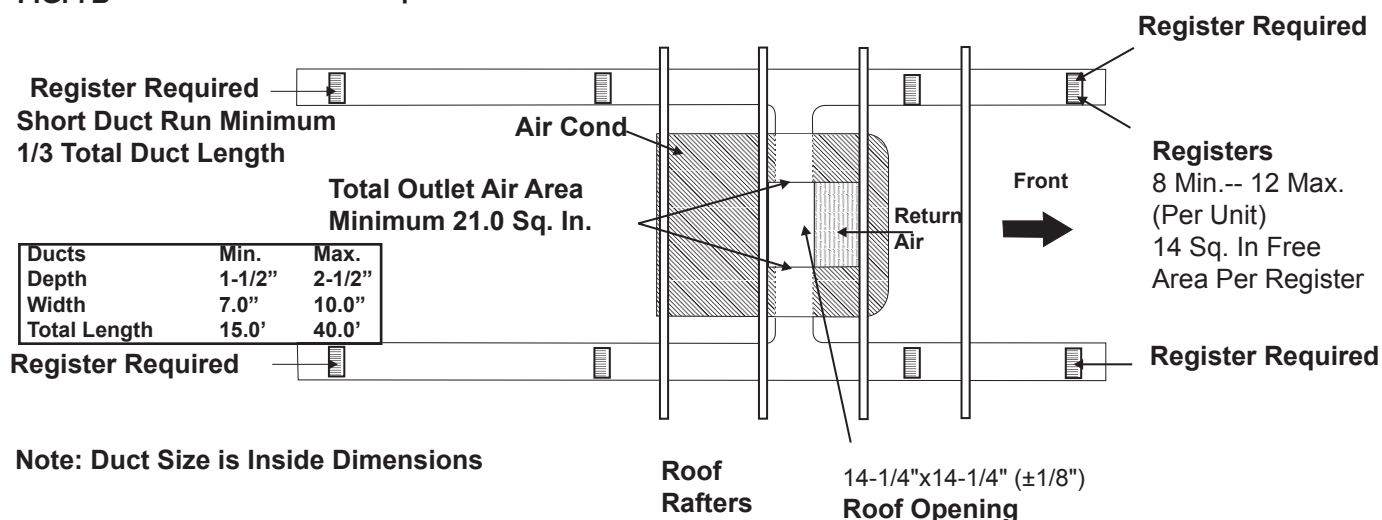
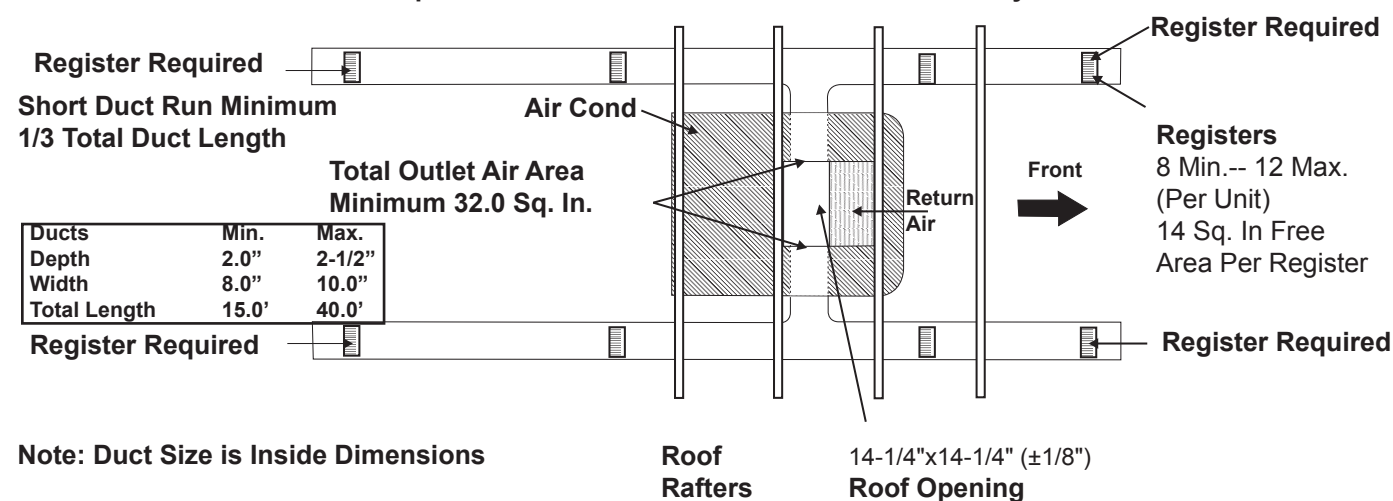


FIG. 7B Duct Size And Requirements For 3105007 And 3105935 Return Air Cover**FIG. 7C Duct Size And Requirements For 3308120 Genesis Air Filtration System Kit****D. Wiring Requirements**

