



USER'S INFORMATION MANUAL

SPLIT AIR CONDITIONER WITH GAS FURNACE

Chas Roberts

AIR CONDITIONING & HEATING

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www.ChasRoberts.com

Important Facts You Should Know About Your Gas Furnace and Air Conditioner

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Gas Furnace

- **If You Smell Gas** – Call your gas company, at once, from a neighbor's phone. DO NOT touch any electrical switches or light any flames.
- **If Smoke Appears – Don't be alarmed, THIS IS NORMAL**, the first time the furnace is started. Your smoke alarms may sound, but they will reset when the smoke clears. The reason this happens is because the factory applies a layer of oil inside the furnace to protect it during shipment. The burners will burn away this oil the first time the furnace is started. The furnace will smoke this one time only.
- **Before you call for service, check these simple items first:**
 - Is the furnace plugged in and are the breakers and disconnects turned on?
 - Is the thermostat set above the room temperature?
 - Is the thermostat switch set in the heat position:
 - Is the gas line connected to the furnace? If not, call you builder or plumbing contractor.
 - Is the gas manual shut off valve open? The gas valve handle is located just outside the furnace and the handle should be turned parallel with the gas pipe to be on. If it is turned at a right angle, it is off.
 - Is the air filter dirty or full of lint? A dirty filter will block needed air flow to the furnace and shut it down prematurely.
- If you have checked all these things, and the furnace still does not operate, CALL your builder or Chas Roberts Air Conditioning.
- Important, more detailed information on your furnace should be reviewed in your homeowner's operation and maintenance manual.

Air Conditioner

- During the cooling season, your gas furnace provides air flow for your air conditioning.
- **Do Not** turn the air conditioning system off. Part-time cooling is poor economy. If the system is left off during the morning, the home will soak up heat and be more difficult to cool in the afternoon. You can actually save money by letting the thermostat determine when cooling is needed.
- During the hot, dry seasons, we recommend keeping the air conditioner blower on continuously. The air conditioning unit cools more evenly when the blower switch is in the ON position. The blower provides refreshing air movement and even temperatures throughout the home. The blower also circulates air through the filter, which helps remove dust, lint and other pollutants more efficiently.
- During the more humid monsoon season, we recommend switching the blower to the AUTO position to help dehumidify the air more efficiently. Check you condensate drain to make sure the moisture being removed from the house is draining properly. The bottom drain outside your house should be dripping and the emergency overflow drain above should be dry.
- Shades, drapes, shutters, or screens should be installed on windows that are exposed to direct sunlight. Also, plant a tress or put up a canopy to protect your windows from the direct sun.
- For cooling and heating . . . **Leave your thermostat alone**. When you have found a temperature that you prefer, it is best to leave the thermostat at that setting.
- **Clean or replace the filters frequently**. Dirty filters will lower performance and efficiency of your cooling. The filters are usually located at the return grille or at the indoor section of your unit.

USER'S INFORMATION MANUAL

OUTDOOR SPLIT-SYSTEM AIR CONDITIONER

MODELS: 13, 14+ SEER SERIES
1 TO 5 TONS



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CONTACT INFORMATION

- Go to website at www.york.com click on "contact", then click on "contact form" and follow the instructions.
- Contact us by mail:

Johnson Controls Unitary Products
Consumer Relations
5005 York Drive
Norman, OK 73069

This high efficiency air conditioning system has been precision engineered, manufactured of high quality materials, and passed many rigorous tests and inspections to ensure years of satisfactory service. That's why you can rely on efficient, trouble-free operation.

Your system is fully automatic. Set the thermostat and forget it. And it's automatically protected from damage by voltage fluctuations or excessive heating or cooling demands.

Your split system air conditioner consists of two units - one installed outdoors and one installed indoors. The indoor unit may be installed in a basement, attic, or crawl space.

HOW YOUR AIR CONDITIONER WORKS

If your hand is wet and you blow on it, it feels cool because some of the moisture is evaporating and becoming a vapor. This process requires heat. The heat is being taken from your hand, so your hand feels cool.

That's what happens with an air conditioner. During the cooling cycle, your system will remove heat and humidity from your home and will transfer this heat to the outdoor air.

SYSTEM OPERATION

Your thermostat puts full control of the comfort level in your home at your fingertips. DO NOT switch your thermostat rapidly "On" and "Off" or between "Heat" to "Cool". This could damage your equipment. Always allow at least 5 minutes between changes.

SETTING THE THERMOSTAT

Although thermostats may vary widely in appearance, they are all designed to perform the same basic function: to control the operation of your air conditioning or heat pump system. Regardless of size or shape, each thermostat will feature a temperature indicator; a dial, arm, or push button for selection of the desired temperature; a fan switch to choose the indoor fan operation; and a comfort switch for you to select the system mode of operation.

Only approved thermostats have been tested and are fully compatible with this equipment. *Please be aware that many different thermostats operate on batteries or "power stealing" principals. These types of thermostats can not be supported as trouble free when used with this product.*

A complete operating instruction is provided by the manufacturer for each thermostat. Familiarize yourself with its proper operation to obtain the maximum comfort with minimum energy consumption.

If your system has been designed to allow both cooling and heating operation, you may have either a manual change-over type, or a programmable electronic type thermostat.

Manual change-over simply means that the comfort switch must be manually positioned every time you wish to switch from the cooling to heating or heating to cooling modes of operation.

The computerized electronic thermostat is actually a sophisticated electronic version of a manual change-over type. This thermostat includes features which allow "set-back" temperature variations for periods of sleep, or while you are away during the day, and means energy savings for you. The thermostat also features a digital clock.

CAUTION

The main power to the system must be kept "ON" at all times to prevent damage to the outdoor unit compressor. If necessary, the thermostat control switch should be used to turn the system "OFF". Should the main power be disconnected or interrupted for 8 hours or longer, DO NOT attempt to start the system for 8 hours after the power has been restored to the outdoor unit. If heat is needed during this 8 hour period, use emergency heat.

Fan Operation Selection

A multi-position fan switch allows you to choose the type of fan operation of the indoor fan.

AUTO - With the thermostat fan switch set to "AUTO", the fan will run intermittently as required for either heating or cooling. This position will provide the lowest operating cost. If you purchased one of our thermostats, they have an Intelligent fan mode which continually circulates the air during occupied modes or when you are at home, and can cycle the fan during unoccupied mode or during the night while you sleep to further conserve energy.

ON - If the fan switch is set to "ON", the indoor fan will not shut off. However, the system will still operate as required by room temperatures. This provides continuous air filtering and more even temperature distribution throughout the house, which is especially useful in houses with basements.

Usually during spring and fall, when neither heating nor cooling is required, you may want to run only the fan to ventilate, circulate, and filter the air in your home or building. Set the comfort control switch to "OFF" and the fan switch to "ON". Be sure to return the switches to their original positions for normal operation.

MANUAL CHANGE-OVER THERMOSTAT

COOLING YOUR HOME: With the comfort control switch in the "COOL" position, the system will operate as follows: When the indoor temperature rises above the level indicated by the temperature adjustment setting, the system will start. The outdoor unit will operate and the indoor fan will circulate cool, filtered air. When the room temperature is lowered to the setting selected, the system will shut off.

HEATING YOUR HOME: If your system includes a heating unit and the comfort control switch is in the "HEAT" position, the system will operate as follows: When the indoor temperature drops below the level indicated by the temperature adjustment setting, the system will start. The heating system will operate and the indoor fan will circulate warm, filtered air. When the room temperature rises to the setting selected, the system will shut off.

Whether heating or cooling, the fan will continue to operate if the fan switch was set in the "ON or Intelligent" position. The "AUTO" setting on the fan switch will allow the fan to shut off when your system does.

ELECTRONIC THERMOSTAT

The computerized electronic thermostat, when programmed, will function automatically to operate the system as follows: When the indoor temperature rises above the higher (COOL) setting, the outdoor unit will operate and the indoor fan will circulate cool, filtered air. When the room temperature is lowered to the selected level, the system will shut off. When the indoor temperature drops below the lower (HEAT) setting, the heating system will operate, and the indoor fan will circulate the warm, filtered air. When the indoor temperature rises to the selected setting, the system will shut off. The indoor fan will either shut off or run continuously, depending upon your choice of fan switch setting.

TO MAXIMIZE OPERATING EFFICIENCY

HEATING CONSERVATION

For the most efficient operation, keep storm windows and doors closed all year long. They not only help insulate against heat and cold, but they also keep out dirt, pollen, and noise.

Closing drapes at night, keeping fireplace dampers closed when not in use, and running exhaust fans only when necessary will help you to retain the air you have already paid to heat.

Keep lamps, televisions, or other heat producing sources away from the thermostat. The thermostat will sense this extra heat and will not be able to maintain the inside temperature to the desired comfort level.

