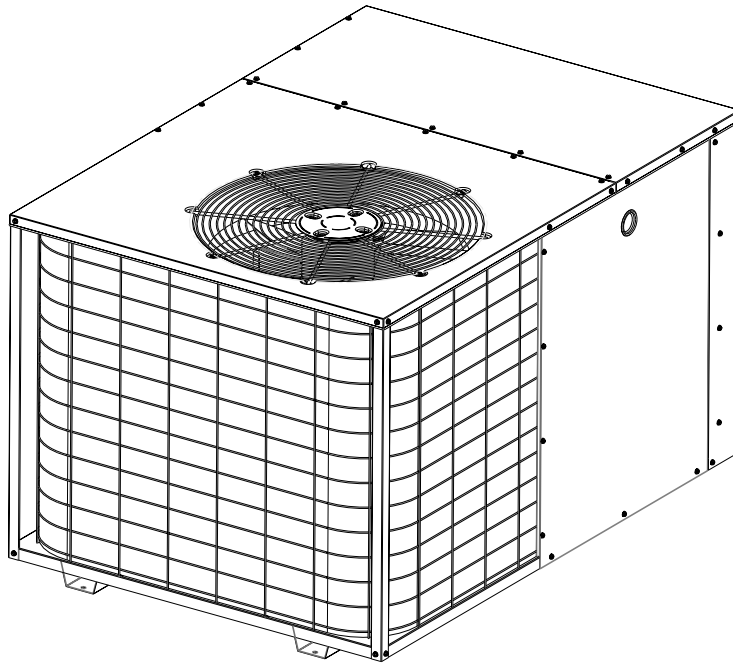


# USER'S MANUAL AND INSTALLATION

**13 SEER**

**Single Package Air Conditioner**



**Single Package Air Conditioner**

## IMPORTANT

Read this owner information to become familiar with the capabilities and use of your appliance. Keep this with literature on other appliances where you have easy access to it in the future. If a problem occurs, check the instructions and follow recommendations given. If these suggestions don't eliminate your problem, call your installing contractor or distributor in your area.

### INTRODUCTION

Most any air conditioner will keep you cool. Our air conditioner was designed to do it efficiently. Efficiency means less cost to you while keeping you comfortable.

### WHY YOUR AIR CONDITIONER WORKS SO WELL, SO QUIETLY

1. Air is cooled by a large evaporator coil. Moisture is also removed from the air by this same coil.
2. Air is then delivered through the main duct, via registers, into your home.
3. Return air is drawn through the return register.
4. This air enters the unit, passes through the evaporator coil, is cooled and dehumidified. Then the cycle begins again.

## SECTION 1. OWNER INFORMATION

### OPERATING INSTRUCTIONS

#### To Turn On Air Conditioner

**If you have a heating/cooling thermostat:**

1. Set the system switch to "Cool."
2. Set the thermostat at the temperature level you desire.
3. Turn the power on. Your air conditioner should start as soon as room temperature rises above the setting on the thermostat.

**If you have one thermostat for heating and another for cooling, they must be interlocked to prevent simultaneous operation (See Figure 1):**

1. Turn the heating thermostat to its lowest possible setting.
2. If the cooling thermostat has an "On/Off" switch, turn it "On."
3. Set the cooling thermostat to the desired temperature.
4. Turn the power on. Your air conditioner should start when room temperature exceeds the thermostat setting.

#### To Shut Off Air Conditioner

**If you have a heating/cooling thermostat:**

1. Turn the system switch to "Heat" or "Off."
2. Turn the thermostat to the desired heating temperature setting.
3. If you are turning your air conditioner off for the winter or an extended period, shut off the power to the air conditioner.

**If you have one thermostat for heating and another for cooling, they must be interlocked to prevent simultaneous operation (See Figure 1):**

1. Turn your cooling thermostat "Off" or to its highest setting.
2. Turn the heating thermostat to the desired temperature.
3. If you are turning your air conditioner off for the winter or an extended period, shut off the power to the air conditioner.

#### BEFORE YOU CALL A SERVICEMAN

Let your serviceman check your system at the start of each air conditioning season. He will

make sure it's working right, clean or change filters and make any needed adjustments.

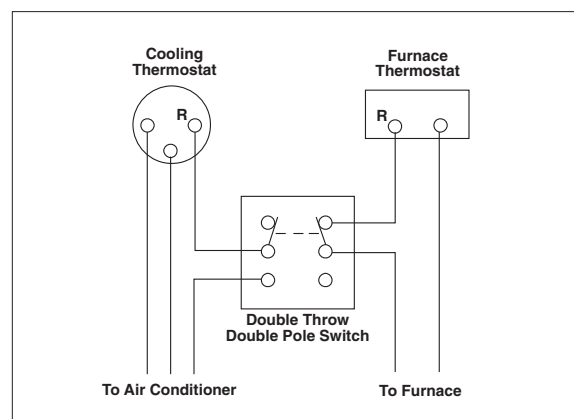
**In addition, follow these simple rules:**

1. Never run your system without filter. If you do, the cooling coils will get dirty and may become clogged.
2. Set your thermostat at the comfort level you wish -- and then leave it alone. Let it control the operation of the air conditioning system. If you get chilly, turn it up a degree at a time until comfort is restored.
3. It takes longer for an air conditioner to cool your dwelling than it does for your furnace to heat it. So . . . don't turn the unit on and expect a dramatic drop in temperature, at least not right away. If your home is hot and humid, the temperature will drop slowly.
4. Check your filters every ten days in summer to see if they are dirty. To keep them clean, use a mild solution of detergent and water on washable types. Replace non washable filters.
5. Keep your outdoor condenser coil clean. You can hose it down when it gets dirty.

**If your air conditioner isn't working:**

1. Make sure the fuses are not blown or that your circuit breakers are on.
2. See that your thermostat is set at the desired temperature and that your system's switch is on "Cool."
3. For free air flow, make sure your return register is not covered and that the filter is clean.
4. Check the outdoor condenser coil and make sure it is clean and not clogged with grass or leaves.