1. 120 VAC Supply Line
Route a copper 12 AWG, with ground, 120 VAC supply line from the time delay fuse or circuit breaker box to the roof opening.
 - a. This supply line must be located in the front portion of the 14-1/4" x 14-1/4" (±1/8") opening.
 - b. The power **MUST** be on a separate 20 Amp time delay fuse or HACR circuit breaker.
 - c. Make sure that at least 15" of supply wire extends into the roof opening. This ensures an easy connection at the control box.
 - d. Wiring must comply with all National, State and Local Wiring Codes.
 - e. Use a steel sleeve and a grommet or equivalent methods to protect the wire where it passes into the opening.
2. Route a dedicated 12 VDC supply line (18-22 AWG) from the RV's converter (filtered terminals) or battery to the roof opening.
 - a. This supply line must be located in the front portion of the 14-1/4" x 14-1/4" (±1/8") opening.
 - b. Make sure that at least 15" of supply wire extends into the roof opening. Terminate the wires with 1/4" x 0.032" insulated terminals.
3. If a furnace is to be controlled by the system, the two furnace thermostat leads must be routed to the roof opening. Make sure that at least 15" of the furnace thermostat wires extend into the roof opening. Terminate the wires with 1/4" x 0.032" insulated terminals.
4. Route a 4-conductor control cable from the **Digital Thermostat** mounting position into the front of 14-1/4" x 14-1/4" (±1/8") roof opening. Make sure that at least 15" of the wire extends into the roof opening and 6" extend from the wall at the mounting position of the **Digital Thermostat**. A 3/8" diameter hole will be needed to route the cable through the wall. See Section E-2.

E. Dometic Digital Thermostat & Cable Installation

1. Location

- It is very important to ensure proper location of the **Digital Thermostat**, to provide a comfortable RV temperature. Observe the following rules when selecting a location:

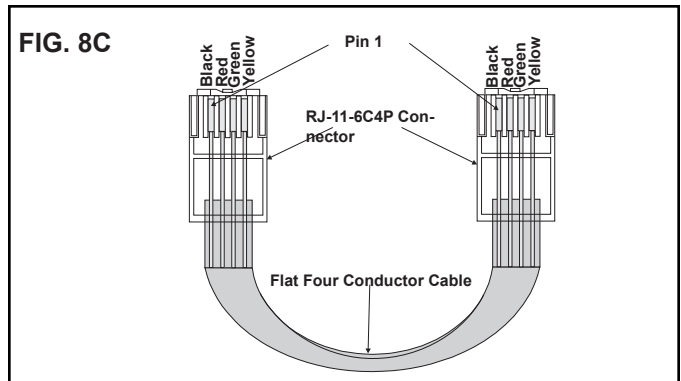
- Locate the **Digital Thermostat** 54" above the floor.
- Install the **Digital Thermostat** on a partition, not on an outside wall.
- **NEVER** expose it to direct heat from lamps, sun or other heat producing items.
- Avoid locations close to doors that lead outside, windows or adjoining outside walls.
- Avoid locations close to supply registers and the air from them.

2. Control Cable Installation

A 4-conductor control cable must be routed from the roof opening to the **Digital Thermostat**.

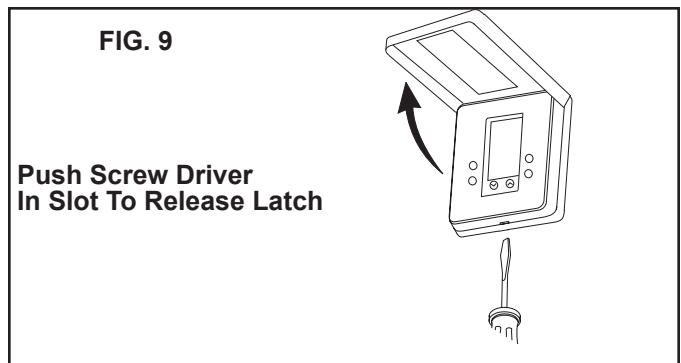
- Choose the shortest, most direct route from the 14-1/4" x 14-1/4" ($\pm 1/8$ ") opening to the **Digital Thermostat** location selected. Leave 6" of cable extending through the wall. See Section D-4.
- The control cable that should be used is a flat, 4-conductor telephone cable.
- The control cable must be terminated with two (2) RJ-11-6C4P telephone connectors. Refer to the crimp tool manufacture for crimping instructions. See FIG. 8A, 8B and 8C.

Important: RJ-11-6C4P connectors must be installed as shown in FIG. 8A, 8B & 8C.



3. Digital Thermostat Installation

- Carefully remove the base plate from the **Digital Thermostat**. This may be accomplished by pushing a small screwdriver in the slot on the bottom edge of the front cover to release latch. See FIG. 9.
- Insert the control cable through the hole in the base plate and mount the plate to the wall with two (2) screws provided. Check the alignment to ensure level installation.
- Install the control cable RJ-11-6C4P connector into the back of the **Digital Thermostat** and snap onto the base plate. See FIG. 9.

