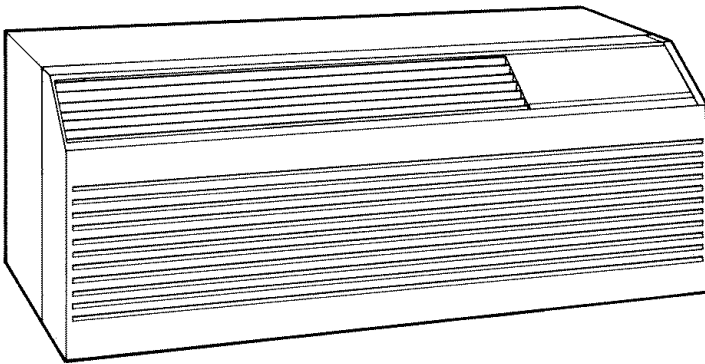


# INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS

## PACKAGED TERMINAL AIR CONDITIONERS AND HEAT PUMPS

7,000-14,000 Btuh



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1•800•894•6449  
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Technical Assistance

# 52S SERIES

## GENERAL

These installation instructions provide easy-to-understand information for installing, operating, and maintaining these packaged air conditioners and heat pumps. The following models are covered in this book:

52SC Cooling only . . . . . 60 Hz  
 52SE Cooling with electric heat . . . . . 60 Hz  
 52SQ Cooling, electric heat, and heat pump . . . 60 Hz

All models are designed for through-the-wall installation. Separate installation instructions are included with all accessory components.

## UNIT INSPECTION

Examine unit for damage incurred during shipment. File a claim immediately with the transit company if damage is found.

The data information plate (Figure 1) lists the model number, voltage ranges, and other important electrical information about this product. Reading and understanding this material is important for proper use of this unit. To access the information plate, the front panel must be removed; see Figure 2.

To remove the front panel:

1. Grasp panel firmly near top of both sides.
2. Pull panel up then forward.

**IMPORTANT:** The front panel has to be off the unit to complete future checks and installation procedures. **Do not reinstall front panel at this time.**




MODEL	
SERIAL	1395E62973
DATE OF MFG	3-20-95
VOLT RANGE	253-187
VOLTS	250/208
PH	1
HZ	60
MIN CKT CAPACITY	13.3
R-22 OZ	28.0
DESIGN PBD 350 HIGH SIDE, 150 LOW SIDE	
COOLING	
BTU/HR	6,800/6,800
AMPS	3.2/3.4
WATTS	715/685
EER	9.5/9.5
COMP	RLA 2.9
	LRA 12
FAN	FLA 0.6/0.5
MOTOR	HP 1/15
HEATING	
BTU/HR	6,000/5,805
AMPS	10.6/9.6
WATTS	2440/2025
COP	2.8/2.8
HEATER	AMPS 10.0/9.1
	WATTS 2300/1900
BTU/HR	WATER ---
	STEAM ---
USE 15 AMP CANADIAN INSTALLATION	
1/2 IN. DELAY FUSE OR FASTER TYPE CIRCUIT BREAKER	MAX FUSE 15 AMP MAX BREAKER 15 AMP
APPLY DATA FOR PERMANENTLY TRANSMITTED UNIT ONLY	
MOTOR - COMPRESSOR THERMALLY PROTECTED	
  	
CARRIER CORPORATION	
99LRS20212 REV B	

FIGURE 1 — SAMPLE DATA INFORMATION PLATE

Using Figures 1 and 3 as reference, verify that the packaged terminal product ordered will operate properly in your facility. If you do not understand the information given or have questions about the product, please call your local dealer or distributor.

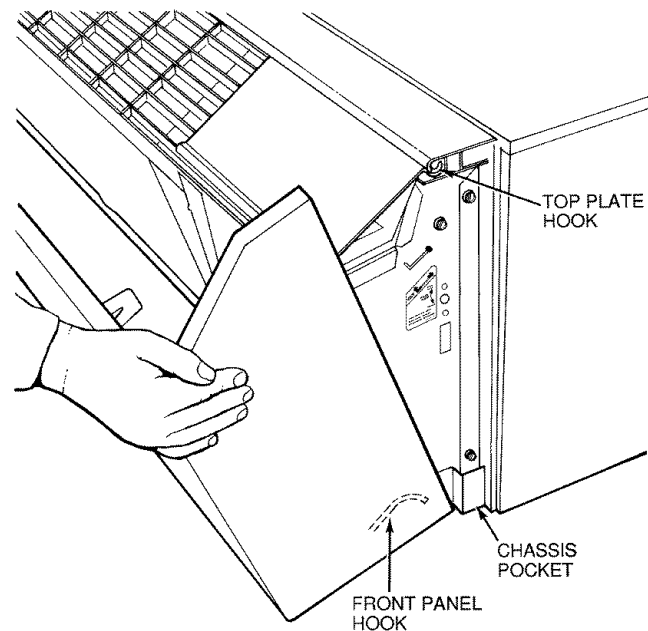
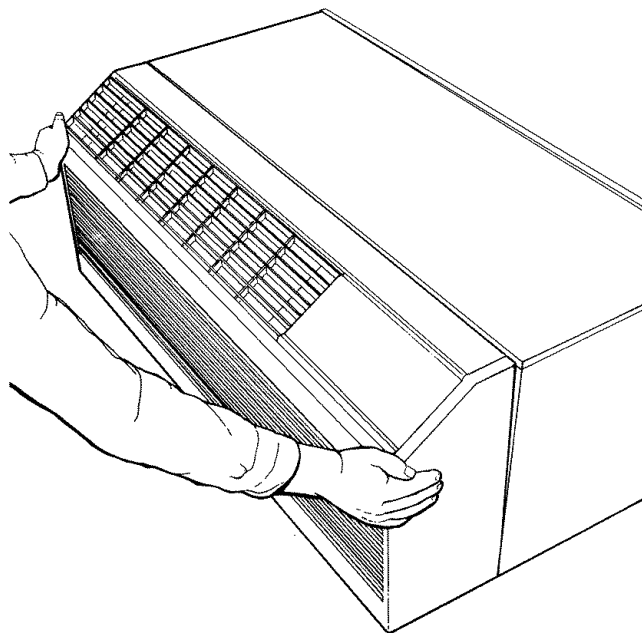
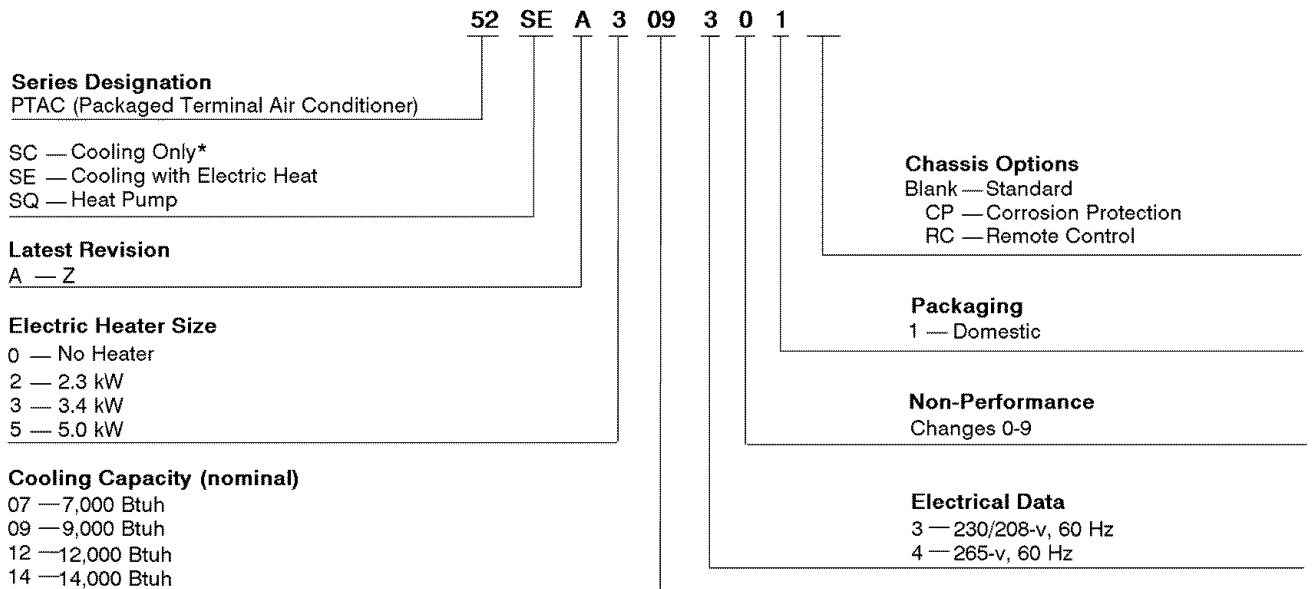


FIGURE 2 — REMOVING FRONT PANEL



\* Cooling only units not available with RC option.

FIGURE 3 — MODEL NUMBER NOMENCLATURE

## ELECTRICAL DATA

### ▲ WARNING

#### ELECTRICAL SHOCK HAZARD

DO NOT alter cord or plug, and DO NOT use an extension cord. Personal injury or damage to the unit may result.

Be sure that your outlet matches the appropriate blade configuration of the supplied plug and that it is within reach of the service cord. A hardwire kit is available as an accessory to change cord-connected units to hardwired units. The junction box can be mounted with manufacturer's non-electric subbase accessory. (See Accessories section, page 18.)

**IMPORTANT:** All packaged terminal 265-v units can either be hardwired or cord-connected with accessory kits. Both accessories must be purchased separately through your order correspondent.

### ALL UNITS

■ **WIRE SIZE** — Use recommended wire size given in Table 1 and install a single branch circuit. All wiring must comply with local and national codes. **All units are designed to operate off single branch circuits only.**

NOTE: Use copper conductors only.