If your air conditioner still isn't working, call your nearest distributor.



**Figure 1. Thermostat Interlock System**

## SECTION 2. INSTALLER INFORMATION

### GENERAL

Read the following instructions completely before performing the installation.

These instructions are for the use of qualified personnel specially trained and experienced in the installation of this type of equipment and related system components. Some states require installation and service personnel to be licensed. Unqualified individuals should not attempt to interpret these instructions or install this equipment.

The single packaged air conditioners are designed for outdoor installation only and can be readily connected into the high static duct system of a home. The only connections needed for installation are the supply and return ducts, the line voltage, and thermostat wiring. A complete air conditioning system typically consists of:

- Single Package Air Conditioner
- Home Fittings Kit
- Unit Fittings Kit
- Thermostat

The single package air conditioner is completely assembled, factory wired, and factory run tested. The units are ready for easy and immediate installation.

### PRE-INSTALLATION CHECK

Before any installation is attempted, the cooling load of the area to be conditioned must be calculated and a system of the proper capacity selected. It is recommended that the area to be conditioned be completely insulated and vapor sealed.

The installer should comply with all local codes and regulations which govern the installation of this type of equipment. Local codes and regulations take precedence over any recommendations contained in these instructions. Consult local building codes and the National Electrical Code (ANSI C1) for special installation requirements.

The electrical supply should be checked to determine if adequate power is available. If there is any question concerning the power supply, contact the local power company.

**Inspecting Equipment:** All units are securely packed at the time of shipment and, upon arrival, should be carefully inspected for damage. Claims for damage (apparent or concealed) should be filed immediately with the carrier.

### INSTALLATION

#### 1. SELECT THE BEST LOCATION FOR THE AIR CONDITIONING UNIT

**IMPORTANT: DO NOT PLACE UNIT UNDER THE HOME.**

- Select a solid, level position, preferably on a concrete slab, slightly above the grade level, and parallel to the home.
- The hot condenser air must be discharged up and away from the home, and if possible, in a direction with the prevailing wind.
- Do not place the unit in a confined space.
- If practical, place the air conditioner where it and the ducts will be shaded from the afternoon sun when the heat load is greatest.
- Try to select a site for the unit that is as close as possible to the proposed return grille location.
- Keep in mind that the length of the supply and return ducts should be kept to a minimum with no sharp radiused bends.

#### 2. UNPACK THE UNIT

It is recommended that the unit be unpacked at the installation site to minimize damage due to handling.



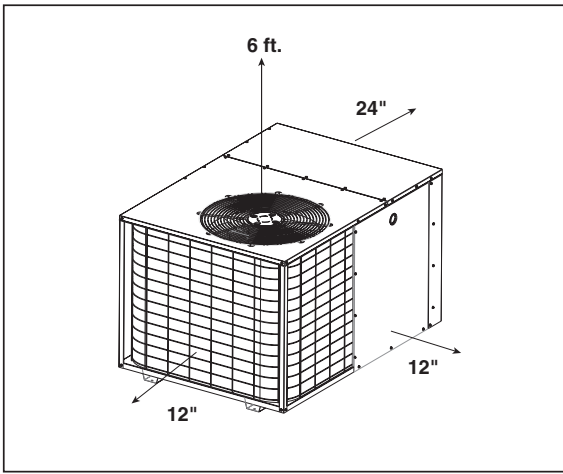
### CAUTION:

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**Do not tip the unit on its side. Oil may enter the compressor cylinders and cause starting trouble. If unit has been set on its side, restore to upright position and do not run for several hours. Then run unit for a few seconds. Do this three or four times with five minutes between runs.**

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- a. Remove the bands from around the unit.
- b. Unfold the top and bottom cap flanges.
- c. Carefully remove the top cap and tube.



**Figure 2. Minimum Unit Clearances**

**3. CLEARANCES**

Minimum clearances, as specified in Figure 2, **MUST** be maintained from adjacent structures to provide room for proper servicing and air circulation.

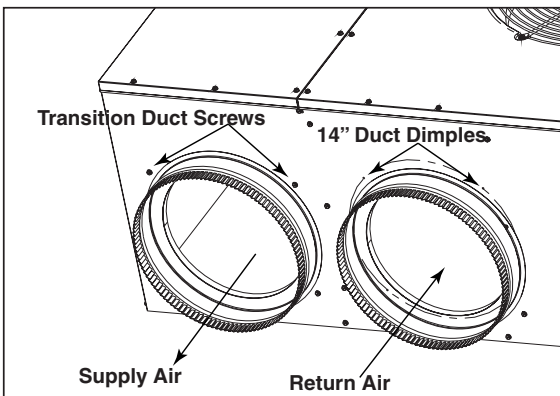
**Do NOT** install unit in a confined or recessed area that will allow discharge air from the unit to re-circulate into the condenser air inlet, through the coil.

**Service Access Clearance:**

- Blower access panel side ..... 24"
- Electrical compartment access panel side ... 12"
- Clearance between overhang and top of unit ..... 72"
- Clearance around condenser coil area to wall or shrubs (excludes duct panel side)..... 12"

**Minimum clearance to combustible materials:**

- Combustible Base (Wood or Class A, B, or C roof Covering material) ..... 0"
- Supply and Return Air Ducts..... 0"
- Duct Connection side..... 0"



**Figure 3. Return and Supply Air Fittings**

**DUCT REQUIREMENTS**

The supply duct system, including the number and type of registers, will have much more effect on the performance of an air conditioning system than any other factor. The duct must be sufficiently large to conduct an adequate amount of air to each register.

**4. INSTALL THE RETURN AND SUPPLY AIR FITTINGS ON THE UNIT**

The supply and return fittings are included with select models. If supplied, the duct fittings are shipped in the supply duct. They attach to the unit openings with a flange and bead arrangement, secured with two sheet metal screws. Note: For ease of access, install fitting before positioning unit in final location.

