



RECORD THIS UNIT INFORMATION
FOR FUTURE REFERENCE:

Model Number _____

Serial Number _____

Date Purchased _____

**579 Series
595 Series
ROOF TOP AIR CONDITIONER
USED WITH
3107210 AIR DISTRIBUTION BOX KIT
and**

**3107541.009 Analog Relay Kit- Cool/Furn
or
3107541.017 Analog Relay Kit-Cool/Furn/HS**



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

CANADA
Dometic, LLC
46 Zatonski, Unit 3
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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**

3312768.000

MODELS

57912.542	57915.556	59516.351	59516.746
57912.742	57915.751	59516.356	59516.751
57915.351	57915.756	59516.541	59516.756
57915.356	59516.341	59516.546	
57915.551	59516.346	59516.741	

Form No. 3312768.000 10/08
(French 3312769.000)
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LaGrange, IN 46761

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.

1. GENERAL INFORMATION

- A. Product features or specifications as described or illustrated are subject to change without notice.
- B. This "Air Conditioner" (hereinafter referred to as the "unit") 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 4.00 inches distance between roof to ceiling of recreational vehicle. Alternate installation methods will allow for roofs more than 4.00 inches thick.
- C. The ability of the unit 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 unit. 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.
 5. Operation on High Fan/Cooling mode will give optimum or maximum efficiency in high humidity or high outside temperature.
 6. Starting the unit 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.
 7. For a more permanent solution to a high heat gain, accessories like A&E outdoor patio and window awnings will reduce heat gain by removing the direct exposure to the sun. They also add a nice area to enjoy company during the cool of the evening.

D. Condensation

Note: The manufacturer of this unit 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 unit removes this moisture from the air during normal operation. Keeping doors and windows closed when this unit is in operation will minimize condensed moisture on cold surfaces.

SPECIFICATIONS

Model Number	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-22 (Oz.)	Minimum Wire Size*	AC Circuit Protection *** User Supplied	Installed Weight (Pounds)	Minimum Generator Size** 1 Unit/2 Units
57912.542	11,000	120VAC 60Hz. 1 Phase	8.0	53.0	2.5	5.8	18.5	12 AWG Copper Up To 24'	20 AMP	93	2.5 KW / 4.0 KW
57912.742	11,000		8.6	44.0	2.5	5.8	18.5		20 Amp	93	2.5 KW / 4.0 KW
57915.351	13,500		11.4	58.0	2.5	5.8	15.5		20 Amp	100	3.5 KW / 5.0 KW
57915.356	13,500		11.4	58.0	2.5	5.8	15.5		20 Amp	101	3.5 KW / 5.0 KW
57915.551	13,500		11.3	62.0	2.5	5.8	16.0		20 Amp	94	3.5 KW / 5.0 KW
57915.556	13,500		11.3	62.0	2.5	5.8	16.0		20 Amp	95	3.5 KW / 5.0 KW
57915.751	13,500		13.2	62.0	2.5	5.8	15.5		20 Amp	94	3.5 KW / 5.0 KW
57915.756	13,500		13.2	62.0	2.5	5.8	15.5		20 Amp	95	3.5 KW / 5.0 KW
59516.341	15,000		12.7	60.0	2.0	5.6	29.0		20 Amp	101	3.5 KW / 5.0 KW
59516.346	15,000		12.7	60.0	2.0	5.6	29.0		20 Amp	102	3.5 KW / 5.0 KW
59516.351	15,000		12.7	60.0	2.0	5.6	29.0		20 Amp	101	3.5 KW / 5.0 KW
59516.356	15,000		12.7	60.0	2.0	5.6	29.0		20 Amp	102	3.5 KW / 5.0 KW
59516.541	15,000		12.7	79.0	2.0	5.6	29.0		20 Amp	101	3.5 KW / 5.0 KW
59516.546	15,000		12.7	79.0	2.0	5.6	29.0		20 Amp	102	3.5 KW / 5.0 KW
59516.741	15,000		13.3	62.0	2.0	5.6	29.0		20 Amp	101	3.5 KW / 5.0 KW
59516.746	15,000		13.3	62.0	2.0	5.6	29.0		20 Amp	102	3.5 KW / 5.0 KW
59516.751	15,000		13.3	62.0	2.0	5.6	29.0		20 Amp	101	3.5 KW / 5.0 KW
59516.756	15,000		13.3	62.0	2.0	5.6	29.0		20 Amp	102	3.5 KW / 5.0 KW

