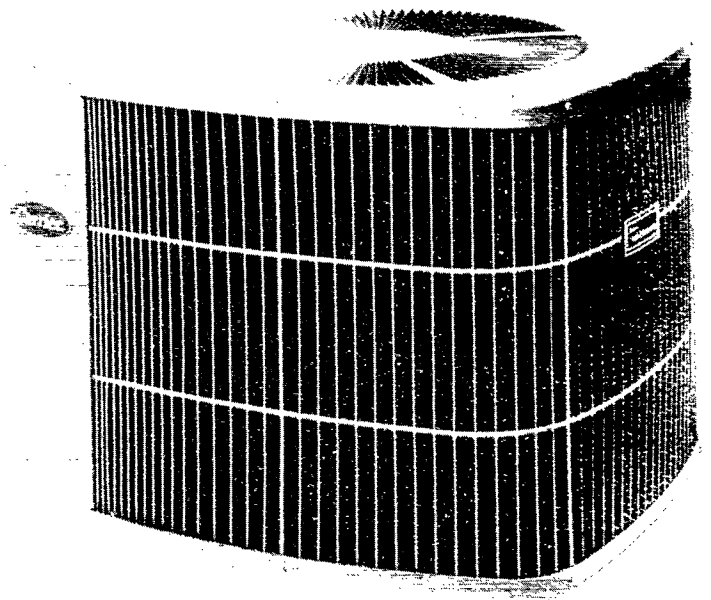




38TD
TWO-SPEED

**A GUIDE TO OPERATING
AND MAINTAINING YOUR
RESIDENTIAL AIR
CONDITIONING UNIT.**



SYNERGY 2000

NOTE TO INSTALLER:

This manual should be left with equipment user.



IMPORTANT: Complete, detach and mail immediately for . . . PRODUCT REGISTRATION

THE FEDERAL CONSUMER PRODUCT SAFETY ACT REQUIRES THAT YOU BE NOTIFIED OF ANY RECALLS INVOLVING THIS PRODUCT. YOUR NAME AND ADDRESS AND THE MODEL AND SERIAL NUMBERS OF YOUR PRODUCT WILL ASSIST US IN NOTIFYING YOU SHOULD THE NEED ARISE.

Your warranty coverage is not dependent upon the return of this card.

893B

1. Mr. 2. Mrs. 3. Ms. 4. Miss
Name (First/Initial/Last)

Street _____
City _____ State _____ Zip _____

MODEL NO. (Copy from rating plate on unit) SERIAL NO.

2. DATE INSTALLED _____
Mo. Day Yr.

3. What Carrier product did you purchase?

- 1. Central air conditioner
- 2. Gas furnace
- 3. Oil furnace
- 4. Electric furnace
- 5. Heat pump

4. When did you acquire your Carrier product?

- 1. Upon purchase of new dwelling
- 2. To replace an older Carrier system
- 3. To replace an older non-Carrier system
- 4. Within a year of buying new dwelling with no central air system
- 5. Over 4 years after buying dwelling with no central air system

5. If this was a replacement product, how old was the original?

- 1. 1-5 years
- 2. 6-8 years
- 3. 9-11 years
- 4. 12-14 years
- 5. 15-17 years
- 6. 18 & over years

6. Your product is installed in?

- 1. Single family/townhouse
- 2. Multi-family: 2-4
- 3. Mobile home
- 4. Apartment: 1-3 floors
- 5. Apartment: 4+ floors
- 6. Office/Bank
- 7. Store
- 8. Hospital/School
- 9. Manufacturing building
- 10. Other

7. What 2 factors most influenced your purchase?

- 1. Our reputation
- 2. Friend's recommendation
- 3. Contractor/dealer's recommendation
- 4. Price
- 5. Energy efficiency
- 6. Ready availability
- 7. Radio ads
- 8. TV ads
- 9. Newspaper ads
- 10. Magazine ads
- 11. Dealer display

8. Which of the following have you done in the past 6 months? (check all that apply)

- 1. Redeemed a product coupon
- 2. Ordered an item from mail order catalog
- 3. Sent in product inquiry card from magazine
- 4. Bought an item from offer received in mail
- 5. Entered sweepstakes/contest

