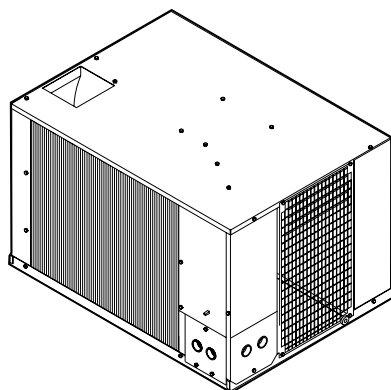




RECORD THIS INFORMATION FOR FUTURE REFERENCE
BEFORE INSTALLING THE UNIT:

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

SELF-CONTAINED AIR CONDITIONER & HEAT PUMP FOR RECREATIONAL VEHICLE PARK MODEL



SYSTEM MODELS
39335.541
39335.641
39125.602



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

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

For Service Center
Assistance Call:
800-544-4881

THIS UNIT IS DESIGNED FOR OEM INSTALLATION
ALL INITIAL INSTALLATIONS MUST BE APPROVED BY THE SALES DEPT.

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

**SYSTEM
MODELS**
39335.541
39335.641
39125.602

REVISION

Form No. 3109533.020 8/00
(Replaces 3109533.012)
(French 3109572.010)

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LaGrange, IN 46761

Important: 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: means if the safety information is not followed someone could be injured or killed, and/or damage to equipment could occur.

CAUTION: means if the safety information is not followed someone might be injured, and/or damage to equipment could occur.

Read and follow all safety information and instructions.

Learn how to operate the air conditioner properly.

Keep your air conditioner in proper operating condition (See Maintenance Section). Do not modify the air conditioner which may impair the function.

SPECIFICATIONS

SPECIFICATIONS			
System Model	39125.602	39335.641	39335.541
Nominal BTU Capacity	14,000	15,000	15,000
Volts/Phase/Hertz	115 / 1 / 60		115 / 1 / 60
Run Amps Comp/Motor	8.7/2.5	12.9/4.0	12.24/4.0
LRA Compressor	54.0	77.0	79
Wire Size	Up to 24 ft. - Use No. 12 AWG Copper Conductors		
Circuit Protection	15 Amp T.D. Fuse 15 Amp HACR	20 Amp Time Delay Fuse or 20Amp HACR	
Circuit Breaker			
Refrigerant	R-22	R-22	R-22
System Refrigerant Charge	26.25	34.5	37
Size (In Inches)	Width	Height	Depth
	26.25	16.25	19.25
Installed Weight	91 Pounds	102 Pounds	102 Pounds
Duct Size Supply	24 sq. in. min. 42 sq. in. max.	42 sq. in. min. 60 sq. in. max.	42 sq. in. min 50 sq. in. max

1. GENERAL INFORMATION & LOCATION

1. GENERAL INFORMATION

HEAT PUMP

The Basement/Park Model heat pump was designed to operate in a **MILD GEOGRAPHICAL AREA** for heating where the heat loss is minimum. The Heat Pump will operate down to an outside ambient temperature of 30 degrees. At 30 degrees, the outdoor ambient sensor will turn off the Heat Pump circuit. As long as the temperature remains below 38 degrees, the Heat Pump will remain "OFF".

As the outside temperature increases to 38 degrees, the outdoor ambient sensor switches back "ON" the heat pump circuit.

The advantages of the Heat Pump Central Air Conditioner are:

1. User friendly; only one unit for both heating and cooling.
2. Heat pump heating uses the campsite electrical hookup and you save on trips to refill LP tanks.
3. When used in mild climates where the outdoor temperature range is 38 degrees or higher, auxiliary heat is not needed.

NOTE: Geographical location usage should be determined before omitting a central furnace.

4. The unit is not exposed to the elements.

AIR CONDITIONER

The Central Air Conditioning Unit was designed to allow the coach manufacturer the option of installing the air conditioning unit in a closet, alcove or basement storage compartment of the RV. The advantages of the central air conditioning unit are:

1. Unit is not exposed to the elements;
2. Easier serviceability;
3. Increased roof area for additional storage bins or other roof-mounted accessories.