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

** Dometic, LLC 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

1. PRECAUTIONS

⚠ WARNING

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

- A. Read and understand Installation Instructions before attempting to start your unit installation.
- B. The Dometic, LLC will not be liable for any damages or injury incurred due to failure in following these instructions.
- C. Installation must comply with the National Electrical Code and any State or Local Codes or regulations.
- D. **DO NOT** add any devices or accessories to this unit except those specifically authorized by Dometic.
- E. This equipment must be serviced by qualified personnel and some states require these people to be licensed.

2. CHOOSING PROPER LOCATION FOR THE UNIT

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

A. NORMAL LOCATION

1. The unit is designed to fit over an existing roof vent opening. When the vent is removed, it normally creates a 14-1/4" x 14-1/4" $\pm 1/8$ opening.
2. It is preferred that this unit 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.

B. OTHER LOCATIONS

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

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

C. AFTER LOCATION HAS BEEN SELECTED:

1. Check for obstructions in the area where unit will be installed. Check inside the RV for air box obstructions (i.e. door openings, room dividers, curtains, ceiling fixtures, etc.). See FIGS. 1 & 2.

FIG. 1

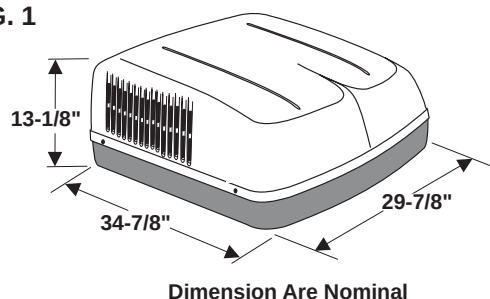
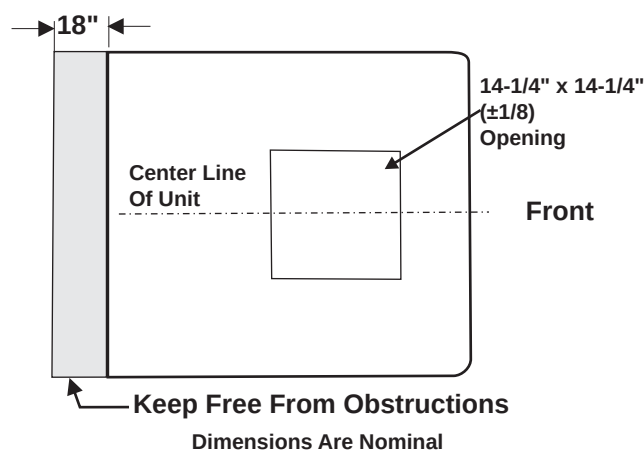


FIG. 2



2. 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 unit 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 unit may leak into the interior causing damage to the product and the RV.

3. ROOF PREPARATION

Before preparing the ceiling opening, the type of system options must be decided upon. If a furnace is to be connected, wires must be run from the furnace to the Dometic Unit. Read all of the following instructions before beginning the installation.

⚠ 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.

A. CEILING OPENING REQUIREMENTS

1. A 14-1/4" x 14-1/4" ($\pm 1/8$ ") opening must be cut through the roof and ceiling of the RV. This opening must be located between the roof reinforcing members.
2. Mark a 14-1/4" x 14-1/4" ($\pm 1/8$ ") square on the roof and carefully cut the opening.
3. Using the roof opening as a guide, cut the matching hole in the ceiling.