COOLING CONSERVATION

To comfortably cool your home, your air conditioner must remove both heat and humidity. Don't turn your system off even though you will be away all day. On a hot day, your system may have to operate between 8 to 12 hours to reduce the temperature in your home to a normal comfort level.

Keep windows closed after sundown. While the outdoor temperature at night may be lower than indoors, the air is generally loaded with moisture which is soaked up by furniture, carpets, and fabrics. This moisture must be removed when you restart your system.

The hotter the outside temperature, the greater the load on your system. Therefore do not be alarmed when your system continues to run after the sun has set on a hot day. Heat is stored in your outside walls during the day and will continue to flow into your home for several hours after sunset.

Use your kitchen exhaust fan when cooking. One surface burner on "HIGH" requires one ton of cooling. Turn on your bathroom exhaust fan while showering to remove humidity. However, exhaust fans should not be run excessively. It would decrease efficiency by removing conditioned air.

You can also help your system in the summer by closing drapes or blinds and by lowering awnings on windows that get direct sunlight.

CARE OF SYSTEM

IMPORTANT: The owner/user should not attempt to disassemble the equipment nor perform periodic maintenance unless they are experienced and qualified to do so.

A periodic inspection, cleaning, lubrication, and adjustment of your heat pump is available from your dealer. Be sure to ask him about this service.

For those who prefer to do-it-yourself, follow the instructions below to care for your system.

COIL CARE

Keep the outdoor unit free of loose snow, foliage, grass clippings, leaves, paper, and any other material which could restrict the proper air flow in and out of the unit. The coil may be vacuumed to remove any debris from between the fins. However, don't knock ice off the outdoor unit's coil surface following an ice or severe snowstorm. The blows could mash the coil fins shut (blocking air passage), or break the refrigerant tubing allowing the refrigerant to escape.

If the coil becomes excessively dirty, turn the main disconnect switch to "OFF" and wash the coil with your garden hose. Avoid getting water into the fan motor and control box. Flush dirt from base pan after cleaning the coil.

CARE OF FAN MOTORS

Some fan motors are provided with lubrication ports. Inspect your indoor and outdoor units to determine whether or not lubrication ports are provided.

The fan motor is shipped with an oil supply which will last for several years under normal operating conditions. After this time, each motor bearing should be oiled with 10-15 drops (approximately 1/4 teaspoon) of SAE 20 non-detergent electric motor oil or automobile oil. DO NOT use definite purpose oils such as sewing machine, cleaning, rust preventative, cutting, household, etc.

SCHEDULE FOR RELUBRICATION		
Running Hours Per Day	Environment	
	Normal	Dirty
0-8	Every 5 Yrs.	Every 4 Yrs.
9-16	Every 4 Yrs.	Every 3 Yrs.
17-24	Every 3 Yrs.	Every 2 Yrs.
Do not over oil		

If your system is an add-on type, (installed in conjunction with a standard furnace) inspect your furnace blower motor and care for it in the same way.

FILTER CARE

Inspect the air filter(s) at least once a month. If they are dirty, wash reusable filters with a mild detergent per manufacturer's recommendations. Replace disposable filters with new filters.

Install the clean filters with "air flow" arrow in the same direction as the air flow in your duct. Filters should be clean to assure maximum efficiency and adequate air circulation. Drapes, furniture or other obstructions blocking your supply and return air grilles will also decrease efficiency.

OUTDOOR UNIT FINISH

If you wish to maintain the finish of the outdoor unit, it can be polished with car wax. It is recommended the unit be cleaned with soap and water prior to waxing.

TROUBLESHOOTING GUIDE			
PROBLEM	CHECK	ACTION TO TAKE	FAULT CODE
No Heat or Cooling	1. Thermostat for proper settings.	Set thermostat to proper setting.	-
	2. Circuit breakers and fuses.	Reset circuit breakers - Replace blown fuses.	-
	3. Check outdoor unit for dirty coil (Cooling).	Clean coil, see "COIL CARE" section.	2
	4. Outdoor unit for snow accumulation. (Heating).	Remove loose snow only.	3
	5. Indoor unit for dirty filter (Heating).	Clean or replace, see "FILTER CARE" section.	2
	6. Emergency heat light status on thermostat.	Check 1 - 5, call qualified service person.	2
	Light on = Malfunction	Check 1 - 5, call qualified service person.	-
	Light flashing = Malfunction	Check 1 - 5, call qualified service person with fault code.	-
Wet on Floor or in Furnace	Condensate drain and "P" trap	Remove blockage, usually mold or fungus.	-

CLEARANCES

The minimum clearances shown below must be maintained should any patio or yard improvements be done around the outdoor unit.

	Vertical Discharge	Horizontal Discharge
Top	60"	N/A
Coil Side	6"	6"
Access	18"	24"
Fan Side	N/A	6"

POWER INTERRUPTION

When ice, snow, wind storms, etc. disrupt electrical power supply to your house, proceed as follows:

Heating Season

1. Switch thermostat to emergency heat.

NOTE: There will be no heat available until power is re-established.

2. Leave on emergency heat for at least 8 hours after electrical power is re-established if the power was off more than 8 hours.

3. Switch thermostat back to heating or auto.

Cooling Season

1. Switch thermostat to OFF position.
2. Do not switch to cooling or auto until electrical power has been re-established for 8 hours if the power was off more than 8 hours.

SERVICE CALLS

There are a few instances where you can avoid unnecessary service calls. (See Troubleshooting Guide above). Some models provide fault codes. The flashing light on the system thermostat is capable of providing you with time and money saving information. The fault code numbers listed can be handled by taking the corrective action indicated. Call qualified service person if displaying fault code numbers **not** listed.

PARTS INFORMATION

Replacement parts are available from local contractor/dealers or the nearest distribution center.

Chas Roberts

AIR CONDITIONING & HEATING

The Most Comfortable Call You Can Make!

Chas Roberts Air Conditioning is proud to be a family owned and operated business, serving Arizona since 1942.

As your HVAC system Installer, we can provide you with services to meet all of your Heating and Air Conditioning needs after you have taken possession of your new home:

- Sales
- Service & Repair
- Extended Warranties
- Preventative Maintenance

We are available to speak with you Monday-Friday 7am to 8pm, Saturday 7am to 5pm, and Sunday 9am to 4pm with extended hours during the summer.

Please call, or visit our website, with all of your HVAC questions or concerns.

(602) 943-3426 or (520) 292-6858
www.ChasRoberts.com

Limited Warranty

UPG warrants this product to be free from defects in factory workmanship and material under normal use and service and will, at its option, repair or replace any parts that prove to have such defects according to the terms outlined on this warranty. This warranty covers only the equipment described by the Product Model Number and Serial Number listed on the Warranty Registration Card.

For your benefit and protection, return the Warranty Registration Card to UPG promptly after installation. This will initiate the warranty period and allow us to contact you, should it become necessary. In the absence of a recorded Warranty Registration Card, the warranty period will begin upon product shipment from UPG.

This warranty extends only to the original consumer purchaser and is non-transferable. For this warranty to apply, the product must be installed according to UPG recommendations and specifications, and in accordance with all local, state, and national codes; and the product must not be removed from its place of original installation. The warranty period for repair or replacement parts provided hereunder shall not extend beyond the warranty period stated below.

CONDENSING UNITS ¹		
CONDENSING UNITS	COMPRESSOR	PARTS
H*RD, H*BD, ERCS, AC13, H*ZD, CCBD, LCBD, TCGD, GCGD, AY,	5 yrs	5 yrs
YCHD, YCJD, CCJD, LCJD	10 yrs	5 yrs
H*RE, FRCS, H*BE, TCGF, YCJF, CCJF, LCJF	10 yrs	5 yrs

¹. All 3 phase condensing units have 5-year compressor and 1-year parts (Model Numbers with 25/46 or T/W voltage codes).

UPG strongly recommends regular periodic preventative maintenance on this equipment. The person most familiar with the equipment in your HVAC system is a UPG dealer. The UPG dealer can ensure your maintenance program meets the conditions of the "UPG Warranty", maximize the efficiency of the equipment, and service your unit within the mandated guidelines with regard to unlawful discharge of refrigerants into the atmosphere.

This warranty applies only to products installed in the United States and Canada.

EXCLUSIONS

This warranty does not cover any:

1. Shipping, labor, or material charges.
2. Damages resulting from transportation, installation, or servicing.
3. Damages resulting from accident, abuse, fire, flood, alteration, or acts of God (tampering, altering, defacing or removing the product serial number will serve to void this warranty).
4. Damages resulting from use of the product in a corrosive atmosphere.
5. Damages resulting from inadequacy or interruption of electrical service or fuel supply, improper voltage conditions, blown fuses, or other like damages.
6. Cleaning or replacement of filters.
7. Damages resulting from failure to properly and regularly clean air and/or water side of condenser and evaporator.
8. Damages resulting from: (I) freezing of condenser water or condensate; (II) inadequate or interrupted water supply; (III) use of corrosive water; (IV) fouling or restriction of the water circuit by foreign material or like causes.
9. Damages resulting from operation with inadequate supply of air or water.
10. Damages resulting from use of components or accessories not approved by UPG (vent dampers, etc.).
11. Increase in fuel or electric cost.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

SOME STATES DO NOT ALLOW THE DISCLAIMER OF IMPLIED WARRANTY, SO THAT THE ABOVE DISCLAIMER MAY NOT APPLY TO YOU.

