DOMETIC

RECORD THIS INFORMATION FOR FUTURE REFERENCE:

Date Installed _____
Installed By _____
Product Serial Number _____

SERVICE INSTRUCTIONS

3315450.000
HEATER KIT

FOR USE WITH

3316120.017
CONTROL KIT

(120 VAC)

FOR AIR CONDITIONER MODELS:
B57915
B59516

Read these instructions carefully. These instructions MUST stay with this product.

REVISION B
Form No. 3316134.000 11/16
(French 3316135.000_B)

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INTRODUCTION

This kit is designed for, and may only be installed on, Dometic B57915 and B59516 series air conditioners (hereinafter referred to as “unit”, or “product”). It is not intended for and should not be used on any other models. Installation can take place prior to or after the unit is installed. Use these instructions to ensure a properly installed, and properly functioning product.

Dometic Corporation reserves the right to modify appearances and specifications without notice.

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DOCUMENT SYMBOLS

Indicates additional information that is **NOT** related to physical injury.

Indicates step-by-step instructions.

IMPORTANT SAFETY INSTRUCTIONS

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

A. Recognize Safety Information

This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

B. Understand Signal Words

A signal word will identify safety messages and property damage messages, and will indicate the degree or level of hazard seriousness.

⚠ WARNING indicates a hazardous situation that, if **NOT** avoided, could result in death or serious injury.

⚠ CAUTION indicates a hazardous situation that, if **NOT** avoided, could result in minor or moderate injury.

NOTICE is used to address practices **NOT** related to physical injury.

C. Supplemental Directives

Read and follow all safety information and instructions to avoid possible injury or death.

Read and understand these instructions before [installing / using / servicing / performing maintenance on] this product.

Incorrect [installation / operation / servicing / maintaining] of this product can lead to serious injury. Follow all instructions.

The installation **MUST** comply with all applicable local and national codes, including the latest edition of the following standards:

U.S.A.

- ANSI/NFPA70, National Electrical Code (NEC)
- ANSI/NFPA 1192, Recreational Vehicles Code

CANADA

- CSA C22.1, Parts I & II, Canadian Electrical Code
- CSA Z240 RV Series, Recreational Vehicles

D. General Safety Messages

⚠ WARNING Failure to obey the following warnings could result in death or serious injury:

- This product **MUST** be [installed / serviced] by a qualified service technician.
- Do **NOT** modify this product beyond the scope of these service instructions. Modification (beyond these service instructions) can be extremely hazardous.

GENERAL INFORMATION

A. Scope Of Delivery

(1) Service Instructions
(1) Electric Heater
(4) 307987.001 Screw, T 10-24 x .38 HHW

B. Required Tools

- #2 Square Screwdriver / Bit
- 5/16″ Hex Nut Driver / Bit

C. Additional Items Required

- Thermostat
  3313194.000 C/F/HS-WHT or
  3313194.015 C/F/HS-BLK
- Control Kit *
  3316120.017

* Required if control kit was installed on return air opening of ADB or return air grille ceiling template. See “FIG. 4” on page (5) or “FIG. 8” on page (6).

SPECIFICATIONS

A. Table - Unit Data

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	Refrigerant R-410A (oz)	Minimum Wire Size*	AC Circuit Protection ***Installer Supplied	Minimum Generator Size** 1 Unit / 2 Units
B57915.71X	13,500	120 Vac 60 Hz 1 ph	12.4	68.0	2.5	5.8	16.0	12 AWG Copper Up to 24'	20 Amp	3.5 kW / 5.0 kW
B59516.71X	15,000		13.3	70.0	2.0	5.6	27.5		20 Amp	3.5 kW / 5.0 kW

* For wire length over 24 ft., consult the National Electrical 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 RV must be considered. Keep in mind generators lose power at high altitudes and from lack of maintenance.

*** CIRCUIT PROTECTION: Time Delay Fuse or Circuit Breaker Required.

B. Roof Requirements

- A 14-1/4″ x 14-1/4″ (±1/8″) square opening (hereinafter referred to as “roof opening”) is required for installing this unit. This opening is part of the return air system of the unit and **MUST** be finished in accordance with NFPA 1192.
- Roof construction with rafters/joists support frames on a minimum of 16 inch centers.
- Minimum of 2 inches and maximum of 4 inches distance between roof to ceiling of RV.

INSTALLATION INSTRUCTIONS

A. Wiring Requirements - New Installation

1. Route a copper, with ground, 120 Vac supply wire from the time delay fuse or circuit breaker box to the roof opening. Use a listed / certified non metallic - sheathed single strand cable. See ”A. Table - Unit Data”.
   a. This supply wire must be located in the front portion of the roof opening.
   b. The power **MUST** be on an appropriately sized separate time delay fuse or circuit breaker. See “A. Table - Unit Data”.
   c. Make sure that at least 15″ of supply wire extends into the roof opening. This insures an easy connection at the junction box.
   d. Protect the wire where it passes into the opening with approved method.
2. Route a dedicated 12 Vdc supply wire (18 - 22) AWG) from the RV converter (filtered side) or battery to the roof opening.
   a. This supply wire must be located in the front portion of the roof opening.
   b. Make sure that at least 15″ of supply wire extends into the roof opening.
3. Route a 3 conductor communication cable, 18 to 22 AWG, from the roof opening to the Liquid Crystal Display Single Zone (hereinafter referred to a LCD SZ) thermostat mounting location. Make sure that at least 15″ of the wire extends into the roof opening and 6″ extends from the wall at the thermostat mounting location.
4. If system includes a gas furnace, route two 18 gauge thermostat wires from the furnace to the roof opening of the unit that will control it. If more than one furnace is to be used, route the second set of thermostat wires to the second unit. Make sure that at least 15″ of wire extends into the opening.

B. Interior Preparation Procedures

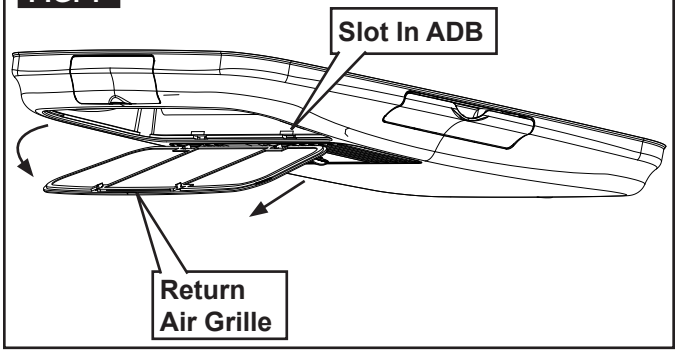
⚠WARNING ELECTRICAL SHOCK HAZARD. Disconnect 120 Vac power from RV. Failure to obey this warning could result in death or serious injury.