9. In which age group are you?

- 1. 18-24
- 2. 25-34
- 3. 35-44
- 4. 45-54
- 5. 55-64
- 6. 65 & over

10. Marital status:

- 1. Married
- 2. Unmarried

11. Which group best describes your family income?

- 1. Under \$10,000
- 2. \$10,000-\$14,999
- 3. \$15,000-\$19,999
- 4. \$20,000-\$24,999
- 5. \$25,000-\$29,999
- 6. \$30,000-\$34,999
- 7. \$35,000-\$39,999
- 8. \$40,000-\$44,999
- 9. \$45,000-\$49,999
- 10. \$50,000 & over

12. Do you have any children in any of the following age groups who are living at home?

- 1. Under age 2
- 2. Age 2-4
- 3. Age 5-7
- 4. Age 8-10
- 5. Age 11-12
- 6. Age 13-15
- 7. Age 16-18

13. For your primary residence, do you:

- 1. Own a house?
- 2. Rent a house?
- 3. Own a townhouse/condominium?
- 4. Rent an apartment?

14. Which of the following types of credit cards do you use?

- 1. Travel/Entertainment (American Express, Diners Club, Carte Blanche)
- 2. Bank (MasterCard, Visa)
- 3. Gas, department store, etc.

15. What is your occupation? (check one)

- 1. Professional/Technical
- 2. Upper Mgt./Administrator
- 3. Sales/Service/Middle Mgt.
- 4. Clerical/White Collar
- 5. Craftsman/Blue Collar
- 6. Student
- 7. Housewife
- 8. Retired

16. Which of the following interests and hobbies do you and your family enjoy?

- 1. Tennis
- 2. Golf
- 3. Snow Skiing
- 4. Running/Jogging
- 5. Camping/Hiking
- 6. Hunting/Shooting
- 7. Fishing
- 8. Bicycling
- 9. Racquetball
- 10. Sailing/Boating
- 11. Stamp/Coin Collecting
- 12. Motorbiking/Motorcycling
- 13. Home Video Games
- 14. Physical Fitness/Exercise
- 15. Home Video Recording
- 16. Recreational Vehicle/4-WD
- 17. Photography
- 18. CB Radio
- 19. Home Workshop/Do-it-Yourself
- 20. Gardening/Plants
- 21. Electronics
- 22. Automotive Work
- 23. Sewing/Needlework
- 24. Crafts
- 25. Collectibles/Collections
- 26. Art & Antiques
- 27. Stereo Music Equipment
- 28. Foreign Travel
- 29. Attending Foods/Arts Events
- 30. Gourmet Cooking/Cooking

- 31. Health/Natural Foods
- 32. Wines
- 33. Fashion Clothing
- 34. Home Furnishings/Decorating
- 35. Records & Tapes
- 36. Avid Book Reading
- 37. Science Fiction
- 38. Astrology/Occult
- 39. Stock/Bond Investments
- 40. Real Estate Investments
- 41. Self Improvement Programs
- 42. Community/Civic Activities

We appreciate your taking the time to complete this card; the information provided will help us serve you better in the future. We participate in a multi-company program whereby you can receive information about new products, developments, trends, etc. related to the interest areas and other information you have indicated above. Please check here if you would prefer not to learn about such products and services.

Other comments & suggestions about our product:

Fold Here

Carrier Corporation

PLACE
FIRST CLASS
STAMP
HERE

Carrier
Product Registration Center
P.O. Box 17686
Denver, Colorado 80217

(over)
Seal Here

Fold Here



WELCOME TO EFFICIENT HOME COOLING COMFORT

Congratulations on your excellent choice and sound investment in home cooling comfort!

Your new air conditioning unit represents both the latest in engineering development and the culmination of many years of experience from one of the most reputable manufacturers of comfort systems.

Your new unit is among the most energy-efficient and reliable air conditioning products available today. To assure its dependability, spend just a few minutes with this booklet now. Learn about the operation of your air conditioner, and the small amount of maintenance it takes to keep it operating at its peak efficiency.

With minimal care, your new air conditioner will provide you and your family with cool comfort—both now and for years to come.

▲ WARNING

Improper installation, adjustment, alteration, service, maintenance or use can cause explosion, fire, electrical shock, or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency or your distributor or branch for information or assistance. The qualified installer or agency must use factory-authorized kits or accessories when modifying this product.