**SUPPLY DUCT**

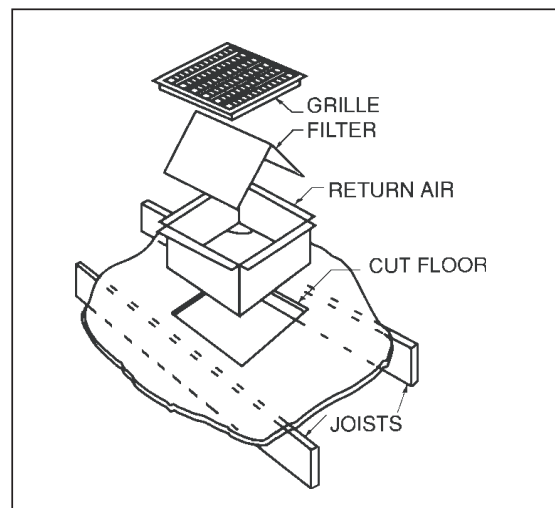
Position the supply duct collar, if supplied, so the edge of the unit opening fits between the flange and the bead. Overlap the collar ends keeping the small screw holes underneath. Align the holes in the crimped area and install one screw.

Note: It may be necessary to loosen the four screws that hold the transition duct in order to install the supply fitting. Re-tighten when installation is complete.

Tap collar as necessary to ensure engagement with unit opening and install second screw. Tighten first screw. Rotate collar clockwise so joint is near three o'clock position.

**RETURN DUCT**

Align the 14" return duct slots with the holes in the collar and install two screws. Position the



**Figure 4. Return Air Box**

collar over the opening and align the four notches in the collar with the four dimples in the panel. Using self-drilling screws (10-16x.5) attach the collar to the rear panel.

## 5. LOCATING AND INSTALLING THE RETURN AIR ASSEMBLY

To avoid complications, locate and install the return air assembly first. The return air box with grille and filter (Figure 4) should not be located in heavy traffic areas like hallways or center of rooms. A good spot is in a corner or under a table, if a minimum two inch clearance is available. If desired, the return opening can be located inside a closet with louvered doors that have an open area equal to or greater than the 12" x 20" grille furnished. The return air grille can be placed in the wall of a closet and the air ducted into the filter box through a boxed-in area at the closet floor level. Make sure the filter is readily accessible.

After determining the location of the return air opening, start the installation from under the home by cutting a small hole in the fiber under-board to determine how the floor joist location will affect cutting the opening needed for the box. Floor joists generally are located on 16" centers, leaving 14-3/8" between joists. After measuring the return air box (approximately 12-1/4" x 14-1/4"), cut the hole through the floor so that the box will fit between the floor joists. Care should be taken when cutting through carpeting to avoid snags. In most installations it will be necessary to cut a similar hole in the fiberboard directly under the hole in the floor. However, if the floor is more than ten inches deep, it will only be necessary to cut a hole for the collar on the return air box or for the insulated duct.

Set the box into the opening and fasten with screws or nails. Put the filter and return air grille in place.

## 6. LOCATING AND INSTALLING THE SUPPLY DAMPER(S)

### CAUTION:

**When a home is not equipped with a make-ready kit means must be provided to prevent simultaneous operation of the heating and cooling units. A heat/cool thermostat is available for this purpose.**

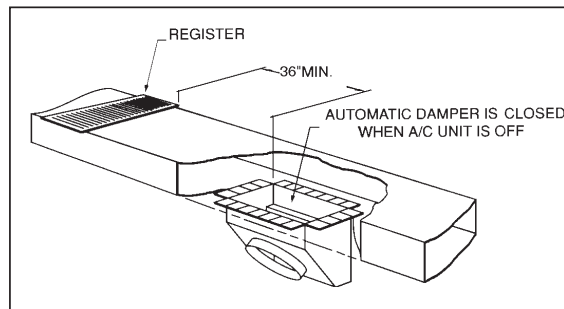


Figure 5. Supply Damper

**When installing this air conditioning system in conjunction with a furnace, a damper must be installed in the furnace base assembly to prevent cold air being discharged around the heat exchanger. Damage to the heat exchanger and asphyxiation may occur if a damper is not installed.**

**Check with the furnace manufacturer for damper requirements. Failure to install the required furnace damper may invalidate code agency listing and limited warranty on the furnace.**

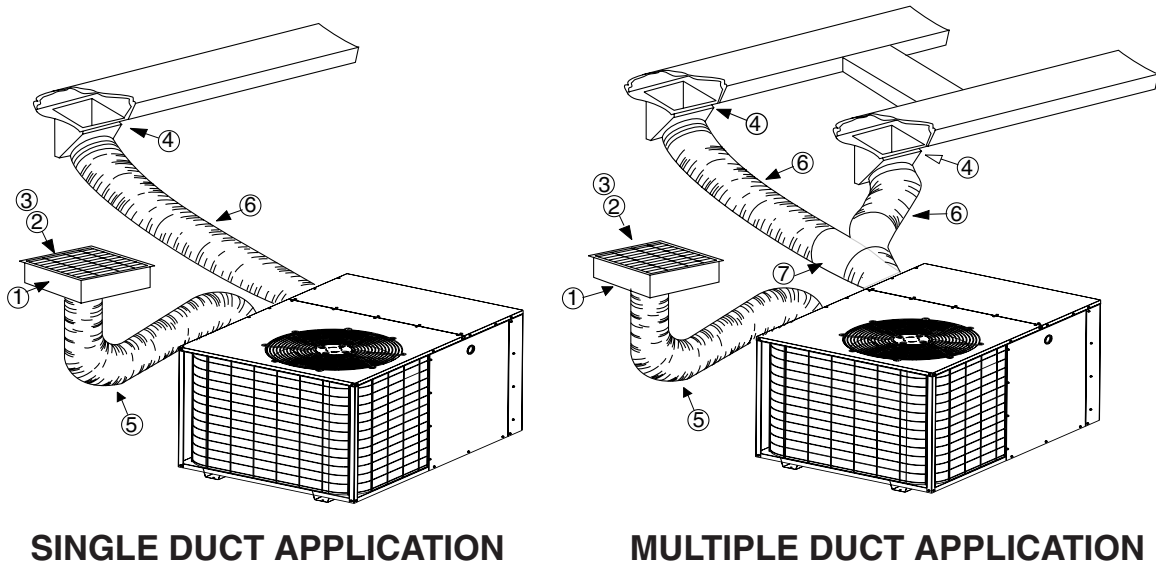
When locating the supply damper(s), carefully check floor joists and frame members that could interfere with the installation of the damper or flexible duct. Ideally, the damper should be located in the bottom of the main duct, forward of center of the home, at least three feet from the nearest register. The round supply opening in the slanted side of the damper should face the side of the home where the air conditioner is located. To locate the center of the heat duct, first cut a small hole in the fiberboard below the duct at the desired location. After locating the duct center, cut a hole approximately 3/4" larger than the damper opening in the fiberboard. Cut a 9-1/8" x 13-1/8" hole in the duct and bend over all tabs flat on the inside of the heat duct. After inserting the damper into the duct, bend over all tabs flat on the inside of the heat duct. Seal the opening between the fiberboard and damper or flexible duct.