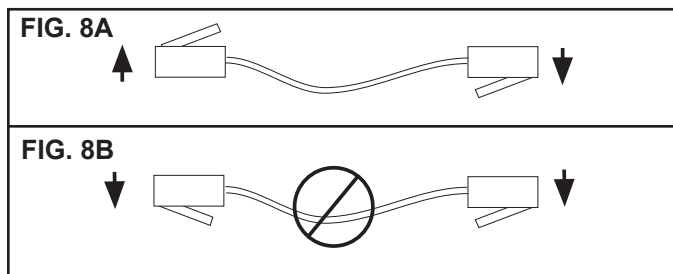
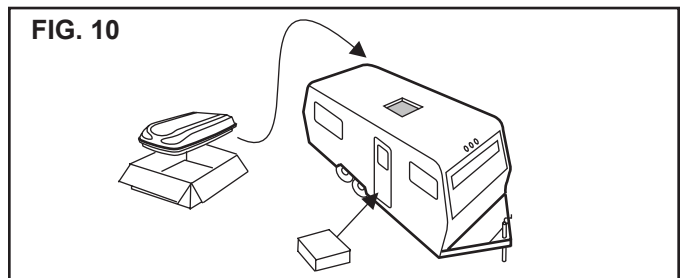


F. Placing Air Conditioner On The Roof

- Remove the air conditioner from the carton and discard carton. See FIG. 10.

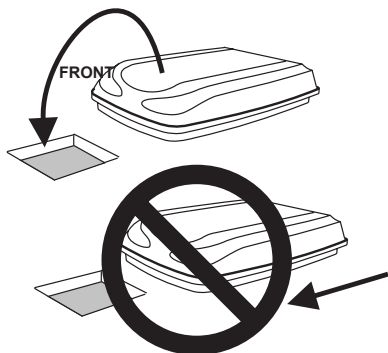
CAUTION

This unit weighs approximately 100 pounds. To prevent back injury, use a mechanical hoist to place Air Conditioner on roof.



2. Place the air conditioner on the roof.
3. Lift and place the unit over the prepared opening using the gasket on the unit as a guide. See FIG. 11.

FIG. 11



CAUTION

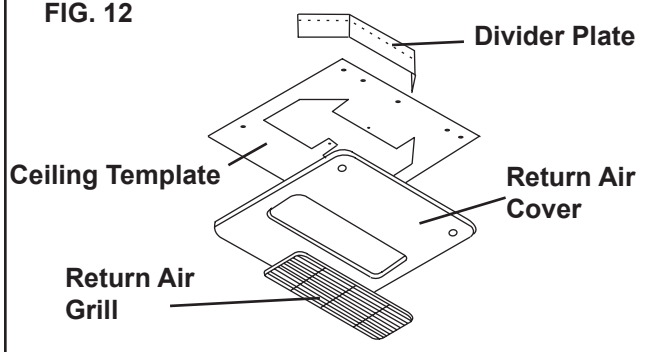
Do not slide the unit. This may damage the roof gasket attached to the bottom and may create a leaky installation.

4. Place the 3309697.013 Control Kit and Return Air Kit inside the RV. This box contains mounting hardware for the air conditioner and will be used inside the RV. This completes the outside work. Minor adjustments can be done from the inside of the RV if required.

G. Installing The Air Conditioner

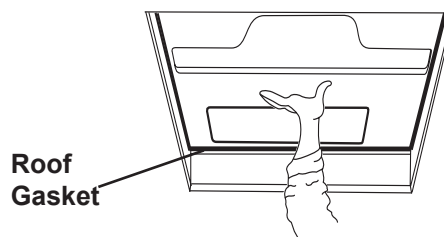
- Installing Unit with 3105007 or 3105935 Return Air Kit. For unit with Genesis Air Filtration System, see page 12.

FIG. 12



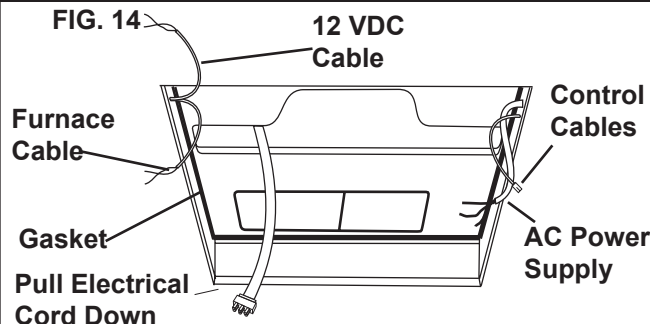
1. Installation Of Ceiling Template
 - a. Check gasket alignment of the air conditioner over the roof opening and adjust if necessary. Unit may be moved from below by slightly lifting and moving. See FIG. 13.

FIG. 13 Center Unit From Below



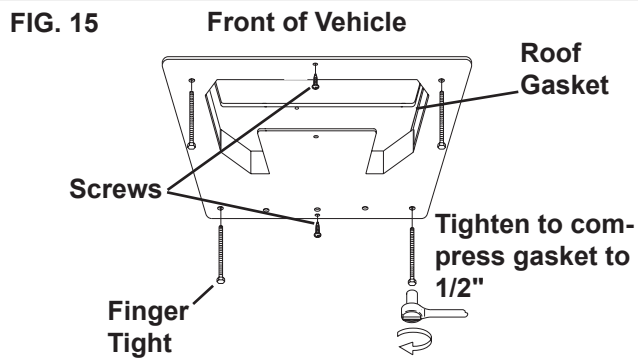
- b. Remove return air cover and ceiling template from the 3105007 or 3105935 carton.
- c. Locate the four 8" x 1/4"-20 unit mounting bolts Supplied with relay kit.
- d. Pull down the unit's electrical cord See FIG. 14.