■ **GROUNDING** — For safety and protection, the unit is grounded through the service cord plug or through separate ground wire provided on hardwired units. Be sure that the branch circuit or general purpose outlet is grounded.

TABLE 1 — SUGGESTED BRANCH CIRCUIT WIRE SIZES\*

NAMEPLATE AMPS	AWG WIRE SIZE
7.0 to 12	14
12.1 to 16	12
16.1 to 24	10

#### LEGEND

AWG — American Wire Gage

\*Single circuit from main box.

†Based on copper wire at 60 C temperature rating.




# 52S SERIES

## VOLTAGE SUPPLY

Check voltage supply at outlet. For satisfactory results, the voltage range must always be within the ranges found on the data information plate (Figure 1).

■ **208/230-v CORD-CONNECTED UNITS** — The field-supplied outlet must match the plug and be within reach of the service cord. Refer to Table 2 for proper receptacle and fuse type.

**TABLE 2 — RECEPTACLES AND FUSE TYPES, 250 VOLTS**

RATED VOLTS AMPS	250		
	15	20	30
BLADE CONFIGURATION			
MFG PART NO.			
Hubbell	5661	5461	8330
P & S	5661	5871	5930
GE	GE4069-1	GE4182-1	GE4139-3
Arrow-Hart	5661	5861	5700
TIME-DELAY TYPE FUSE (or HACR Circuit Breaker)	15	20*	30

**LEGEND**



**HACR** — Heating, Air Conditioning, Refrigeration

\*May be used for 15-amp applications if fused for 15 amp.

■ **265-v ACCESSORY CORD-CONNECTED UNITS** —

The field-supplied outlet must match the plug and be within reach of the service cord. Refer to Table 3 for the proper receptacle and fuse type.

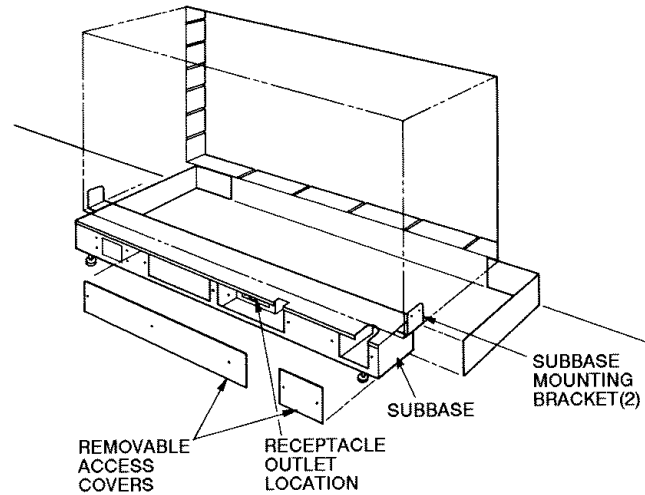
**TABLE 3 — RECEPTACLES AND FUSE TYPES, 265 VOLTS**

RATED VOLTS AMPS	265	
	15/20	30
BLADE CONFIGURATION		
MFG PART NO.		
Hubbell	—	9315
Eagle	834B-BOX	—
TIME-DELAY TYPE FUSE (or HACR Circuit Breaker)	20*	30

**LEGEND**

**HACR** — Heating, Air Conditioning, Refrigeration

\*May be used for 15-amp applications if fused for 15 amp.



**FIGURE 4 — SUBBASE ASSEMBLY**

## LOW-VOLTAGE CONNECTIONS — REMOTE CONTROL AND ENERGY MANAGEMENT ACCESSORY

Energy Management Accessory must be ordered separately and field-installed. Low-voltage connections must be made for Energy Management Units. Refer to page 10.

Remote control units are supplied with a low-voltage terminal board for direct interface with a field-supplied low-voltage, manual changeover thermostat or a programmable thermostat (both are Manufacturer-recommended). When properly wired, the unit operation is controlled by either wall-mounted thermostat.

**IMPORTANT:** The 265-v cord-connected units require an accessory subbase, Part No. SUB-BASE, with a field-installed receptacle. See Table 3 and Figure 4.

# INSTALLATION

## SLEEVE INSTALLATION REQUIREMENTS

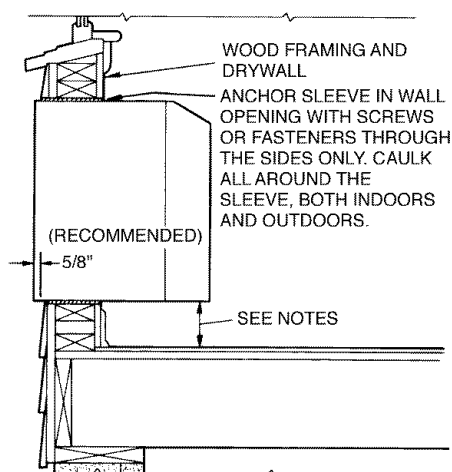
Reminder: Units are shipped without sleeve.

■ **INSPECT WALL SLEEVE INSTALLATION** — In a replacement or retrofit situation, it is recommended that a sleeve be used with a chassis from the same manufacturer. Refer to Figures 5 and 6 for typical wall installation and unit dimensions.

1. For lateral airflow applications, an accessory lateral duct must be used. Refer to Figure 7.
2. The sleeve must be mounted so that it is level in all directions. A  $\frac{1}{4}$ -in. pitch is built into the unit chassis for proper condensate drainage. An accessory drain kit is available if needed.

**IMPORTANT:** If more than 4 in. of the sleeve projects into the room or the wall is less than 2 in. thick, an accessory subbase must be used for support. Refer to Figure 8.

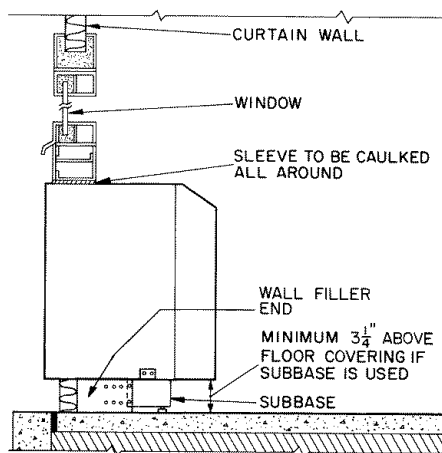
3. The sleeve should be caulked on all sides, including both inside and outside of the building.



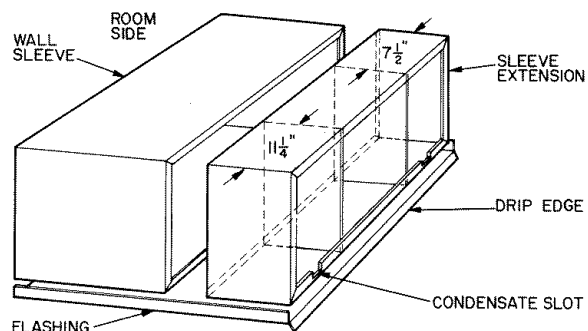
TYPICAL WALL INSTALLATION (52SC, SE, SQ)

**NOTES:**

1. Sleeve may be flush mounted to floor, and front panel may have to be notched to accommodate service cord.
2. If more than 4 in. of sleeve projects into room an accessory subbase must be used.
3. If wall is less than 2 in. thick, an accessory subbase must be used.



TYPICAL CURTAIN WALL INSTALLATION (All Models)



WALL SLEEVE AND SLEEVE EXTENSION (Field-Fabricated) (All Models)

**NOTES:**

1. Unit sleeve and sleeve extension (field-fabricated) should be connected before installing in wall opening.
2. Sleeve extension is water-bearing. It must be watertight when installed against unit sleeve. Use quality grade sealant on all butting flanges. Attach both sections with bolts and nuts or self-tapping screws installed from unit sleeve to extension. Cut drain slots in front and rear flanges of extension to line up with drain openings in unit sleeve.
3. Install 2 center baffles inside sleeve extension to prevent recirculation of outdoor air circuit.
4. Leave  $\frac{3}{8}$ -in. roomside projection of extension and  $\frac{5}{8}$ -in. outdoor projection of sleeve. This allows for unit casing clearance to finished wall plus ample edging to apply weather sealant between unit sleeve/extension assembly and wall opening.
5. Paint sleeve extension and seal corner and lap joints; clear all drain holes of excess sealant, paint, etc., to permit free drainage.
6. Install quality flashing under unit sleeve and extension using quality sealant between flashing and wall.
7. Install unit casing/extension assembly following standard practices. Seal assembly to wall on all 4 sides, indoors and outdoors.
8. Make provision for a condensate drain extension tube for routing excess condensate from the wall sleeve through the sleeve extension to the building exterior.
9. Attach grille to the outside of the sleeve extension (using field-supplied fasteners).
10. Seal any gaps between grille and sleeve extension on all sides.

