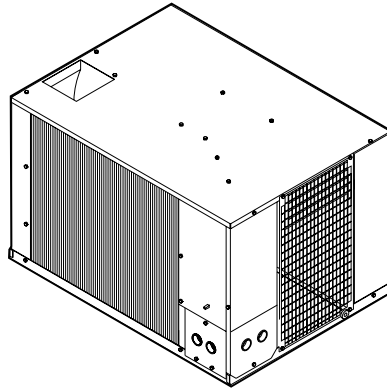




RECORD THIS INFORMATION FOR FUTURE REFERENCE BEFORE INSTALLING THE UNIT:

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

SELF-CONTAINED AIR CONDITIONER FOR RECREATIONAL VEHICLE/ PARK MODEL 39115 & 39045



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 & OPERATING INSTRUCTIONS

**SYSTEM
MODELS
39115
39045**

Form No. 3109870.018 4/01
(Replaces 3109870.000)
(French 3109871.016)
©2001 The Dometic Corporation
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.

CAUTION: means if the safety information is not followed someone might be injured.

Read and follow all safety information and instructions.

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SPECIFICATIONS

System Model	39115.626 60 HERTZ	39045.522 60 HERTZ	39045.601 60 HERTZ	39045.601 50 HERTZ	39045.616 60 HERTZ	39045.616 50 HERTZ
Nominal BTU Capacity	14,000	15,000	15,000	12,500	15,000	12,500
Volts/Phase/Hz	115 / 1 / 60	115 / 1 / 60	115 / 1 / 60	100 / 1 / 50	115 / 1 / 60	100 / 1 / 50
Run Amps Comp/Motor	8.7 / 2.5	4.1 / 12.3	12.1 / 4.7	10.1 / 3.4	12.1 / 4.7	10.0 / 3.4
LRA Compressor	54	79.0	71	71	77	77
Wire Size	Up to 24 ft. - Use No. 12 AWG Copper Conductors					
Circuit Protection	15 Amp TD Fuse 15 Amp HACR	20 Amp T.D. Fuse 20 Amp HACR				
Refrigerant	R-22	R-22	R-22	R-22	R-22	R22
System Refrigerant Charge	26.25	28.0	28.5	28.5	28.5	28.5
Size (In Inches)	Width		Height		Depth	
	26.25		16.25		19.25	
Installed Weight	102 Pounds	102 Pounds	102 Pounds	102 Pounds	102 Pounds	102 Pounds
Duct Size Supply	2 x 12" min. 3 x 14" max.		3 x 14" Required			

1. GENERAL INFORMATION & LOCATION

GENERAL INFORMATION

The **Central Air Conditioning Unit** was designed to allow the coach manufacturer the option of connecting the air conditioning unit to the coach's central furnace duct system.

The advantages of the Central Air Conditioning Unit are:

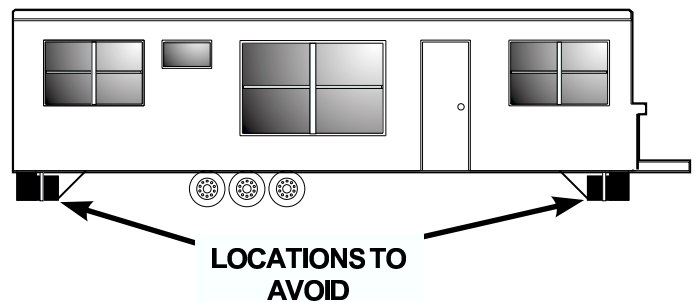
1. The unit is not exposed to the elements;
2. Easier serviceability;
3. Elimination of the air conditioner's roof perch;
4. Cleaner roofline.

The 391 Series was designed to be used exclusively with external ductwork for the cold air discharge. A standard wall mounted thermostat operates the cooling cycle. There are no provisions for an electric heater to be installed internal to the unit. Heating will be supplied by the central furnace if installed.

The manufacturer should review each floor plan to determine proper duct design and register location.

The Dometic Product Engineering and Applications Departments are available for recommendations and suggestions.

FIG. 1



LOCATION

The system is intended for installation in a recreational vehicle 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. (See FIG. 1).