YOUR COMFORT SYSTEM

Identifying Your System

Take the time to familiarize yourself with the type of system you have. This knowledge will be of use in understanding the basic operation of your new air conditioner.

The split-system type has an indoor and an outdoor unit, each of which contains a coil. These units are interconnected by refrigerant tubes, as shown in Fig. 1.

Each unit has a rating plate affixed to it. A rating plate provides necessary information for specific identification of a unit. You should familiarize yourself with the product, model, and serial numbers listed on each rating plate.

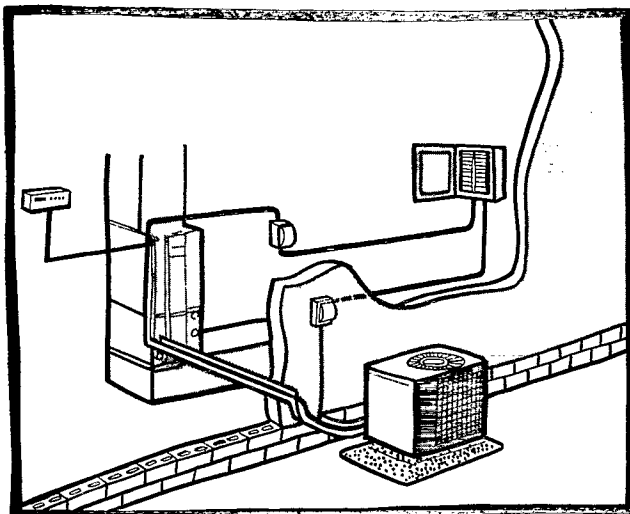


Fig. 1—Typical Split-System Installation

IMPORTANT FACTS

To better protect your investment and to eliminate unnecessary service calls, familiarize yourself with the following facts:

- Your air conditioning system should never be operated without a clean air filter properly installed. Plan to inspect the filter periodically. A clogged air filter will increase operating costs and shorten the life of the unit.
- Supply-air and return-air registers should not be blocked. Drapes, furniture, and toys are some of the items commonly found obstructing grilles. Restricted airflow lessens the unit's efficiency and life span.
- The outdoor unit must have unrestricted airflow. Do not cover the unit, lean anything against it, or stand upon it. Do not allow grass clippings, leaves, or other debris to accumulate around or on top of the unit. Maintain a 12-in. minimum clearance between the outdoor unit and tall grass, vines, shrubs, etc.
- Your multipurpose indoor thermostat is the control center for your air conditioning system. You should familiarize yourself with its proper operation. Attempting to control the system by other means—for instance, switching the electrical supply power ON and OFF—may cause damage to the unit.
- Thermostat “jiggling” causes rapid-cycling, which is potentially damaging to the compressor. Do not move the temperature selector on the thermostat for any reason for at least 5 minutes after the compressor has shut off. The unit will delay upon short cycling of the thermostat.
- You may find that you can maintain greater personal comfort by running the fan continuously. “Air pockets” can form due to the structure of the house, placement of registers, etc. These air pockets may be too cool or warm for your liking. Continuous fan operation minimizes any temperature differences. Also, systems equipped with electronic air cleaners and/or humidifiers offer the added benefits of having the air continuously cleaned year-round, and humidified during the winter season.
- Your air conditioner will remove humidity from your home during the cooling season. After a few minutes of operation, you should be able to see water trickle from the condensate drain of the cooling coil. Check this occasionally to be sure the drain system is not clogged. Of course, don't expect to see much drainage if you live in a very dry environment.
- Do not operate your unit when outdoor temperatures are below 55 F.

OPERATING YOUR AIR CONDITIONER

The operation of your air conditioning system is controlled by the indoor thermostat. Simply adjust the thermostat and it maintains the indoor temperature at the level you select. Most thermostats have three controls: the temperature control selector, FAN switch, and SYSTEM switch.

The temperature control selector is a dial, lever, or buttons that allow you to establish the degree of temperature that you wish to maintain for your personal comfort. Some thermostats possess two temperature control selectors: one for setting the temperature desired during the cooling cycle, and one to set the heating operation temperature. Typical settings are 78 F for cooling and 68 F for heating.

The FAN switch offers two options for controlling the blower: AUTO and ON. When set to AUTO, the blower will run only while the thermostat operates the cooling or heating section. When the FAN switch is set at the ON position, the blower will run continuously—regardless of whether the cooling or heating section is operating.