FIGURE 5 — TYPICAL WALL INSTALLATIONS



# 52S SERIES

## SLEEVE INSTALLATION REQUIREMENTS (cont)

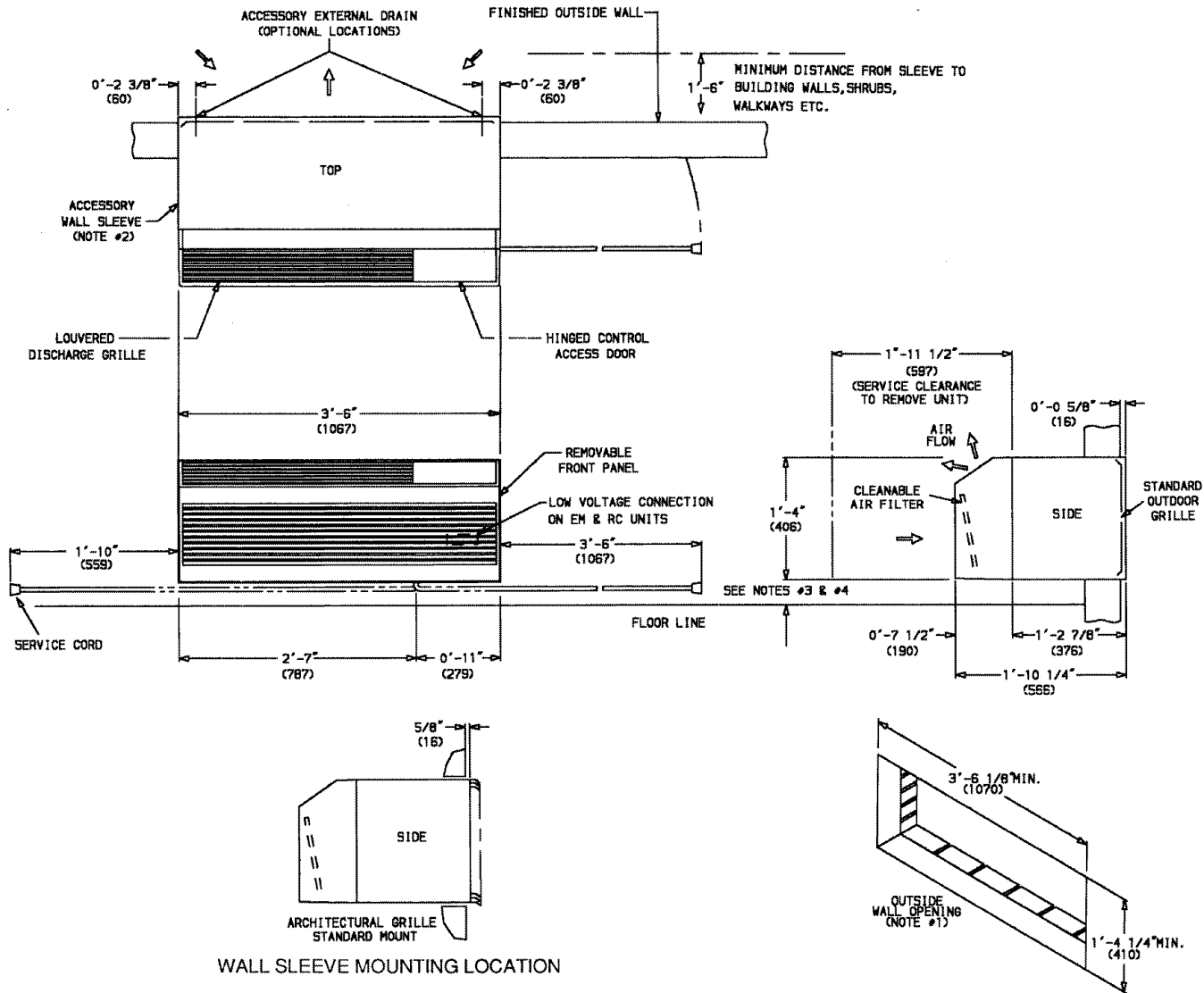


FIGURE 6 — DIMENSION DRAWING — 52SC,SE,SQ

### NOTES FOR FIGURES 6-8

1. Minimum opening sizes apply to all wall openings.
2. Installed wall sleeve must be level from side to side and front to back.
3. Sleeve can be flush mounted to floor, but front panel may have to be notched to accommodate service cord, except for units with subbase (see Note 4).
4. When using subbase accessory, wall sleeve must extend 3 1/4-in. minimum into room and 3 1/4 in. minimum to 5 1/2 in. maximum above floor.
5. Dimensions in parentheses are in millimeters.
6. For all applications with an accessory lateral duct, sleeve must extend into the room 1 in. minimum.
7. If wall sleeve extends into room more than 4 in., an accessory subbase must be used for support.
8. If wall is less than 2 in. thick, an accessory subbase must be used for support.

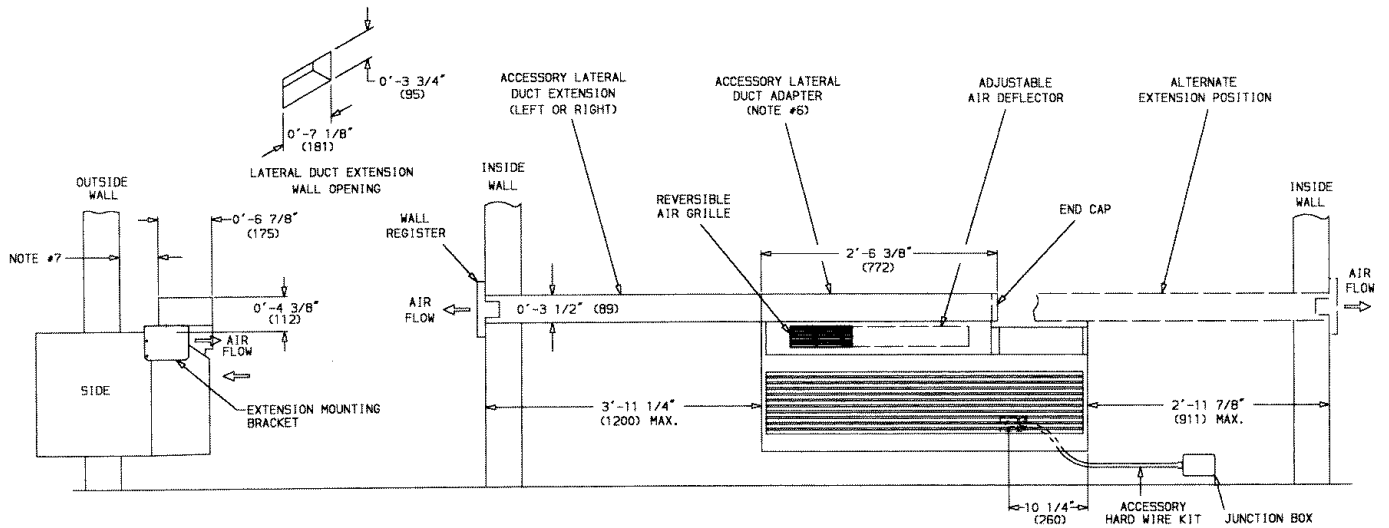


FIGURE 7 — 52S LATERAL DUCT

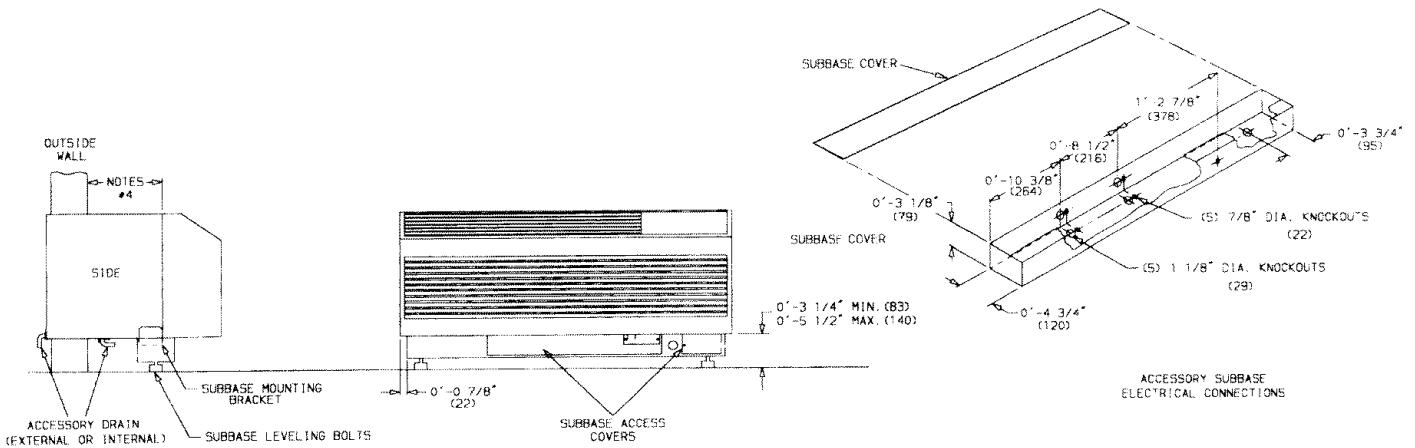


FIGURE 8 — 52S WITH SUBBASE

**■ PREPARE SLEEVE FOR CHASSIS INSTALLATION**

1. Remove cardboard center support and rear closure panel from wall sleeve. Refer to Figure 9.
2. Install outdoor grille as described in the installation instructions supplied with the grille.

**▲ CAUTION**

Only a Carrier outdoor grille should be used with the 52S unit air conditioner. Use of any other grille must be approved by Carrier in Syracuse, New York. In deep-wall applications, if an existing grille is used on an outdoor wall opening, *do not* install an additional outdoor grille on unit sleeve.

