

# Owner's Manual

## America's Heat Model AHB-170P Wood Pellet Fuel Boiler-170,000 Btu



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## Introduction

Congratulations! You have purchased an AMERICAS HEAT® bio-mass fueled boiler, and we are proud to have you as one of our valued customers. The AMERICAS HEAT® boiler is UL and CUL approved by Underwriters Laboratories.

LMF Manufacturing LTD takes great pride in helping to preserve our environment by testing and reducing the emissions produced by our hydronic boiler. We continue to work diligently with both the USA and Canadian EPA to meet and exceed the expectations of the required standards. The AMERICAS HEAT® boiler has been tested and approved by the EPA for 40 CFR part 60, by EPA Method 28WHH, for EPA standard 2015 cribwood.

The AMERICAS HEAT® bio-mass fueled boiler is capable of burning all known varieties of wood pellets to date. Burning wood pellets as a fuel can be a feasible way of dealing with the high prices of more conventional fuels such as fuel oil, propane, natural gas, coal, and cord firewood. It makes so much sense to use a heat source that utilizes a resource that is readily available and cost effective.

LMF Manufacturing believes that there is no substitute for safety and quality. You can have confidence that your AMERICAS HEAT® boiler will serve your heating needs now, and for years to come. We ask that you follow our policy of “safety first” when installing and using your AMERICAS HEAT® boiler. We strongly advise you to read the owners manual before installing and operating your AMERICAS HEAT® boiler.

Your AMERICAS HEAT® boiler is a practical alternative heat source specifically designed for residential application. Proper care of this appliance should result in many years of service and comfort. An annual checkup by a competent service person is recommended.

LMF Manufacturing offers a warranty on all AMERICAS HEAT® boilers. The warranties include: 1 year after the date of purchase LMF will repair or replace as necessary any defective parts. LMF warrants all fabricated steel parts for a period of 5 years after the date of purchase. The vessel (water tank) is warranted for a period of 20 years from the date of purchase. Please review complete warranty information on page 22 and 23 of this manual.

AMERICAS HEAT® boiler comes with a Low Water Cut-off for safety reasons. (Now required by Underwriters Laboratories) U.L. Listing.

AMERICAS HEAT® boiler is universal in its design. Our 170,000 Btu input model comes ready to install a Domestic Hot Water coil. See your dealer or call LMF Manufacturing for information.

If you have any problems, questions or concerns, please contact your AMERICAS HEAT® dealer from whom you purchased your unit, or contact LMF Manufacturing at 570-769-7775.

## Rules for Safe Operation and Installation

**\*\*PLEASE READ ALL INFORMATION ON THIS PAGE BEFORE INSTALLATION\*\***

*This appliance must be installed in accordance with local codes.  
Installation is to be performed by a qualified installer, according to state and local codes.*

*Maintain adequate minimum clearances to combustible materials. (See Figure 2)*

*Install in an area with adequate air for combustion and ventilation; 60 cubic feet per minute minimum. Minimum clearances to combustibles for the AMERICAS HEAT® boiler is 24" from the top, open front, 30" on both sides and 18" from the rear. The AMERICAS HEAT® boiler is to be installed on noncombustible flooring. (See Figure 2)*

*Do not connect this unit to a chimney flue serving another appliance.*

*Disconnect all power to the unit before performing routine maintenance or service. Before servicing, allow the unit to cool.*

*Establish a regular service and maintenance schedule for efficiency and safe operation. Have a qualified service person perform tasks you are not familiar with.*

**DANGER:** *Risk of fire or explosion. Do not burn garbage, gasoline, drain oils, or other flammable liquids.*

**WARNING:** *Risk of Fire*

*Do not operate with flue draft exceeding .04" water column.*

*Do not use chemicals to start unit firing*

*Do not burn garbage, gasoline, drain oils, or other flammable liquids.*

*Do not operate with fuel loading or ash removal doors open.*

*Do not store fuel or other combustible material within marked installation clearances.*

*Inspect and clean flues and chimney regularly.*

**CAUTION:** *Children and adults should be alerted to the potential high surface temperatures of the burner door; Keep children away!*

*Do not place clothing or other flammable material on or near this appliance.*

*Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, well away from all combustible materials pending final disposal. If the ashes are disposed of by burial in soil or otherwise dispersed, they should be retained in the closed container unit until all clinkers have thoroughly cooled.*