Typically, the SYSTEM switch on your thermostat offers the following selections: COOL, OFF, and HEAT. Your thermostat

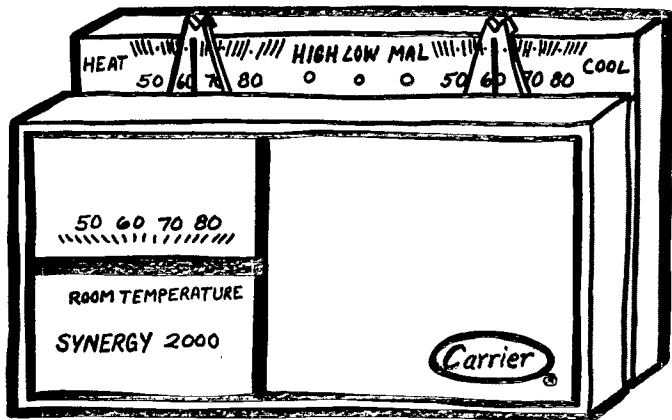


Fig. 2—Auto Changeover Thermostat

may also have a fourth selection, AUTO. Neither the cooling nor heating section will operate when the SYSTEM switch is set at the OFF position. With the SYSTEM switch set at COOL, the cooling section of your comfort system will operate when the indoor temperature rises above the level that you wish to maintain. With the SYSTEM switch set at the HEAT position, the heating section will operate automatically when the indoor temperature falls below the level that you have selected.

The AUTO selection found on some thermostats provides for automatic changeover between cooling and heating cycles. With the SYSTEM switch set in the AUTO position, the cooling section will operate when the indoor temperature rises above the thermostat cooling temperature setting, or the heating section will operate when the indoor temperature drops below the thermostat setting for the heating cycle.

NOTE: Your two-speed air conditioning system has several special features built in to protect the unit.

- 5-MINUTE TIME DELAY—unit will delay operation upon initial start-up or short cycling of the indoor thermostat.
- 1-MINUTE TIME DELAY—when changing speeds from low to high, or high to low, there is a one minute time delay. During the speed change delay the outdoor fan will continue to run.
- 2-MINUTE LOW-SPEED MINIMUM—if the unit has not operated within the past 30 minutes, upon the next cooling demand, it will operate for a minimum of 2 minutes on low speed.

If you wish to program your accessory electronic indoor thermostat, please refer to thermostat installation instructions.

COOLING CYCLE

When operating in the cooling cycle, your air conditioner will run until the indoor temperature is lowered to the level you have selected. On extremely hot days, your conditioner will run for longer periods at a time and have shorter “off” periods than on moderate days.

The following are typical conditions that add extra heat and/or humidity to your home. Your cooling unit will work longer to keep your home comfortable under these conditions:

- Entrance doors are frequently opened and closed
- Laundry appliances are being operated

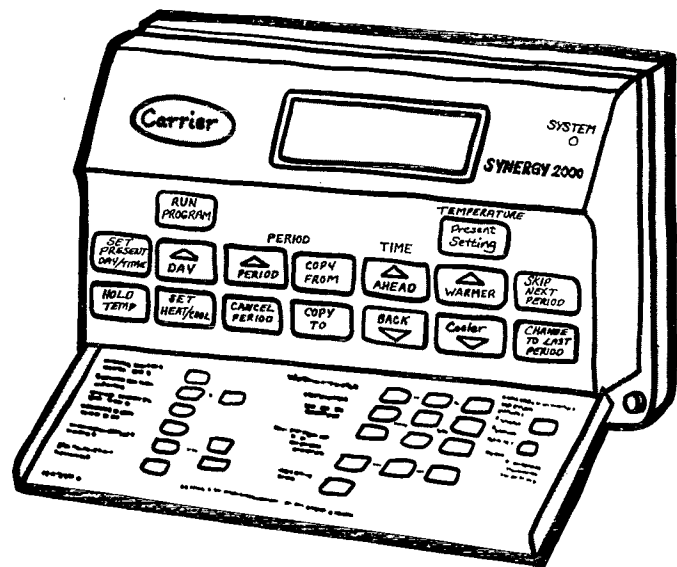


Fig. 3—Night Setback Thermostat

- A shower is running
- More than the usual number of people are present in the home
- More than the normal number of electric lights are in use
- Drapes are open on the sunny side of the home

HEATING CYCLE

With the SYSTEM switch of your indoor thermostat set to the HEAT position, the heating section of your home comfort system will operate until room temperature is raised to the level you have selected. Of course, the heating unit will have to operate for longer periods to maintain a comfortable environment on cooler days and nights than on moderate ones.