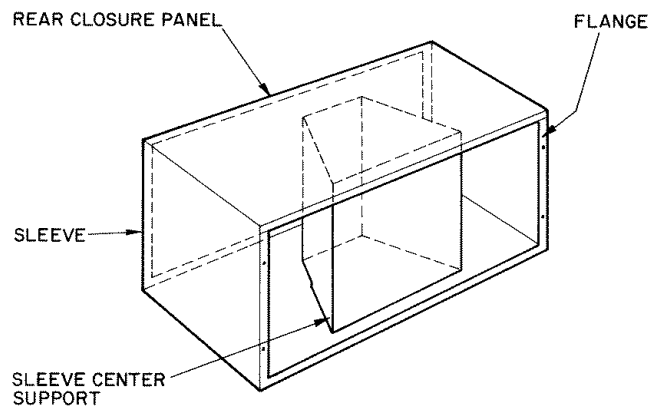


FIGURE 9 — REMOVING CENTER SUPPORT AND CLOSURE PANEL FROM CARRIER WALL SLEEVE

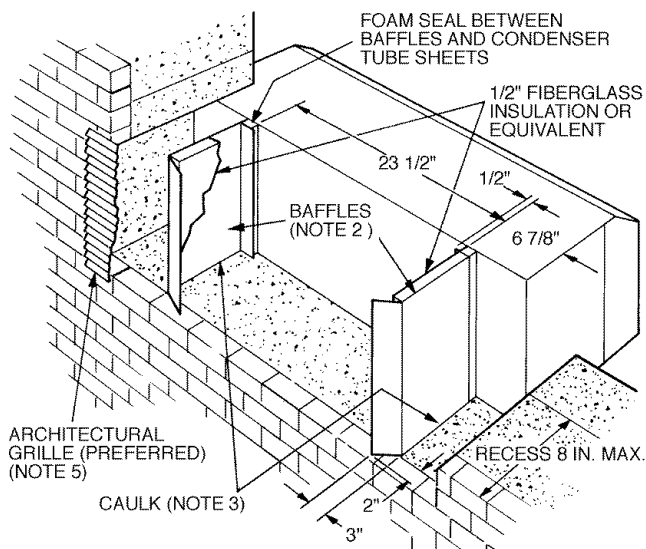
# 52S SERIES

- See Figure 10 for typical deep wall application. Inspect accessory outdoor grilles.

**IMPORTANT:** Be sure that the foam strips and/or baffles provide a good seal between the grille and condenser coil tube sheets. These foam strips or baffles provide a barrier to separate condenser air from the major components (compressor and fan motor).

## ⚠ CAUTION

If baffles are not installed properly, loss of performance and premature damage to the major components can result.



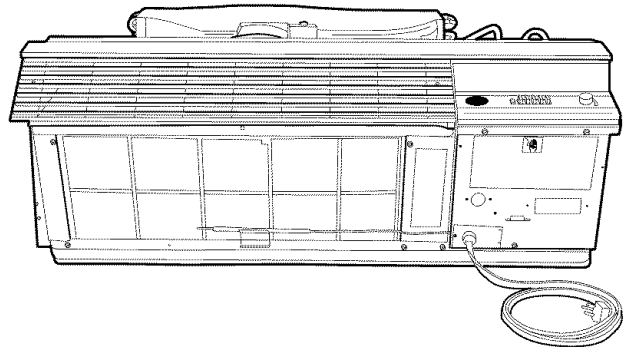
### NOTES:

- To permit outdoor grille to be attached to and supported by unit sleeve, fabricate a sleeve extension so unit sleeve and baffles can reach outdoor grille. Be sure to provide flashing for proper condenser run-off to avoid water damage to room interior. Internal or external drain system may be required.
- Baffles may be part of the sleeve extension or fixed directly to condenser coil tube sheets.
- Caulk all joints between sleeve or baffles and opening in wall.
- If grille is used on outdoor wall opening, *do not* install an additional outdoor grille on unit sleeve.

**FIGURE 10 — TYPICAL DEEP WALL  
INSTALLATION — ALL MODELS  
(Baffles are Field Fabricated)**

## ■ INSTALL CHASSIS IN SLEEVE

- Inspect foam gaskets (top, bottom, both sides) on chassis. (See Figure 11.) Replace foam gaskets if torn or missing.



**FIGURE 11 — 52S SERIES CHASSIS  
(Cord Connected Unit Shown)**

## ⚠ WARNING

Chassis weighs between 118 and 138 lbs. For personal protection, seek help when lifting the unit. Lift unit by holding unit basepan.

- Lift chassis level with wall sleeve.
- Slide chassis into wall sleeve until foam gaskets on chassis mounting flange rest firmly against front of wall sleeve.
- Screw chassis to wall sleeve with four 1<sup>3</sup>/<sub>4</sub>-in. long screws taped to the control box. Four screw holes are located on both sides of the mounting angles of the chassis. Use only the top and bottom screw holes on each side for a plastic sleeve. Use two middle screw holes on each side for a metal sleeve.

**NOTE:** If the gasket behind the chassis mounting angle covers screw holes, push a nail through each hole before inserting screws to facilitate assembly.

**IMPORTANT:** The gaskets combine with the sleeve face to create a weather barrier. If the chassis is installed in a non-Carrier sleeve, this weather barrier may not be effective.



## ACCESSORY INSTALLATION

**IMPORTANT:** Only trained, qualified personnel and service mechanics should install electrical accessories on Carrier 52S series products per Carrier's installation instructions. Please contact your local electrical contractor, dealer, or distributor for assistance.

■ **INSTALL ACCESSORY HARDWIRE KIT OR 265-v ACCESSORY CORD-CONNECTED KIT** — Install Carrier accessory hardwire kit according to the instructions provided with the accessory. The accessory cord-connected kit is for 265-v units only, and requires an accessory subbase, Part No. SUBBASE, with a field-installed receptacle.

■ **INSTALL THERMOSTAT** — All remote control units.

1. Check to be sure power to unit is disconnected.
2. Remove terminal board cover from right side of chassis (see Figure 12).
3. Insert field-supplied low-voltage thermostat wire through bushing on the cover.
4. Connect wires from terminals on the thermostat to terminals on chassis terminal board. See Figures 13A and 13B.
5. Reinstall cover with two screws.
6. Mount field-supplied thermostat to wall.
7. Set thermostat anticipator at 0.8 amp (manual thermostat only).

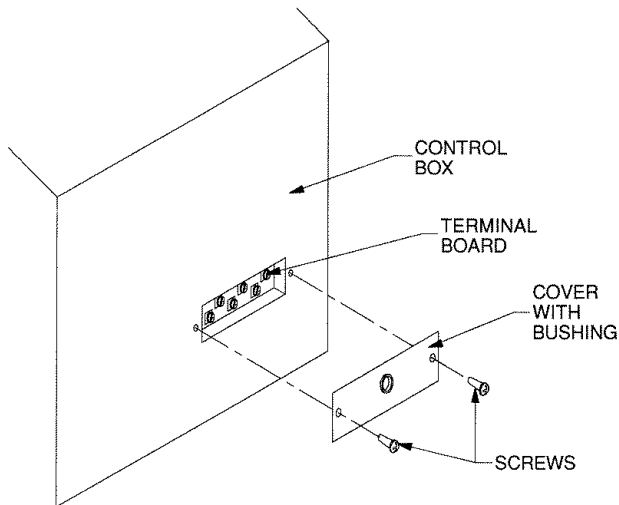
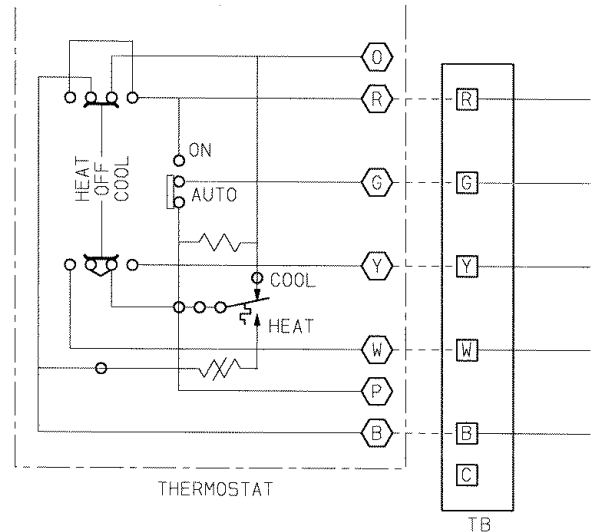


FIGURE 12 — LOW-VOLTAGE TERMINAL BOARD

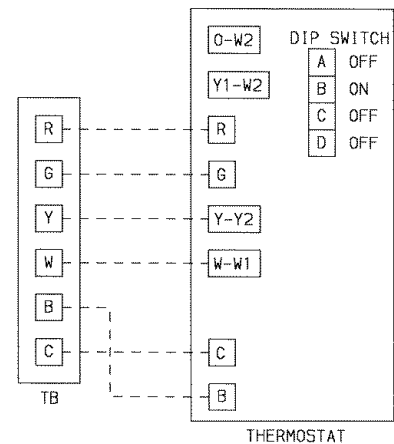


**LEGEND**

**TB** — Terminal Board

NOTE: B to B connection for heat pump only.

FIGURE 13A — WIRING CONNECTIONS, LOW-VOLTAGE MANUAL CHANGEOVER THERMOSTAT



**LEGEND**

**TB** — Terminal Board

NOTE: B to B connection for heat pump only.

FIGURE 13B — RC WIRING CONNECTIONS, PROGRAMMABLE THERMOSTAT

# 52S SERIES

■ **INSTALL ENERGY MANAGEMENT (EM) ACCESSORY KIT** — This accessory kit permits individual units to be turned off from a remote location such as a hotel control desk to conserve energy when the room is unoccupied. Freeze guard protection prevents the room temperature from dropping below 40° F, overriding any OFF command, including front desk control.

**IMPORTANT:** In order for freeze guard to operate, the unit must be put into the HEAT mode.

Electric heat will remain activated until the temperature reaches approximately 60° F.

**IMPORTANT:** The manufacturer currently does not supply any central desk equipment. This type of equipment should be handled through your local electrical contractor.

See Figure 14 for accessory kit location in control box. After EM accessory kit has been properly installed, connect low-voltage (24 VAC) field-supplied wires from chassis terminal board to your central desk panel (see Figure 15).