SOME STATES ALLOW ONLY A PARTIAL LIMITATION ON IMPLIED WARRANTIES TO LIMIT THE DURATION OF IMPLIED WARRANTIES TO THE DURATION OF THE EXPRESS WARRANTY. IN SUCH STATES, THE DURATION OF IMPLIED WARRANTIES IS HEREBY EXPRESSLY LIMITED TO THE DURATION OF THE EXPRESS WARRANTY ON THE FACE HEREOF.

IN NO EVENT, WHETHER AS A RESULT OF BREACH OF WARRANTY OR CONTRACT, TORT (INCLUDING NEGLIGENCE) STRICT LIABILITY OR OTHERWISE, SHALL UPG BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF USE OF THE EQUIPMENT OR ASSOCIATED EQUIPMENT, LOST REVENUES OR PROFITS, COST OF SUBSTITUTE EQUIPMENT OR COST OF FUEL OR ELECTRICITY. THE ABOVE LIMITATIONS SHALL INURE TO THE BENEFIT OF UPG'S SUPPLIERS AND SUBCONTRACTORS. THE ABOVE LIMITATION ON CONSEQUENTIAL DAMAGES SHALL NOT APPLY TO INJURIES TO PERSONS IN THE CASE OF CONSUMER GOODS.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, OR FOR STRICT LIABILITY IN TORT, SO THAT THE ABOVE EXCLUSIONS AND LIMITATIONS MAY NOT APPLY TO YOU.

UPG DOES NOT ASSUME, OR AUTHORIZE ANY OTHER PERSON TO ASSUME FOR UPG, ANY OTHER LIABILITY FOR THE SALE OF THIS PRODUCT. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

For Owner's Information:

PRODUCT MODEL NO. _____
UNIT SERIAL NO. _____

INSTALLATION DATE _____
INSTALLING DEALER _____

USER'S INFORMATION, MAINTENANCE AND SERVICE MANUAL

HIGH EFFICIENCY
TUBULAR HEAT EXCHANGER SERIES

MODELS: GY8S*DH / GM8S*DH / LY8S*DH / LM8S*DH
(Single Stage Downflow/Horizontal / Standard & Low NOx)



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CONTACT INFORMATION

- Go to website at www.york.com click on "contact", then click on "contact form" and follow the instructions.
- Contact us by mail:

York International
Consumer Relations
5005 York Drive
Norman, OK 73069

The manufacturer recommends that the user read all sections of this manual and keep the manual for future reference.

WARNING

FIRE OR EXPLOSION HAZARD - Failure to follow safety warnings exactly could result in serious injury, death, or property damage.

— **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**

— **WHAT TO DO IF YOU SMELL GAS:**

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone (including cell phone) in your building.
- Leave the building immediately.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

— **Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

SECTION I: USER'S INFORMATION SAFETY

1. The furnace area must be kept clear and free of combustible materials, gasoline and other flammable vapors and liquids.
2. Insulating materials may be combustible. The furnace must be kept free and clear of insulating materials. The furnace area must be examined when installed in an attic or other insulated space or when insulation is added to be sure that the insulation material has been kept away from the furnace.
3. The furnace needs air for combustion in order to operate properly and safely. Do not block or obstruct air openings on the furnace, air openings to the area where the furnace is installed, or spaces around the furnace.
4. Follow the instructions exactly as shown on the OPERATING INSTRUCTION LABEL or the Start-up and Shutdown Instructions on Page 3 of this manual when lighting the furnace or turning the furnace off.
5. Should the gas supply fail to shut off or if overheating occurs, shut off the gas valve to the furnace before shutting off the electrical supply.
6. Do not use this furnace if any part has been under water. A flood-damaged furnace is extremely dangerous. Attempts to use the furnace can result in fire or explosion. A qualified service agency should be contacted to inspect the furnace and replace all gas controls, control system parts, electrical parts that have been wet or the furnace if deemed necessary.

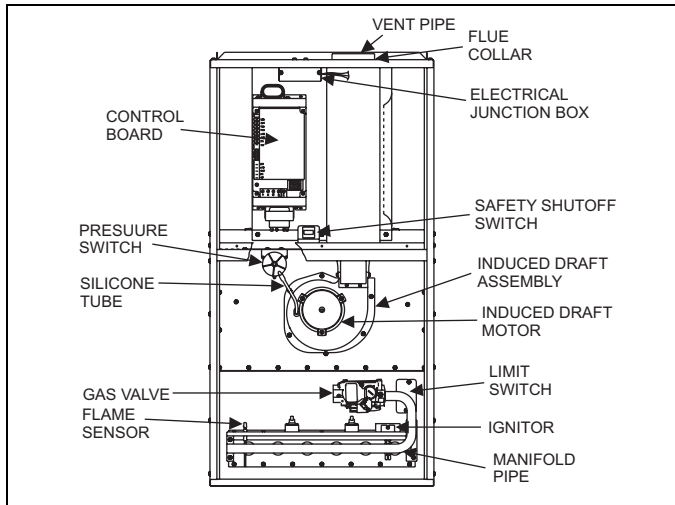


FIGURE 1: Component Locations

7. NEVER . . . Store flammable materials of any kind near your furnace. Gasoline, solvents, and other volatile liquids should be stored only in approved containers outside your home. These materials vaporize easily and are extremely dangerous.
8. NEVER . . . Store cleaning materials near your furnace. Materials such as bleaches, detergents, powdered cleansers, etc., can cause corrosion of the heat exchangers.
9. NEVER . . . Use the area around your furnace as a storage area for items which could block the normal flow of air. This flow of air is required for ventilation of the various furnace components.

WARNING

FIRE OR EXPLOSION HAZARD

This furnace is designed and approved for use with Natural Gas and (LP) Propane Gas ONLY. DO NOT BURN ANY LIQUID FUEL OR SOLID FUEL IN THIS FURNACE.

Burning any unapproved fuel will result in damage to the furnace heat exchanger, which could result in Fire, Personal Injury, and/or Property Damage.

INSTRUCTIONS FOR EXAMINING THE FURNACE INSTALLATION

It is the owner's responsibility to ensure that an annual inspection of the entire heating portion of the unit is made by a qualified service agency. Examine the furnace as outlined below in steps "1 - 6" before each heating season. Use Figure 3 for visual reference.

1. Examine the heat exchanger, vent pipe, combustion air passages, vent connectors and chimney to be sure they are clear and free of obstructions.
2. Examine the vent pipe making sure it is firmly in place, that it slopes slightly upward and is physically sound without holes and all of the connections are secure.
3. Examine the return-air duct connections to make sure they are physically sound, sealed to the furnace casing, and the ducts terminate outside the space containing the furnace.
4. Examine the furnace casing making sure the physical support is sound without sagging, cracks or gaps. Examine the furnace base making sure it is physically sound without cracks, gaps or sagging and has a good seal.
5. Examine the furnace casing for obvious signs of deterioration.
6. Examine the burner flames to make sure they are in good adjustment. Refer to the pictorial sketch shown in Figure 2 as a comparison to the actual flame.