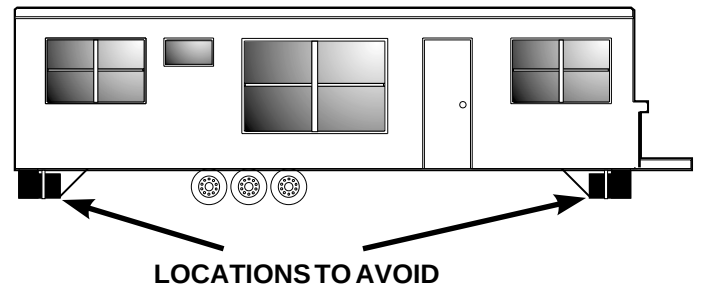
The basement air conditioning unit is designed to be used exclusively with external ductwork for the cold air discharge. There are no provisions for an electric heater to be installed as part of the unit. The heating of the RV will be supplied by the central furnace if installed.

Since it is necessary to install all or part of the ductwork in the ceiling and sidewall or floor, it is the responsibility of the RV manufacturer to assure the structural integrity of the roof and any reinforcement that may be required. The RV manufacturer should review each RV floor plan to determine proper duct design and register location.

LOCATION

The system is intended for installation in a Recreational Vehicle Park Model where the interior is essentially one undivided space. When locating the unit, avoid any area where the unit could be damaged when transporting. An area to avoid during mounting is the extreme front and rear of the unit.

FIG. 1



2. OUTDOOR SECTION

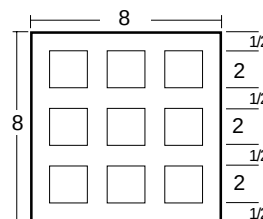
The condenser coil is designed to have a fresh supply of air. If skirting is installed, allow a 15" x 22" opening (330 square inches) for supply air and a 15" x 22" opening (330 square inches) for discharge air. Use the cross flow method for good air circulation.

CAUTION

DO NOT TOTALLY ENCLOSE THE UNDERSIDE OF THE UNIT. AIR CIRCULATION PREVENTS HEAT FROM BUILDING UNDER UNIT AND YOUR SYSTEM WILL PERFORM AS DESIGNED.

The condenser section is a "blow-through" type. When the face of the coil is positioned behind a louvered or other type of restrictive opening, the **FREE AREA** of the opening must be **at least 260 square inches**.

A. FREE AREA — is the opening that remains in a grill or louvered panel after the restrictions are taken away. For example, an opening of 10 x 20 inches has 200 square inches. When this opening is covered with a grill that is 56 percent open, the **FREE AREA** is (200 x .56), 112 square inches.



EXAMPLE OF HOW TO DETERMINE FREE AREA OR % OPEN AREA:

$$\begin{aligned} \text{TOTAL AREA} &= 8 \times 8 = 64 \\ \text{FREE AREA} &= 2 \times 2 \times 9 \text{ openings} = 36 \\ \text{\% OPEN AREA} &= \frac{36}{64} = 56\% \end{aligned}$$

Expanded and perforated metal grills in general vary from 30 percent to 60 percent open. Be certain that **260 square inches** of FREE AREA is available to the face of the condenser.

NOTE: Service access must always be supplied either as clearance or as a defined access panel.

B. MOUNTING

Vibration eliminators are supplied to prevent the transmittance of vibration into the living area.

The air conditioning unit may be attached to rails beneath the vehicle, attached to the frame, or mounted directly to the floor of some vehicles.

Unit should be mounted with a tilt toward the rear (condenser) a half-bubble using a level. Unit rear should be 1/4" lower than the front.

C. SERVICE ACCESS

Be sure **NOT** to block the inlet or discharge air, or service access, when mounting.

3. INDOOR SECTION

A. CLEARANCES

The minimum clearances to the evaporator are zero inches to the bottom, top, left and right sides. Access to the electrical connections and drain connection must be provided when making the installation.