## DUCTING SYSTEM

### DUCT REQUIREMENTS

The supply duct system, including the number and type of registers, will have much more ef-

## TYPICAL APPLICATIONS



**SINGLE DUCT APPLICATION**

**MULTIPLE DUCT APPLICATION**

Ref. No.	Description
①	12" x 20" Return Air
②	16" x 20" Air Filter
③	12" x 20" Grille
④	Supply Damper
⑤	14" Diameter Flex Return Duct
⑥	12" Diameter Flex Supply Duct
⑦	12" x 12" x 12" "Y" Fitting

Figure 6. Typical Applications

fect on the performance of an air conditioning system than any other factor. The duct must be sufficiently large to conduct an adequate amount of air to each register.

Air ducts should be installed in accordance with the standards of the National Fire Protection Association "Standard for Installation of Air Conditioning and Ventilation Systems" (NFPA 90A), "Standard for Installation of Residence Type Warm Air Heating and Air Conditioning Systems" (NFPA 90B), these instructions, and all applicable codes.

**THE AIR CONDITIONING OUTPUT OF THE SYSTEM WILL NOT COOL THE HOME IF THE AIR IS LOST TO THE OUTSIDE THROUGH LEAKS IN THE DUCT SYSTEM. ALSO, DUCTS WHICH ARE COLLAPSED OR RESTRICTED BY FOREIGN OBJECTS WILL PREVENT ADEQUATE AIR FLOW.**

Note: For highly resistive duct systems it may be necessary to add an additional return air duct and or supply to achieve maximum performance and prevent coil icing and refrigerant flood back.

## CONNECTING THE RETURN AND SUPPLY AIR FLEXIBLE DUCTS

- The supply duct for all units is 12" in diameter. The return duct is 14" diameter for all air conditioning units.
- The flexible ducts can be connected to the corresponding fittings with the clamps provided with the ducts. Note: All connections should be leak tight or a loss in cooling capacity will result.
- The flexible ducts may be cut to the required length, see instructions packed with duct. Keep all ducts as short and straight as possible. Avoid sharp bends.
- Ducts may be spliced with sheet metal sleeves and clamps. (See Ducting Installation Accessories page 6.)
- Once the inner duct is connected to the proper fitting, the insulation and plastic sleeve should be pulled over the connection and clamped.
- For homes with multiple supply ducts or for special applications, a Y fitting is available to divide the supply air so it can be ducted to different areas of the home for more efficient cooling. Note: The Y fitting should be insulated for maximum performance.

Model P3RD	Wire Color / Speed Tap	Motor Speed	Air Flow (0.3 In. WC)
2 Ton	Red	Low	760
	Black	High*	1000
2.5 Ton	Red	Low	760
	Black	High*	1000
3 Ton	Red	Low	760
	Black	High*	1000
3.5 Ton	T1	Low	750
	T2	Med/Low	1,000
	Orange / T3	Medium*	1,140
	Red / T4	Med/High*	1,300
	T5	High	1,350
4 Ton	T1	Low	1,340
	Orange / T2	Med/Low*	1,450
	Red / T3	Medium*	1,650
	T4	Med/High	1,750
	T5	High	1,965
5 Ton	T1	Low	1,340
	T2	Med/Low	1,450
	Orange / T3	Medium*	1,650
	Red / T4	Med/High*	1,750
	T5	High	1,965

\* Factory Setting

Figure 7. Standard Motor Lead Connection

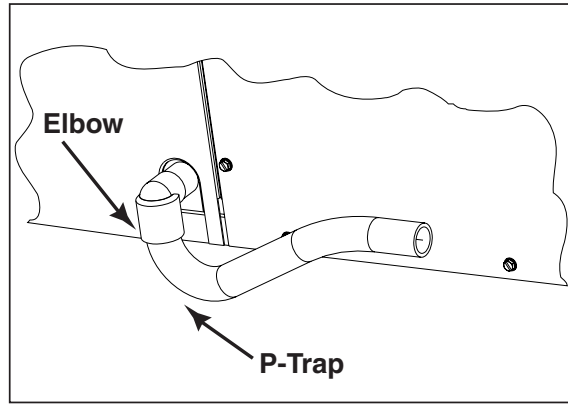


Figure 8. Drain Trap

**Blower Speed** — For optimum system performance and comfort, it may be necessary to change the factory set speed. See figure 7 for factory settings. To change the blower speed:

If Standard Motor (2, 2.5 and 3 Ton):

- Disconnect all electrical power to the unit and remove the service panel.
- Place the desired blower speed lead on the "COM" terminal. Use another wire tie (field supplied) to bundle the remaining motor leads.