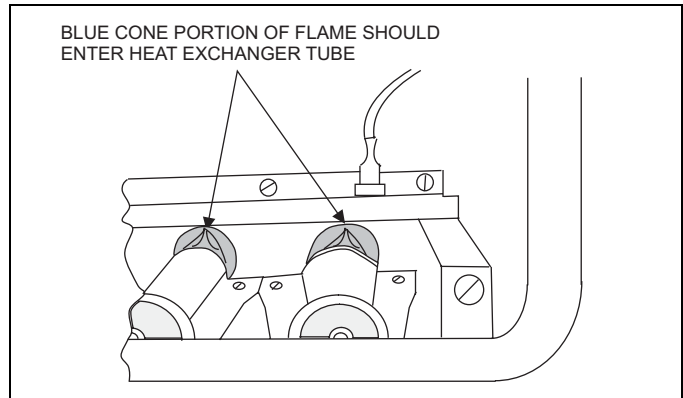


FIGURE 2: Burner Flame Drawing

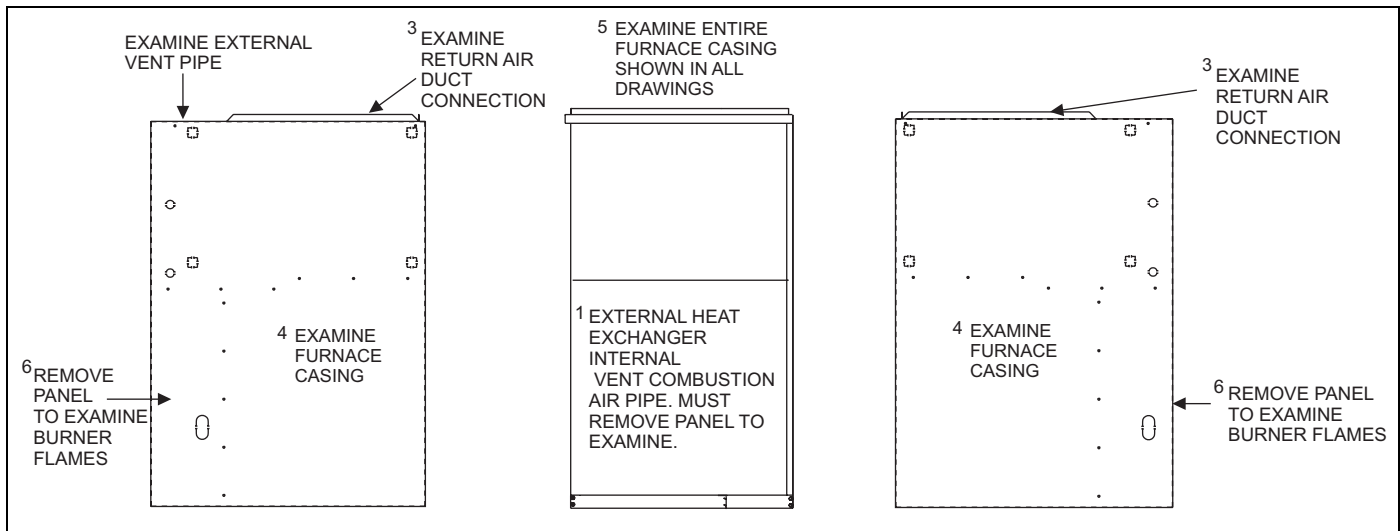


FIGURE 3: Furnace Examination Checkpoints

HOW YOUR GAS FURNACE WORKS

Your furnace is a very easy appliance to take for granted. Season after season, it sits there in your home, keeping you warm and comfortable. For this reason, you may never have given much thought to the way your furnace operates. In order to get the safest and most efficient operation from your furnace, you should understand how your furnace does its job.

When you set your thermostat to provide more heat in your home, you are starting the heating cycle of the furnace. First, the inducer motor starts to purge the heat exchanger of any remaining gases. Next, the hot surface ignitor glows and after a warm-up period the gas valve opens and ignition occurs. A short time later, the blower starts and distributes the warm air throughout the home. When the temperature setting on your thermostat is reached, the gas valve closes, the main burners are turned off, and the blower continues to run until the remaining warm air in the system is distributed. When the blower stops, the heating cycle has ended.

START-UP AND SHUTDOWN INSTRUCTIONS

Read the Instructions Below Before Trying to Start the Furnace

WARNING

If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury, and/or loss of life.

- This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- BEFORE OPERATING**; smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- Use only your hand to push the gas control switch to the "on" position. Never use tools. If the switch will not operate by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control, which has been under water.

Operating Instructions:

- STOP! Read the safety information above.
- Set the thermostat to the lowest setting.
- Turn off all electric power to the appliance.
- Remove furnace door.
- Move gas control switch to the "OFF" position. Do not force. See Figure 4.
- Wait five (5) minutes to clear out any gas. If you then smell gas, STOP! Follow "B" in the safety information above. If you don't smell gas, go to next step.
- Move gas control switch to the "ON" position. Do not force. See Figure 4.
- Replace burner access panel.
- Turn on all electric power to the appliance.
- Set thermostat to the desired setting. Burner will light, which may take 30-60 seconds.
- After three (3) trials for ignition, if the appliance will not operate follow the instructions, "TO TURN OFF THE APPLIANCE" and call your service technician or gas supplier.

To Turn Off the Appliance:

- Set the thermostat to lowest setting.
- Turn off all electric power to the appliance if service is to be performed.
- Remove burner access panel.
- Move gas control switch to the "OFF" position. See Figure 4.
- Replace burner access panel.

WARNING

Should overheating occur, or the gas valve fail to shut off, turn the external manual gas valve in the gas supply line to the furnace to the "off" position and let the furnace cool off before shutting off the electrical power supply. Refer to Figure 5.

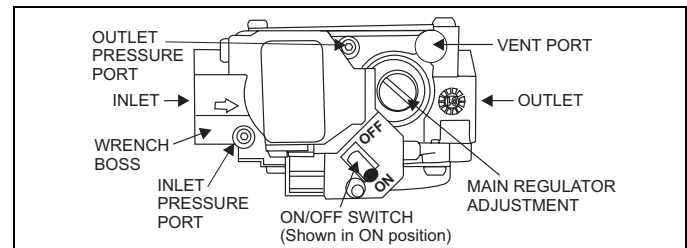


FIGURE 4: Gas Valve - White Rodgers

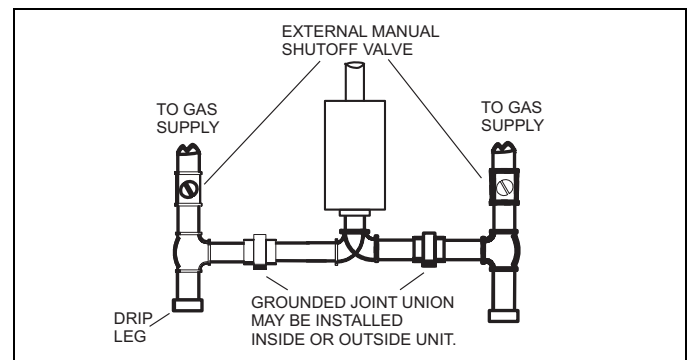


FIGURE 5: Gas Piping

NOTE: The spring-loaded safety cut-off switch, mounted under the blower deck will automatically cut off the electrical power supply to the furnace when the blower panel is removed. As a safety precaution, all electrical power and the gas supply to the furnace should be turned off before servicing.

FURNACE USER MAINTENANCE

WARNING

Before proceeding, be sure the area is well ventilated. Turn the thermostat OFF. If the blower is running, wait until it stops automatically. Turn OFF the gas and electrical power supplies to the furnace. Check all metal parts and surfaces to be sure they have cooled to room temperature before you begin.

Every time the filters are changed the following items should be visually inspected:

- Check combustion air and vent pipe for blockage or leakage.
- Check all components to be sure they are in good condition and that there are no obvious signs of deterioration.
- Check the drain lines to make sure there are no cracks or leaks.
- Check for dirt or lint on any surfaces or on components. Do not try to clean any of the surfaces or components. Cleaning of the furnace and its components must be done by a qualified service professional.

If during the inspection of your furnace, you find any of the following conditions:

- Excessive amounts of dust and lint on components.
- Damaged or deteriorated components or surfaces.
- Leaks or blockage in the vent pipe passages.
- Water on any surface inside or outside of the furnace.

Do not operate the furnace, call a certified dealer / servicing contractor to check and / or clean your furnace, or for more information if you have questions about the operation of your furnace.

If all components appear to be in good operating condition, replace the front panels. Turn ON the gas and electrical power supplies to the furnace, and set thermostat to the desired temperature.

Air Filters

Dirty filters greatly restrict the flow of air and may cause damage to the moving parts of the furnace. If the filters become clogged the heat exchangers and blower motor could overheat resulting in a potentially dangerous situation. The filters should be checked every 3 months. On new construction, check the filters every week for the first four weeks and every three weeks after that, especially if the indoor fan is running continuously. When replacing the filter(s) you must use filters that are the same size as those recommended in Table 1 to be sure you install the right size filter for your furnace. Never operate your furnace without a suitable air filter.

Removing Filters

Externally Mounted Air Filters

Some installations may have the air filter in a rack attached to the casing of the furnace or placed in the return air duct. You can gain access to the filter by pulling on the door or unscrewing the retaining screw, then slide the filter(s) out of its channel. Replace throw away filter(s) with the same size new filter(s). Throw away filter(s) may be replaced with cleanable filter(s) at this time. Cleanable filter(s) may be cleaned as described in the manufacturer instructions or as described below and then re-installed.

To replace the filter after cleaning you must do the following:

1. Slide filter into place.
2. Snap the door on or place the door in position and tighten the retaining screws, if provided.
3. Make sure the door is secure to the end of the filter rack.

TABLE 1: Recommended Filter Sizes

Cabinet Size	Top Return (in)	Top Return (cm)
A	(2) 14 x 20	(2) 35.6 x 50.8
B	(2) 14 x 20	(2) 35.6 x 50.8
C	(2) 14 x 20	(2) 35.6 x 50.8
D	(2) 14 x 20	(2) 35.6 x 50.8

NOTES:

1. Air velocity through throwaway type filters may not exceed 300 feet per minute. All velocities over this require the use of high velocity filters.