FIG. 14



- e. Hold the ceiling template up to the 14-1/4" x 14-1/4" (±1/8") opening. Be sure the large plate faces the rear of the RV.
 - Start each mounting bolt through the ceiling template and up into the unit base pan by hand. Install wood screw in each end of the ceiling template. This insures a tight fit of the return air cover to ceiling. See FIG. 15.

FIG. 15



- **EVENLY** tighten the four bolts to a torque of 40 to 50 inch pounds. This will compress the roof gasket to approximately 1/2". The bolts are self locking so over tightening is not necessary. See FIG. 15.

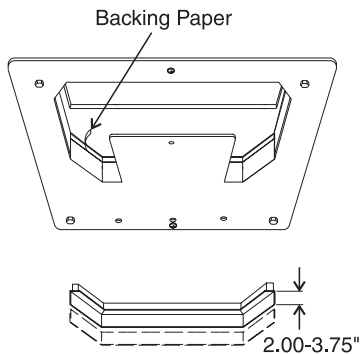
CAUTION

If bolts are left loose there may not be adequate roof seal or if over tightened, damage may occur to the air conditioner base or ceiling template. Tighten to specifications listed in this manual.

2. Installation Of Divider Plate

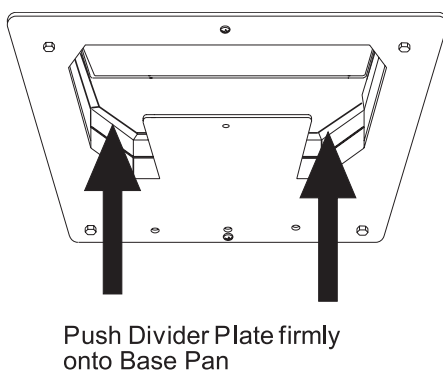
- a. Measure the ceiling to roof thickness:
 - If distance is 2.0" - 3-3/4", remove perforated tab from divider plate.
 - If distance is 3-3/4" - 5-1/2", remove no tabs.
- b. Remove the backing paper from double sided tape located on ceiling template. See FIG. 16.

FIG. 16



- c. Place divider plate up to bottom of air conditioner base pan firmly. The foam tape on the divider plate must seal to bottom of base pan. See FIG. 17.

FIG. 17



Note: The adhesive on the insulation is extremely sticky. Be sure the part is located where desired before pressing into place.

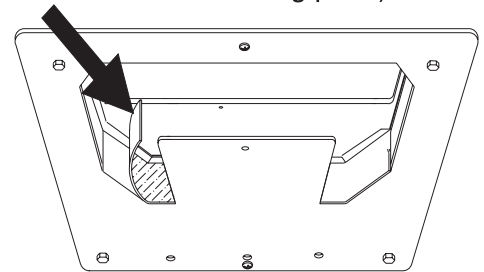
- d. With slight pressure then push the divider plate against the double sided tape on the ceiling template.
- e. Locate the 1/8" x 7" x 18" self-adhesive insulation supplied with the return air kit. Remove the backing paper from the insulation and carefully stick onto the ceiling template divider panel. See FIG. 18.

CAUTION

Improper installation and sealing of divider plate will cause the compressor to quick cycle on the cold control. This may result in fuse or circuit breaker opening and/or lack of cooling.

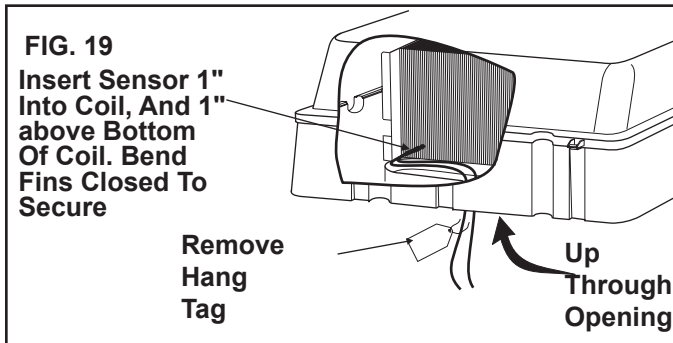
FIG. 18

Place insulation in position
(Do not Cover unit rating plate)