NOTICE Disconnect the positive (+) 12 Vdc terminal from supply battery. Otherwise, damage to unit could occur.

1. Non-Ducted Models

a. Remove return air vent grille. See (FIG. 1).

FIG. 1



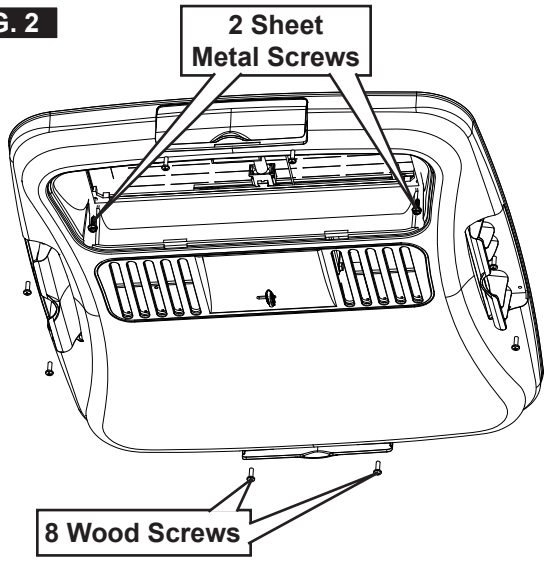
b. Remove ADB plastic cover.

INSTALLATION INSTRUCTIONS

I. Remove eight (8) wood screws inside the front, rear and side doors, securing ADB to ceiling. See (FIG. 2).

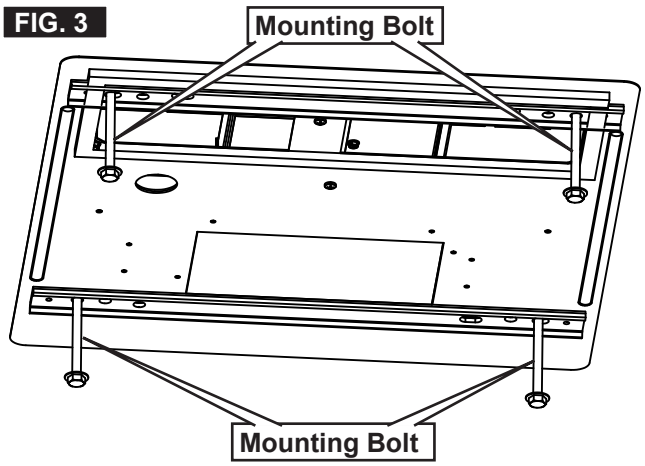
II. Remove two (2) sheet metal screws inside return air opening, securing ADB to ceiling template. See (FIG. 2).

FIG. 2



c. Remove (4) mounting bolts from ceiling template. Save for reinstallation later. See (FIG. 3).

FIG. 3



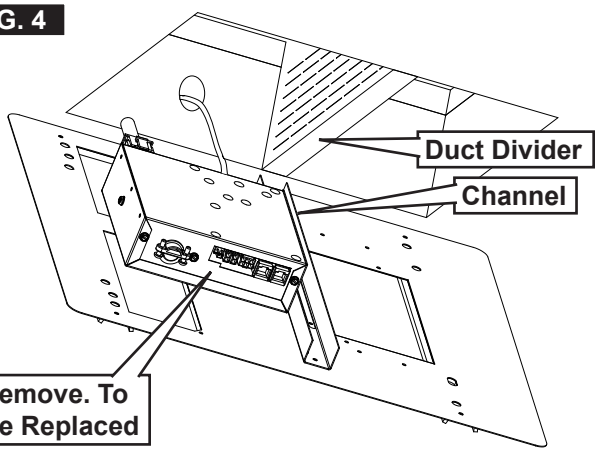
d. Remove ceiling template. See (FIG. 4).

e. **⚠WARNING** ELECTRICAL SHOCK HAZARD. Make sure 120 Vac power is disconnected from RV. Failure to obey this warning could result in death or serious injury.

NOTICE Make sure the positive (+) 12 Vdc terminal is disconnected from supply battery. Otherwise, damage to unit could occur.

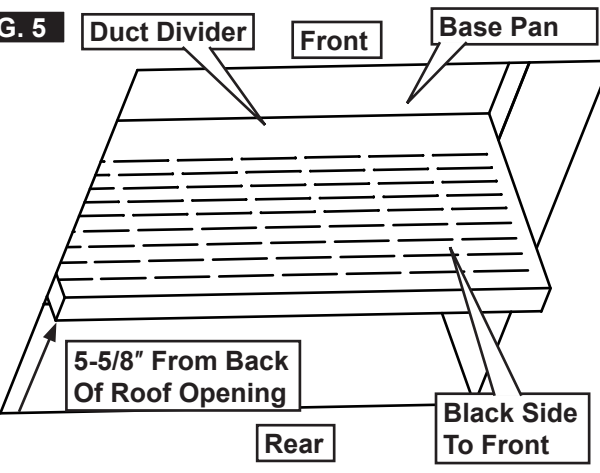
If unit has an electronic control box, see (FIG. 4), disconnect 6-pin plug and line voltage wires from electronic control box and remove electronic control box.

FIG. 4



f. Remove duct divider. See (FIG. 5).

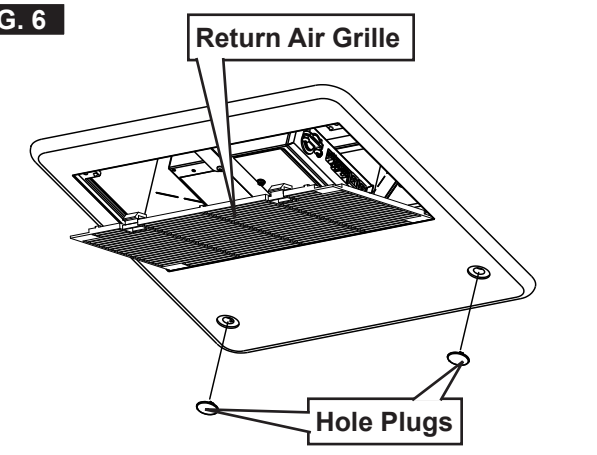
FIG. 5



2. Ducted Models

a. Remove two (2) hole plugs in back of return air cover. Save for reinstallation later. See (FIG. 6).