If High Efficiency Motor (3.5, 4, and 5 Ton):

- Disconnect all electrical power to the unit and remove the blower panel.
- Locate the orange and red wires terminated to the blower motor. The orange wire controls cooling operation while the red wire controls heating operation.
- Verify the required speed from the airflow data found in figure 7. Place appropriate wire on the appropriate motor speed tap for the required airflow point.

Check all factory wiring per the unit wiring diagram and inspect the factory wiring connections to be sure none loosened during shipping or installation.

## CAUTION:

**To avoid personal injury or property damage, make certain that the motor leads cannot come into contact with any uninsulated metal components of the unit.**

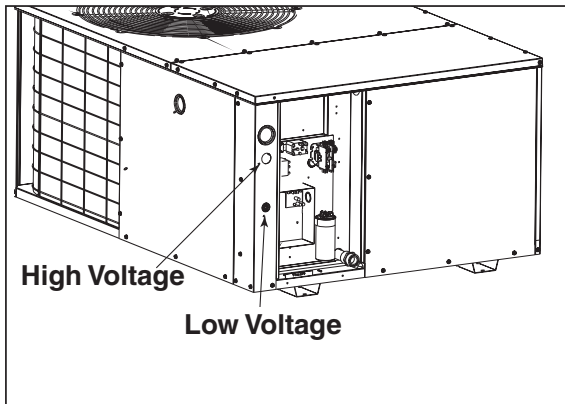


Figure 9. Power Entry

## CONDENSATE DRAIN

A 3/4" condensate fitting extends out of the side of the unit. The drain trap, shipped in the electrical compartment, must be installed to prevent water from collecting inside the unit. Thread the elbow provided with the unit into the drain connection until hand tight. Install the trap into the fitting and seal the joint. Make sure it is level. Route the condensate from the trap to a suitable drain. Any connecting tubing or hose must have the outlet below the trap level for proper drainage.

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## WARNING:

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**Turn off electrical power before servicing controls. Severe electrical shock may result unless power is turned off. Unit must be installed in compliance with the National Electrical Code (NEC) and local codes.**

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## ELECTRICAL CONNECTIONS

### 1. ELECTRICAL SERVICE

#### High Voltage

- Install a branch circuit disconnect of adequate size per NEC. Locate the disconnect within sight of the unit.
- Extend leads through power wiring hole provided. Connect L1 and L2 directly to the contactor. (See Figure 9).
- Ground the air conditioning unit using the green grounding screw provided in the control panel.

#### Low Voltage

- Route 24v control wires through the sealing grommet near the power entrance.
- Connect the control wires to the leads in the low voltage area. (See Figure 10).

### 2. OVERCURRENT PROTECTION

In general, the best fuse or breaker for any air conditioner is the smallest size that will permit the equipment to run under normal use and service without nuisance trips. Such a device, sized properly, gives maximum equipment protection. The principal reason for specifying a time delay type is to prevent nuisance trips when the unit starts.

In the event that a fuse does blow or a breaker trips, always determine the reason. Do not arbitrarily put in a larger fuse or breaker and do not, in any case, exceed the maximum size listed on the data label of the unit.

### 3. LOCATING THE THERMOSTAT

Locate the thermostat away from drafts and slamming doors and place it where there is a free flow of air. Mount on an inside wall approximately five feet from the floor.

Do not locate near a lamp, kitchen range, direct sunlight, or in line with air flow from supply registers.

- Connect Cooling Thermostat:** The cooling thermostat available for use with this system is equipped with a selector switch. To shut down the air conditioner, set the selector switch to the OFF position. Connect the red and yellow wires from the unit to the R and Y terminals respectively on the thermostat subbase. Connect the green wire to the yellow wire at the unit. See the instruction sheet packed with the thermostat for detailed methods of mounting.

**Note:** The cooling-only thermostat must be connected to an interlock switch to prevent simultaneous operation of the furnace and the air conditioner. (See Figure 1, Page 2.)

- Connect the Heat-Cool Thermostat:** The heat-cool thermostat is equipped with a system HEAT-COOL switch, which provides