2. CONDENSER SECTION

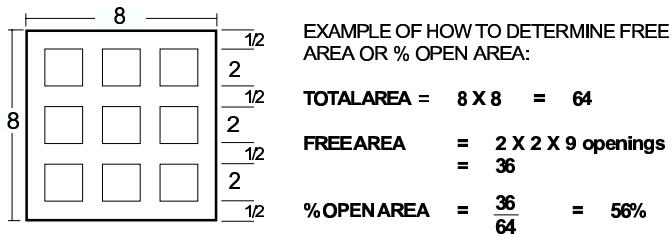
The condenser coil is designed to have a fresh supply of air. If skirting is installed, allow a 15" x 22" opening (330 square inches) for supply air and a 15" x 22" opening (330 square inches) for discharge air. Use the cross flow method for good air circulation.

! 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 330 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.



Expanded and perforated metal grills in general vary from 30 percent to 60 percent open. Be certain that **294 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 should be used at the unit's surface contact points to prevent the transmittance of vibration into the living area. Use a rubber or ethafoam pad to absorb any unit vibration that may occur.

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. EVAPORATOR SECTION

A. CLEARANCES (See FIG. 2)

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.

! CAUTION

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 255 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. CONDENSER 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.

Return air grills must be located in a high wall area (next to the ceiling) for good air circulation. Each return air grille must be filtered and accessible for cleaning or replacement.

C. OUTLETAIR:

The central air conditioning unit is designed to use a 3" x 14" max. discharge air duct at a static pressure of .10 to .25 inches water column. This 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

See FIG. 3.