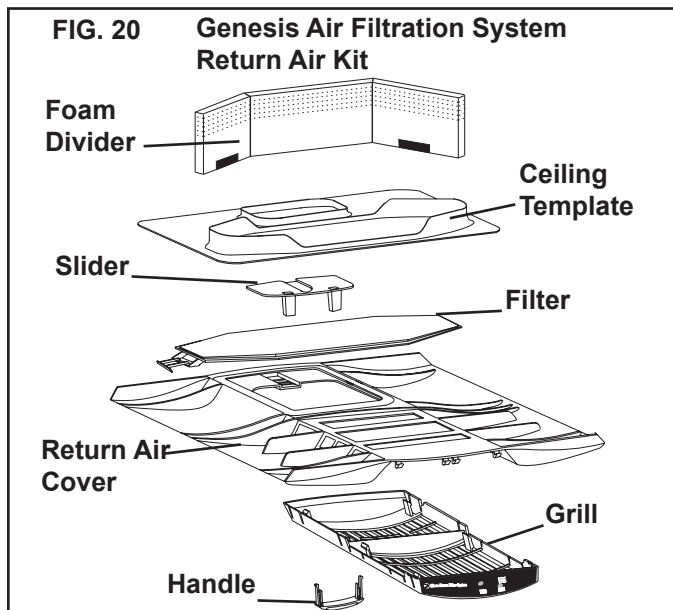
- Excess width is intended to seal the divider plate to the sides of the 14-1/4" x 14-1/4" ($\pm 1/8$ ") opening. This is to help prevent cold air discharge from circulating into the air conditioner return air opening.
 - If the insulation is too high, stick excess height of insulation to the air conditioner base pan. Do not cover up unit rating plate.
- f. Locate the relay control box on the ceiling template with the white 6 connector plug on the curb side of RV. Secure the control box to the ceiling template with 2 blunt self tapping screws.
 - g. Connect the 6 pin plug to the control box. The plug is polarized and will only fit in one direction.

- h. Insert the Freeze Control Sensor (blue wire from control box) approximately 1" into the 630045 evaporator coil fins located at the left side (other models in center) of the evaporator approximate 1" above the bottom of the coil fins as shown in FIG. 19.

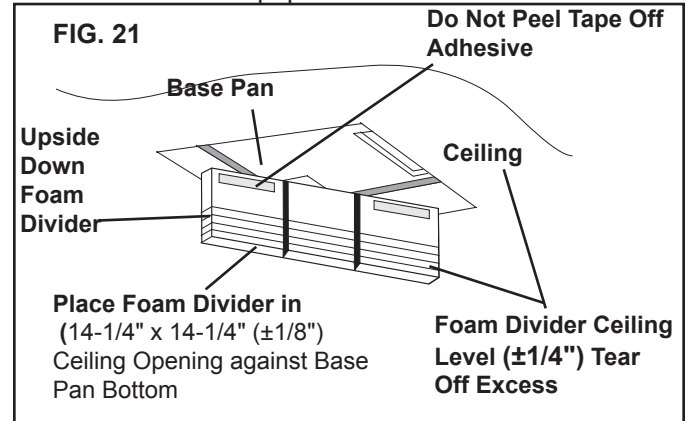


- i. Bend fins over sensor to secure in place.
- j. Insert the outdoor ambient sensor (red wire) from Unit into the 2 pin plug on the side of the control box, labeled "outdoor".

■ **Installing unit with 3308120 Genesis Air Filtration System Return Air Kit. For unit with 3105007 or 3105935 Return Air Kit, see page 10.**

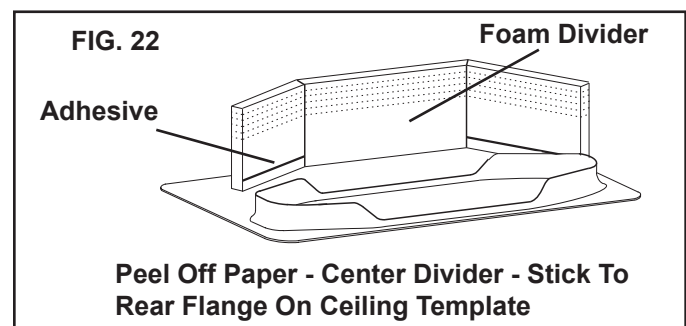


1. Check gasket alignment of the air conditioner over the roof opening and adjust if necessary. Unit may be moved from below by slightly lifting and moving. See FIG. 13.
 - a. Remove return air cover, ceiling template, foam divider and air filter from the 3308120 carton.
 - b. Locate the four (8" x 1/4-20) unit mounting bolts.
 - c. Pull down the unit's electrical cord. See FIG. 14.
2. Installing Foam Divider
 - a. Locate the foam divider and insert it corner to corner in the 14-1/4" x 14-1/4" ($\pm 1/8$ ") opening with the adhesive tape up (Do not remove paper to expose adhesive). The foam divider should be level with the ceiling ($\pm 1/4$ "). Tear off the excess at the pre-cut perforations in divider. See FIG. 21.
 - b. Peel the paper off of the foam divider and stick



it in place on the center of the rear flange of the return air opening on the ceiling template. See FIG. 22.

3. Install control box on ceiling template with blunt



CAUTION

Improper installation and sealing of foam divider will cause the compressor to quick cycle on the cold control. This may result in fuse or circuit breaker opening and/or lack of cooling.

self-tapping screws. See FIG. 23 & 23A.