B. OPENING PREPARATION

1. If the opening exceeds 14-3/8" x 14-3/8", it will be necessary to install spacers.
2. If the opening is less than 14-1/8" x 14-1/8", it must be enlarged.
3. Route a copper 12AWG, with ground, 120 VAC supply line from the 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" ($\pm 1/8$ ") 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 easy connection at the junction 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.
4. If a furnace is to be connected, wires must be run from the furnace to the Dometic Unit.
5. 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 (if applicable) and thermostat wires. See FIG. 3.

FIG. 3

Do Not Cut
Roof Structure
Or Rafters

Good-Rafters
Supported By
Cross Beams

Good Location-
Between Roof
Rafters

3/4" Min.

Frame Opening So It
Won't Collapse When
Bolting Down Unit

Leave Access For Power
Supply Wiring

15" Min. At
Front Of
Opening

CAUTION

It is the responsibility of the installer of this unit 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 unit may leak into the interior causing damage to the product and the RV.

6. The 14-1/4" x 14-1/4" ($\pm 1/8$ ") opening is part of the return air system of the Unit and must be finished in accordance with NFPA Standard 501C Section 2.7.2.
7. Route a dedicated 12V DC supply line (18-22 AWG) from the RV's converter 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" ($\pm 1/8$ ") opening.
 - b. Make sure that at least 15" of supply wire extends into the roof opening.
8. If a furnace is to be controlled by the system, the two furnace thermostat leads must be routed to the roof opening of the unit that will control it. Make sure that at least 15" of the furnace thermostat wires extend into the roof opening.

4. THERMOSTAT AND CABLE INSTALLATION

A. LOCATION

The proper location of the thermostat is very important to insure that it will provide a comfortable RV temperature. Observe the following general rules when selecting a location.

1. Locate the thermostat about 54" above the floor.

2. Install thermostat on a partition, **NEVER** on an outside wall;
3. **NEVER** expose it to direct heat from lamps, sun or other heat producing items;
4. Avoid locations close to doors that lead outside, windows or adjoining outside walls;
5. Avoid locations close to supply registers and the air from them;
6. Never locate thermostat in a room that is warmer or cooler than the rest of the coach - such as the kitchen.
7. The major living area is normally a good location.

B. CABLE INSTALLATION

1. A seven-conductor cable, 18 to 22 AWG is to be used for low voltage connections.
2. Choose the shortest, direct route from the 14-1/4" ($\pm 1/8$ ") opening to the thermostat location selected.
3. Consider where screws, nails or staples might contact the cable.
4. Leave approximately 6" of cable extending through the wall for connection to the thermostat.
5. Leave approximately 10" of cable extending into the 14-1/4" x 14-1/4" ($\pm 1/8$ ") opening for connection at unit
6. If system is to control a gas furnace: Route two 18 gauge wires from the furnace to 14-1/4" x 14-1/4" ($\pm 1/8$ ") opening at this time.

5. PLACING THE UNIT ON THE ROOF

- A. Remove the unit from the carton.

WARNING

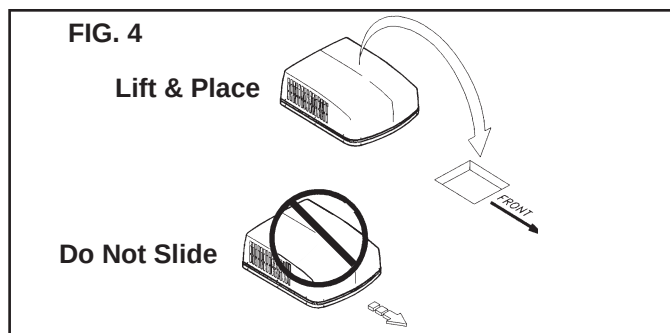
This unit weighs approximately 100 pounds. To prevent back injury, use a mechanical hoist to place Unit on roof.

- B. Place the unit on the roof.

CAUTION

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

- C. Lift and place the unit over the prepared opening using the gasket on unit as a guide. The **shroud end** without louvers goes **toward the front** of the RV. See FIG. 4.