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

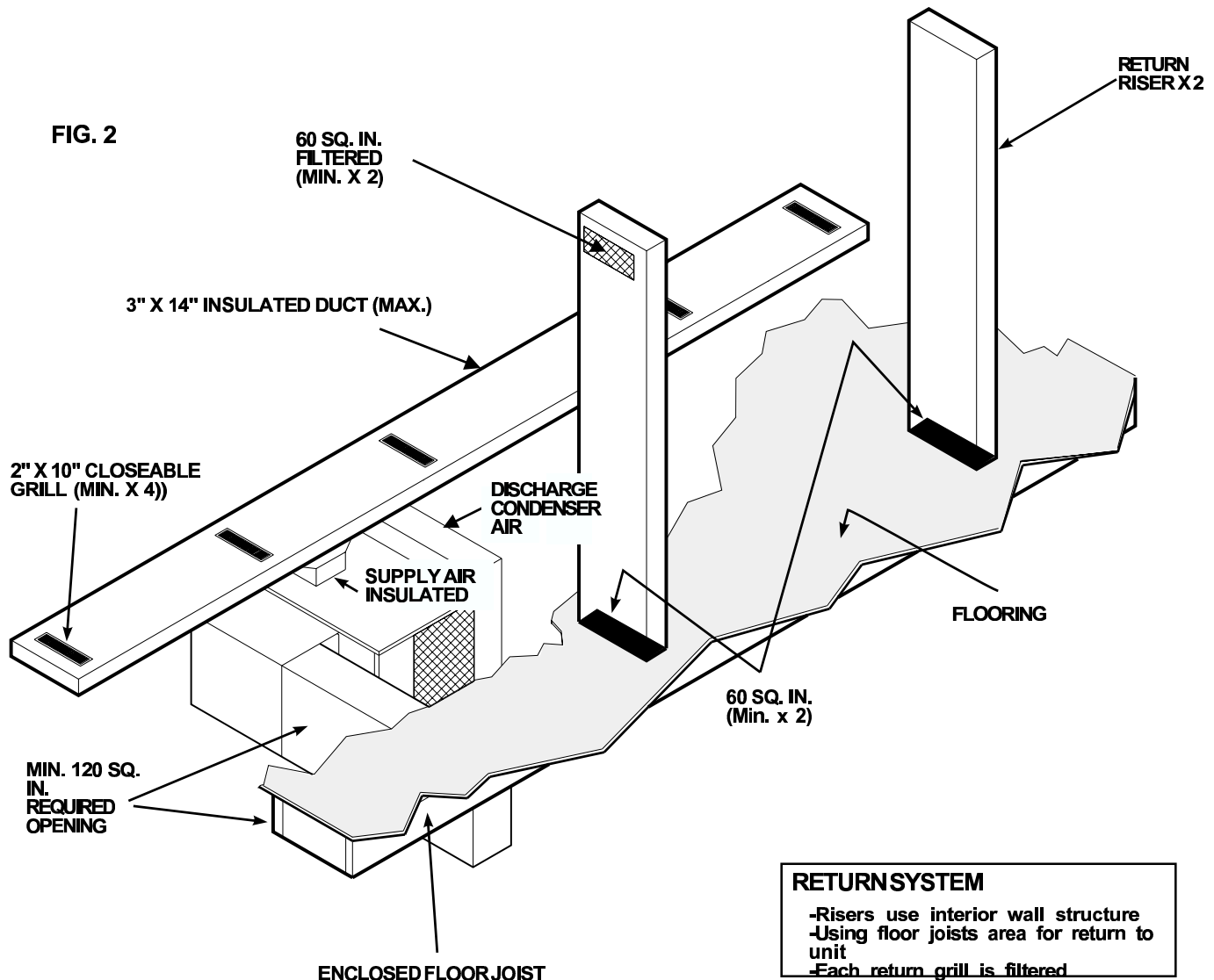
A. GENERAL

1. All wiring must be at least 12 AWG.
2. Two conductors plus a ground must be provided from a supply circuit protected by a slow-blow fuse or HACR type circuit breaker. See "Specifications", Page 2 for breaker and fuse size for your model.

B. EVAPORATOR SECTION-Line Voltage

(See FIG. 3)

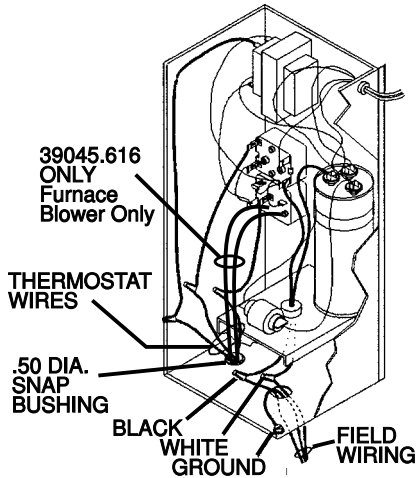
1. Remove electrical box cover.
2. Route the supply wire through the connector and tighten lock nut to ensure against twisting of the wires.
3. Connect the white wire in the junction box and the white (neutral) wire from the supply line using an appropriate wire connector.
4. Connect the black wire in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



! WARNING

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

FIG. 3



5. THERMOSTAT MOUNTING

Contact The Dometic Corporation for the proper thermostat kit. The proper location of the thermostat is very important to ensure that it will provide a comfortable temperature. Observe the following general rules when selecting a location.

- A. Locate thermostat about 5 feet above the floor;
- B. Install thermostat 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;
- F. Never locate thermostat in a room that is warmer or cooler than the rest of the coach — such as the kitchen;
- G. The major living area is normally a good location.

6. THERMOSTAT WIRING

MODEL 39045

A three-conductor cable 18 to 22 AWG is to be used for low voltage connections. Route low voltage cable from thermostat to unit electrical box. Use .50 dia. snap-bushing for routing cable into electrical box.

Connect "R" from thermostat to red wire in control compartment. Connect "G" or "F" from thermostat to blue wire in control box. Connect "Y" from thermostat to yellow wire in control box. Use wire nuts to ensure good connections.

OPERATION

This unit functions like a residential air conditioner.

- A. Set the **System Switch** to COOL.
- B. Set the **Temperature Lever** to your comfort level.
- C. Set the **Fan Switch** to:
 - 1) "AUTO": The fan cycles off and on with the compressor.

- 2) "ON": The fan will run continuously. The compressor will turn off when the room temperature is low enough to satisfy the thermostat setting.

Air Circulation Without Cooling:

- A. Set the system switch to "OFF";
- B. Set the fan switch to "ON". The fan will run continuously, circulating air.

FURNACE TO THERMOSTAT WIRING

When connecting a gas furnace to Dometic's Heat/Cool thermostat, the "W" and "R" terminals are used. This means there will be two wires on the "R" terminal (one wire from the furnace and one wire from the air conditioner).