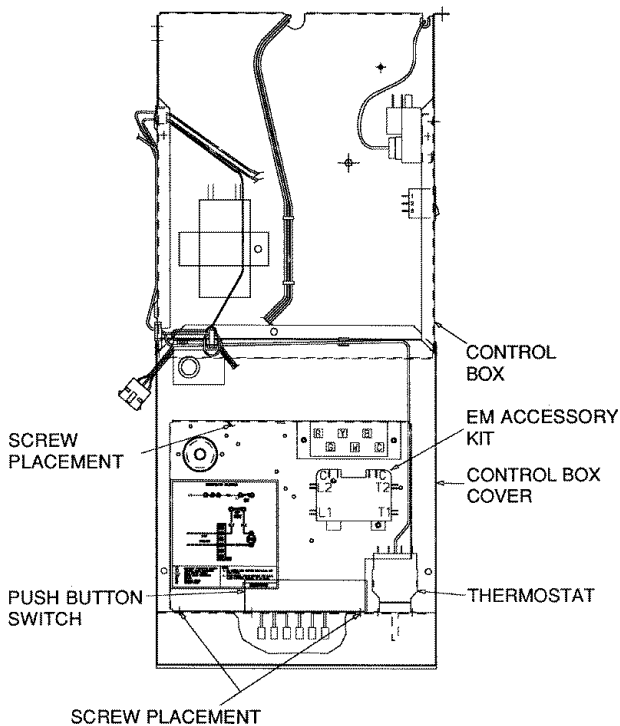
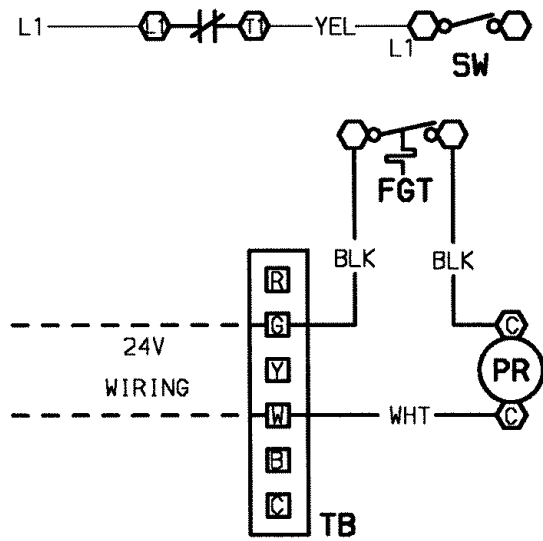





FIGURE 14 — EM ACCESSORY KIT



- LEGEND**
- FGT — Freeze Guard Thermostat
  - NEC — National Electrical Code
  - SW — Switch
  - TB — Terminal Board
  -  Terminal Board Connection
  -  Field Control Wiring
  -  Primary Relay

**NOTES:**

1. All wiring must conform with NEC and local codes.
2. Field control wiring suitable for NEC Class 2 control circuit, at 24 volts.

FIGURE 15 — EM ACCESSORY KIT SCHEMATIC DIAGRAM

## ADJUSTMENTS

■ **ADJUST AIRFLOW DIRECTION** — The discharge air grille is mounted on the unit so that the air discharges forward. If upward discharge is required, remove the grille, invert it, and reinstall on the chassis.

■ **ADJUST VENT** — The VENT knob is located on the side of the unit. Slide VENT knob manually to open or close vent. Vent remains in the position selected.

■ **ADJUST LIMITS ON ECONO ZONE® II CONTROL** — (This adjustment is optional and is not applicable to remote-control units.) Econo Zone II control permits adjustment of the temperature range available to the user by restricting rotation of the TEMPERATURE control knob.

To adjust:

1. Remove thermostat control knob and the control panel. To detach the control panel, remove two screws at base of panel and gently pull off panel. Once removed, the temperature limiter is exposed. (See Figure 16.)

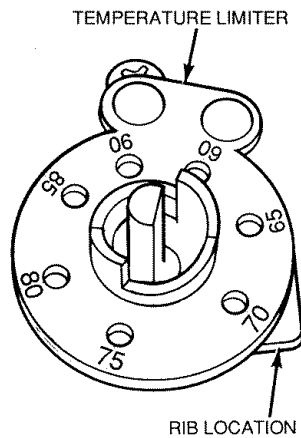


FIGURE 16 — ECONO ZONE II TEMPERATURE LIMITER

2. Orient the shaft of the thermostat so that the rib on the vent control lever assembly, which is located under the limiter, is positioned between the temperature limits desired.

NOTE: The numbers stamped on the limiter represent degrees F and are **approximate**.

3. To set minimum cool setting, remove clip from the hole marked 60 and relocate to hole with desired setting. Repeat with clip from hole marked 90 to set maximum heat setting desired.

**IMPORTANT:** Clips must be fully inserted.

4. Reinstall the control panel and the thermostat control knob. If adjusted properly, the indicator on the control knob should always swing through the top section of the temperature markings on the control panel.

# 52S SERIES

## OPERATING INSTRUCTIONS

### SWITCH SETTINGS

For 52S remote control (RC) units, all switches are located on the wall-mounted thermostat. (See Figures 17 and 18.)

For all other 52S units, room controls are located on the unit control panel. Refer to Figure 19, A and B.

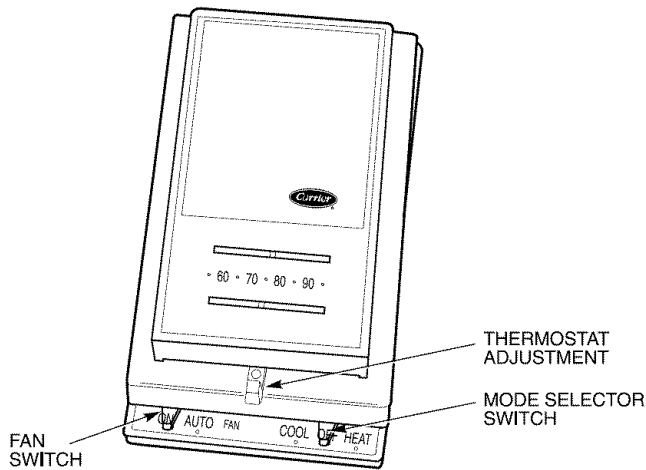
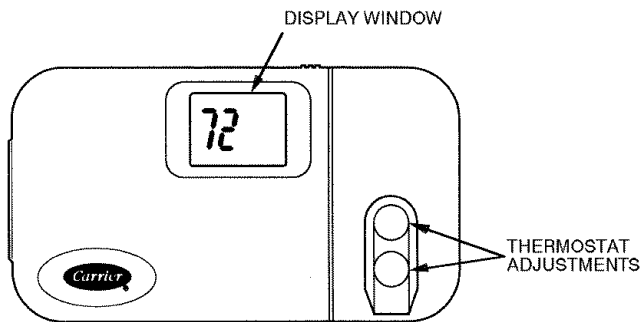
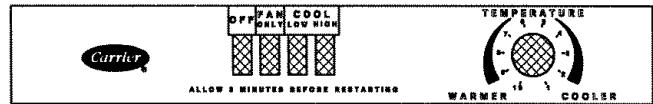


FIGURE 17 — STANDARD MANUAL CHANGEOVER THERMOSTAT (FOR RC UNITS)

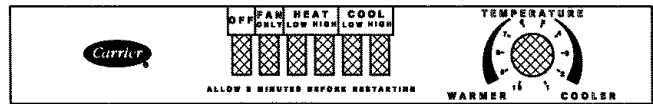


NOTE: Thermostat cover swings open to left for additional programming options.

FIGURE 18 — PROGRAMMABLE THERMOSTAT (FOR RC UNITS)



A. 52S COOLING ONLY UNIT



B. 52S COOLING/HEATING UNIT



C. 52S COOLING/HEATING UNIT WITH REMOTE CONTROL (BLANK PLATE)

FIGURE 19 — UNIT CONTROL PANELS

- **OUTSIDE AIR** — Push FAN ONLY button and slide vent lever to OPEN position.
- **OFF** — The OFF button terminates unit operation.
- **FAN ONLY** — Push button for air circulation without heating or cooling.
- **HIGH HEAT OR HIGH COOL** — Push button, and rotate temperature knob to desired comfort level. This function provides maximum heating or cooling, and is recommended to raise or lower the room temperature quickly. Once the occupied space has reached the desired comfort level, this setting is not required. See Finding Temperature Setting section below for more information.
- **LOW HEAT OR LOW COOL** — Push button and rotate temperature knob to desired comfort level. This function provides minimum heating or cooling with maximum dehumidification.
- **FINDING TEMPERATURE SETTING FOR YOUR COMFORT LEVEL** — Set temperature knob between number 5 and number 6. Push High or Low Heat or Cool button and allow unit to run 15 to 30 minutes. If room is not comfortable, turn knob one number at a time. When room is comfortable, keep control knob at that position.

## OPERATING CONTROLS

The following controls are located on the right side of the chassis. (See Figure 20.) To obtain access to operating controls, remove the unit front panel as shown on page 2.

**IMPORTANT:** When unit is first started, high humidity conditions can cause condensation to form on grille. Keep doors and windows closed. Room humidity decreases and moisture evaporates.