4. Place the ceiling template up into the return air

FIG. 23

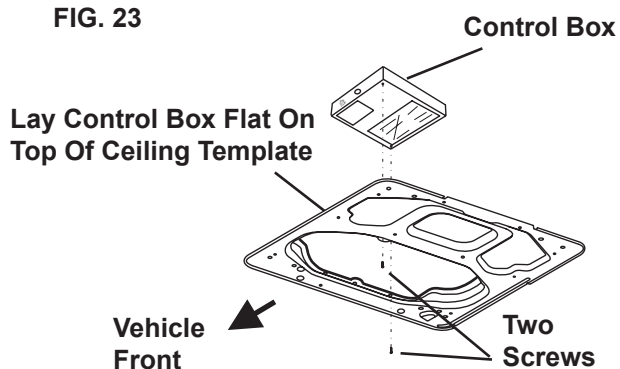
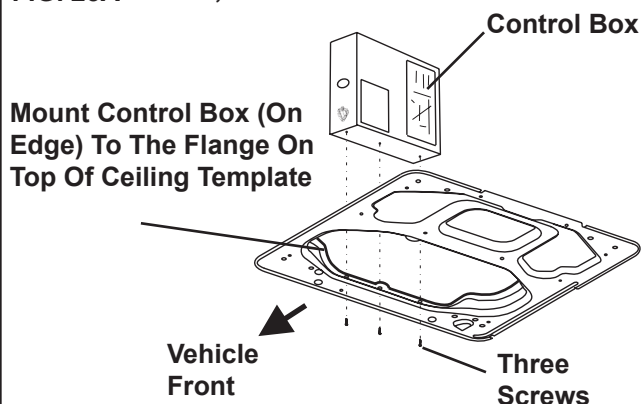


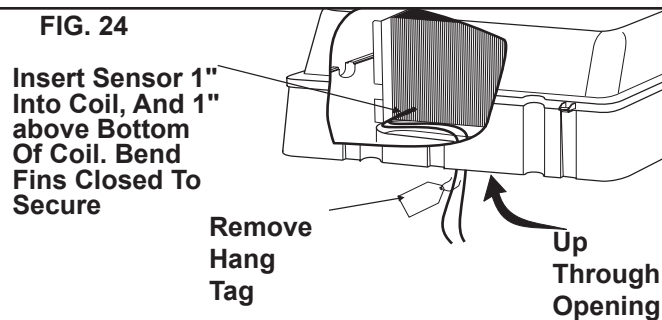
FIG. 23A 530, and 591 Series



opening and plug the unit's control cable into the control box before installing the mounting bolts.

5. Insert the Freeze Control Sensor See Page 12 h.

FIG. 24

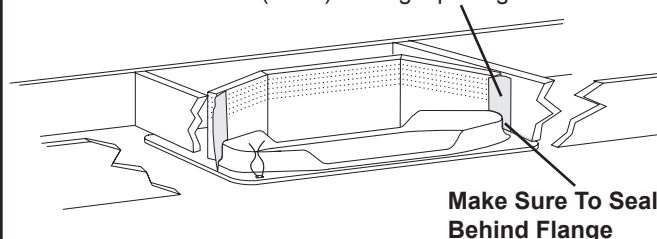


6. Start each mounting bolt through the ceiling template and up into the unit base pan by hand. **EVENLY** tighten the four bolts to a torque of 40 to 50 inch pounds. This will compress the roof gasket to approximately 1/2". The bolts are self locking so over tightening is not necessary.

CAUTION

If bolts are left loose there may not be adequate roof seal or if over tightened, damage may occur to the air conditioner base or ceiling template. Tighten to specifications listed in this manual.

7. Use Aluminum foil tape (not supplied) to seal the ends of the foam divider to the sides of the opening. Make sure the area behind the flange on the ceiling template is sealed. See FIG. 25.

FIG. 25 Use Aluminum Foil Tape To Seal the Foam Divider To The Sides of 14-1/4" x 14-1/4" ($\pm 1/8$ ") Ceiling Opening**H. Wiring The System**

Reach up into the return air opening and pull the remaining wires down.

1. Connection Of Low Voltage Wires

CAUTION

Disconnect the positive (+) 12 volt DC terminal at the supply battery. Damage to equipment could occur if the 12 volt DC is not shut off.

Note: If solar panel is installed see instructions packaged with solar panel option.

Note: If using the Genesis Air Filtration System step "a" is to be completed when installing the decorative cover.

- a. Connect the 1/4" x 0.032 receptacles from the 12 VDC to the to the supply terminals on the control box. Connect +12 VDC to the "+12V" and the; black wire to terminal labeled "COM".
- b. Connect the 1/4" x 0.032" terminals from the furnace wires (if applicable) to the two furnace terminals on the control box. The polarity of these connections does not matter.
- c. Terminate the 4-conductor control cable(s) protruding into the 14-1/4" x 14-1/4" ($\pm 1/8$ ") roof opening. The cable(s) must be terminated with a telephone RJ-11-6C4P connector. Refer to the crimp tool manufacturer for crimping instructions.

Important: RJ-11-6C4P connectors must be installed as shown in FIG. 8A, 8B & 8C.

- d. Plug the control cable into the telephone jack on the control box.
2. Connection Of 120 Volt Power Supply

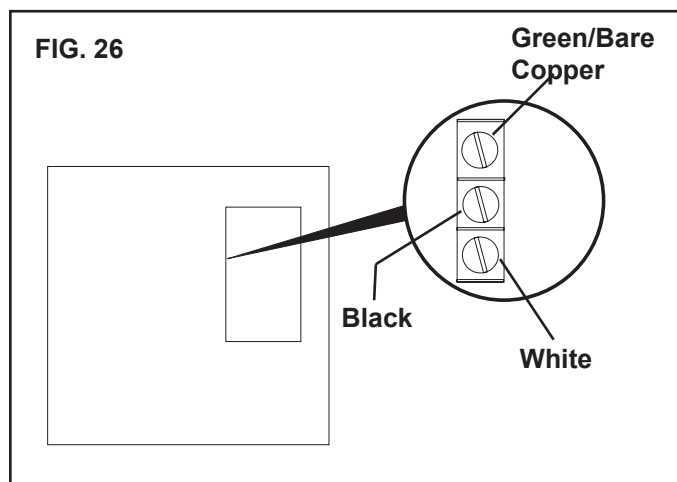
⚠ WARNING

Disconnect 120 volt AC. Failure to follow these instructions could create a shock hazard causing death or severe personal injury.