How to Clean your Filter

High-velocity filters may be cleaned with a vacuum cleaner or washed with a garden hose. Be sure to shake off excess water and allow filter to completely dry before re-installing the filter.

Blower Care

Even with good filters properly in place, blower wheels and motors will become dust laden after long months of operation. The entire blower assembly should be inspected annually. If the motor and wheel are heavily coated with dust, they can be brushed and cleaned with a vacuum cleaner. If the blower cannot be properly cleaned without removing it from the furnace, then this service must be performed by a qualified service agency.

⚠ WARNING

*Make sure you **DO NOT** move the clip on weight on the indoor fan wheel when cleaning the wheel. This weight is used to balance the wheel. Moving the weight will cause the fan wheel to vibrate.*

Motor Lubrication

The motors in these furnaces are permanently lubricated, and do not require periodic oiling.

SECTION II: SERVICE AND MAINTENANCE MANUAL

SAFETY SECTION

The following safety rules must be followed when servicing the furnace.

⚠ WARNING

ELECTRIC SHOCK, FIRE OR EXPLOSION HAZARD
Failure to follow safety warnings exactly could result in dangerous operation, serious injury, death or property damage.
Improper servicing could result in dangerous operation, serious injury, and death or property damage.

- Before servicing, disconnect all electrical power to the furnace.
- When servicing controls, label all wires prior to disconnecting. Reconnect wires correctly.
- Verify proper operation after servicing.

FURNACE MAINTENANCE SECTION

The furnace should be cleaned and adjusted by a certified dealer or qualified service contractor once a year or before the start of every heating season. The following items must be cleaned and serviced or replaced if there are signs of deterioration.

1. The vent terminal.
2. The furnace vent and combustion air intake passageways. Should it be necessary to service the vent/air intake system, the manufacturer recommends this service be conducted by a qualified service agency. The operation of this appliance requires the reassembly and resealing of the vent/air intake system.
3. The furnace burners, ignitor and flame sensor.
4. The condensate collection and disposal system. If any disassembly of components containing flue or vent gases is required, a qualified service agency must perform the service.

⚠ CAUTION

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

FURNACE CLEANING SECTION

NOTE: The cleaning operations listed below must be performed only by a qualified service agency.

Burner Removal/Cleaning

The main burners should be checked periodically for dirt accumulation. If cleaning is required, follow this procedure:

1. Turn off the electrical power to the unit.
2. Turn off the gas supply at the external manual shut-off valve and loosen the ground union joint.
3. Remove the upper access panel and remove the burner box cover.
4. Disconnect wires from flame sensor, rollout switch and HSI igniter. Remove igniter carefully, as it is easily broken.
5. Remove the screws that hold the burner box assembly to the vest panel and remove the assembly.
6. Remove burners from the burner assembly.
7. Burners may be cleaned by rinsing in hot water.
8. Reassemble the burners in the reverse order.

Cleaning the Heat Exchanger

Lower Heat Exchanger Access

1. Turn off the electrical power to the unit and turn off gas supply at the shutoff valve.
2. Remove the blower and burner compartment access doors. Disconnect the gas supply piping at the union to permit removal of the entire burner and gas control assembly from the vestibule panel. Use the wrench boss on the gas valve when removing or installing this piping. See Figure 4.
3. Unplug the igniter from the wire harness. Disconnect sensor and rollout switch wires located on top of the air shield. Identify and note the location of all leads for ease of reinstallation. Also disconnect the wires at the side rollout switches (upflow only) and the gas valve wires.
4. Remove the screws holding the burner assembly to the vestibule panel and remove this assembly. Handle the assembly carefully since it contains the igniter, which is fragile and easily broken. The lower portion of the heat exchanger will now be exposed. To clean the burner assembly, use a vacuum cleaner, or remove the burners as outlined in burner cleaning, and clean in hot water.

Upper Heat Exchanger Access

1. Perform steps 1-4 above.
2. Disconnect vent piping from the vent motor assembly at the top panel on the furnace (upflow only). On downflow models, the vent pipe is attached to the vent motor outlet. Remove this screw before proceeding.
3. Unplug the vent motor wires and ground wire. Remove the pressure switch tubing at the tap on the vent motor housing.

NOTE: It is recommended that replacement gaskets be available before removing vent motor.

4. Remove six mounting screws that hold the vent motor to the restrictor plate. The surface is gasketed and the gasket can be reused if it is carefully removed. It is necessary to remove this assembly to gain access to the restrictor plate mounting holes. The assembly may be vacuumed if cleaning is necessary. If any

vent assembly parts are damaged, replace with an entire new assembly (except for gaskets).

5. Remove the perimeter screws attaching the restrictor plate assembly to the vestibule panel. The surface is also gasketed. The assembly, including the flue baffle plate (rear) may be vacuumed or cleaned with hot water if necessary.
6. The upper portion of the heat exchanger is now accessible. With a long flexible wire brush, clean inside each tube at both the top and bottom. The brush must pass around the rear heat exchanger tubes. Vacuum loose scale and dirt from each tube.
7. Clean - Replace all components in reverse order. Re-gasket all surfaces which required a gasket. Reconnect all wiring. Reattach vent pipe and gas supply lines before restoring service to furnace. Restore electrical power, check gas supply piping for leaks, and then verify furnace operation.

⚠ CAUTION

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

SEQUENCE OF OPERATION

The following describes the sequence of operation of the furnace. Refer to Figure 1 for component location.

Continuous Blower

Cooling/heating thermostats have a fan switch that has an ON and AUTO position. In the ON position the thermostat circuit is completed between terminals R and G. The motor will operate on the speed tap selected on the Continuous Fan speed Jumper on the control board (HI COOL, LO COOL, or HEAT pins).

Intermittent Blower - Cooling

Cooling/heating thermostats have a fan switch that has an ON and AUTO position. In the AUTO position the thermostat circuit is completed between terminals R and G when there is a call for cooling. The motor will operate on the speed tap wire that is connected to the HI COOL terminal on the control board. The fan off setting is fixed at 60 seconds for SEER enhancement.

Heating Cycle

When the thermostat switch is set on HEAT and the fan is set on AUTO, and there is a call for heat, a circuit is completed between terminals R and W of the thermostat. When the proper amount of combustion air is being provided, the pressure switch will close, the ignition control provides a 17-second warm-up period, the gas valve then opens, the gas starts to flow, ignition occurs and the flame sensor begins its sensing function. The blower motor will energize 30 seconds after the gas valve opens, if a flame is detected. Normal furnace operation will continue until the thermostat circuit between R and W is opened, which causes the ignition system and gas valve to de-energize and the burner flames to be extinguished. The vent motor will operate for an additional 15 seconds and the blower motor will operate for the amount of time set by the fan-off delay jumper located on the control board. See Figure 6. The heating cycle is complete, and ready for the start of the next heating cycle.

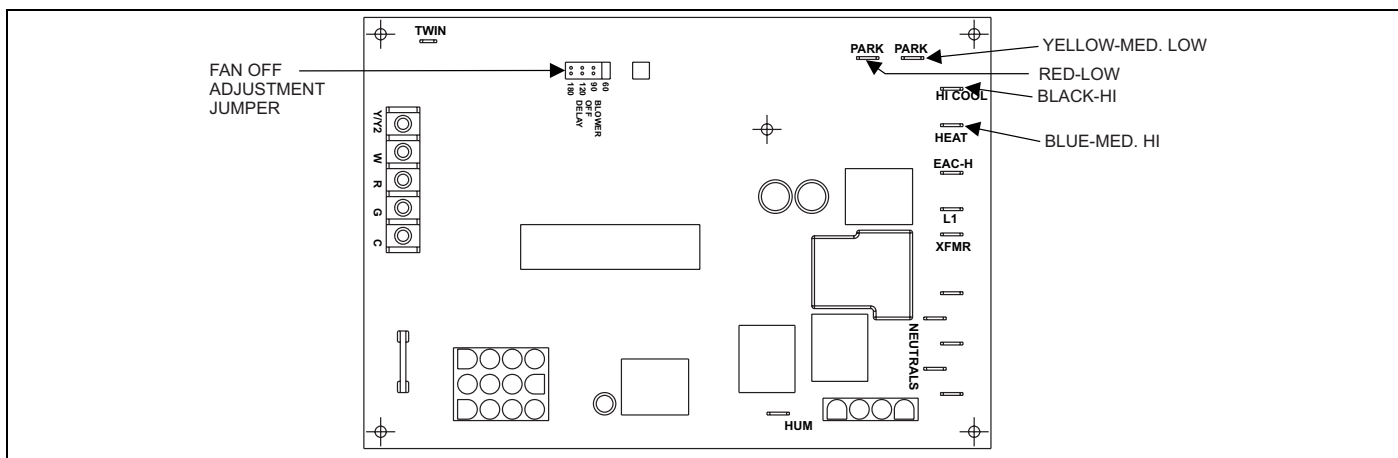


FIGURE 6: Furnace Control Board

If the flame is not detected within 7 seconds of the gas valve opening, the gas valve is shut off and a retry operation begins. If the flame is lost for 2 seconds during the 10-second stabilization period, the gas valve is shut off and a retry operation begins. During a retry operation, the vent motor starts a 15 second inter-purge and the ignitor warm-up time is extended to 27 seconds. If the flame is established for more than 10 seconds after ignition during a retry, the control will clear the ignition attempt (retry) counter. If three retries occur during a call for heat, the furnace will shut down for one hour. If at the end of the one hour shut down there is a call for heat, the furnace will initiate a normal start cycle. If the problem has not been corrected the furnace will again lockout after three retries.