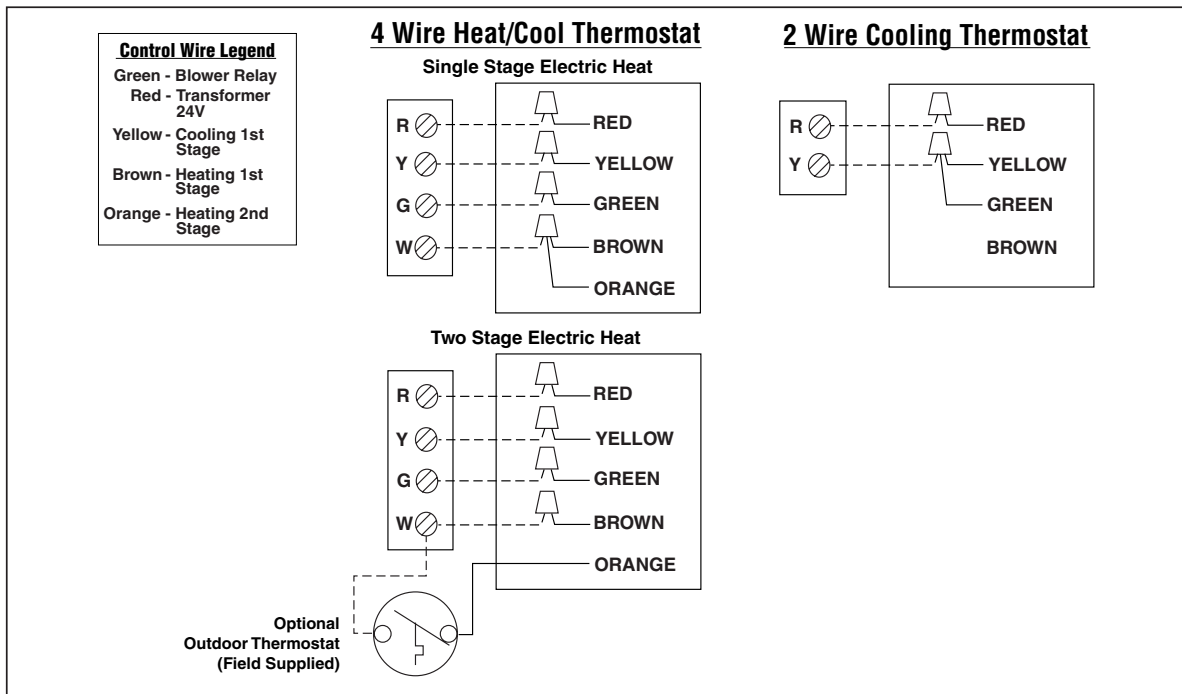


Figure 10. Low Voltage Connections

a positive means of preventing simultaneous operation of the heating and cooling units. The thermostat is also equipped with an ON-AUTO fan switch which allows the home owner to operate the indoor blower when air circulation is desired.

Connect the red, yellow, green and brown low voltage wires to the R or RC, Y, G and W terminals respectively on the thermostat base. The black wire is the 24 volt common required on some thermostats. See thermostat instruction sheet for more detailed information.

Refer to furnace installation instructions for required connections and proper heat anticipator setting when installing unit with an external furnace.

- c. **If two stage heating is desired, an optional outdoor thermostat may be installed:** Connect the thermostat to the orange low voltage wire and the W terminal on the indoor thermostat base (See Figure 10). See the thermostat instructions for details on setting the outdoor thermostat.

#### 4. ELECTRIC HEAT PACKAGE (OPTIONAL)

The air conditioner is shipped without an auxiliary electric heat kit installed. If electric heat is desired, an accessory Heater Kit must be field installed. See Specifications Sheet for available kits and their applications.

- Select the correct size heat package for the installation.
- Follow installation instructions provided with each heater kit.
- Installation is most easily accomplished before making duct or electrical connections.
- The blower must be set to high speed for electric heat operation.

### SYSTEM OPERATION

#### 1. PRE-START CHECK LIST

The following check list should be observed prior to starting the unit.

- Is the unit level? It should be level or slightly slanted toward the drain for proper condensate drainage.

- Is the unit installed with the proper clearances (See Figure 2)?
- Is the wiring correct according to the wiring diagram and electrical codes?
- Are all the wiring connections tight? Check the condenser fan to make sure it turns freely.
- Is the overcurrent protection properly sized?
- Is the thermostat wired correctly? Is it installed in a proper location?

## 2. START-UP PROCEDURE

- a. Set the system switch to the OFF position.
- b. Dial thermostat setting as high as it will go.

- c. Turn on power supply at the disconnect switch.
- d. Set the system switch to ON or COOL. Set the temperature setting to below room temperature. Verify that the indoor blower, outdoor fan, and compressor are energized and the cooling function starts.
- e. Verify that the discharge air grilles are adjusted and the system is balanced.
- f. Verify that there are no air leaks in the duct work.
- g. Verify that the condensate drain is properly installed and that it functions correctly.
- h. Dial the thermostat higher than room temperature. The unit should stop.
- i. If using a combination heating-cooling thermostat, set to the HEAT position. Proceed to check for correct furnace operation.
- j. Verify that the furnace controls and burners or heating elements operate correctly.
- k. Instruct the owner on unit operation, filter servicing, and proper thermostat operation.

# 13 SEER - Charging Charts

2 TON	OUTDOOR TEMPERATURE (°F)															
	70		75		80		85		90		95		100		105	
Suct. Press.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.
75	142	133														
77	144	138	157	136												
79	147	144	159	141	171	138										
81	150	147	161	146	173	143	186	141								
83	153	149	164	149	176	148	188	146	200	144						
85			168	152	179	152	190	150	202	148	215	146				
87					182	155	193	154	205	152	217	150	229	149		
89							197	158	208	156	219	155	231	153	244	151
91							200	161	211	160	222	159	233	157	246	155
93									215	164	226	163	237	161	248	159
95											229	167	240	165	251	163
97													244	170	255	168
99															258	172
101																

2-1/2 TON	OUTDOOR TEMPERATURE (°F)															
	70		75		80		85		90		95		100		105	
Suct. Press.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.
75	143	126														
77	145	131	158	130												
79	148	137	161	135	174	134										
81	149	143	163	140	176	139	189	138								
83	153	146	165	146	178	144	191	143	204	142						
85			168	149	180	148	193	147	206	146	219	145				
87					184	152	196	151	208	151	221	150	234	149		
89							199	155	211	155	223	154	236	153	250	152
91							203	159	215	158	227	158	238	157	252	156
93									218	162	230	162	242	161	254	160
95											234	166	246	166	258	165
97													249	170	261	169
99															265	174
101																

## Refrigerant Charging Chart Legend for Cooling Mode of Operation

\* Note: All pressures are listed in psig. and all temperatures in °F.



- Shaded Boxes indicate flooded conditions



- Rated Design Values. Suction Pressure will be lower than design value if indoor air flow, entering dry bulb, or entering wet bulb temperatures are lower than design.

- Discharge temperatures greater than charted values indicate an undercharged system.