⚠ WARNING

This product is equipped with a 3-wire (grounded) system for protection against shock hazard. Make sure that the appliance is wired into a properly grounded 120 volt AC circuit and the polarity is correct. Failure to do so could result in death, personal injury or damage to the equipment.

- a. Route power supply line through Romex connector into control box. Tighten connector making sure not to pinch or short wires.
- b. Terminate the green/bare copper, black and white wires with spade terminals to fit a #8 screw. Fasten wires in control box as shown in FIG. 26



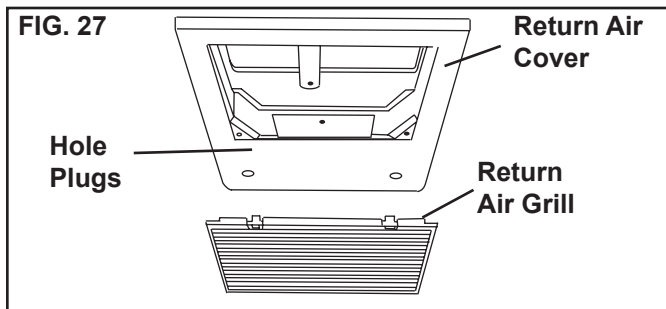
- c. Install the cover onto the control box.

I. Installing Decorative Inside Cover

- **Installing unit with 3105007 or 3105935 Return Air Cover. For Genesis Air Filtration System Return Air Kit, see page 12.**

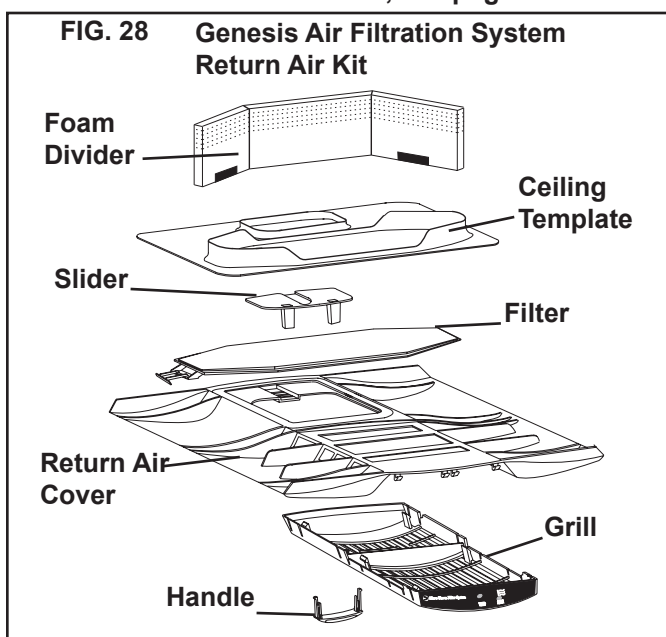
1. Remove the return air grill from the return air cover.
2. Place the return air cover up to the ceiling template.
3. Install cover to template with #8 x 3/8" blunt point Phillips head screws provided (6 required).

4. Reinstall filter return air grill into return air cover. Align tabs with mating notches and snap into place
5. Install two hole plugs into screw holes in back of return air cover. See FIG. 27.

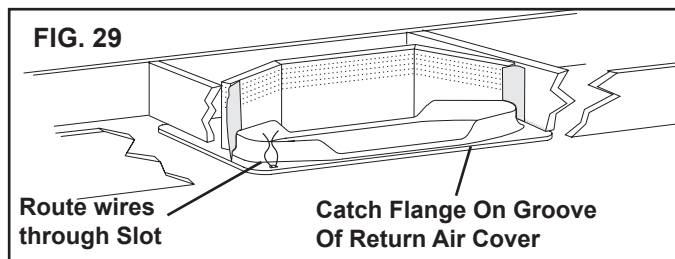


6. This completes the installation of the air conditioner. We recommend that power be supplied to the air conditioner and check for proper operation. Refer to Operating Manual or Users Guide for a description of the air conditioner operation.

- **Installing unit with 3308120 Genesis Air Filtration System Return Air Kit. For 3105007 or 3105935 Return Air Kit, see page 101.**



1. Install the slider in the return air cover and raise it to the ceiling template. Route the filter indicator wires from the return air cover through the template slot leaving 3" extended. See Figure 29. Place the wires where they can be reached after plastic cover is installed. Place the front of the return air cover against the ceiling and slide towards the rear. The flange on the ceiling template will catch in the groove on the return cover. Adjust the position (right to left) and install the front two screws. Start and tighten the remaining screws to hold it in place.
 - a. Cut both of the 12 VDC supply wires 6"-8" from the end of the wire. Terminate end of the cut wire with 1/4"x 0.032" terminal. Strip opposite end of wire. See FIG. 29.