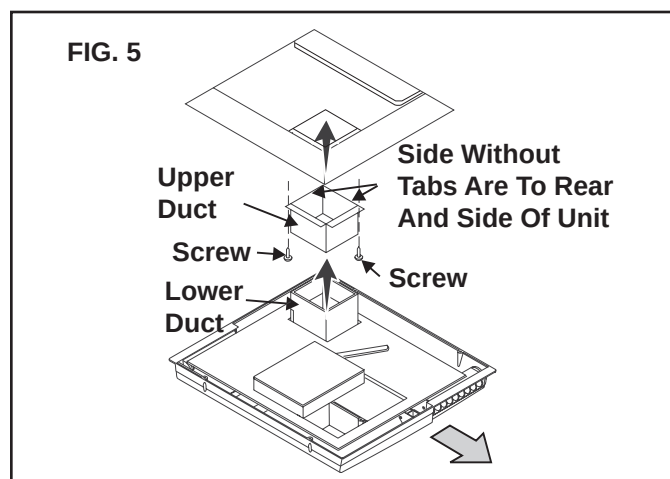


- D. Place the 3107210 Air Box Kit and Analog Control Kit inside the RV. Both boxes contain mounting hardware for the unit and will be used inside the RV. This completes the outside work. Minor adjustments can be done from the inside of the RV if required.

6. DISCHARGE DUCT & CEILING TEMPLATE INSTALLATION

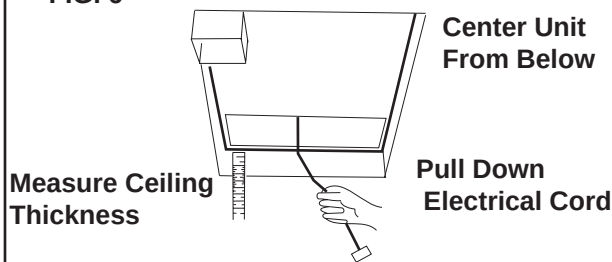
- A. Remove the air box and mounting hardware from their carton. The upper duct is shipped inside the lower duct which is part of the ceiling template.
- B. Remove the upper duct from the ceiling template and locate it over the blower discharge.

Note: The edge without the flange installs toward the **rear and side** of the opening. See FIG. 5.



- C. Use two of the sharp pointed sheet metal screws to hold the duct to the base pan. The holes are pre-punched in the pan for each location.
- D. Check gasket alignment over roof opening and adjust if necessary (roof gasket centers over opening). Unit may be moved from below by lifting and sliding.
- E. Reach up into the return air opening and pull the conduit power cable down for later connection. See FIG. 6.

FIG. 6



Note: In some applications it may be necessary to extend the 6 pin cable. Order cable number 3105584.001 if needed.

F. Measure the ceiling thickness:

1. If the distance is 2" to 3", remove perforated tabs from bottom duct only.
2. If the distance is 3" to 4", install ducts as received.
3. If the distance is 4" to 6" (maximum thickness), optional Duct Kit and Bolt Kit are available:
Duct Kit (Part No. 3106775.004)
Bolt Kit (Part No. 3100895.006)

G. Remove the junction box cover from the Analog Control Box.

H. Plug the electrical conduit (6 pin connector) from the upper unit into the mating connector in Analog Control Box.

I. Freeze Control Installation

1. Fits on all 579 and 595 Series Brisk Air units by placing the cold control switch up through the base pan and on the second refrigerant tube from the bottom in the center of the evaporator coil. Make sure the spring clip is fastened securely to the tubing and the cold control surface is making contact with aluminum fins on evaporator coil. See FIGS. 7 & 8.