Be sure to allow sufficient room to service the electrical components.

B. INLET AIR

The evaporator section must have free access to room air. **A minimum of 180 square inches** of FREE AREA opening is required. Where the return air must be provided through louvers or mesh screen, the FREE AREA percentage of the material used shall be taken into consideration when making this determination. An example of how to determine FREE AREA is included under **"2. OUTDOOR SECTION"**.

GRILLS AND REGISTERS:

NOTE: The return air grill must have the same square surface as the coil face (15"H x 17"L).

For each air conditioning system, there must be a return grill to bring cabin air back into the unit. There must also be at least four discharge grills per unit.

Each return air grille must be filtered and accessible for cleaning or replacement.

C. OUTLET AIR:

The central air conditioning unit is designed to use a discharge air duct with a static pressure of .10 to .25 inches water column. Proper duct size is necessary to maintain proper air flow without loss of static pressure and provide good air circulation.

All air handling ducts must be properly insulated to prevent condensation forming on their surface during operation. A vapor barrier must also be supplied on the outer surface of the insulation to prevent moisture from traveling through the insulation and condensing on the cold ductwork.

NOTE: If the air conditioning unit is attached to the central furnace, a damper must be installed at the furnace outlet to prevent cold air from circulating through the furnace heat exchanger.

4. ELECTRICAL WIRING

NOTE: All wiring must comply with the National Electrical Code or CSA Standard C22.1, Canadian Electric Code, Part 1; and all local codes.

A. GENERAL

1. All 115 AC wiring must be at least 12 AWG.
2. Two conductors plus a ground supply circuit must be provided. Refer to Page 2, **"Specifications"** for breaker and fuse size for your air conditioner.

B. LINE VOLTAGE CONNECTION

1. Remove electrical box cover.
2. Route AC supply wires through one of the bushings.
3. Route AC supply wire through the connector and tighten lock nut to ensure against twisting of the wires.
4. Connect the white wire in the junction box and the white (neutral) wire from the supply line using an appropriate wire connector.
5. Connect the black wire in the junction box to black (hot) wire from the supply line using an appropriate wire connector.
6. Connect the ground wire from the supply line to the unit ground screw.

C. DC VOLTAGES CONNECTION

1. Route a dedicated 12 VDC supply line (18-22 AWG) from the RV's converter or battery to the electrical box. In a multiple zone installation, this wiring is required in only one of the A/C units.
2. If a Remote Temperature Sensor is to be used (Part No. 3106486.008), the connector end must be routed to the electrical box of the system which it will control. Mount the Remote Sensor in a locations 54" above the floor and away from any heat source in the area that is to be controlled.