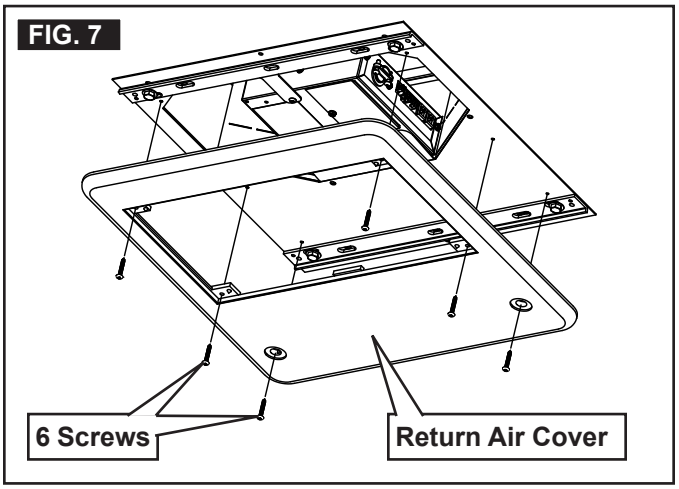
FIG. 6



b. Remove return air grille from return air cover. See (FIG. 6).

c. Remove six (6) #8 x 3/8" blunt point Phillips head screws. Save for reinstallation later. See (FIG. 7).

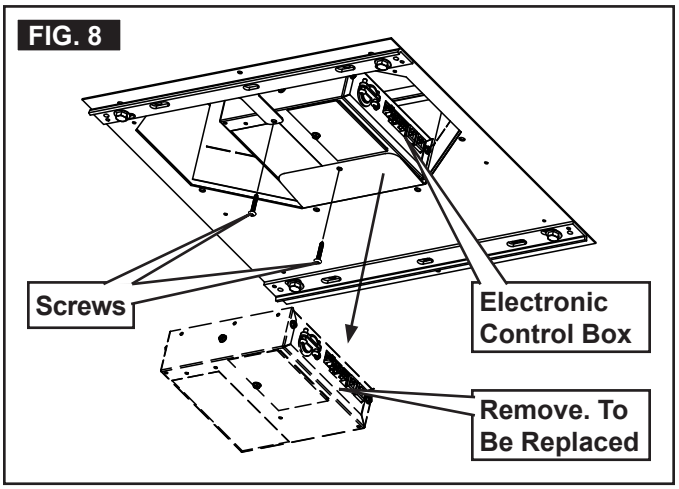
FIG. 7



d. Remove return air cover. See (FIG. 7).

e. Remove two (2) blunt, self-tapping screws, releasing electronic control box. See (FIG. 8).

FIG. 8



f. **⚠WARNING** ELECTRICAL SHOCK HAZARD. Make sure 120 Vac power is disconnected from RV. Failure to obey this warning could result in death or serious injury.

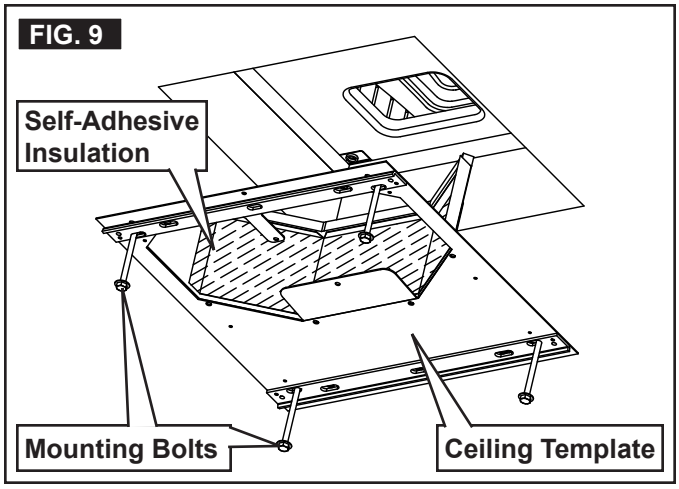
NOTICE Make sure the positive (+) 12 Vdc terminal is disconnected from supply battery. Otherwise, damage to unit could occur.

If unit has an electronic control box, disconnect 6-pin plug and line voltage wires from electronic control box.

g. Remove electronic control box, if applicable.

h. Remove tape and / or insulation sealing divider plate to side of opening. See (FIG. 9).

FIG. 9



i. Remove four (4) mounting bolts. Save for reinstallation later. See (FIG. 9).

j. Remove ceiling template. See (FIG. 9).

C. Electronic Control Box And Electric Heater Installation

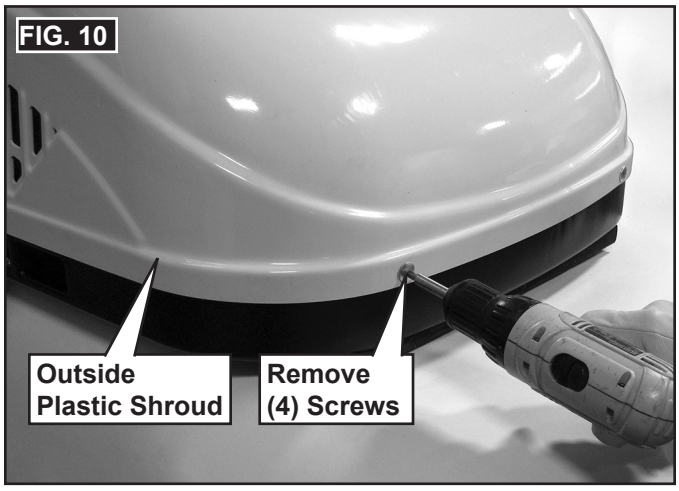
Electronic control box and electric heater will be installed in unit from above, with wiring connection made from below. Installing the electronic control box and electric heater can be done prior to placing the unit on the roof.

1. **⚠WARNING** ELECTRICAL SHOCK HAZARD. Disconnect 120 Vac power from RV. Failure to obey this warning could result in death or serious injury.

   NOTICE Disconnect the positive (+) 12 Vdc terminal from supply battery. Otherwise, damage to unit could occur.

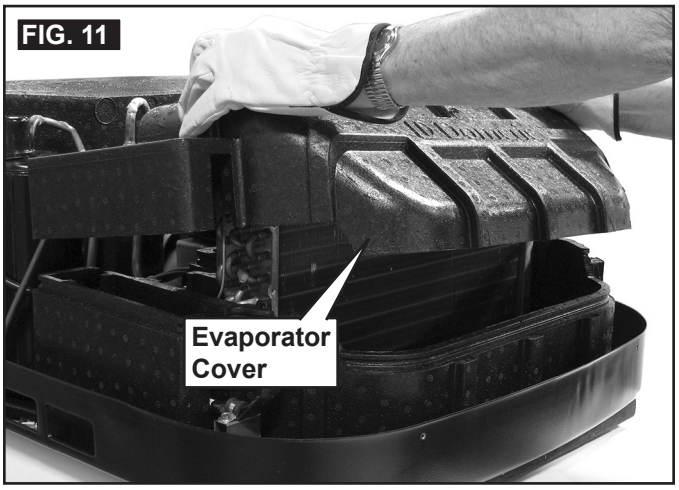
2. Remove outside plastic shroud (with screws) from unit. Save for reinstallation later. See (FIG. 10).