**CAUTION:** *Make sure all fittings and controls are tight before introducing water to the boiler.*

*All units require a dump zone to distribute a low fire B.T.U.*

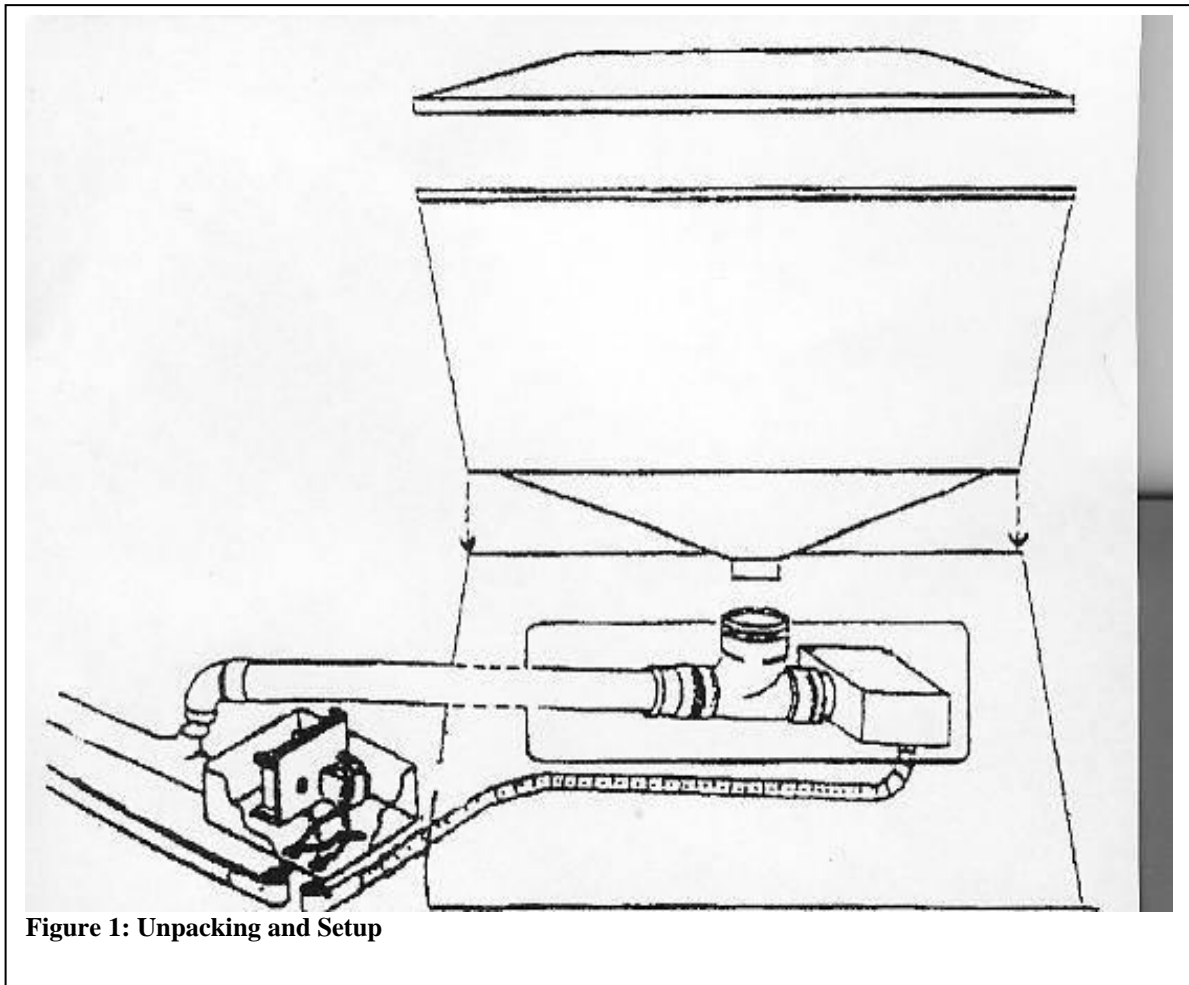
## Unpacking and Setup

After removal of shipping container, position storage bin on storage bin base at desired angle for installation.