FIG. 7

Snap The Open Loop Of Spring Clip On Second Tube In Center Of Evaporator Coil

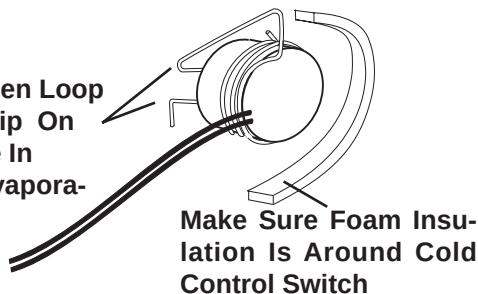
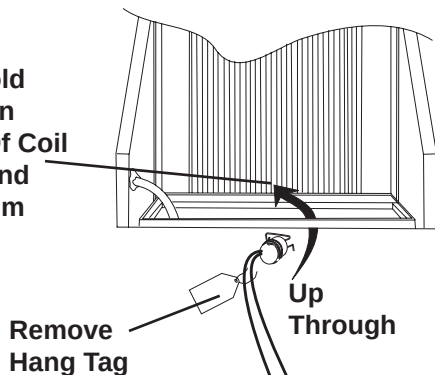


FIG. 8

Place Cold Control In Center Of Coil On Second Tube From Bottom



2. Keep wires away from heat strip (if applicable) and sharp edges to prevent damaging the wires. Use wire ties if necessary. See FIGS. 7 & 8.

7. WIRING OF SYSTEM

A. 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.

1. Route the 120 VAC supply line through the strain relief in Analog Control box. Tighten strain relief, making sure enough wire is inside electronic box to connect with unit 120 VAC wire. Tighten screws on strain relief connector being careful not to pinch and cut into the insulation on power supply leads.
2. Connect the white to white; black to black; and green to green or bare copper wire using "listed" wire connectors.
3. Push the wires into the box and install the cover (part of the mounting hardware) with the one blunt point screw provided.
4. Plug unit electrical cord into the mating connector on the relay control box. These connectors are polarized and will easily snap together. Do not force.

B. CONNECTION OF LOW VOLTAGE WIRE

See FIG. 9.

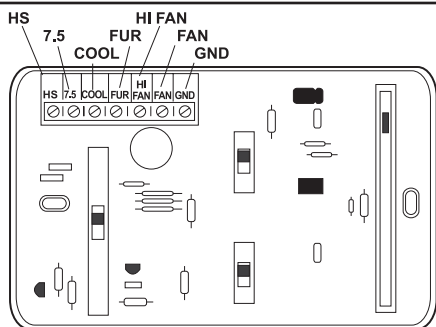
CAUTION

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 a solar panel is to be installed see instructions packaged with solar panel option.

1. Connect the previously run 12 VDC to the red and black wires protruding from the control box. Connect +12 VDC to the red wire; -12 VDC to the black wire.

FIG. 9

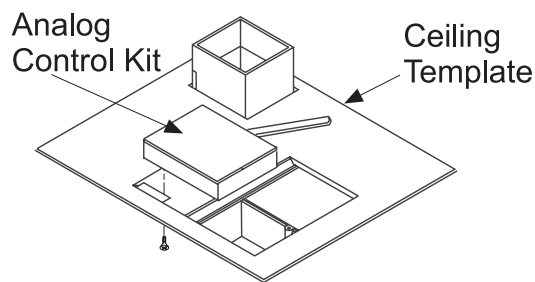


THERMOSTAT WITH COVER REMOVED

2. Connect the previously run furnace thermostat wires (if applicable) to the blue/white wires protruding from the control box. The polarity of these connections does not matter.
3. Connect the red/white wire between the control box and the thermostat +7.5 terminal.
4. Connect the green wire between the control box and the thermostat GND terminal.
5. Connect the yellow wire to the thermostat COOL terminal.
6. Connect the tan wire between the control box and the thermostat FAN terminal.
7. Connect the blue wire between the control box and the thermostat HI FAN terminal.
8. Connect the white wire between the control box and the thermostat FUR terminal (if applicable).
9. Connect the orange wire between the control box and the thermostat HS/HP terminal (if applicable).