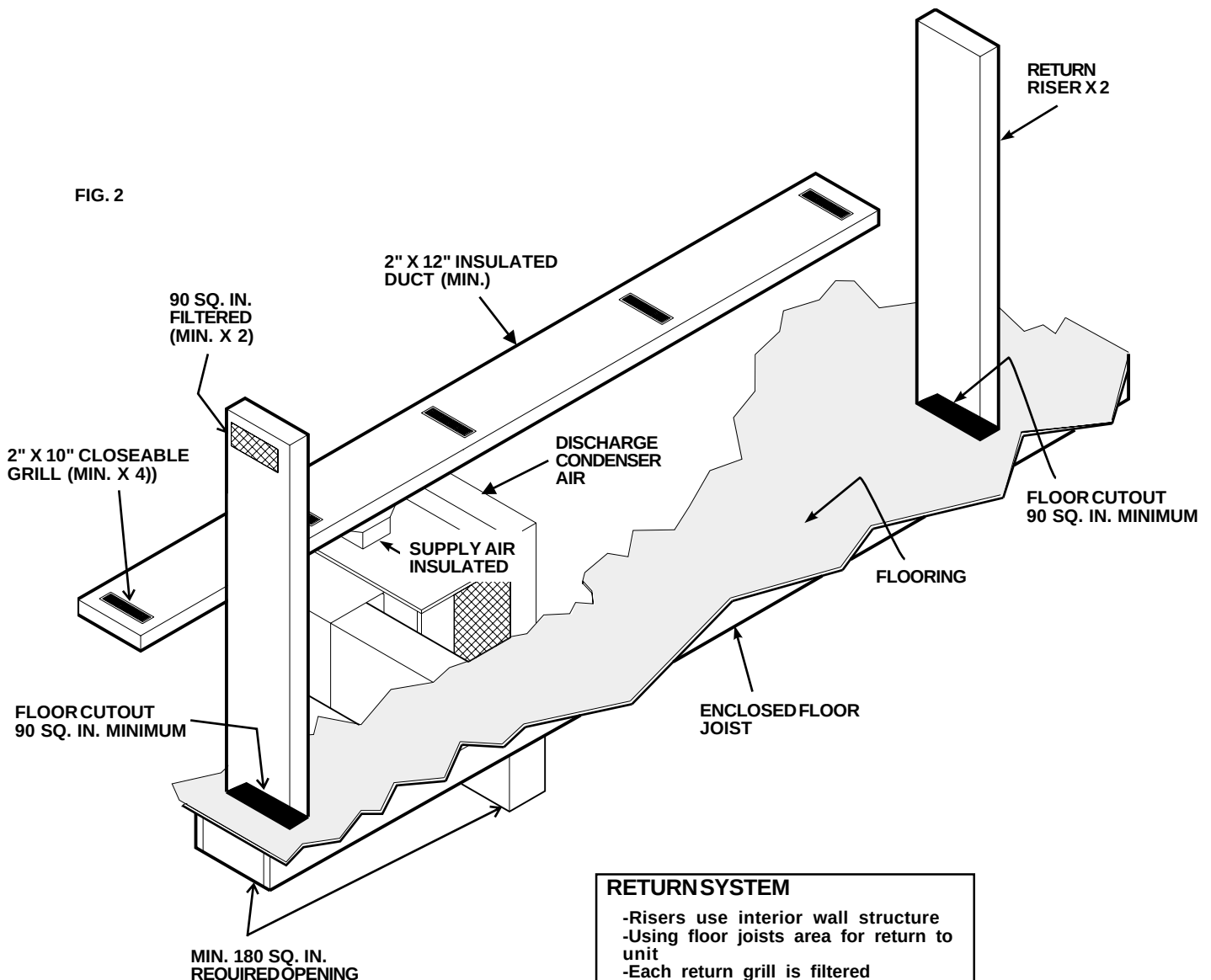
3. If a furnace is to be controlled by the system, the two furnace thermostat leads must be routed to the electrical box of the air conditioner that will control it.
4. If an Energy Management System (EMS) is to be used with the control, two wires must be routed to the electrical box of the zone to be managed. The signal required for this function is a normally open relay contact. When the EMS calls for the compressor to shut off, the relay contacts should close.
5. Route a 4-conductor control cable from the Comfort Control Center mounting position into the unit electrical box.
6. In the event that other A/C's are to be installed (additional zones) an additional 4-conductor control cable must be routed to the other A/C's.

5. DOMETIC COMFORT CONTROL CENTER™ & CABLE INSTALLATION

A. LOCATION

1. If the system is to be used **WITHOUT** a **Remote Temperature Sensor**, the proper location of the **Comfort Control Center™** is very important to ensure that it will provide a comfortable RV temperature. Observe the following rules when selecting a location.
 - a. Locate the **Comfort Control Center™** 54" above the floor.
 - b. Install the **Comfort Control Center™** on a partition, not on an outside wall.
 - c. **NEVER** expose it to direct heat from lamps, sun or other heat producing items.
 - d. Avoid locations close to doors that lead outside, windows or adjoining outside walls.
 - e. Avoid locations close to supply registers and the air from them.