Install auger assembly by sliding auger boot (with clamp) over bin outlet; align elbow on bin auger tube directly over boiler fuel inlet. Tighten auger boot clamp securely. It is advisable to install two sheet metal screws (not supplied) thru the clamp, auger boot, and into the hopper bin outlet to insure a permanent connection. Install fuel delivery coupler between bin auger tube and boiler fuel inlet. (See Figure 1)

Fasten flex conduit extending from storage bin auger assembly to boiler auger motor housing using conduit lock nut. (See Figure 1)

Connect one black auger motor lead to the two orange wires with wire nut connector. Connect the other black auger motor lead to the two white wires using wire nut connector. (See Figure 1)



# Installation

## **OXYGEN DIFFUSION BARRIER**

This barrier provides added protection against corrosion for the various ferrous components of a heating system.

Oxygen molecules will penetrate through the tubing wall and into the circulating water of a “closed” system. The amount of oxygen passing through the tubing wall and into the system is well known for all materials and increases with temperature. For a typical system with plastic tubing working at 100° F continuously, this oxygen diffusion leads to the generation of about 1 oz. corrosion products (Magnetite $Fe_3O_4$ ) per 100 ft. of pipe each year (10 times more for epdm rubber hoses). That is, if ferrous materials are present in the systems, such as steel pipes, steel pumps or steel boilers. If the quality of the water is good, general corrosion occurs. The resultant sludge consists of a fine grain metal oxide that normally is easily transported with the water. It mainly settles where the water flow rate is low. However, the amount of sludge builds up over the years and will lead to circulation disturbances and other corrosion-related problems. With more corrosive water qualities, problems due to pitting corrosion are likely to occur early.

An Oxygen barrier is a layer within the pipe construction which prevents oxygen from entering the system. By preventing oxygen from entering the system, corrosion of the pipe, radiators, boilers and associated fittings is massively reduced, thus prolonging the life of the system.

Other problems that will increase the corrosion of the system: Faulty expansion tank, Leak in pipes or expansion tank and new water introduced

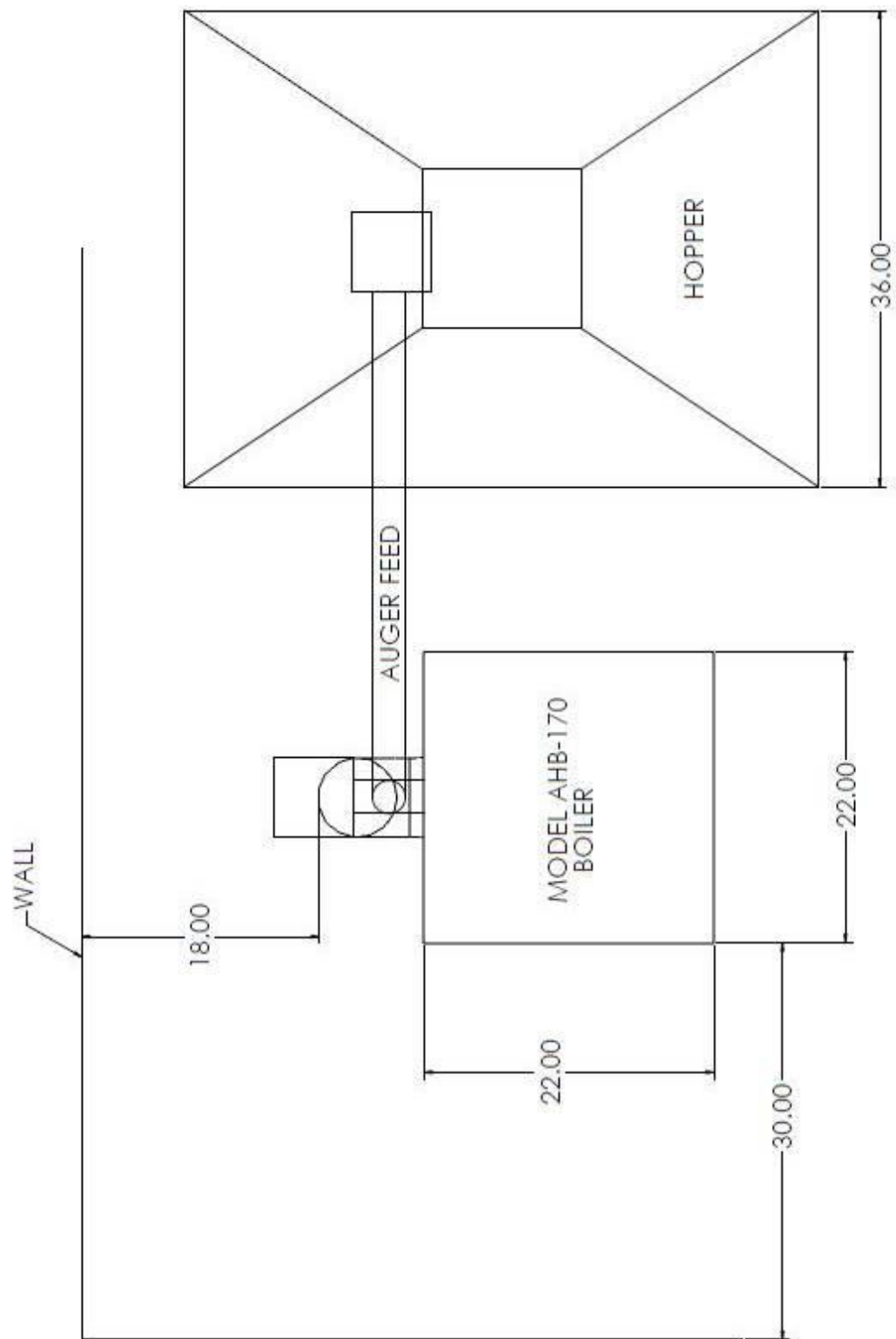
***WARNING: FAILURE TO INSTALL THE AMERICAS HEAT ® BOILER ACCORDING TO INSTRUCTIONS MAY VOID THE WARRANTY.***