FURNACE OPERATION

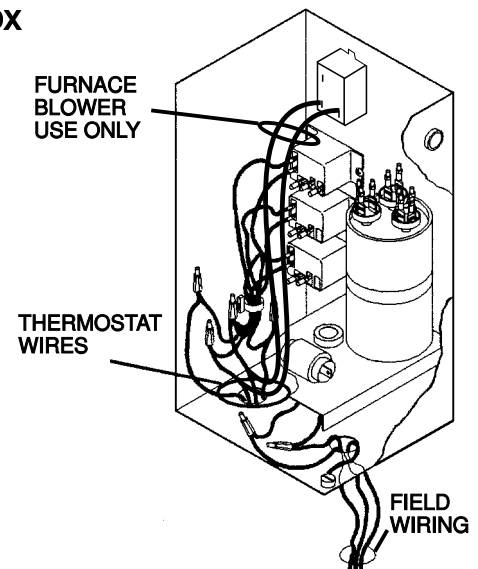
- A. Set the fan switch to "AUTO"
 - B. Set the system switch to "HEAT"
 - C. Set the **temperature lever** to your comfort level.
- The furnace will come on and heat your coach as required. The furnace and blower will cycle ON and OFF as needed to maintain your comfort.

MODEL 39115

! WARNING

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

FIG. 4
MODEL 39115 ELEC-
TRICAL BOX



- A. FOR THERMOSTAT MOUNTING, refer to Sec. 5, Page 5.

B. CABLE INSTALLATION

1. A four-conductor cable, 18 to 22 AWG is to be used for low voltage connections.
2. Choose the shortest, direct route from the unit to the thermostat location selected.

3. Consider where screws, nails or staples might contact the cable.
4. Leave approximately 3" of cable extending through the wall for connection to the thermostat.
5. Leave approximately 10" of cable extending into the air conditioner.

installation instructions provided with the furnace and/or the thermostat. Normally, the furnace will connect to the "RH" and "W" terminals of the thermostat.

7. THERMOSTAT WIRING (12V DC)

A 2-conductor cable, 18 to 22 AWG is required for the 12V DC power source. This can be routed into the system at either the unit or the thermostat.

Select the shortest direct route between the power supply and the system. A negative wire must be supplied. Frame work grounding is not adequate.

- A. At the unit, route both leads from the 12V DC supply and the four wires from the thermostat up through the plastic bushing in the bottom left of the electric box for connection.
- B. Or at the thermostat, route both leads from the 12V DC supply through the wall to behind the thermostat.
Route the four wires from the thermostat up through the plastic bushing in the bottom left of the electric box for connection.
- C. Trim the wires to 10" to allow for easy connections.
- D. Connect the wires per Table 1. Use wire nuts or equivalent connectors to insure good electrical connection.

THERMOSTAT INSTALLATION

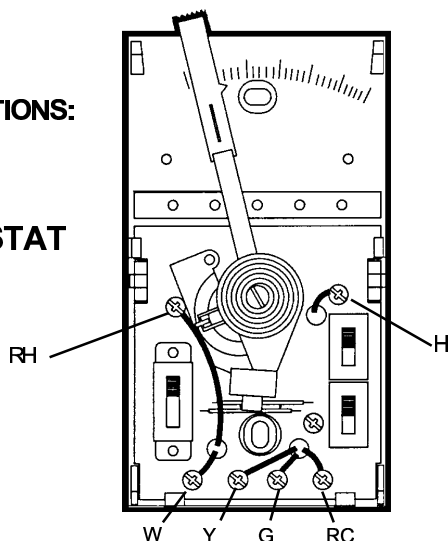
These instructions cover only the cooling connections required for Dometic's 2-speed thermostat.

- A. Remove the thermostat cover.
- B. Connect the unit wires to the thermostat per Table 1.
- C. Push the thermostat wires into hole in wall and fill excess hole with insulation.
- D. Mount thermostat base to the wall with screws provided.
- E. Check all thermostat wires on base to insure they are completely clear of the bi-metal coil of the thermostat. Adjust if necessary.
- F. Replace thermostat cover.

For furnace hook-up or use of another thermostat, consult the

FIG. 5
WIRE CONNECTIONS:

THERMOSTAT BASE



MODEL 39115 ONLY

	T'stat Terminal	Unit Wire Color	Power Source
AC	RC	---	+12V DC
	---	Black	-12V DC
	Y H G	Yellow Blue Orange	Field Supply Wires ↑
HEAT	RH & W	(Furnace Option)	

TABLE 1

8. OPERATION

This unit functions like a residential air conditioner. (Refer to FIG. 6).

A. COOLING

1. Set the system switch to "COOL"
2. Set the temperature lever to your comfort level
3. Set the fan speed switch to "HI" or "LO" as desired.
4. Set the fan auto switch to:
 - a. "ON", the fan will run continuously. The cooling unit will turn OFF when the room temperature is low enough to satisfy the thermostat setting from Item 2 above.
 - b. "AUTO": The fan will cycle OFF and ON with the cooling unit.