FIG. 10



3. Remove evaporator coil cover. Grasp with both hands and lift cover to remove. Save for reinstallation later. See (FIG. 11).

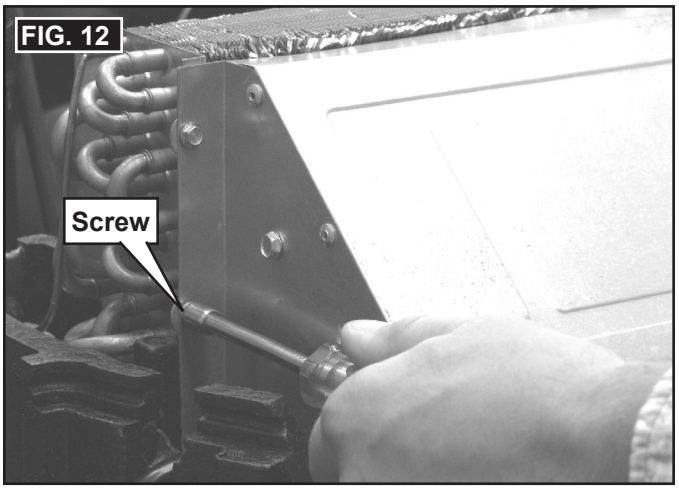
FIG. 11



4. Remove (4) screws securing electric heater. Save for reinstallation later. See (FIG. 12).

   If unit has no electric heater, proceed to step (6).

FIG. 12

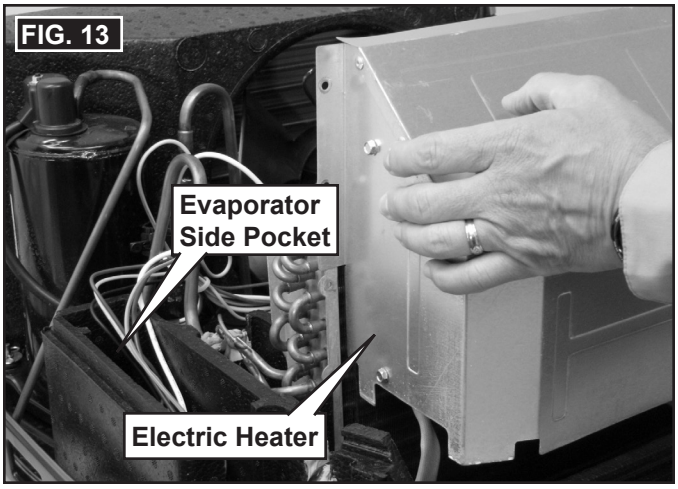


5. **⚠WARNING** ELECTRICAL SHOCK HAZARD. Make sure 120 Vac power is disconnected from RV. Failure to obey this warning could result in death or serious injury.

   NOTICE Make sure the positive (+) 12 Vdc terminal is disconnected from supply battery. Otherwise, damage to unit could occur.

   Unplug electric heater and lift from unit. See (FIG. 13).

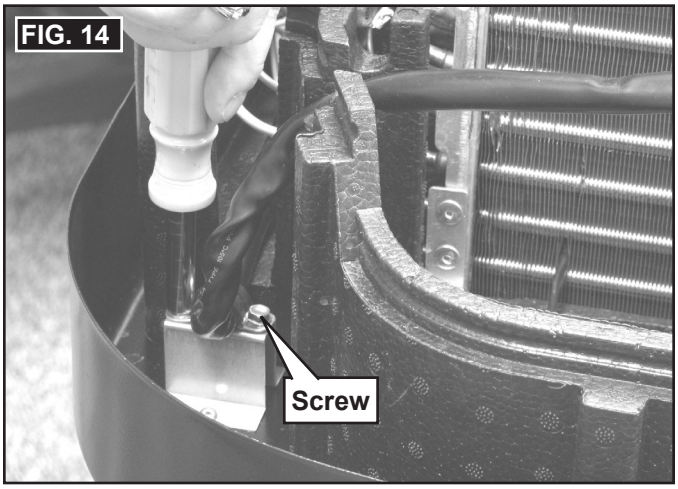
FIG. 13



If an electronic control box is already present in the side pocket of the evaporator housing, proceed to step (8).

6. Remove (2) screws and clamp, releasing cable. See (FIG. 14).

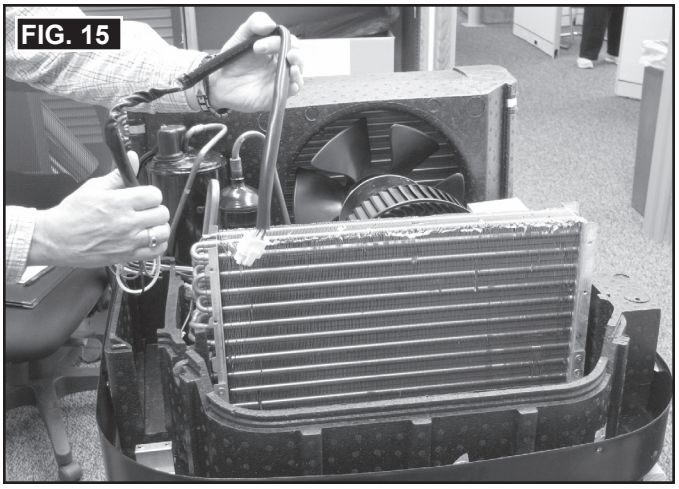
FIG. 14



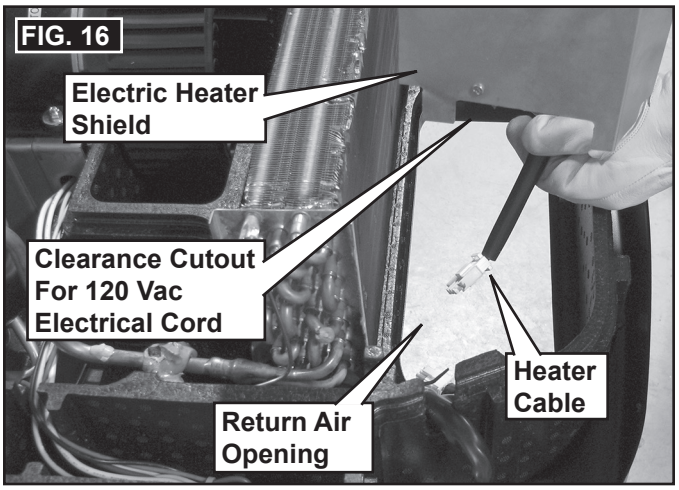
7. Remove wire bundle from evaporator housing. See “FIG. 15” on page (8).