- C. Locate the Analog Control Kit 3107541 on the ceiling template as shown in FIG. 10. Drive two #10 x 3/8 blunt point Phillips head screws (provided) through ceiling template into holes in electronic kit to hold into place.

FIG. 10



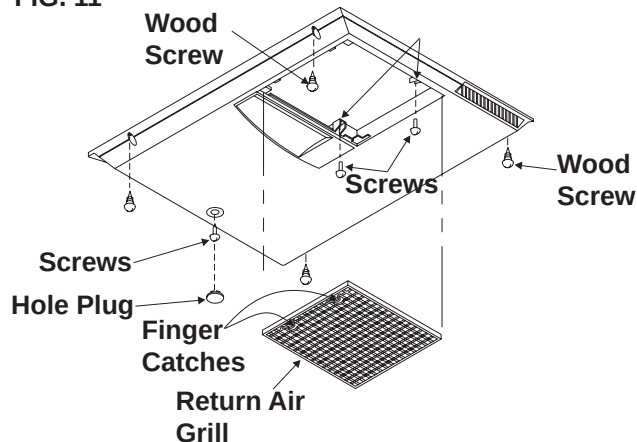
- D. If your installation includes the optional electric heat kit, install it at this time. Follow the instructions with the heat package for its installation procedure.
- E. Take the ceiling template and slide the lower unit over the upper duct.
- F. Hold the ceiling template with one hand and with the other, install the four 1/4" mounting bolts through the template and into the base pan.
1. Finger-tighten the (4) bolts and check alignment. There should be an equal opening on each side and the rear flange must be tight against the roof opening.

CAUTION

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

2. Evenly tighten mounting bolts to compress gasket to 1/2" this will be a torque of 40 - 50 inch pounds.

FIG. 11



MOUNTING PARTS

(4) 1/4" — #20 x 7" bolts



(4) #8 x 5/8" long sharp point wood screws



(3) #10 x 3/8" blunt point tapping screws

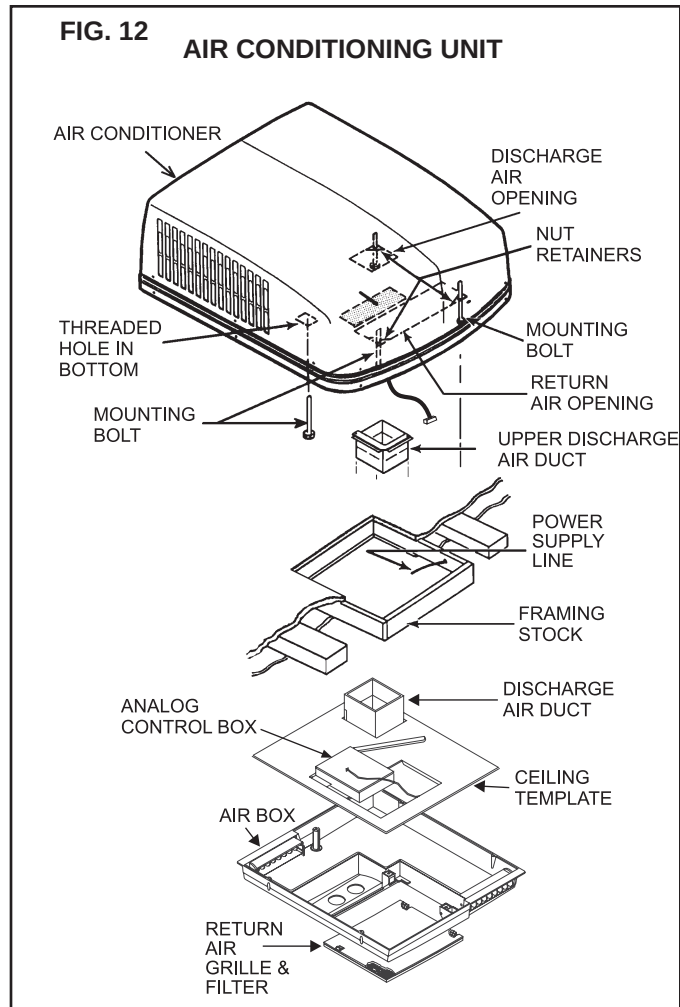
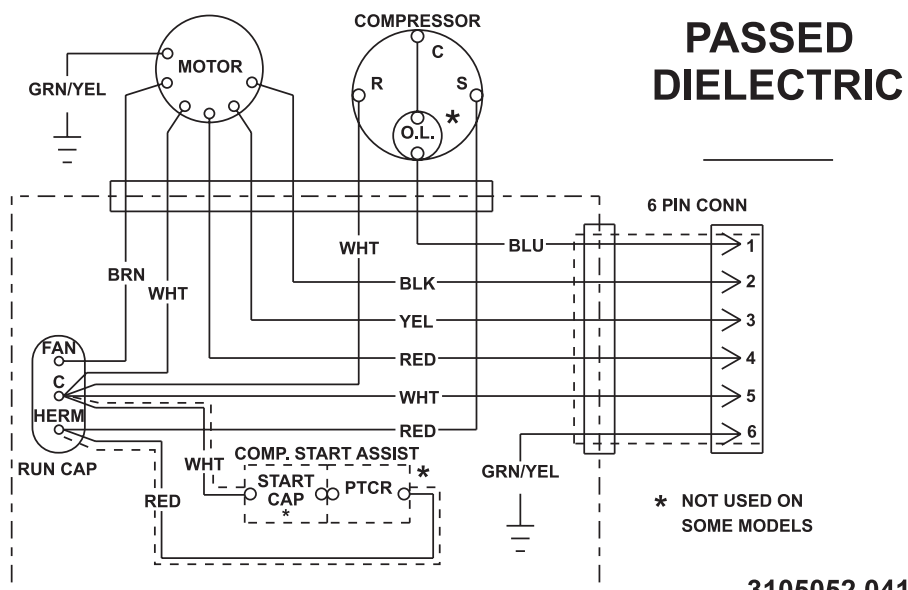