Refer to your furnace user’s manual for specific information on heating operation.

PERFORMING ROUTINE MAINTENANCE

With the proper maintenance and care, your air conditioning unit will operate economically and dependably. Maintenance can be accomplished easily by referring to the following directions. However, before performing maintenance, consider these important safety precautions:

- DISCONNECT ALL ELECTRICAL POWER TO THE AIR CONDITIONER BEFORE REMOVING ACCESS PANELS TO PERFORM MAINTENANCE. Disconnect power to both the indoor and outdoor units. **NOTE: THERE MAY BE MORE THAN ONE ELECTRICAL DISCONNECT SWITCH.**
- ALTHOUGH SPECIAL CARE HAS BEEN TAKEN TO MINIMIZE SHARP EDGES IN THE CONSTRUCTION OF YOUR UNIT, BE EXTREMELY CAREFUL WHEN HANDLING PARTS OR REACHING INTO THE UNIT.

CHECK THE AIR FILTER

A dirty air filter will cause excessive strain on the compressor and blower motor. This can cause the components to over heat and automatically shut down. In the extreme, the components will fail and need to be replaced. To avoid inefficient or failed operation of your unit, CHECK THE FILTER(S) EVERY 3 TO 4 WEEKS. Replace filter(s) when necessary, or clean the filter(s) if you have the reusable type.

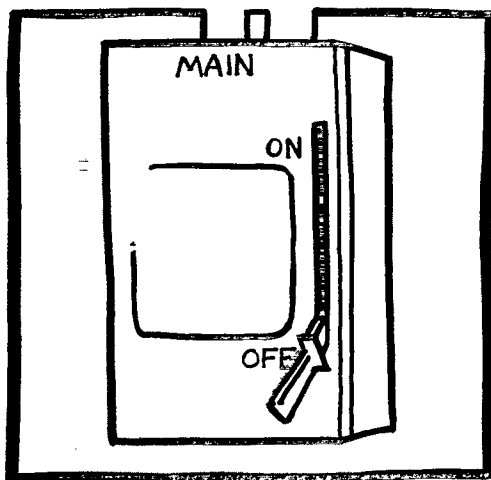


Fig. 4—Main Electrical Disconnect

Disposable filters should be replaced by similar, new filters of the same dimensions.

Reusable, permanent filters should be washed in a solution of cold water and mild detergent, then rinsed and thoroughly dried. **THE FILTER MUST BE COMPLETELY DRY BEFORE BEING REINSTALLED.** To avoid prolonged shutdown of your unit while a filter is drying, you should have an extra filter on hand. This would allow you to rotate between the two with minimal downtime for your comfort system. Extra filters may be purchased from your dealer.

There are no filters in the outdoor unit of a split-system. If your indoor unit is a gas or oil furnace, refer to your furnace owner's manual for filter location and procedures for replacement or cleaning.

If your system includes an indoor fan-coil unit, the filter is located in the unit where it connects with the return-air duct or plenum. (See Fig. 5.) Remove the two black thumbscrews (or, plastic pull rings on modular fan coil), then pull out the rack and filter. The clean filter must be reinstalled with the cross-hatched side facing the blower. With the clean filter in place, secure the spring tensioner, slide the tray into the unit, then secure the thumbscrews.

INDOOR COIL

If the split-system coil has only been operated with a clean filter in place, it should require minimal cleaning. You may use a vacuum cleaner and soft brush attachment to remove any accumulation of dust from the top and underside of the finned coil surface. However, only perform this maintenance when the coil is completely dry.

If you cannot get the coil clean by this method, call your dealer for service. It may be necessary to clean the coil with a detergent solution and rinse it with water. This could require the removal of the coil. You should not attempt this yourself.