   When removing wire bundle from slot in housing, it may be necessary to remove sealing compound. Save sealing compound for reinstallation of wires later.

   If unit has no electric heater, proceed to step (10).



8. Install electric heater.
   a. Place electric heater cable down through return air opening. See (FIG. 16).

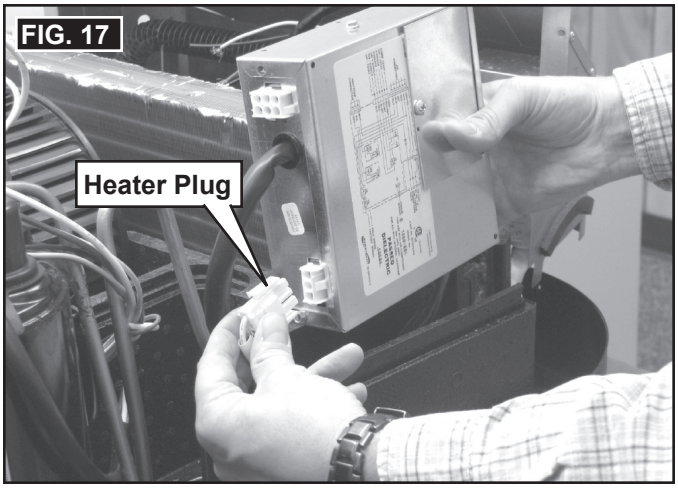


   b. ***NOTICE*** Do **NOT** pinch wiring or allow wiring to rub against sharp edges. If wiring is damaged, it **MUST** be replaced by a qualified service technician.

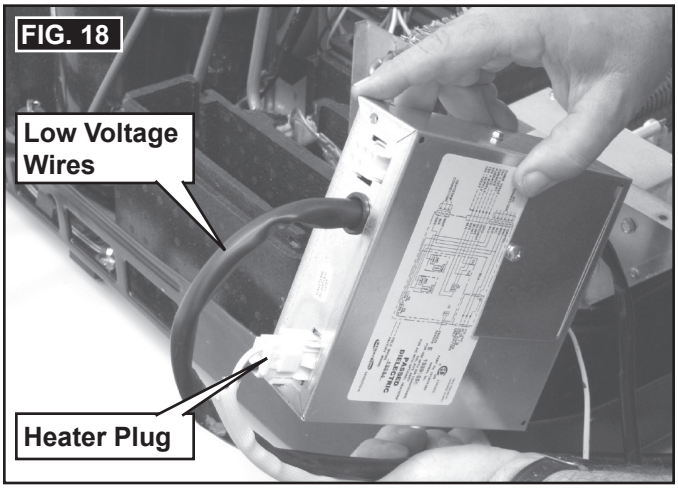
      Route 120 Vac electrical cord in a manner that will not interfere with positioning the electric heater.

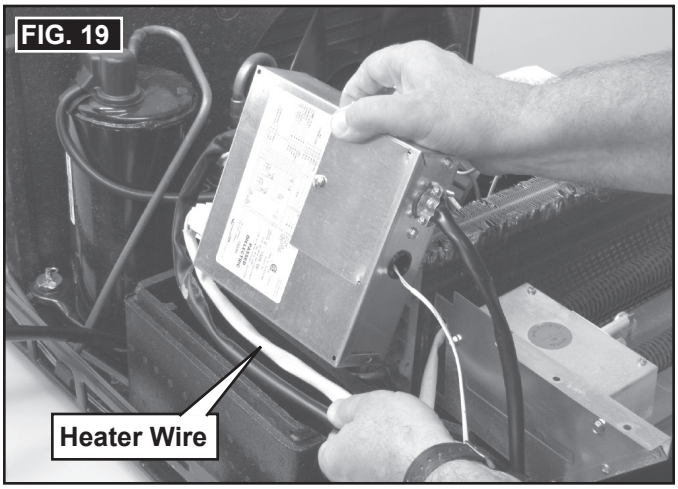
      Be careful not to pinch or damage 120 Vac electrical cord. When in proper position, the cord will pass through clearance cutout in heater shield.

9. Plug the 3 pin electrical cord from heater into the mating connector on the electronic control box. See (FIG. 17).

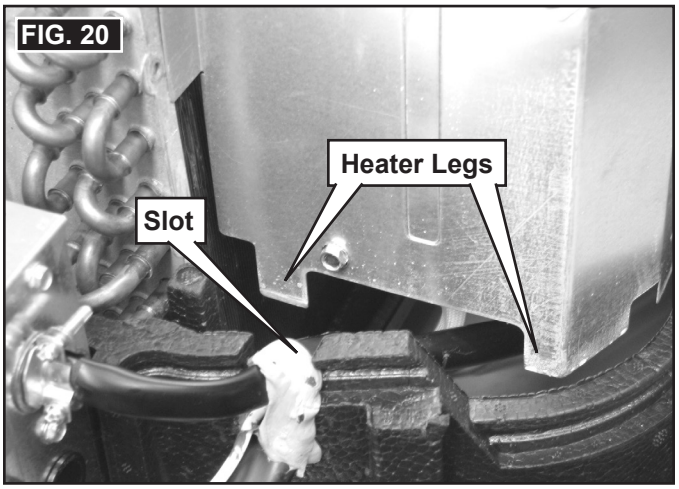


10. Route the wire bundle from the electronic control box and the heater electrical cord under the electronic control box before assembling control box into position in unit. See (FIG. 18) and (FIG. 19).

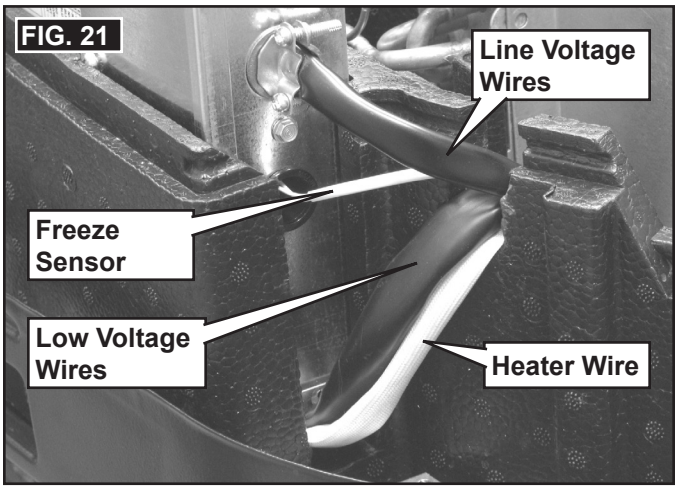




11. Route the bundle of wires coming from the electronic control box through the slot in foam housing and between the legs of the electric heater. See (FIG. 20).