A momentary loss of gas supply, flame blowout, or a faulty flame probe circuit will result in a disruption in the flame and be sensed within 1.0 seconds. The gas valve will de-energize and the control will begin a recycle operation. A normal ignition sequence will begin after a 15 second inter-purge. If during the five recycles the gas supply does not return, or the fault condition is not corrected the ignition control will lock-out for 60 minutes.

During burner operation, a momentary loss of power for 50 milliseconds or longer will de-energize the gas valve. When the power is restored, the gas valve will remain de-energized and the ignition sequence will immediately restart.

Hot Surface Ignition System

WARNING

HOT SURFACE IGNITION SYSTEM

Do not attempt to light this furnace by hand (with a match or any other means). There may be a potential shock hazard from the components of the hot surface ignition system. The furnace can only be lit automatically by its hot surface ignition system.

TROUBLESHOOTING

The following visual checks should be made before troubleshooting:

1. Check to see that the power to the furnace and the ignition control module is ON.
2. The manual shut-off valves in the gas line to the furnace must be open.
3. Make sure all wiring connections are secure.
4. Review the sequence of operation. Start the system by setting the thermostat above the room temperature. Observe the system's response. Then use the troubleshooting section in this manual to check the system's operation.

WARNING

Never bypass any safety control to allow furnace operation. To do so will allow furnace to operate under potentially hazardous conditions.

Do not try to repair controls. Replace defective controls with UPG Source 1 Parts.

Never adjust pressure switch to allow furnace operation.

FURNACE CONTROL DIAGNOSTICS

The furnace has built-in, self-diagnostic capability. If a system problem occurs, a blinking LED shows a fault code. The LED can flash red, green or amber to indicate various conditions. It is located behind a clear view port in the blower compartment door.

The control continuously monitors its own operation and the operation of the system. If a failure occurs, the LED will indicate the failure code. If the failure is internal to the control, the light will stay on continuously. In this case, the entire control should be replaced, as the control is not field repairable.

Flash sequence codes 1 through 10 are as follows: LED will turn "on" for 1/4 second and "off" for 1/4 second. This pattern will be repeated the number of times equal to the code. For example, six "on" flashes equals a number 6 fault code. All flash code sequences are broken by a 2 second "off" period.

SLOW GREEN FLASH: Normal operation.

SLOW AMBER FLASH: Normal operation with call for heat.

RAPID RED FLASH: Twinning error, incorrect 24V phasing. Check twinning wiring.

RAPID AMBER FLASH: Flame sense current is below 1.5 microamps. Check and clean flame sensor. Check for proper gas flow.

4 AMBER FLASHES: The control board is receiving a "Y" signal from the thermostat without a "G" signal, indicating improper thermostat wiring.

1 RED FLASH: This indicates that flame was sensed when there was not a call for heat. With this fault code the control will turn on both the inducer motor and supply air blower. A gas valve that leaks through or is slow closing would typically cause this fault.

2 RED FLASHES: This indicates that the normally open pressure switch contacts are stuck in the closed position. The control confirms these contacts are open at the beginning of each heat cycle. This would indicate a faulty pressure switch or miswiring.

3 RED FLASHES: This indicates the normally open pressure switch contact did not close after the inducer was energized. This could be caused by a number of problems: faulty inducer, blocked vent pipe, broken pressure switch hose or faulty pressure switch.

4 RED FLASHES: This indicates that a primary or auxiliary limit switch has opened its normally closed contacts. With this fault code the control will operate the supply air blower and inducer. This condition may be caused by: dirty filter, improperly sized duct system, incorrect blower speed setting, incorrect firing rate or faulty blower motor.

5 RED FLASHES: This fault is indicated if the normally closed contacts in the rollout switch opens. The rollout control is manually reset. If it has opened, check for proper combustion air, proper inducer operation, and primary heat exchanger failure or burner problem. Be sure to reset the switch after correcting the failure condition.

6 RED FLASHES: This indicates that after the unit was operating, the pressure switch opened 4 times during the call for heat. If the main blower is in a "Delay on" mode it will complete it, and any subsequent delay off period. The furnace will lock out for one hour and then restart.

7 RED FLASHES: This fault code indicates that the flame could not be established. This no-light condition occurred 3 times (2 retries) during the call for heat before locking out. Low gas pressure, faulty gas valve, faulty hot surface ignitor or burner problem may cause this. The furnace will lock out for one hour and then restart.

8 RED FLASHES: This fault is indicated if the flame is lost 5 times (4 recycles) during the heating cycle. This could be caused by low gas pressure or faulty gas valve. The furnace will lock out for one hour and then restart.

9 RED FLASHES: Indicates reversed line voltage polarity or grounding problem. Both heating and cooling operations will be affected. Check polarity at furnace and branch. Check furnace grounding. Check that flame probe is not shorted to chassis.

10 RED FLASHES: Gas valve energized with no call for heat. Check gas valve and gas valve wiring.

11 RED FLASHES: This indicates that a primary or auxiliary limit switch has opened its normally-closed contacts and has remained open for more than five minutes. This condition is usually caused by a failed blower motor or blower wheel.

12 RED FLASHES: This code indicates an open igniter circuit, which could be caused by a disconnected or loose wire or by a cracked or broken igniter.

STEADY ON RED: Control failure. Replace control board.

60-MINUTE AUTOMATIC RESET FROM LOCKOUT: This control includes a "watchdog" type circuit that will reset from a lockout condition after 60 minutes. Operational faults 6,7,8 will be reset. This provides protection to an unoccupied structure if a temporary condition exists causing a furnace malfunction. An example would be a low incoming gas supply pressure preventing unit operation. When the gas pressure is restored, at some point the "watchdog" would restart the unit and provide heat for the house.

NOTE: If a flame is detected the control flashes the LED for 1/8 of a second and then enters a flame stabilization period.

IGNITION CONTROL	
Normal flame sense current is approximately	3.7 microamps DC (μ a)
Low flame signal warning starts at	1.5 microamps.
Low flame signal control lockout point is	0.1 microamps DC (μ a)

DIAGNOSTIC FAULT CODE STORAGE AND RETRIEVAL

The control in this furnace is equipped with memory that will store up to five error codes to allow a service technician to diagnose problems more easily. This memory will be retained even if power to the furnace is lost. **This feature should only be used by a qualified service technician.**

The control stores up to five separate error codes. If more than five error codes have occurred since the last reset, only the five most recent will be retained. The furnace control board has a button, labeled "LAST ERROR" that is used to retrieve error codes. This function will only work if there are no active thermostat signals. So any call for heating, cooling or continuous fan must be terminated before attempting to retrieve error codes.

To retrieve the error codes, push the LAST ERROR button. The LED on the control will then flash the error codes that are in memory, starting with the most recent. There will be a two-second pause between each flash code. After the error codes have all been displayed, the LED will resume the normal slow green flash after a five second pause. To repeat the series of error codes, push the button again.

If there are no error codes in memory, the LED will flash two green flashes. To clear the memory, push the LAST ERROR button and hold it for more than five seconds. The LED will flash three green flashes when the memory has been cleared, then will resume the normal slow green flash after a five-second pause.