OUTDOOR COIL

If grass clippings, leaves, shrubbery, and debris are kept away from the outdoor unit, minimal care should be sufficient to keep the system functioning properly. For proper drainage, debris must be removed periodically from the base pan. However, if the outdoor coil becomes dirty, use a brush or vacuum cleaner and soft brush attachment to clean the exterior surface. If dirt is deep in the coil, contact your dealer for service. The outdoor fan motor may have to be disconnected and the top panel removed to gain access to the coil for thorough cleaning. Do not attempt this yourself.

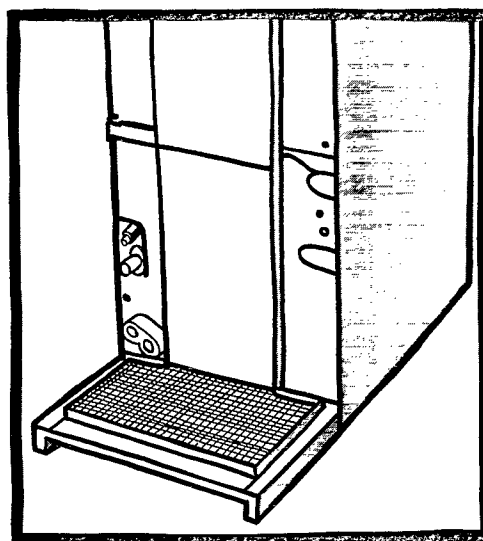


Fig. 5—Removing Filter from Fan Coil Unit

OUTDOOR COIL—SEA COAST

If your unit is located near the ocean, special maintenance is required. Ocean mist/breeze carries salt, which is corrosive to most metals. Although your new unit is made out of galvanized metal and is protected by top grade paint, you should take the precaution of additional maintenance. This additional maintenance consists of periodic washing of the unit. By washing all exposed surfaces and coil approximately every 3 months, you will be adding additional life to your unit. Please consult your installing contractor for proper intervals/procedures for your geographic area or service contact.

UNIT SUPPORT

Your split-system outdoor unit should be maintained at a level position. If its support should shift or settle so that the unit is no longer level, you should correct the condition. Relevel it promptly to assure condensate drainage out of the unit. If you notice that water or ice collects beneath the unit, arrange for it to be drained away from the unit.

BEFORE YOU REQUEST A "SERVICE CALL"

BEFORE YOU CALL FOR SERVICE, CHECK FOR THESE EASILY SOLVED PROBLEMS:

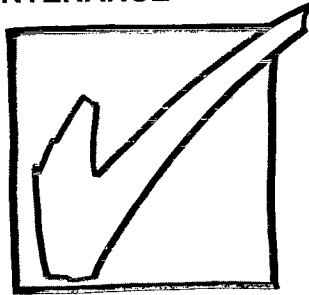
- Check the indoor and outdoor disconnect switches. Verify that circuit breakers are ON or that fuses have not blown.
- Check for sufficient airflow. Check the air filter(s) for any accumulations of dirt. Check for blocked return-air or supply-air grilles. Be sure grilles are open and unobstructed.
- Check the settings on your indoor thermostat. If you desire cooling, see that the temperature control selector is set below room temperature and the SYSTEM switch is on the COOL or AUTO position. If you require warmth, be sure the temperature control selector is set above room temperature and the SYSTEM switch is at HEAT or AUTO. The FAN switch should be set at ON for continuous blower operation or AUTO if you wish blower to function only while the unit is operating.
- Check note concerning special features and time delays in section titled "operating your air conditioner."

- If "MAL" LED light on thermostat is flashing, record pattern of consecutive flashes and pauses (i.e. one flash with pause, two flashes with pause . . .) and report to service person when contacted. This will assist service personnel in diagnosing system problems.

If your comfort system still fails to operate, contact your servicing dealer for troubleshooting and repairs. Specify your apparent problem, and state the model and serial numbers of your equipment. (You should have them recorded on Page 7 of this booklet.) With this information, your dealer may be able to offer helpful suggestions over the phone or save valuable time through knowledgeable preparation for the service call.

REGULAR DEALER MAINTENANCE

In addition to the routine maintenance that you perform, your home comfort system should be inspected regularly by a properly trained service technician. The inspection (preferably each year, but at least every other year) should include the following:



- Routine inspection of air filter(s). Replacement or cleaning as required.
- Inspection and cleaning of the blower wheel, housing, and motor.
- Inspection and, if required, cleaning of indoor and outdoor coils.
- Inspection of the indoor coil drain pan, plus the primary and secondary drain lines. If supplied, the auxiliary drain pan and line should be inspected at this time. Service should include cleaning if required.
- A check of all electrical wiring and connections.
- A check for secure physical connections of individual components within units.
- Operational check of the air conditioning system to determine actual working condition. Necessary repair and/or adjustment should be performed at this time.