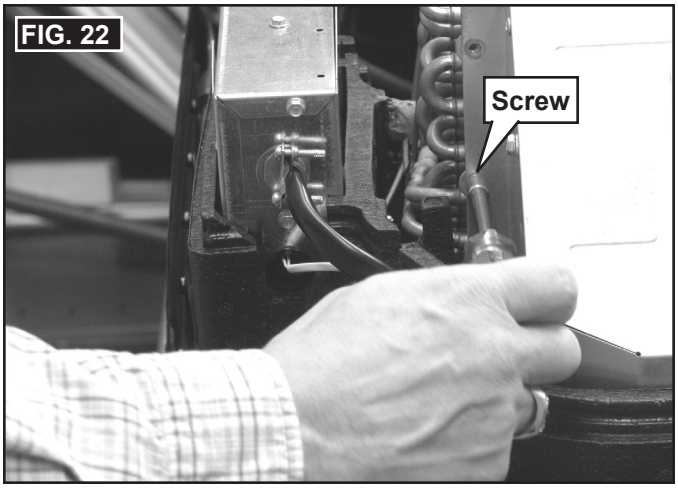


12. When routing wire bundle through slot, be sure heater electrical cord is in the bottom of the slot. See (FIG. 21).

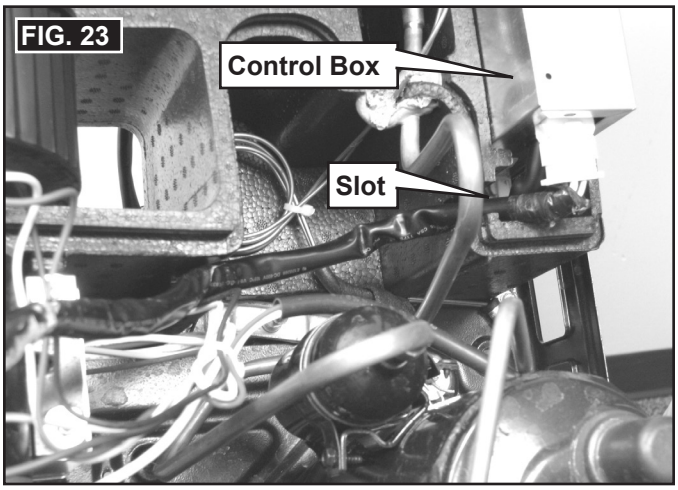


13. Place electric heater in position and secure with four (4) supplied 10 - 24 x .38 HHW screws (two each side). See (FIG. 22).

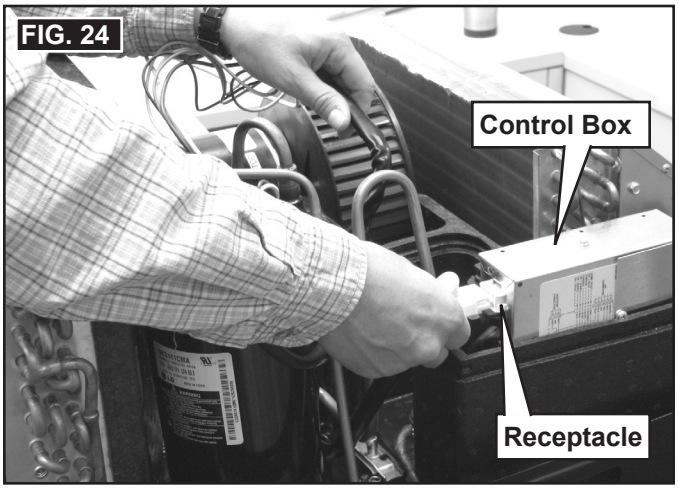
NOTICE Use of longer screws could damage evaporator coil.



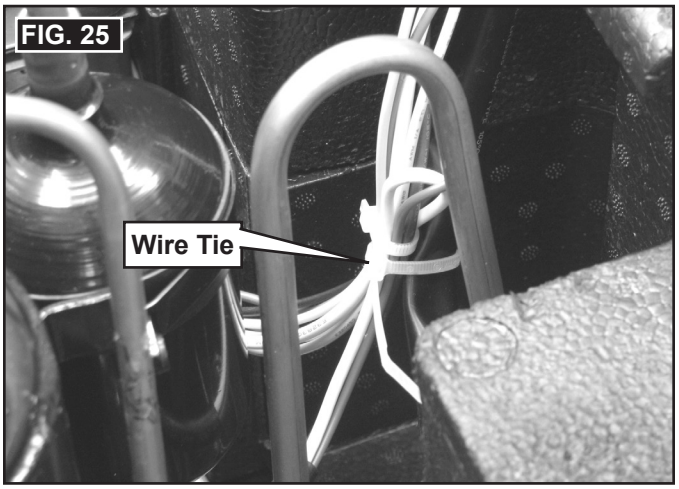
14. Route the wire bundle from compressor and motor through slot in foam housing. See (FIG. 23).



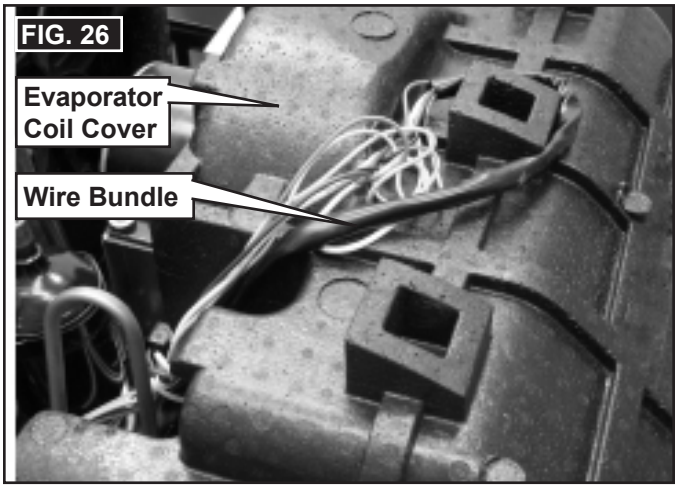
15. Plug the 6 pin electrical cord into mating connector on electronic control box. See (FIG. 24).