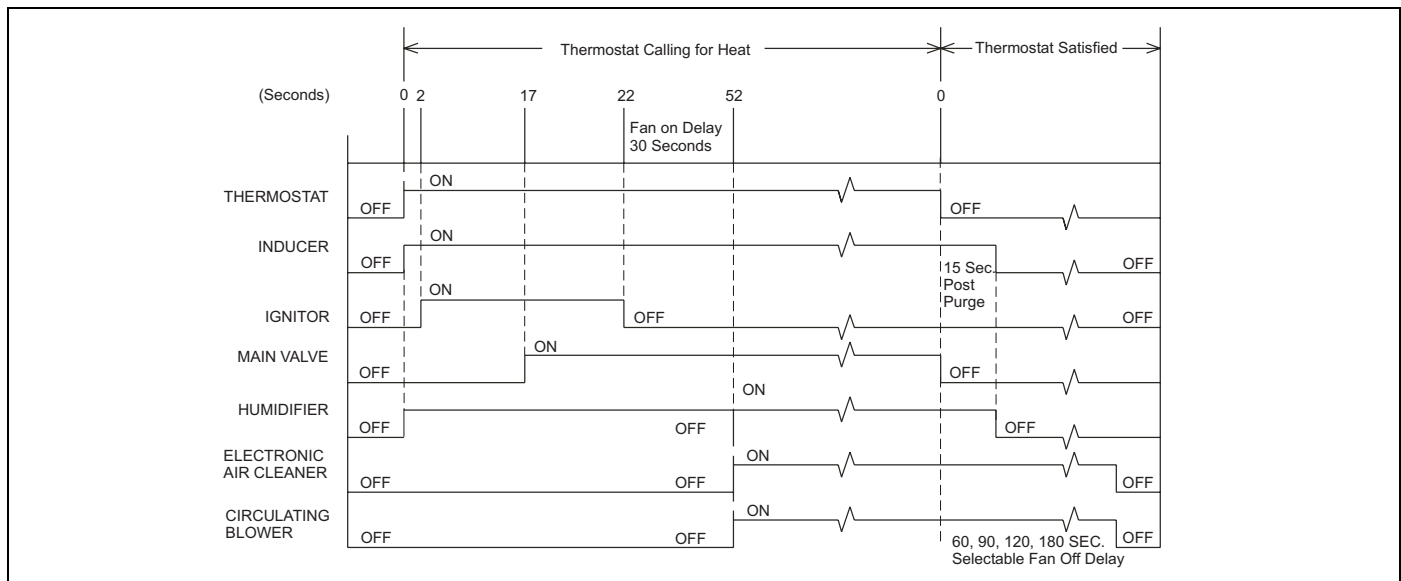
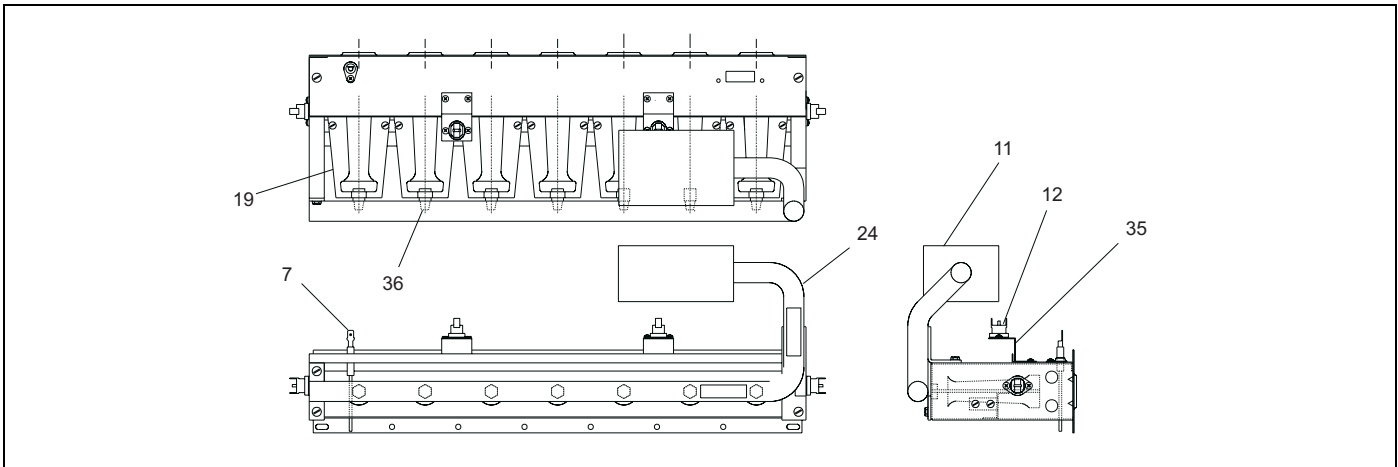
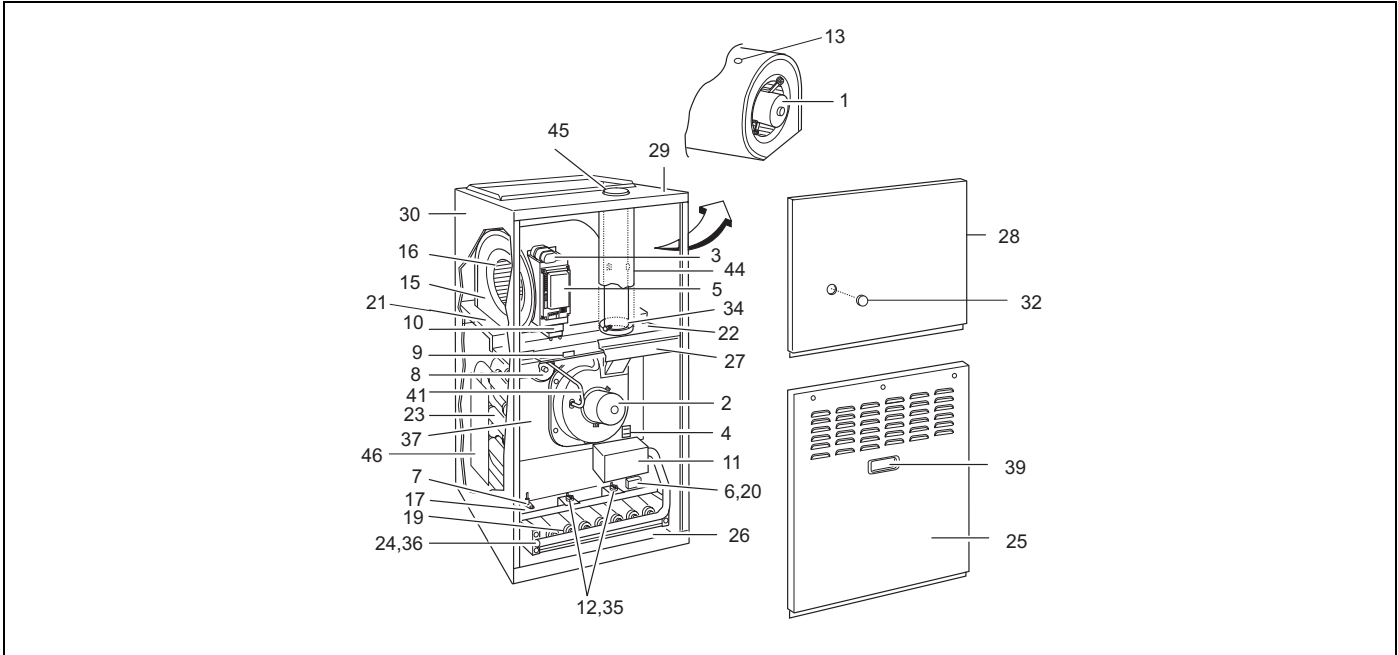


FIGURE 7: Furnace Control Event Schedule

SECTION III: REPLACEMENT PARTS LIST



ITEM	DESCRIPTION
MOTOR	
1	MOTOR,DIRECT DRIVE BLOWER
2	MOTOR,VENTOR ASS'Y
ELECTRICAL	
3	CAPACITOR (7.5MFD/370V)
4	CONTROL, HIGH LIMIT
5	CONTROL,FURNACE
6	IGNITOR
7	SENSOR, FLAME
8	SWITCH, AIR PRESSURE
9	SWITCH, DOOR
10	TRANSFORMER
11	VALVE, GAS
12	CONTROL, LIMIT (Blower)
13	CONTROL, AUXILARY LIMIT
14	FUSE
AIR MOVING	
15	HOUSING, BLOWER
15A	PANEL, FILLER WRAP
16	WHEEL, BLOWER
FABRICATED PARTS	
17	SHIELD, SECONDARY AIR
18	BAFFLE, FLUE
19	BURNER, MAIN GAS
20	BRACKET, IGNITOR
21	DECK, BLOWER (Rear)
22	DECK, FRONT
23	HEAT EXCHANGER ASS'Y (Primary)
24	MANIFOLD, GAS

ITEM	DESCRIPTION
25	PANEL, BURNER ACCESS
26	PANEL, BASE
27	BRACKET, DOOR
28	PANEL, BLOWER ACCESS
29	PANEL, TOP
30	WRAPPER, INSULATED
MISCELLANEOUS	
31	FILTER (2 Req'd) (.75 x 14 x 20)
31A	FILTER BRACKET
32	PLUG, WINDOW, CLEAR - .875"
33	
34	GASKET, VENT PIPE
35	BRACKET, ROLL-OUT SWITCH
36	ORIFICE, BURNER (Natural #45)
37	PLATE, RESTRICTOR
38	COLLAR, FLUE
39	HANDLE, DOOR
40	GASKET, RESTRICTOR PLATE
41	TUBING, SILICONE
42	WIRING DIAGRAM
43	WIRING HARNESS
44	HOUSING FLUE
45	VENT PIPE
46	RETAINER, INSULATION
47	MOTOR MOUNT
48	FERRULE
49	GROMMET
50	LO-NOX SCREEN
51	GASKET KIT, INDUCER

NOTE: *Not Shown

Major components and suggested stocking items are shown with shaded item number.