FIG. 2

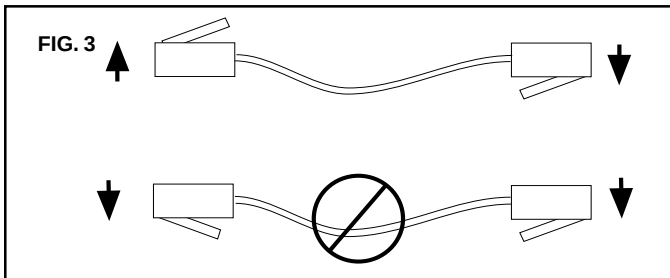


- 2) If the system is to be used **WITH** a **Remote Temperature Sensor** in **ALL** zones, the comfort Control Center may be mounted anywhere that is convenient in the coach. Try to avoid hard to reach and hard to see areas.
 - a. Refer to the instructions provided with the **Remote Temperature Sensor** for details of installation.
- 3) A 3/8" diameter hole will be needed to route the communication cable through the wall.

B. CONTROL CABLE INSTALLATION

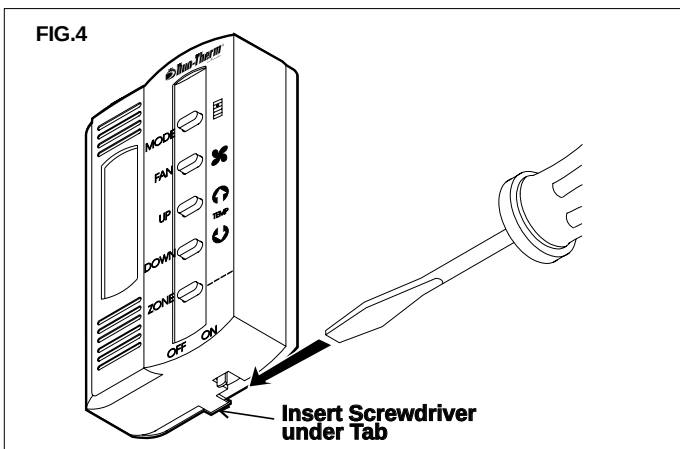
A 4-conductor control cable must be routed from the air conditioning unit to the **Comfort Control Center™**.

1. Choose the shortest, most direct route from the unit electrical box to the **Comfort Control Center™** location selected. Leave 6" of cable extending through the wall.
2. The cable that should be used is a flat, 4-conductor telephone cable.
3. The cable must be terminated with a telephone RJ-11 connector. Refer to the crimp tool manufacturer for crimping instructions. Ensure that the cable is installed into the connector correctly before crimping. (See FIG. 3).



C. COMFORT CONTROL CENTER™ INSTALLATION

1. Carefully remove the base plate from the **Comfort Control Center™**. This may be accomplished by inserting a screwdriver under the tab on the bottom edge of the front cover and gently prying. (See FIG. 4).



2. Insert the control cable through the hole in the base plate and mount the plate to the wall with the two screws provided.
3. Install the control cable RJ-11 connector into the back of the **Comfort Control Center™** and gently press onto the base plate.

D. CONNECTION OF LOW VOLTAGE WIRES



Ensure that the 12 VDC power is shut off.

1. Route the Remote Temperature Sensor cable, if applicable, to the connector that matches its color.
2. Connect the previously run 12 VDC to the red and black wires protruding from the Electronic Control Board. (In multiple zone installations, this needs to be done at only one zone.) Connect +12 VDC to the red wire; -12 VDC to the black wire.
3. Connect the previously run furnace thermostat wires (if applicable) to the blue wires protruding from the Electronic Control Board. The polarity of these connections does not matter.
4. Connect the previously run Energy Management System wires (if applicable) to the yellow wires protruding from the Electronic Control Board. The polarity of these connections does not matter.
5. Plug control cable from comfort control center into the connector on the main control board (P1). If more than one air conditioner or heat pump will be controlled by the Comfort Control Center, an additional 4-conductor control cable must be routed to the other A/C unit.

E. CONFIGURATION

Now that the system is installed, it is necessary to configure the electronics.