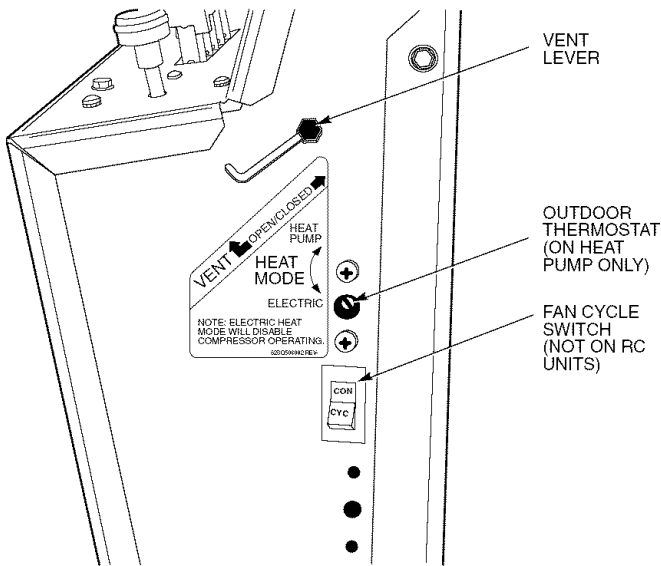


FIGURE 20 — TYPICAL 52S SERIES OPERATING CONTROLS

■ **FAN CYCLE SWITCH** — (Not available on RC units.) This allows the fan to operate in two modes:

**CON** — This setting allows the fan to run continuously, circulating air even when the temperature setting has been satisfied. This switch helps to maintain the room temperature closer to the thermostat setting. Use this switch position when maximum comfort is desired.

**CYC** — This setting allows the fan to cycle on and off with the compressor during heating or cooling. The fan stops when the temperature setting is satisfied. This results in longer unit off-time and wider variations in room temperature and humidity.

■ **OUTDOOR THERMOSTAT (52SQ HEAT PUMP UNITS ONLY)** — If the setscrew is left at the factory setting (in the fully clockwise position), the unit will operate in the reverse cycle heating mode. The control is the defrost thermostat in this mode. The 52SQ thermostat sensing capillary is located between the fins of the outdoor coil. When the temperature at the capillary reaches 25° F, the outdoor frost thermostat closes, shutting off the compressor and energizing the electric heater. The electric heater remains on until the temperature at the outdoor thermostat capillary reaches 40° F; then the electric heater is shut off and the compressor is energized. To set unit to operate in electric heat mode only, turn the setscrew to the fully counter-clockwise position. Once in electric heat mode, the compressor is disabled for heating and cooling.

■ **VENT CONTROL** — See Adjustments on page 10 for vent operating information.

## CARE AND MAINTENANCE

In order to maintain proper performance of your packaged terminal air conditioner or heat pump, it is very important that the fan and outdoor coils, the blower wheel, blower scroll, electric heater, and all drain passages are thoroughly cleaned at least once per year. Carrier recommends that as a minimum, the cleaning should be conducted prior to the start of each heating season. The air inlet filter should be cleaned every month.

Depending on local conditions, more frequent cleaning of the unit may be required to ensure optimum performance and long operating life. Examples of these special conditions include areas where construction dust or heavy airborne dirt is found, or environments that promote the growth of fungus.

### ▲ CAUTION

Some local conditions and environments can cause fungi to grow inside the air conditioner, especially on indoor blower section. Dried fungi, dirt and other foreign material are fire hazards. Be sure to clean unit according to the instructions that follow.

### AIR INLET FILTER

■ **AIR INLET FILTER** should be cleaned once each month.

1. If front panel has not been removed, remove panel as shown in Figure 2. To remove filter, grasp two filter tabs and pull the filter forward (Figure 21).



# 52S SERIES

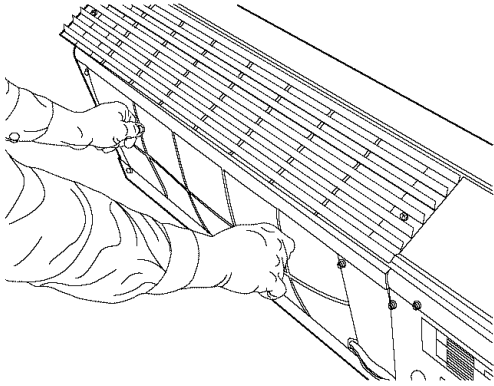


FIGURE 21 — REMOVING FILTER

2. Clean by vacuuming or washing. To reinstall the filter, fit it into the basepan, making sure the notch in the filter fits around the thermostat capillary. The filter media is plastic framed for additional support. Take care not to rip the media when cleaning. Additional filters are available in multi-packs.
3. Flex the filter, and fit it under the discharge deck.

## OUTDOOR VENT FILTER

■ **OUTDOOR VENT FILTER** (Figure 22) should be cleaned in the same manner as the air inlet filter, but only once during a cooling or heating season. Remove chassis from sleeve to access vent filter. Dirty filters restrict airflow, which can reduce major component life.

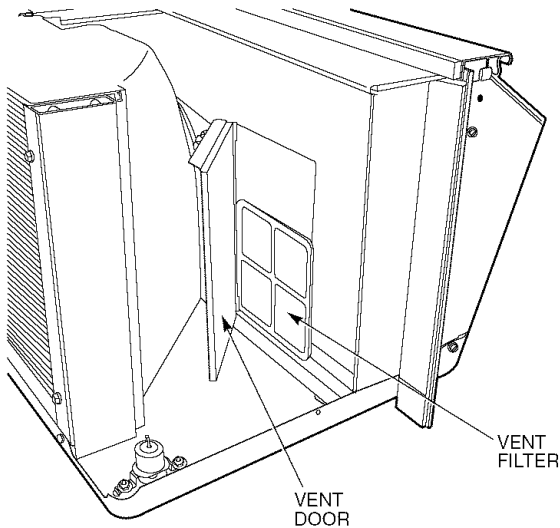


FIGURE 22 — OUTDOOR VENT FILTER LOCATION  
(Left Side of Chassis)

## EXTERNAL PARTS

■ **EXTERNAL PARTS** include the polymer sleeve and grilles. The sleeve manufacturer recommends cleaning the surface, including the grilles, with household detergent and water.

## INTERNAL PARTS

■ **INTERNAL PARTS** should be cleaned at least once each year.

### ⚠ WARNING

Before cleaning, servicing, performing maintenance or removing the chassis from the sleeve, disconnect all power to the unit to avoid the possibility of electrical shock and personal injury.

### ■ DISCONNECT POWER TO UNIT:

#### CORD-CONNECTED UNITS

1. *REMOTE CONTROL UNITS* — Set switch on wall mounted thermostat to OFF.  
*ALL OTHER UNITS* — Push OFF button on unit control panel.
2. Disconnect power at main power supply.
3. Unplug the unit service cord.

#### HARDWIRED UNITS

1. *REMOTE CONTROL UNITS* — Set switch on wall mounted thermostat to OFF.  
*ALL OTHER UNITS* — Push OFF button on unit control panel.
2. Disconnect power at main power supply. Tag disconnect to ensure no one restores power to the unit. If front panel has not been removed, remove panel as shown in Figure 2. Remove access cover on side of unit chassis. Pull out plug assembly and disconnect (see Figure 23).

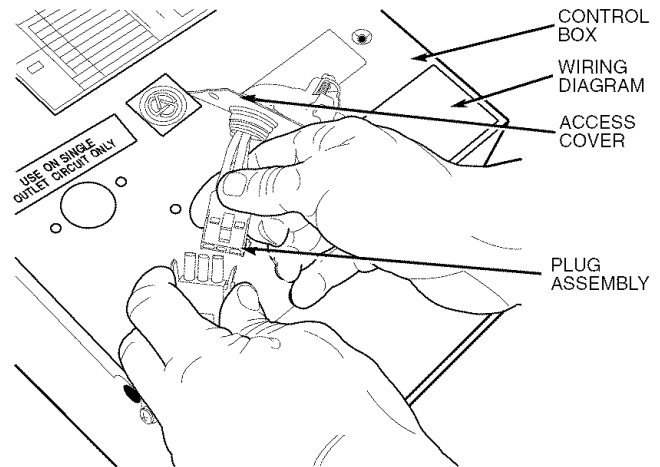


FIGURE 23 — DISCONNECTING PLUG ASSEMBLY ON HARDWIRED UNITS

■ **DISASSEMBLE UNIT**

TOOLS REQUIRED include: a low-pressure tank with wand and/or spray bottle, a coil cleaner (Calgon, Hydrobalance, etc.), a vacuum cleaner, percolator brush, standard spray bottle, rubber gloves, safety glasses, <sup>5</sup>/<sub>16</sub>-in. nut driver, and a standard Phillips-head screw driver.

1. If front panel has not been removed, remove panel as shown in Figure 2.
2. Remove screws (two each side) fastening chassis to sleeve.

For units with lateral duct accessory — remove four screws fastening chassis to sleeve, and two screws on top of duct adapter. See Figure 24.

**▲ WARNING**

Chassis weighs between 118 and 138 lbs. For personal protection, seek help when lifting the unit.

3. Slide out chassis. Lift by holding the unit basepan.
4. Remove aluminum top panel (one screw each side). See Figure 25. On left-hand side, remove the screw closest to the partition.
5. Remove the air discharge grille (two screws). See Figure 26.
6. Remove the top cover (one screw). See Figure 27.