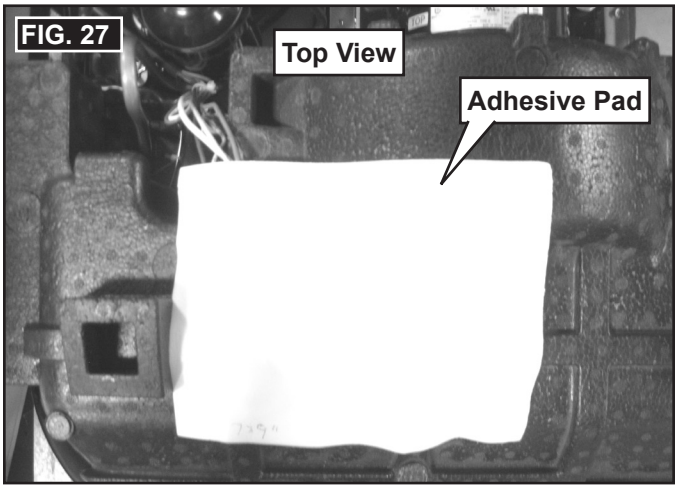
16. Assemble a second wire tie to the wire assembly for added support. Add wire tie next to factory installed wire tie. See (FIG. 25).



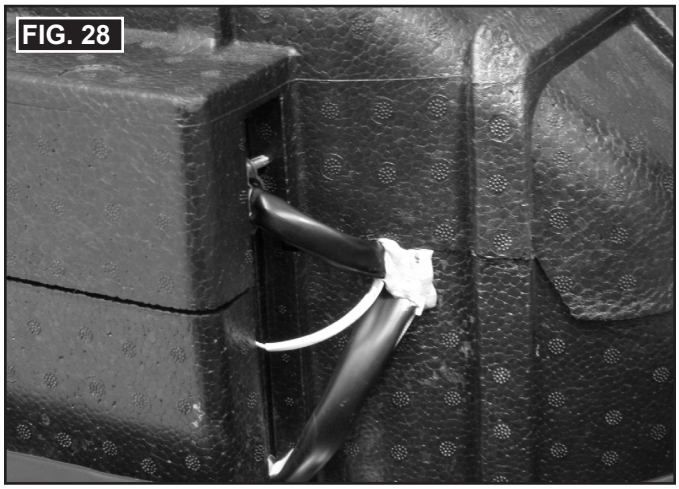
17. Assemble evaporator coil cover to unit.
18. Loop wire bundle around center shroud support on top of evaporator coil cover. See (FIG. 26).



19. Secure looped wire bundle in place with adhesive pad. See (FIG. 27).

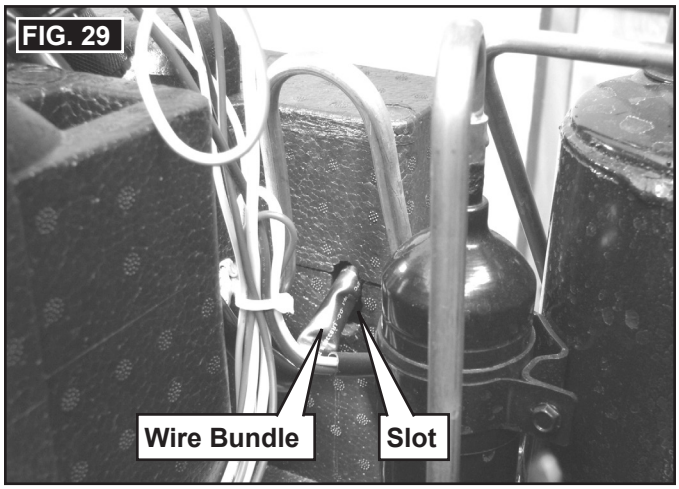


20. Be sure wire bundle routed through slot in front of electronic control box is secure. Apply sealing compound to block the slot completely. See (FIG. 28).



21. Be sure wire bundle, from back of electronic control box, is routed properly through slot. See (FIG. 29).

Be sure wiring bundle is **NOT** rubbing on compressor tubing.



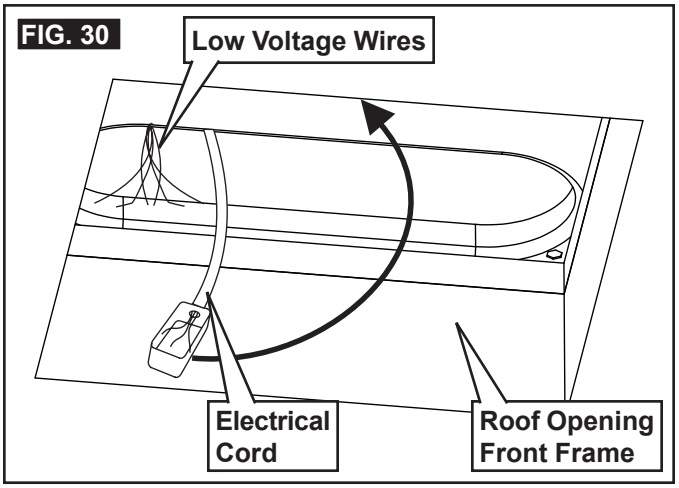
22. **⚠WARNING** FIRE HAZARD. Do **NOT** allow wiring, insulation, or other objects to contact electric heater. Failure to obey this warning could cause a fire resulting in death or serious injury.

    Secure all wiring in a manner that will prevent them from coming in contact with electric heater.
23. Reinstall outside plastic shroud, securing with four (4) screws. See “FIG. 10” on page (6).
24. System checkout - Refer to the unit operating instructions and verify that all features of the installed system are working properly.

D. Junction Box 120V and Low Voltage Wire Connections

1. Mount the junction box with screws to framing in front of roof opening and install strain relief. See (FIG. 30).

FIG. 30



E. 120 Vac Power Supply Conection

1. **⚠WARNING** ELECTRICAL SHOCK HAZARD. Disconnect 120 Vac power from RV. Failure to obey this warning could result in death or serious injury.

   Note: Wiring **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.
2. **⚠WARNING** ELECTRICAL SHOCK HAZARD. Provide grounding in compliance with all applicable electrical codes. Failure to obey this warning could result in death or serious injury.
3. Reach up into the return air opening of the unit and pull down the unit electrical cord and power supply wires. See (FIG. 30).
4. Route power supply line through the strain relief and into junction box on side away from the ceiling template. Tighten strain relief making sure not to damage wires.
5. Connect white to white; black to black; and green to green or bare copper wire using appropriate size connectors.
6. Tape the connectors to the supply wire to assure they don't vibrate off.
7. Push the wires into the box.
8. Install the cover onto the junction box.

F. Low Voltage Wire Connections.

NOTICE Disconnect the positive (+) 12 Vdc terminal from supply battery. Otherwise, damage to unit could occur.