Your servicing dealer may offer an economical service contract that covers seasonal inspections. Ask for further details.

FOR THE RECORD

Record the model, product, and serial numbers of your new equipment in the spaces provided below. This information, along with the other ready-reference facts requested below, will be necessary should you ever require information or service.

Installation Data

Date Installed _____
 Dealer Name _____
 Address _____
 City _____
 State _____ Zip _____
 Telephone _____

Split-System

Outdoor Unit:

Product No. _____
 Model No. _____
 Serial No. _____

Indoor Unit or Coil:

Product No. _____
 Model No. _____
 Serial No. _____

Modular Indoor Unit, if Applicable:

Blower—Product No. _____
 Model No. _____
 Serial No. _____

Coil—Product No. _____
 Model No. _____
 Serial No. _____

Heater—Product No. _____
 Model No. _____
 Serial No. _____

Carrier Corporation



IF YOUR UNIT DOES NOT WORK, FOLLOW THESE STEPS IN ORDER:

- FIRST:** Contact the installer. You may find his name on the product or in your Homeowner's Packet. If his name is not known, call your builder if yours is a new residence.
- SECOND:** Contact the nearest CARRIER distributor. (See telephone yellow pages.)
- THIRD:** Contact:
Carrier Corporation
Consumer Relations Department
P.O. Box 4808
Syracuse, New York 13221
Telephone: 1-800-CARRIER
1-800-227-7437
1-315-432-7885 (Canada)

Unit Model No. _____ Unit Serial No. _____
Date of Installation _____ Installed by _____
Name of Owner _____ Address of Installation _____

Extended Protection Limited Warranty

LIMITED ONE-YEAR WARRANTY—This CARRIER product is warranted to be free from defects in material and workmanship under normal use and maintenance for a period of one year from the date of original installation, whether or not actual use begins on that date. A new or remanufactured part to replace any defective part will be provided, within a reasonable time after return of the defective part, at Carrier's sole option without charge for the part itself, PROVIDED the defective part is returned to our distributor. This warranty applies only to the product in its original installation location and is voided if the product is reinstalled elsewhere.

THIS WARRANTY DOES NOT INCLUDE LABOR or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts or replacement parts. SUCH COSTS MAY BE COVERED BY a separate warranty provided by the installer.

EXTENDED LIMITED NINE-YEAR WARRANTY ON COMPRESSOR ONLY—During the second through tenth years after the date of original installation, CARRIER further warrants the compressor against defects in material or workmanship under normal use and maintenance. A new or remanufactured compressor will be provided at Carrier's sole option under the same conditions as stated in the One-Year Warranty.

LIMITATION OF WARRANTIES—ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF FITNESS AND MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED ONE YEAR WARRANTY IS GIVEN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. THE EXPRESS 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.

CARRIER WILL NOT BE RESPONSIBLE FOR:

1. Normal maintenance as outlined in the installation and servicing instructions or owners manual including coil cleaning, filter cleaning and/or replacement and lubrication.
2. Damage or repairs required as a consequence of faulty installation or application by others.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
4. Damage or repairs needed as a consequence of any misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
5. Damage as a result of floods, winds, fires, lightning, accidents, corrosive environment or other conditions beyond the control of CARRIER.
6. Parts not supplied or designated by CARRIER.
7. CARRIER products installed outside the continental U.S.A., Alaska, Hawaii and Canada.
8. Electricity or fuel costs or increases in electricity or fuel costs from any reason whatsoever including additional or unusual use of supplemental electric heat.
9. ANY SPECIAL, INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you.

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



TO OBTAIN INFORMATION ON PARTS: Consult your installing dealer or classified section of your local telephone directory under the "Heating Equipment" or "Air Conditioning Contractors & Systems" headings for dealer listing by brand name. Have available the Model No., Series Letter & Serial No. of your equipment to insure correct replacement part.

Carrier Corporation • Syracuse, New York 13221

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.