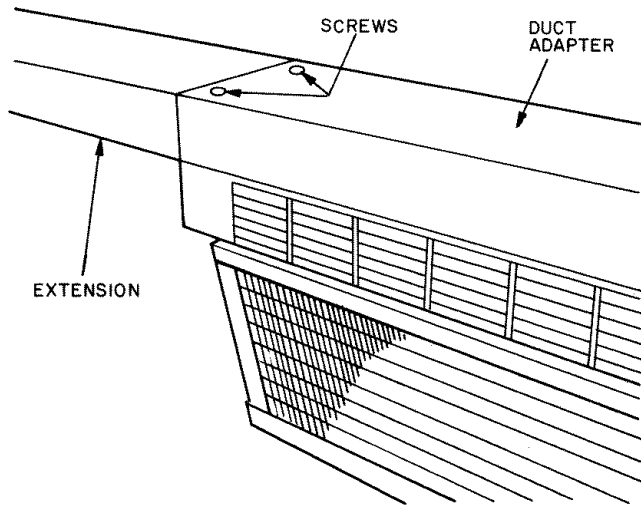


FIGURE 24 — REMOVING CHASSIS WITH DUCT ADAPTER FROM SLEEVE

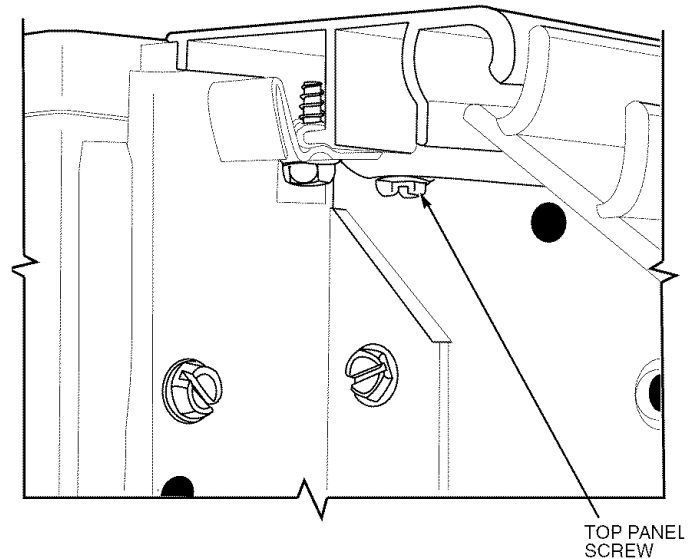


FIGURE 25 — ALUMINUM TOP PANEL

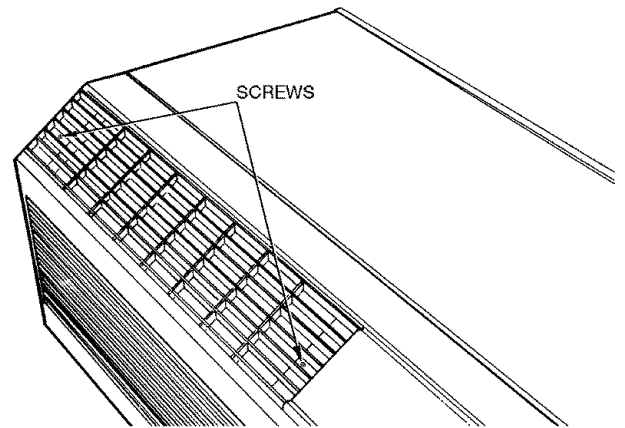


FIGURE 26 — REMOVING AIR DISCHARGE GRILLE

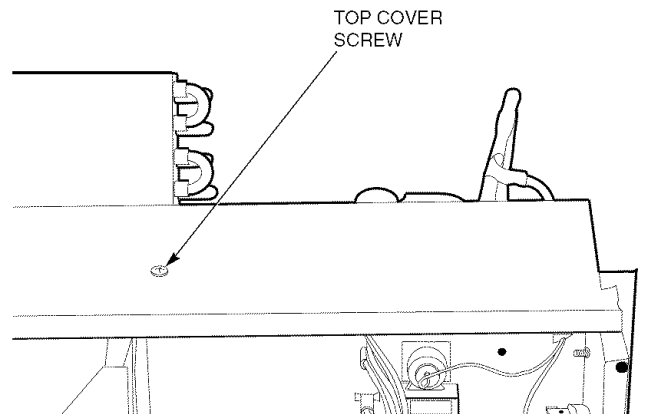


FIGURE 27 — TOP COVER SCREW

7. Remove the gusset (two screws inside the partition, one screw at condenser orifice). Push condenser orifice outward. Pull the gusset up and out of orifice. See Figure 28.
8. Unsnap the condenser orifice from the tube sheets.
9. Remove the stator by moving the condenser orifice toward the partition and by pulling the stator straight up. See Figure 29.
10. Remove the air inlet filter (see removal instructions under AIR INLET FILTER, page 13).
11. Remove thermostat sensing bulb from the indoor coil by pulling two bulb retaining clips out of the coil fins and carefully moving the bulb away from the face of the coil.

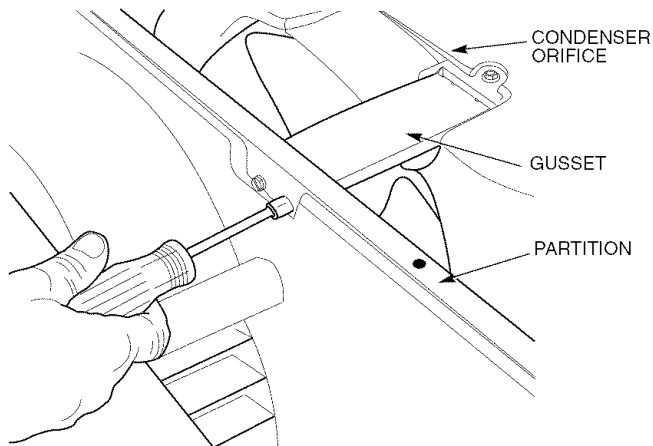


FIGURE 28 — REMOVING GUSSET

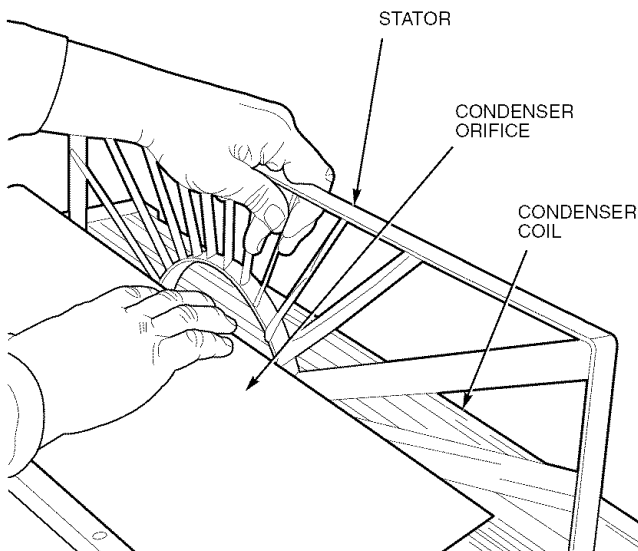


FIGURE 29 — REMOVING STATOR

## ■ CLEANING DISASSEMBLED UNIT

1. Clean the indoor coil and stator side of the outdoor coil by washing or vacuuming.

### ⚠ CAUTION

Fins are sharp and can cut hands. Wear heavy gloves when cleaning coils. When using cleaning tools, be careful not to bend or damage coil fins.

2. Clean vent screen by washing or vacuuming. Open vent door and pull screen out. See Figure 30.
3. Clean basepan, including drain passages and area inside the condenser orifice, by washing or vacuuming. See Figure 30.
4. To clean indoor blower wheel and scroll, insert a piece of 9.0 x 9.0-in. cardboard between the blower wheel and the opening in the blower scroll. This will also prevent fungus and other debris from falling into the coil.

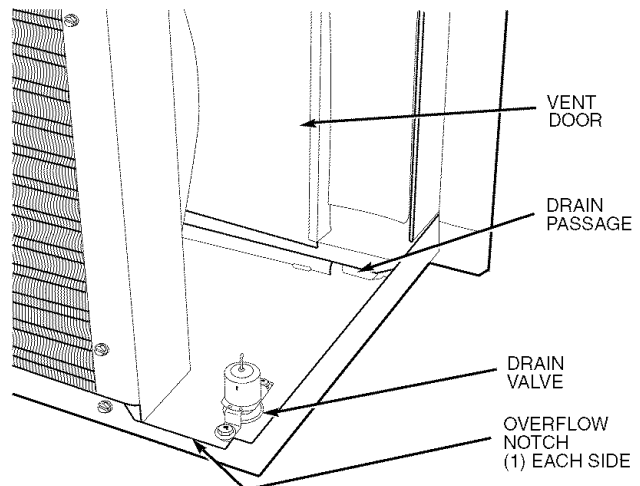


FIGURE 30 — BASEPAN SECTION



5. Bend a soft, spiral wound, long bristle brush to conform to the inner curve of the blower wheel blades. See Figure 31.
6. Insert the brush into **every** blower wheel blade and gently brush out dried material.
7. Clean the walls of the blower scroll by carefully brushing with the bristle brush. Vacuum loose debris that may have fallen into the bottom of the scroll during the cleaning process.
8. Use the spray bottle to spray the blower wheel blades and the inner surface of the blower scroll with a 3% solution of hydrogen peroxide to kill any fungus spores. Wipe up excess solution in the bottom of the blower scroll with a clean cloth. See Figure 32.
9. Clean the inside of the wall sleeve and rear grille by washing or vacuuming. Test wall sleeve drain holes and accessory drains (if used) for proper drainage. Pour water (approximately 2 quarts) into the sleeve. Water should drain freely.