TABLE 2: Field Installed Accessories - Non Electrical

MODEL NO.	DESCRIPTION	USED WITH
1NP0347	PROPANE (LP) CONVERSION KIT	ALL MODELS
1PS0301	HIGH ALTITUDE PRESSURE SWITCH KIT (Does Not Include Orifices)	40, 60, 80 MBH
1PS0311		100, 115, 130 MBH
1CB0314	COMBUSTIBLE FLOOR BASE FOR DOWNFLOW UNITS	14-1/2" ("A") CABINETS
1CB0317		17-1/2" ("B") CABINETS
1CB0321		21" ("C") CABINETS
1CB0324		24-1/2" ("D") CABINETS

REPLACEMENT PART CONTACT INFORMATION

This is a generic parts list. To request a complete parts list, refer to the contact information below:

- Visit our website at www.source1parts.com for the following information:
 1. Search for a part or browse the catalog.
 2. Find a dealer or distributor.
 3. Customer Service contact information.
 - a. Click on the "Brand Links" button
 - b. Click on the "Customer Service" button
- You can contact us by mail. Just send a written request to:

**York International
Consumer Relations
5005 York Drive
Norman, OK 73069**

SECTION IV: WIRING DIAGRAM

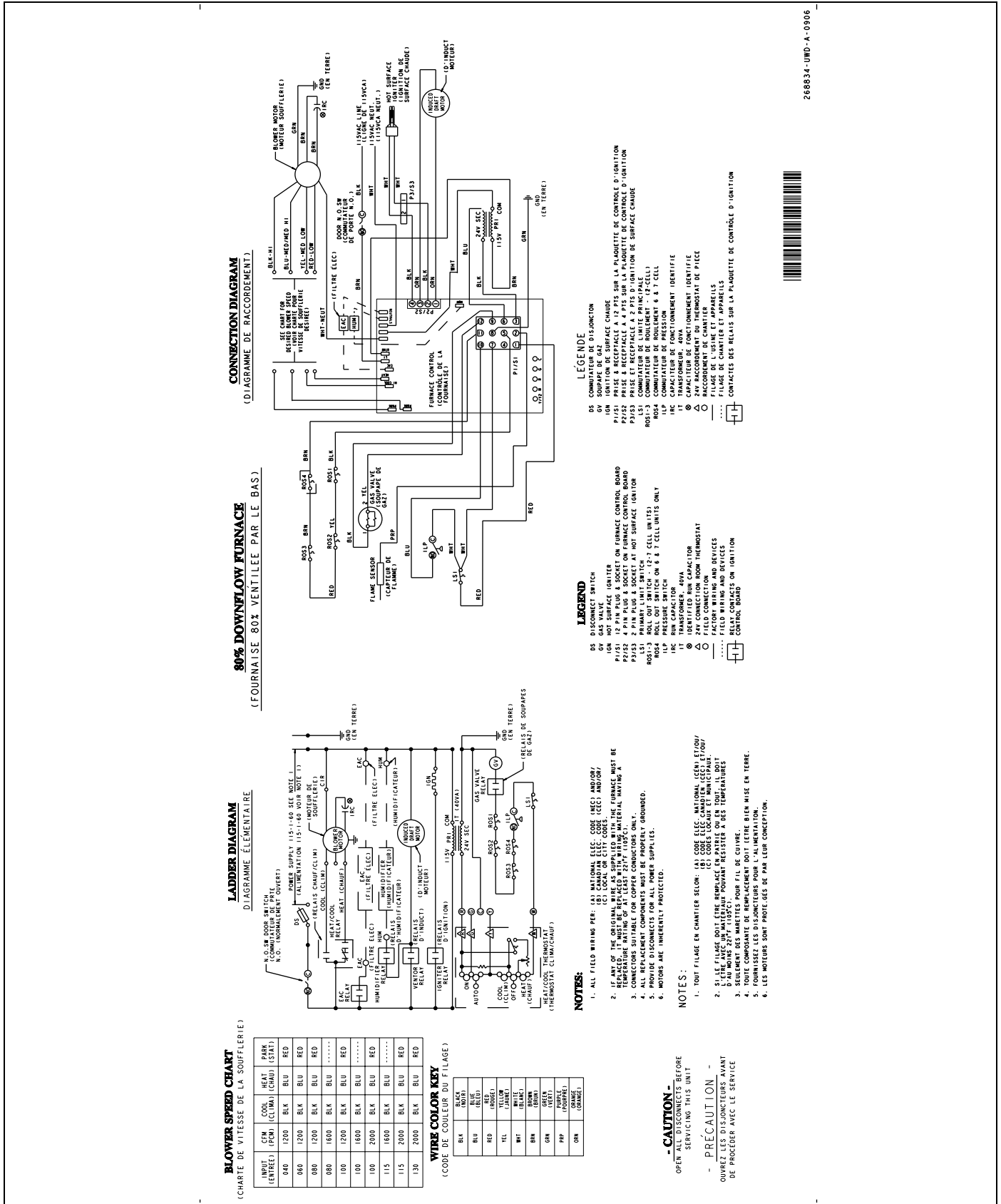


FIGURE 8: Wiring Diagram

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As your HVAC system Installer, we can provide you with services to meet all of your Heating and Air Conditioning needs after you have taken possession of your new home:

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- Extended Warranties
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Please call, or visit our website, with all of your HVAC questions or concerns.

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www.ChasRoberts.com

Limited Warranty

UPG warrants this product to be free from defects in factory workmanship and material under normal use and service and will, at its option, repair or replace any parts that prove to have such defects according to the terms outlined on this warranty. This warranty covers only the equipment described by the Product Model Number and Serial Number listed on the Warranty Registration Card.

UPG warrants the primary heat exchangers in the product to be free from defects in factory workmanship and material under normal use and service and will at its option, repair or furnish a replacement heat exchanger, either new or reconditioned, that meets the intended fit, use and function of the original heat exchanger for any heat exchanger furnished by UPG which proves to have such defects within the duration of warranty coverage. Alternatively, UPG may, at its option, extend a replacement allowance to be applied toward the purchase of a new furnace or packaged unit marketed by UPG. The exact amount of the allowance will be determined at the discretion of UPG, based upon current market conditions, but in no case shall this allowance exceed thirty (30) percent of the original consumer purchase price of the furnace, excluding such items as ductwork, wiring, piping and installation costs. UPG shall have no responsibility hereunder for installation, shipping, handling or other charges except as specifically provided herein.

For your benefit and protection, return the Warranty Registration Card to UPG promptly after installation. This will initiate the warranty period and allow us to contact you, should it become necessary. In the absence of a recorded Warranty Registration Card, the warranty period will begin upon product shipment from UPG.

This warranty extends only to the original consumer purchaser and is non-transferable. For this warranty to apply, the product must be installed according to UPG recommendations and specifications, and in accordance with all local, state, and national codes; and the product must not be removed from its place of original installation. The warranty period for repair or replacement parts provided hereunder shall not extend beyond the warranty period stated on this warranty.

FURNACE TYPE		HEAT EXCHANGER			PARTS
		Residential Applications		Non-Residential Applications	
		Original Owner	Subsequent Owner		
80%	GY8S*DH / GM8S*DH / LY8S*DH / LM8S*DH	20	N/A	10	5

UPG strongly recommends regular periodic preventative maintenance on this equipment. The person most familiar with the equipment in your HVAC system is a UPG dealer. The UPG dealer can ensure your maintenance program meets the conditions of the "UPG Warranty", maximize the efficiency of the equipment, and service your unit within the mandated guidelines with regard to unlawful discharge of refrigerants into the atmosphere.

This warranty applies only to products installed in the United States and Canada.

EXCLUSIONS

This warranty does not cover any:

- Shipping, labor, or material charges.
- Damages resulting from transportation, installation, or servicing.
- Damages resulting from accident, abuse, fire, flood, alteration, or acts of God (tampering, altering, defacing or removing the product serial number will serve to void this warranty).
- Damages resulting from use of the product in a corrosive atmosphere.
- Damages resulting from inadequacy or interruption of electrical service or fuel supply, improper voltage conditions, blown fuses, or other like damages.
- Cleaning or replacement of filters.
- Damages resulting from failure to properly and regularly clean air and/or water side of condenser and evaporator.
- Damages resulting from: (I) freezing of condenser water or condensate; (II) inadequate or interrupted water supply; (III) use of corrosive water; (IV) fouling or restriction of the water circuit by foreign material or like causes.
- Damages resulting from operation with inadequate supply of air or water.
- Damages resulting from use of components or accessories not approved by UPG (vent dampers, etc.).
- Increase in fuel or electric cost.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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For Owner's Information:

PRODUCT MODEL NO. _____ INSTALLATION DATE _____
 UNIT SERIAL NO. _____ INSTALLING DEALER _____