Install the AMERICAS HEAT ® boiler in a room with adequate air for combustion and ventilation; 60 cubic feet per minute, minimum. Minimum clearances to combustibles for the AMERICAS HEAT® boiler is 24” from the top, open front, 30” on either side and 18” from the rear. The AMERICAS HEAT® boiler is to be installed on noncombustible flooring.

Connect the AMERICAS HEAT® boiler to an all fuel or Class “A” fuel chimney only, with 6” (minimum) metal flue pipe using sheet metal screws. Do not connect the AMERICAS HEAT® boiler to any chimney flue servicing any other heating appliance, as recommended by the National Fire Prevention Association. All chimney connections must meet the approval of the local building inspector and fire marshal and conform to all local, state and national codes.

The AMERICAS HEAT® boiler requires .04 inches water column draft (chimney draft), on low fire, to assure proper operation. Low fire mode is when the thermostat is satisfied and fuel is not being augured into the burner. When the chimney draft is too high, burner fire may go out. If the chimney draft is too low, smoke may back up in the boiler storage bin, causing a potential hazard.

Chimney draft can be tested by inserting a draft gauge in the flue pipe as close to boiler as possible. Check draft after boiler has been burning for a minimum of thirty minutes. The supplied automatic barometric damper should be installed, in the flue, to properly regulate .04 water column draft. (Install as close to boiler as possible.)



**Figure 2: Minimum Clearances**





# BAROMETRIC DRAFT CONTROLS

Model: 4"-7" RC



**WARNING:** Read the installation instructions carefully and completely before proceeding with the installation.

## ITEMS INCLUDED:

Barometric Draft Control

## WHEN SHIPPED WITH A COLLAR ADDITIONAL ITEMS:

Mounting straps, Collar, Mounting Hardware

## GENERAL INFORMATION

### BAROMETRIC DRAFT CONTROLS WITH OR WITHOUT COLLAR

The Field RC is furnished as standard equipment on many leading brands of oil fired heating equipment. It is calibrated to allow for easy adjustment to the furnace or boiler manufactures specifications. Designed for draft settings from .02" to .08" inches of W.C.