# 13 SEER - Charging Charts - Continued

3 TON	OUTDOOR TEMPERATURE (°F)																
	70		75		80		85		90		95		100		105		
	Suct. Press.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.
69	147	140															
71	149	145	163	144													
73	152	150	166	149	180	147											
75	152	159	168	154	182	152	196	151									
77	156	161	169	160	184	157	198	155	212	154							
79			173	163	186	162	200	160	215	159	229	157					
81					189	166	203	165	217	163	231	161	245	160			
83							206	168	219	167	233	166	247	164	261	163	
85							210	172	223	171	236	170	249	168	263	167	
87									226	175	240	174	253	172	265	170	
89											243	178	256	177	270	175	
91													260	181	273	180	
93															276	184	
95																	

3-1/2 TON	OUTDOOR TEMPERATURE (°F)																
	70		75		80		85		90		95		100		105		
	Suct. Press.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.
72	162	127															
74	164	133	179	135													
76	167	138	182	140	196	141											
78	167	148	184	145	199	146	213	148									
80	170	150	184	152	201	151	216	153	230	154							
82			188	155	202	157	218	157	232	159	247	161					
84					206	160	220	162	235	163	249	165	264	167			
86							223	166	237	167	251	169	266	171	281	172	
88							227	169	241	171	255	173	268	175	283	176	
90									244	175	258	177	272	179	285	180	
92											262	181	276	183	290	185	
94													279	188	293	189	
96															297	194	
98																	

## Refrigerant Charging Chart Legend for Cooling Mode of Operation

\* Note: All pressures are listed in psig. and all temperatures in °F.



- Shaded Boxes indicate flooded conditions



- Rated Design Values. Suction Pressure will be lower than design value if indoor air flow, entering dry bulb, or entering wet bulb temperatures are lower than design.

- Discharge temperatures greater than charted values indicate an undercharged system.

# 13 SEER - Charging Charts - Continued

4 TON	OUTDOOR TEMPERATURE (°F)															
	70		75		80		85		90		95		100		105	
Suct. Press.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.
71	151	147														
73	153	152	169	151												
75	156	157	171	156	187	156										
77	157	164	173	161	189	161	204	160								
79	160	167	175	167	191	165	206	165	222	164						
81			179	170	193	170	209	169	224	169	240	169				
83					197	174	211	174	226	173	242	173	257	172		
85							215	177	229	177	244	177	259	176	275	176
87							218	181	233	181	247	181	261	180	277	180
89									236	185	251	185	265	185	279	184
91											254	189	269	189	283	189
93													272	193	287	193
95															290	198
97																

5 TON	OUTDOOR TEMPERATURE (°F)															
	70		75		80		85		90		95		100		105	
Suct. Press.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.	Dis. Press.	Dis. Temp.
68	151	151														
70	154	156	168	155												
72	156	162	170	160	184	159										
74	157	168	172	165	186	164	201	163								
76	161	171	174	171	189	169	203	168	217	167						
78			178	174	191	173	205	172	219	171	234	170				
80					194	177	208	176	221	175	236	174	250	173		
82							211	180	224	179	238	179	252	177	266	177
84							215	184	228	183	241	183	254	182	268	181
86									231	187	244	187	258	186	270	184
88											248	191	261	190	274	189
90													265	194	278	194
92															281	198
94																

## Refrigerant Charging Chart Legend for Cooling Mode of Operation

\* Note: All pressures are listed in psig, and all temperatures in °F.



- Shaded Boxes indicate flooded conditions



- Rated Design Values. Suction Pressure will be lower than design value if indoor air flow, entering dry bulb, or entering wet bulb temperatures are lower than design.

- Discharge temperatures greater than charted values indicate an undercharged system.

- NOTES: 1. Disconnect all power before servicing.  
 2. For supply connections use copper conductors only.  
 3. Not suitable on systems that exceed 150 V to ground.  
 4. For replacement wires use conductors suitable for 105° C.
1. Couper le courant avant de faire letretien.  
 2. Employez uniquement des conducteurs en cuivre  
 3. Ne convient pas aux installations de plus de 150 V a la terre.