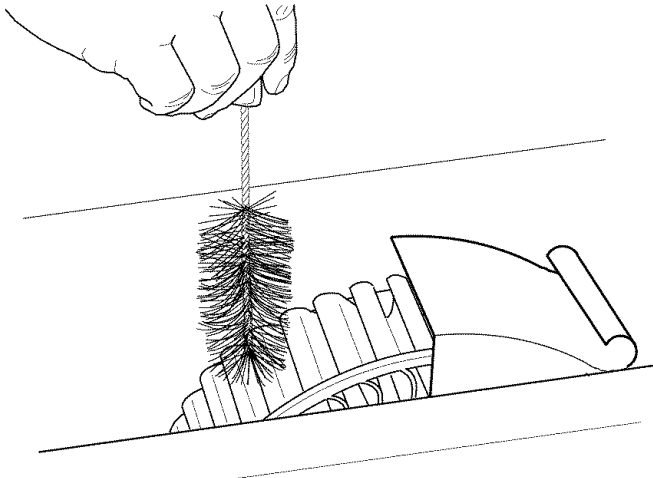


FIGURE 31 — CLEANING INDOOR FAN AND FAN SCROLL

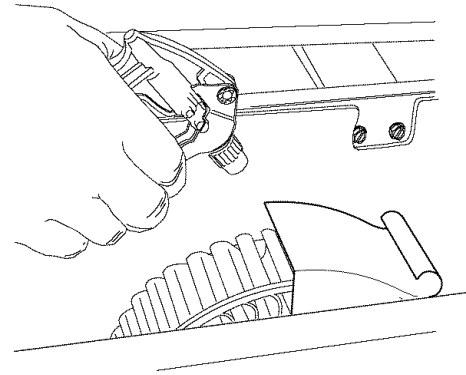


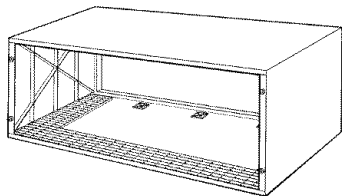
FIGURE 32 — SPRAYING BLOWER WHEEL BLADES

#### ■ REASSEMBLE UNIT

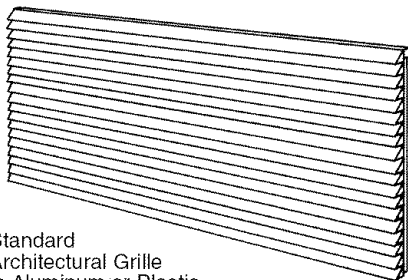
1. Reassemble components by reversing disassembly procedures described on page 15.
2. Reinstall unit into sleeve.
3. Turn on all power to the unit.

# 52S SERIES

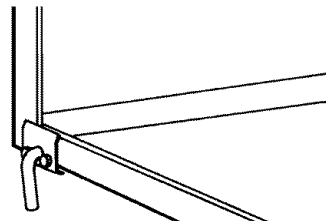
## ACCESSORIES



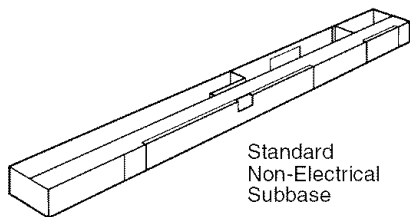
Corrosion-Protected  
Polymer Sleeve



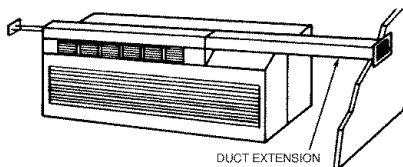
Standard  
Architectural Grille  
in Aluminum or Plastic



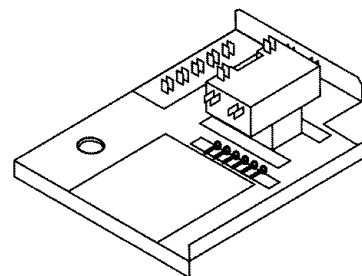
External Drain Kit Application



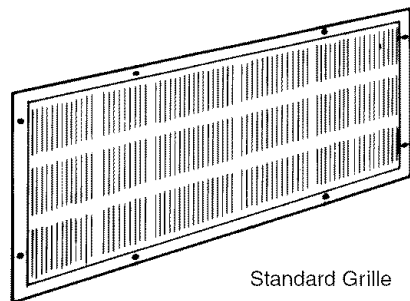
Standard  
Non-Electrical  
Subbase



Lateral Duct Kit



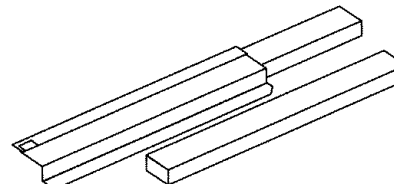
Energy Management Kit



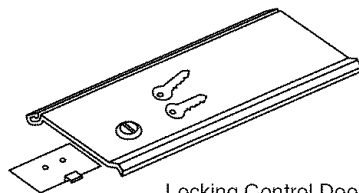
Standard Grille



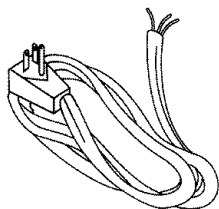
Hardwire Kit



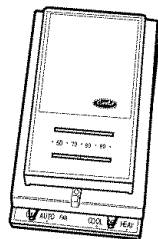
GE Metal Sleeve Retro-Fit Kit



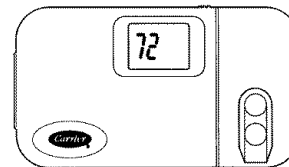
Locking Control Door Kit



265-v Cord Kit



Standard Manual Changeover  
Thermostat



Programmable Thermostat

## Carrier 52S Packaged Terminal Air Conditioner Warranty

**FULL ONE-YEAR WARRANTY** — During the first year after purchase, CARRIER will, through its authorized independent servicing dealers or service stations\*, and free of charge to the user or subsequent users, repair or replace any parts which are defective in material or workmanship. The replacement part can be a new or remanufactured part as provided at CARRIER'S sole option.

**FULL EXTENDED FOUR-YEAR WARRANTY ON SEALED REFRIGERATION SYSTEM ONLY** — During the second through fifth years after date of original purchase, CARRIER will, through its authorized servicing dealers and service stations\* and free of charge to the end user or subsequent users, repair or replace the compressor, condenser, evaporator or connecting tubing if defective in material or workmanship. This includes system refrigeration charge. The replacement part can be new or a remanufactured part as provided at CARRIER'S sole option.

**LIMITED EXTENDED FOUR-YEAR WARRANTY ON NON-SEALED REFRIGERATION SYSTEM ONLY** — During the second through fifth years after date of original purchase, Carrier will, through its authorized servicing dealers and service stations and free of charge to the end user or subsequent users, repair or replace any non-sealed system part (motor, solenoid, thermistor, thermostat, relays, switch, capacitor, overload, drain valve, bulb heater, fan, stator) if defective in material or workmanship. The replacement part can be new or a remanufactured part at CARRIER'S sole option. **THIS LIMITED WARRANTY DOES NOT INCLUDE LABOR**, user is responsible for labor, including cost of diagnosis of problem, removal and transportation of the air conditioner to and from the service center, and reinstallation charges necessary to accomplish repair.

**LIMITATION OF WARRANTIES** — ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH EACH LIMITED WARRANTY IS GIVEN AND APPLIES. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER.

ALL WORK UNDER THE TERMS OF THIS WARRANTY SHALL BE PERFORMED DURING NORMAL WORKING HOURS. ALL REPLACEMENT PARTS, WHETHER NEW OR REMANUFACTURED, ASSUME AS THEIR WARRANTY PERIOD ONLY THE REMAINING TIME PERIOD OF THIS WARRANTY.

\* Authorized independent dealers or service stations are registered with Carrier Air Conditioning thru its distributor organization.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Form No. 530-052 (New 2/90)

### CARRIER WILL NOT BE RESPONSIBLE FOR:

1. Damage due to failure to perform normal maintenance as outlined in the owner's manual.
2. Instruction on methods of control and use of air conditioning unit after initial installation.
3. Damage or repairs needed as a consequence of faulty installation or application. This is the responsibility of the installer.
4. Failure to start due to voltage conditions, blown fuses, open circuit breakers or any other damages due to the inadequacy or interruption of electrical services.
5. Damage or repairs needed as a consequence of any misapplication, abuse, unauthorized alteration, improper servicing or operation.
6. Damage as a result of floods, winds, fires, lightning, accidents, corrosive environment, or other conditions beyond the control of CARRIER.  
EXCEPTION TO CORROSIVE ENVIRONMENT IN ABOVE PARAGRAPH — Packaged terminal units (52 Series) built with corrosion protection are exempt from the exclusion — "Corrosive Environment." The unit model number is identified on the nameplate with a CP suffix.
7. Reimbursement for replacement parts or repair services which are not supplied or designated by CARRIER and which are specifically covered under this warranty.
8. CARRIER products installed outside the continental U.S.A., Alaska, Hawaii and Canada.
9. Shipping damage or damage as a result of transporting the unit. This is the responsibility of the selling dealer or the authorized Room Air Conditioner service station.
10. ANY SPECIAL, INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

NOTE: Service and Maintenance items excluded in this warranty may be covered by a separate service agreement through the seller at time of purchase.



# Carrier Corporation

**IF YOUR AIR CONDITIONER DOES NOT WORK, FOLLOW THESE STEPS IN ORDER:**

1. CHECK THE THINGS YOU CAN DO YOURSELF. These include being sure the air conditioner is plugged in firmly in an appropriate receptacle, checking the fuse or circuit breaker and insuring its replacement or resetting, if necessary, and rereading the instruction book to insure that all controls are set properly. By doing this you can save money. Many unnecessary service calls result in the serviceman doing what the owner can do for him or herself.
2. CONTACT YOUR DEALER OR THE CARRIER AUTHORIZED SERVICE CENTER HE RECOMMENDS. They have been set up to handle the great majority of all possible service problems. The quickest, surest and best way to get your air conditioner back in service is to use this step before proceeding further.
3. CONTACT THE CARRIER DISTRIBUTOR SERVING YOUR AREA. Your dealer can give you his name or you can consult your yellow pages.
4. CONTACT CARRIER IF A SATISFACTORY SOLUTION IS NOT REACHED IN STEPS 2 AND 3.  
Carrier Air Conditioning  
Consumer Relations Department  
Carrier Parkway, P.O. Box 4808  
Syracuse, New York 13221  
Telephone: 1-800 Carrier (227-7437)  
From Canada 1-315-432-7885