### CONTROL LOCATIONS

The control should be located as close as possible to a furnace or boiler and positioned as shown in Figure 1. It should be 18" from a stack switch and at least 18" from a combustible ceiling or wall. Do not locate in a room separated from the appliance. **NOTE:** When a sheet metal tee is used instead of the collar, the "B" dimension must not be less than indicated for proper operation. (See Figure 2 and Table 1)

### COLLAR INSTALLATION

#### WHEN SHIPPED WITH A COLLAR

To attach the collar to the flue, see Figure 2 and follow the instructions as follows:

1. Bend the two ears at the front corners of the collar outward. Bend 90°, 1/4" behind the single hole on the straps.
2. Insert clamping screw in ears on collar and bolt the remainder of the collar together.
3. Hold the collar against the side of the flue in the exact position it is to be installed (shown by dotted lines) and mark the outline of the collar on the flue.
4. Cut a hole in the flue about 1/2" inside of the outline.
5. Make a series of cuts about 1/2" apart from the edge of this hole to the outline marks.
6. Strap the collar to the flue pipe.
7. Bend the tabs formed by the series of cuts outward against the inside of the collar to make a tight joint.
8. Insert the draft control. (See Installation & Adjustment)

If flue pipe is made of material too heavy to bend out into collar, make the diameter of the opening within 1/2" of the inside diameter of the collar. Seal with high temperature RTV silicone or high temperature foil tape UL listed for the temperature of the application.

For proper settings and operation of the burner and the draft combustion testing instrumentation and draft gauges must be used.

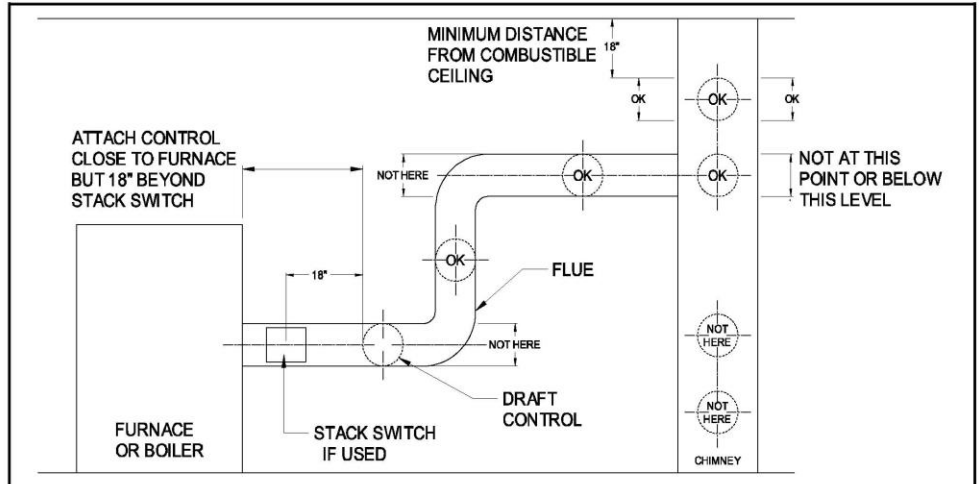


Figure 1

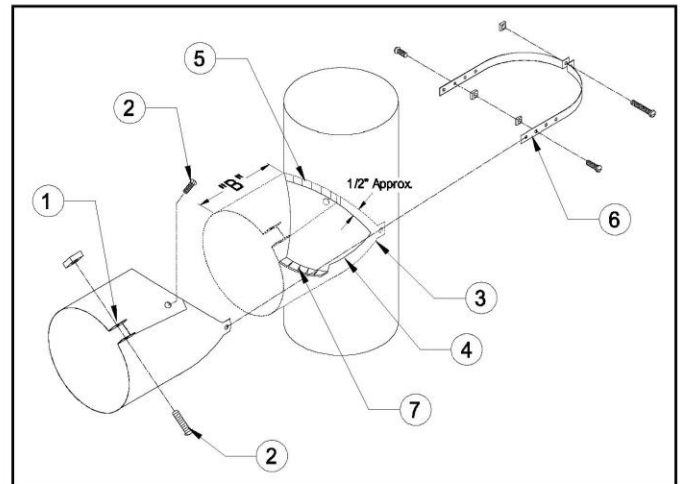


Figure 2



**FIELDCONTROLS**  
THE VENTING SOLUTIONS COMPANY

2630 Airport Road • Kinston, NC 28504  
Phone: 252-522-3031 • FAX: 252-522-0214  
www.fieldcontrols.com

**NOTE:** See sections on control locations and collar installation.

Insert the draft control into the collar. The front face of the control must be plumb. The pivot points must be level whether the control is on a horizontal, vertical, or sloping flue pipe. Use a spirit level, plumb and level accurately. Secure the control in the collar by tightening the clamping screws. If the collar is not supplied by Field, the control may be held in place by small bolts or sheet metal screws so located as not to interfere with the movement of the gate. When a sheet metal TEE is used instead of the collar, the B dimension must not be less than indicated for proper operation. The "B" dimension prevents the damper gate from obstructing the flue passage way. See Figure 2 and Table 1.