1. Connect the previously run +12 Vdc supply wire to the red wire protruding from the unit return air opening.
2. Connect the previously run -12 Vdc supply wire to both the black wire protruding from the unit return air opening and to wire of the three wire cable that goes to the thermostat 12V- terminal.
3. Connect the previously run furnace thermostat wires (if applicable) to the blue wires protruding from the return air opening. The polarity of these connections does not matter.
4. Connect the red / white wire protruding from the unit return air opening to wire of the three wire cable that goes to thermostat 12V+ terminal.
5. Connect the orange wire protruding from the return air opening to wire of the three wire cable that goes to thermostat COMMS terminal.

G. Interior Installation Procedures

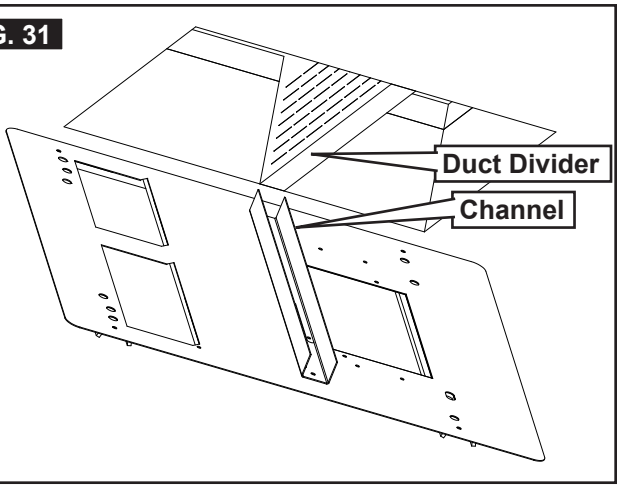
1. Non-Ducted Models

a. Carefully install the duct divider in the roof opening 5-5/8" from back of roof opening. See "FIG. 5" on page (5).

   Foil back faces rear of unit.

b. Hold the ceiling template up to the roof opening and line up the channel in the ceiling template with the previously installed duct divider. See (FIG. 31).

FIG. 31



c. Hold the ceiling template up to the roof opening and start each mounting bolt, by hand, through the ceiling template and up into the unit base pan. See "FIG. 3" on page (5).

INSTALLATION INSTRUCTIONS

d. ***NOTICE*** Tighten mounting bolts to correct torque specifications. Overtightening could damage unit's base pan or ceiling template. Not enough torque will allow an inadequate roof seal, and could cause a leak.

Tighten all four (4) mounting bolts **EVENLY** within 40 to 50 inch pounds.

e. Align ADB with ceiling template.

f. Install two (2) sheet metal screws inside return air opening to secure ADB to ceiling template. See "FIG. 2" on page (5).

g. Install eight (8) wood screws inside the front, rear and side doors to secure ADB to ceiling. See "FIG. 2" on page (5).

h. Install front and rear doors.

i. Install return air vent grille into the ADB. Slide return air vent grille tab into slot in ADB and rotate up and snap in place. See "FIG. 1" on page (4).

2. Ducted Models

a. Hold the ceiling template up to the roof opening. Be sure the large plate faces the rear of the RV. See "FIG. 9" on page (6).

I. Start each mounting bolt through the ceiling template and up into the unit base pan by hand. See "FIG. 9" on page (6).

II. ***NOTICE*** Tighten mounting bolts to correct torque specifications. Overtightening could damage unit's base pan or ceiling template. Not enough torque will allow an inadequate roof seal, and could cause a leak.

Tighten all four (4) mounting bolts **EVENLY** within 40 to 50 inch pounds. See "FIG. 9" on page (6).

This will compress the roof gasket to approximately 1/2".

b. Apply self-adhesive insulation to unit to seal between divider plate and side walls of opening. See "FIG. 9" on page (6).

I. Excess width is intended to seal the divider plate to the sides of the roof opening. This is to help prevent cold air discharge from circulating into the unit return air opening.

II. If the insulation is too high, stick excess height of insulation to the unit base pan. Do not cover up unit rating plate.

c. Place the return air cover up to the ceiling template. See "FIG. 7" on page (6).

d. Secure cover to template using six (6) #8 x 3/8" blunt point Phillips head screws. See "FIG. 7" on page (6).

e. Reinstall filter return air grille into return air cover. Align tabs with mating notches and snap into place. See "FIG. 6" on page (5).

f. Reinstall two (2) hole plugs into screw holes in back of return air cover. See "FIG. 6" on page (5).

INSTALLATION OF NEW SINGLE ZONE THERMOSTAT

A. Remove Previously Installed Single Zone Thermostat (If Applicable)

1. Depress tab on bottom of thermostat.
2. Remove cover from thermostat.
3. Disconnect (3) wires from thermostat.
4. Remove screws, allowing removal of thermostat from wall.

B. Thermostat, Optional Indoor Temperature Sensor & Thermostat Communication Cable Installation

1. LCD SZ System

Wire colors listed for the communication cable (3 conductor cable) match the wire colors in the unit wire harness and the wire harness at the LCD SZ electronic control box. Available wire colors may vary.

a. Remove the cover from the LCD SZ thermostat. Depress tab on bottom of thermostat and separate it from the base.

b. Insert the previously run communication cable (3 conductor cable) through the hole in the base assembly.

c. Cut back the outer cable shield approximately 3 inches and strip 1/4″ insulation from each wire.

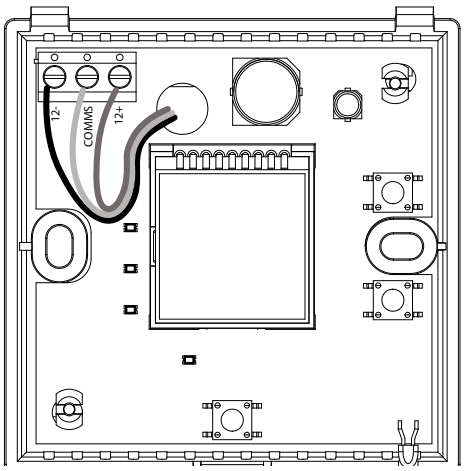
d. Mount the thermostat level on the wall using the screws provided.

e. Make the following connections to the thermostat. See (FIG. 32).

- Red / white wire to the 12V+ terminal
- Black wire to the 12V- terminal
- Orange wire to the "COMMS" terminal

INSTALLATION OF NEW SINGLE ZONE THERMOSTAT

FIG. 32



f. Inspect all connections to make sure they are tight and not touching any other terminals or wires.

g. Push the wires back through the base into the wall. Place cover on the thermostat and push until an audible click is heard.

WIRING DIAGRAM

FIG. 33