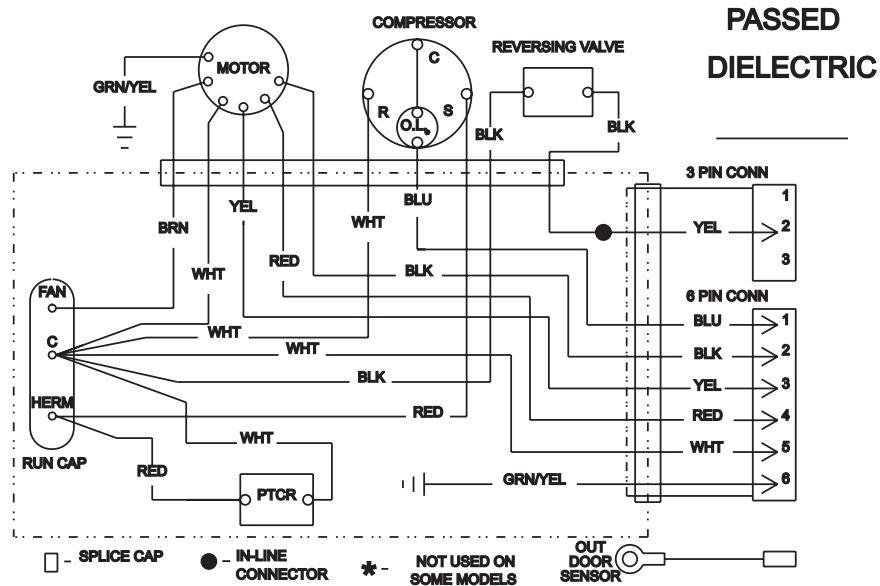
- b. Splice together the + 12VDC supply and red wire from the filter indicator and the red terminated wire. Do the same on the black leads.

Note: Number 10 cabinet screw can be used to replace the two front screws when the ceiling material is hard.

Note: If solar panel is installed see instructions packaged with solar panel option.

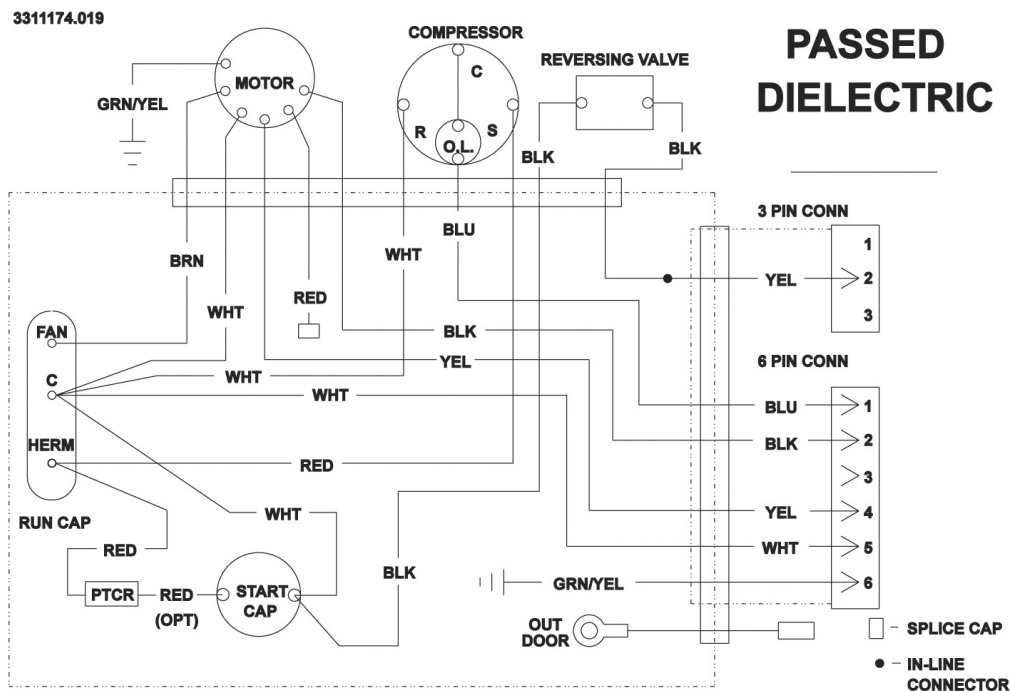
2. Tighten the screws holding the return air cover. Slide the filter from the right side (looking toward the RV front) over the wires. Make sure the wires are above the filter and are out of its way.
3. Place grill on return air cover and snap in place, and install decal on end over circuit board.
4. Place slide handle through slots in grill into the slide posts. Handle will fit in either direction.
5. This completes the installation of the air conditioner. We recommend that power be supplied to the air conditioner and check for proper operation. Refer to Operating Manual or User's Guide for a description of the air conditioner operation.

WIRING DIAGRAM FOR 591 & 5307 SERIES



3311175.008

630045.331 HEAT PUMP WIRING DIAGRAM



CONTROL KIT WIRING DIAGRAM