If the installation is a single zone, no adjustment to the dip switches are necessary: They are all set to the "OFF" position.

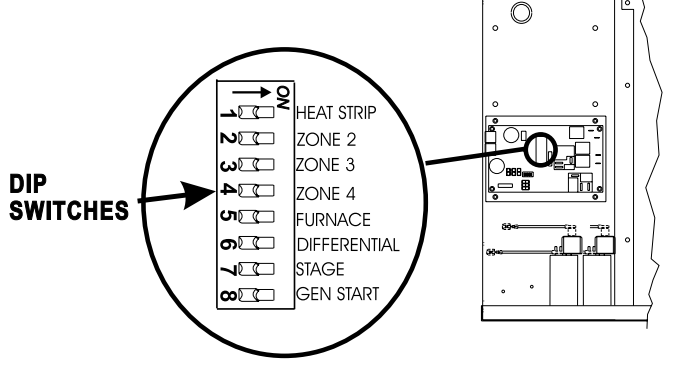
1. If there is more than one zone, the dip switch for each successive zone must be set to "ON". To gain access to the dip switches the cover on the unit's electrical box must be removed.
2. Turn "ON" the "ZONE" dip switch on the electronic control board to set its zone. See figure 7.

NOTE: The Control Board are shipped from the factory with all dip switches in the "OFF" position.

3. Turning "ON" of zone 2 dip switch identifies this as zone 2: likewise zone 3 and 4.

4. Turn "ON" the furnace dip switch when a furnace is connected to the blue wires off the control board.
5. Differential dip switch is the difference between the "ON/OFF" cycle of the thermostat. The normal differential is preset in the circuit board with the dip switch set to the "OFF" positions. In some situations, it may be necessary to decrease the Differential.

FIG. 7



F. SYSTEM RESET

On new installation the **COMFORT CONTROL CENTER™**, and/or any changes made to the dip switches requires the electronic control kit to be reset.

1. Turn "ON/OFF" switch to the "OFF" position.
2. Simultaneously depress and hold the "MODE" and "ZONE" push-buttons while turning the "ON/OFF" switch to "ON". The LCD Display should show "FF" until the "MODE" and "ZONE" push-buttons are released.