(1) Hole Plug



8. AIR BOX INSTALLATION

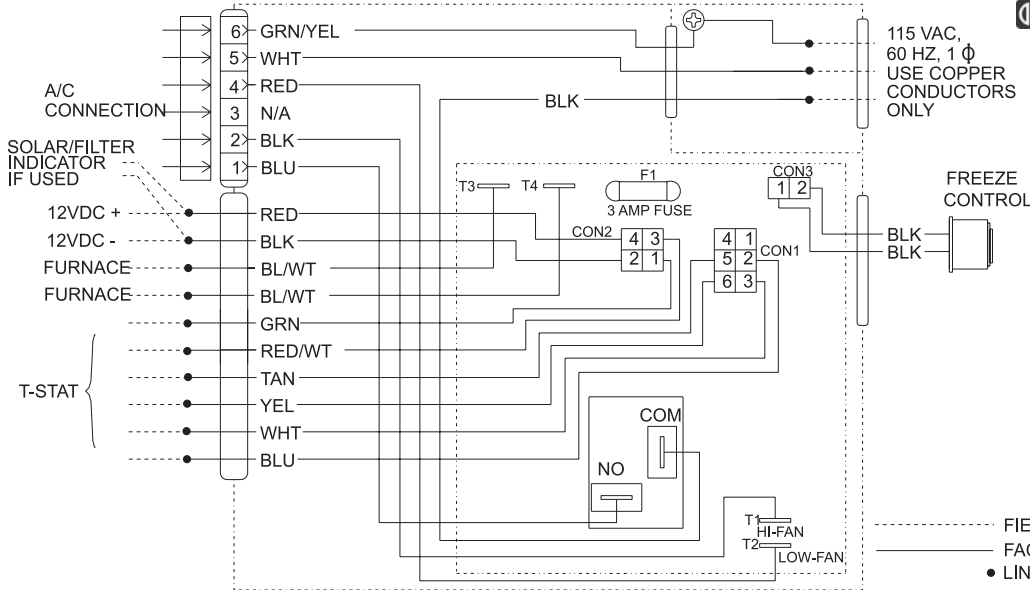
- A. Remove return air grille from air box by pulling in on half round finger catches. See FIG. 11.
- B. Hold air box up to ceiling template and install three (3) #10 x 3/8" screws at air box mounting point.
- C. Snap hole plug into place at rear of air box.
- D. There are four mounting holes on the outer edge of the return air opening for which screws are provided. These are required for all applications.
- E. Reinstall return air grille and filter into air box.
- F. Verify that all features of the installed system work. Please read Unit User's Guide or Operating Instructions before proceeding. Check fan speed, heat strip (if applicable), furnace operation (if applicable) and cooling operation. If the features do not work disconnect the 12 VDC and 120 VAC power supplies and verify that all wiring is correct.