B. HEATING

1. Set the system switch to "HEAT".
2. Set the temperature lever to your comfort level.
3. Set the fan speed switch to "HI" or "LO" as desired.
4. Set the fan "AUTO" Switch to:
 - a. "ON" the fan will run continuously helping the furnace circulate air.
 - b. "AUTO": The fan will not operate.

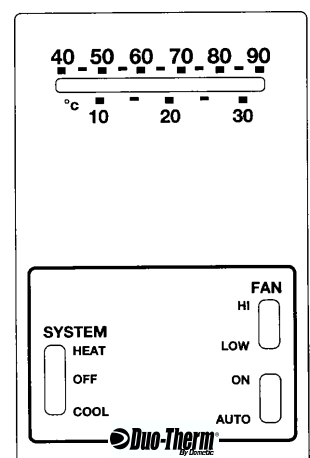
C. AIR CIRCULATION with or without cooling or heating:

1. Set the system switch to "OFF",
2. Set the fan modeswitch to "ON"
3. Set the fan speed to "HI" or "LO" as desired

D. OFF

1. Set the system switch to "OFF",
2. Set the fan mode switch to "AUTO".

FIG. 6
THERMOSTAT FACE PLATE



9. MAINTENANCE

- A. **AIR FILTER:** Your air conditioner will operate more efficiently with a clean filter. Replace the filter with a new one every three months.
- B. To maintain efficient operation, the exposed CONDENSER COIL should be cleaned as often as necessary to keep it free of dirt and debris. Be careful not to damage the coil fins when cleaning.

10. ADDITIONAL FEATURE

A circuit for the furnace blower motor has been added to both the cooling and heating operation.

NOTE: This circuit will not work with all furnaces. Before using this circuit, check with the furnace manufacturer for proper wire connection to the furnace. Other components may or may not be required. Read and follow the instructions provided with the furnace.

INSTRUCTIONS FOR FURNACE CONNECTIONS:

⚠ WARNING

THE FOLLOWING FURNACE CONNECTION INSTRUCTIONS ONLY PERTAIN TO ONE SPECIFIC FURNACE MANUFACTURER, AND MAY NOT APPLY TO YOUR INSTALLATION.

1. Run a 12-volt DC positive lead to one of the gray wires in the unit electrical box and secure with an approved connector.
2. Run a second lead from the furnace blower motor or terminal board to the remaining gray lead in the unit electrical box. Secure with an approved connector.

11. SERVICING

If service work is needed, contact your dealer or the nearest authorized service center. When requesting service, always give complete model and serial numbers. These numbers are located on the left side of the condenser bulkhead.

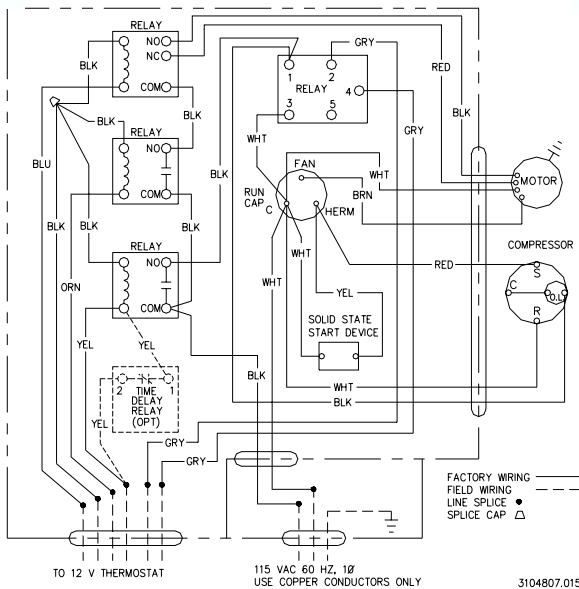
BEFORE YOU CONTACT A SERVICEMAN

There are several built-in features that may automatically shut off the unit under abnormal operating conditions. If your unit should shut off, here are some things you should check before you contact a service center.

- A. Wait 15 to 30 minutes — to see if unit will resume operation.
- B. Check thermostat to see if it is properly set.
- C. Check fuses on electrical supply in the vehicle.
- D. Check the filter (indoor section) to see if it is clean.
- E. Check the condenser coil to be sure it is clean.

WIRING DIAGRAMS

**MODEL
39115.626**



**MODELS
39045.522
39045.601
39045.616**