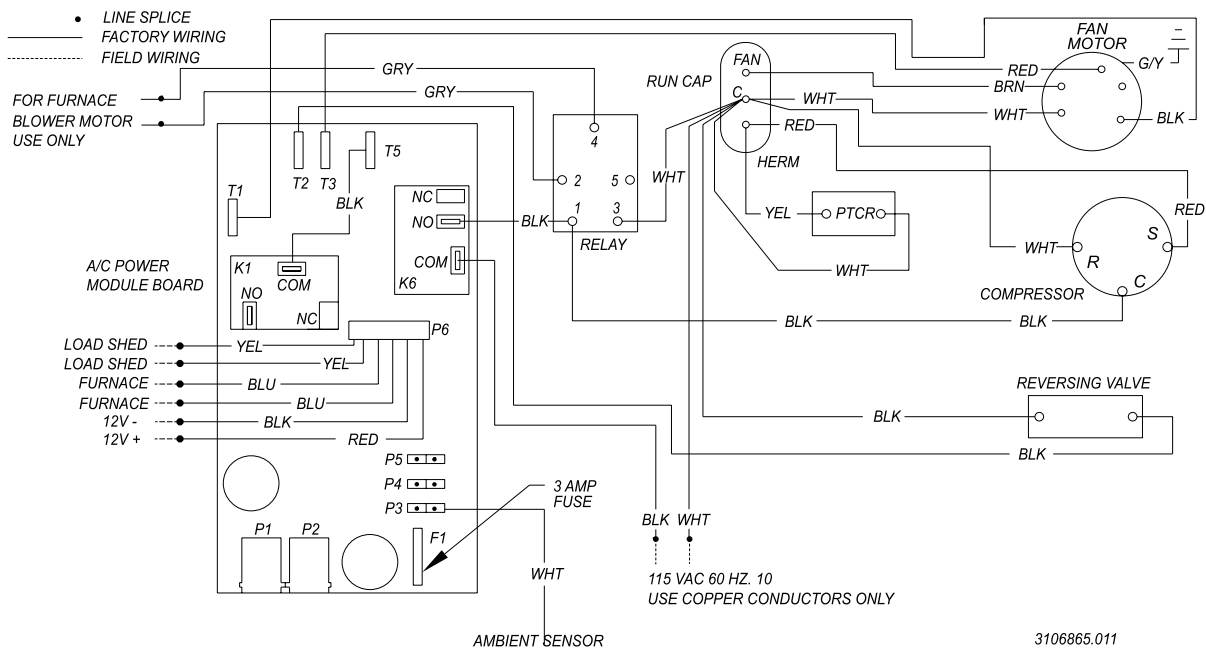
G. SYSTEM CHECKOUT

Verify that all features of the installed system work. Check fan speeds, cooling mode, furnace (if connected) and heat pump. If the features do not work, check all wiring and confirm that the correct options have been selected on the Electronic Control Box.



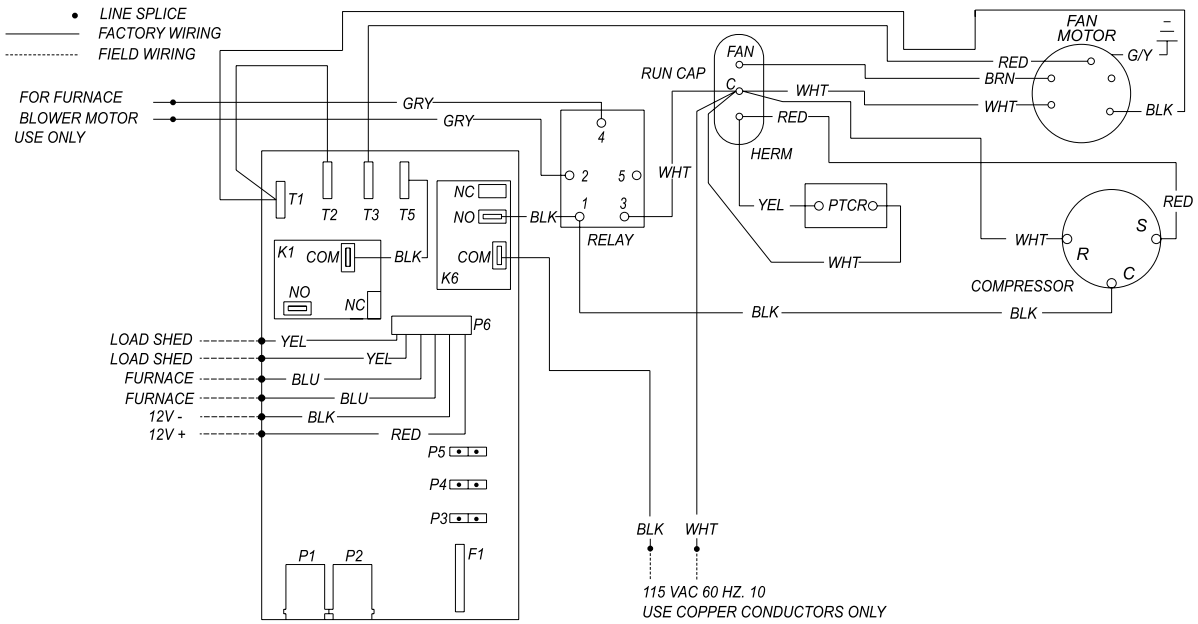
FAILURE TO CORRECTLY WIRE THE UNIT WILL CAUSE PRODUCT DAMAGE AND MAY CAUSE PERSONAL INJURY.

WIRING DIAGRAM FOR SYSTEM MODEL 39335.541 & 39335.641



3106865.011

WIRING DIAGRAM FOR SYSTEM MODEL 39125.602



3106866.019