FIG. 12 AIR CONDITIONING UNIT**UNIT WIRING DIAGRAM**

3105052.041

RELAY KIT FIELD WIRING DIAGRAM COOLING/FURNACE

3107750.048



Dometic

509 S. POPLAR ST.
LAGRANGE, IN 46761

PART No. 3107541.009

SERIAL No.

FOR USE WITH AIR CONDITIONER:

520, 540, 579, 4579, 595

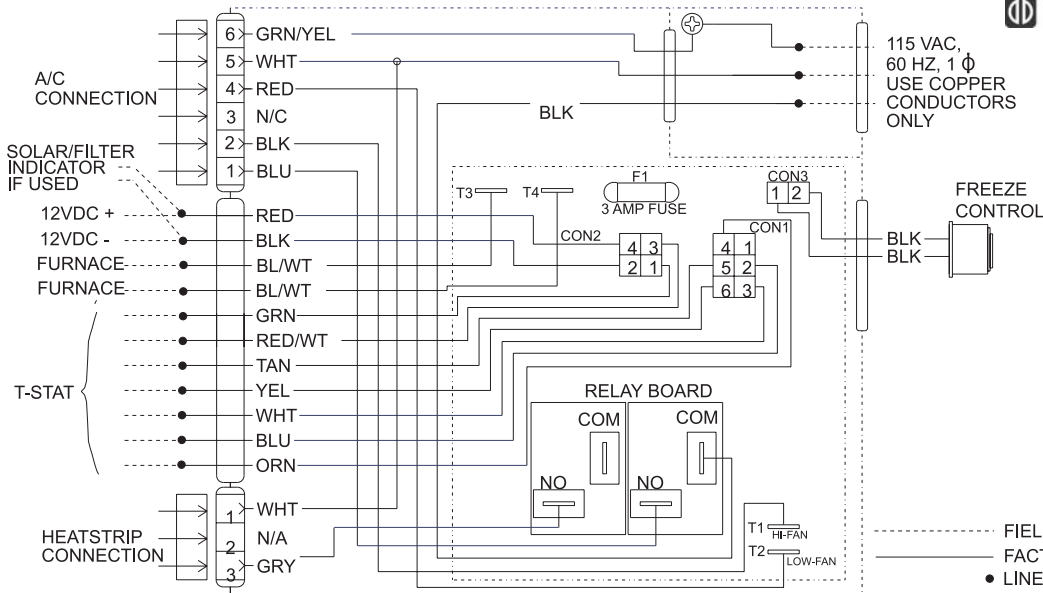
4595, 600, 640

FOR A/C WITHOUT HEATSTRIP OPTION

**PASSED
DIELECTRIC**

RELAY KIT FIELD WIRING DIAGRAM COOLING/FURNACE/HEAT STRIP

3107759.056



Dometic

509 S. POPLAR ST.
LAGRANGE, IN 46761

PART No. 3107541.017

SERIAL No.

FOR USE WITH AIR CONDITIONER:

579, 4579, 590, 4590, 5951, 45951, 520, 540

FOR A/C WITH OPTIONAL HEATSTRIP

**PASSED
DIELECTRIC**