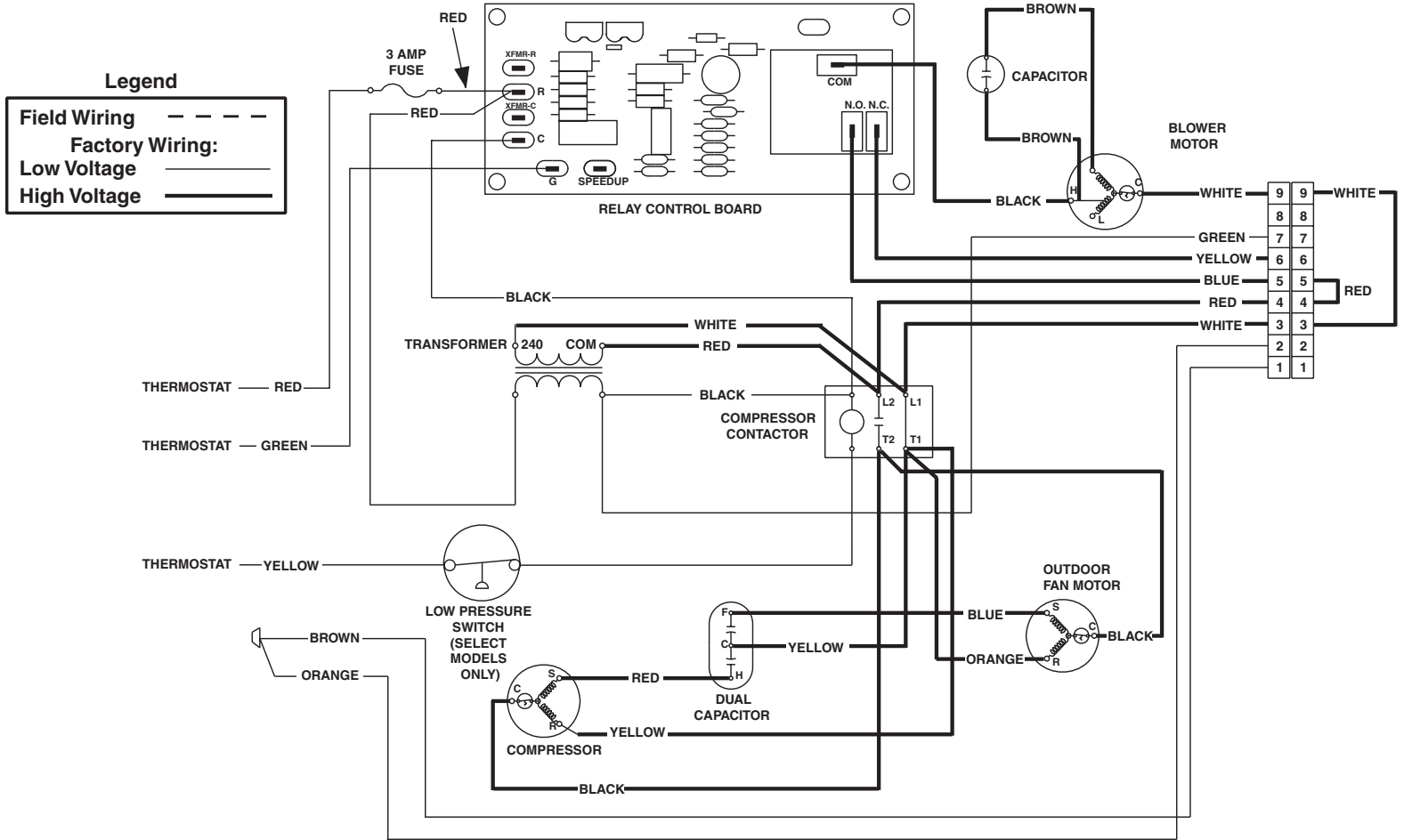
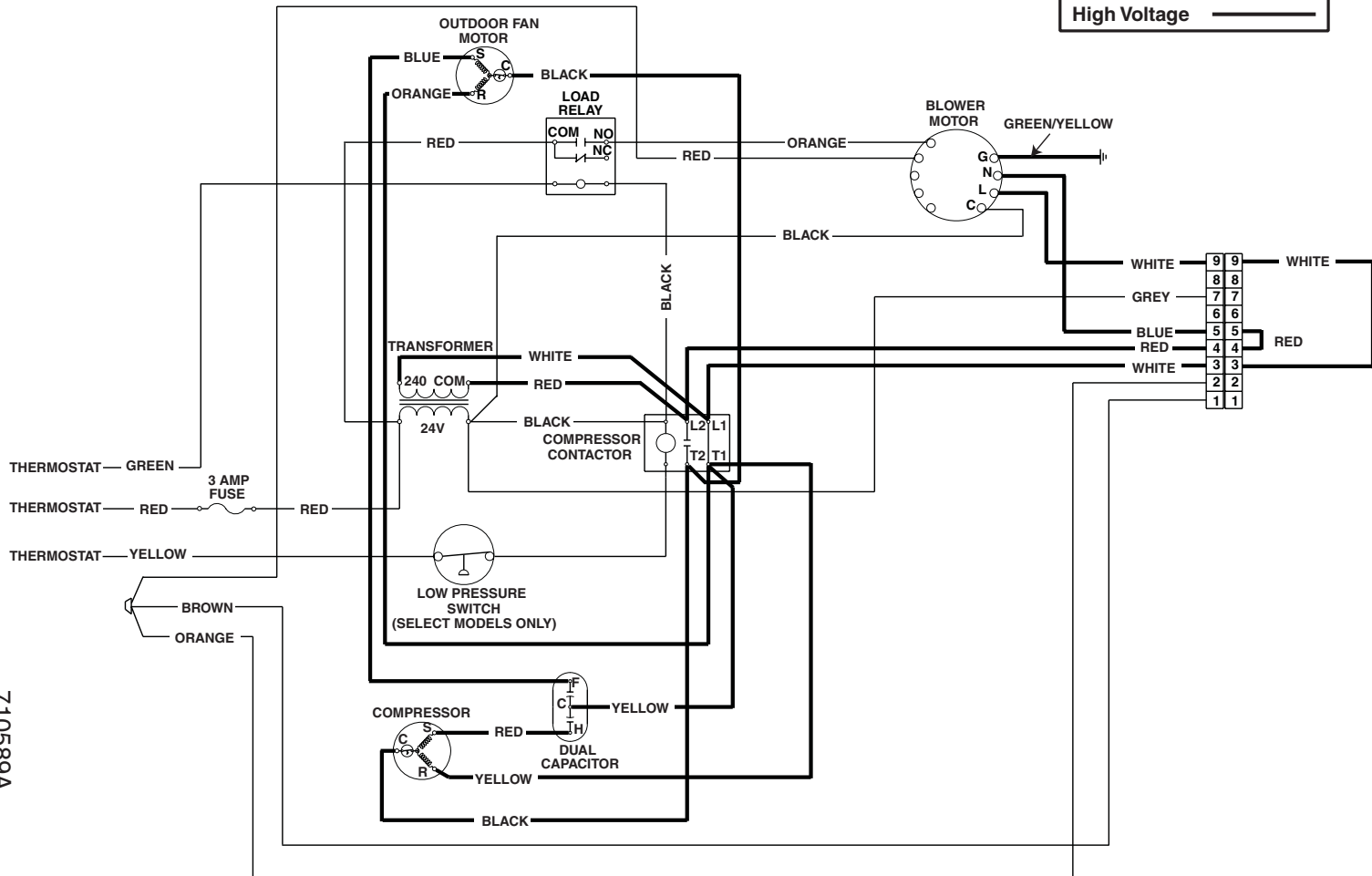


Figure 11. Wiring Diagram

# Packaged Air Conditioner - Single Phase

- NOTES: 1. Disconnect all power before servicing.  
 2. For supply connections use copper conductors only.  
 3. Not suitable on systems that exceed 150 V to ground.  
 4. For replacement wires use conductors suitable for 105° C.  
 5. See Installation Instructions for blower motor airflow settings.
1. Couper le courant avant de faire leretien.  
 2. Employez uniquement des conducteurs en cuivre  
 3. Ne convient pas aux installations de plus de 150 V a la terre.

Legend	
Field Wiring	---
Factory Wiring:	
Low Voltage	—
High Voltage	—



710589A

Figure 12. Wiring Diagram

**INSTALLER**

**PLEASE LEAVE THESE  
INSTALLATION INSTRUCTIONS  
WITH THE HOMEOWNER.**