RC SIZE	B-DIMENSION
4	2 1/2 in.
5	2 1/2 in.
6	1 7/8 in.
7	2 5/8 in.

#### VERTICAL FLUES

The control is shipped for installation in a vertical flue. The adjustment weight should be in the right hand slot when you face the control. (See Figure 3)

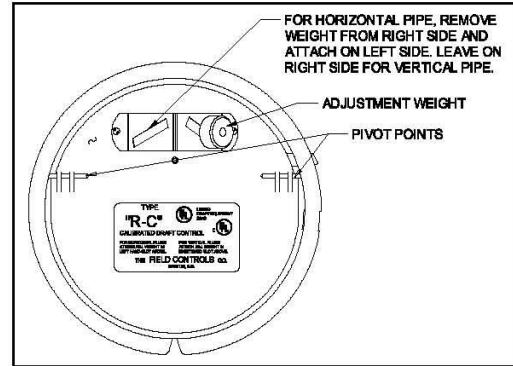
#### HORIZONTAL FLUES

For horizontal flues, remove the weight from the right hand slot and attach it to the left hand slot as shown in Figure 3.

#### ADJUSTING THE CONTROL

The burner must be running when the adjustment of the control is made. The use of a draft gauge is required to accurately set the over fire draft. Set the over fire draft according to the appliance manufactures installation instructions.

Set the control to maintain as low a draft as will give good combustion and meet the requirements for heat. Turn the adjustment weight counter-clockwise to loosen, then slide in slot to the proper position and tighten. The bracket is marked .02", .04", etc. (These are drafts in flue adjacent to control, NOT over-fire drafts)



**Figure 3**

#### OIL BURNER COMBUSTION AIR AND OVERFIRE DRAFT SETTING (INCHES OF W.C.)

After the burner has operated for at least 5 to 10 minutes, take draft readings over the fire. For a domestic oil burner, the over-fire draft should be approximately .02" to .03", although there are some makes of burners which require higher drafts. Follow the burner manufacturer installation instructions for proper settings. There must always be enough draft so that the burner does not puff back into the room at the moment it starts, and there should be no objectionable smoke. CO<sub>2</sub> and smoke readings must be taken to determine the proper adjustments.

#### ADDITIONAL APPLICATIONS (FOR RC SERIES DRAFT CONTROLS)

##### STOKERS

Adjustments must be made while the stoker is running, with a normal fuel bed depth and its fan adjusted to approximately the correct setting.

A draft gauge must be used to accurately set the overfire draft. Follow the manufacture installation instructions for proper settings. If no instructions are available.

For a domestic stoker, the draft should be set at -.04" OVER THE FIRE, with the STOKER ON. Have just enough draft so that at the moment the stoker starts, it does not gas or puff back into the room through cracks around the fire door (with the fire door closed). If there is objectionable smoke, increase draft slightly.

##### HAND FIRED PLANTS

Adjust the draft control when a good fire is burning. Close any check damper and open wide any internal damper.

Usually a draft of -.06" will be sufficient for cold weather, with reasonably quick pickup after a banked period. But if plant overheats, change to a lower draft setting. Raise the setting if there is not enough heat.

In mild weather when less heat is needed, or the fire is to be banked, close ash pit draft door partly or entirely. If desired, a check damper also can be used when banking the fire.



**Figure 3: Barometric Draft Controls**

## Thermostat Wiring

Connect thermostat wires to appropriately marked thermostat terminals to the aquastat relay, located on rear of boiler. The location of the thermostat has an important effect on the operation of your boiler. Be sure to follow the instructions included with your thermostat.

### ELECTRICAL WIRING

**WARNING:** For your personal safety turn off electrical power at service entrance before making any electrical connections.

All electrical work must conform to your local codes and ordinances or with the National Electrical Code. If you are not familiar with wiring and codes in general, have a license electrician do the job.

Connect electrical wiring to the appropriately marked 120v line terminals on aquastat relay (See Figure 4) from a 120v, 15 amp fused circuit. Ground wire is to be attached to the green grounding screw in aquastat relay.

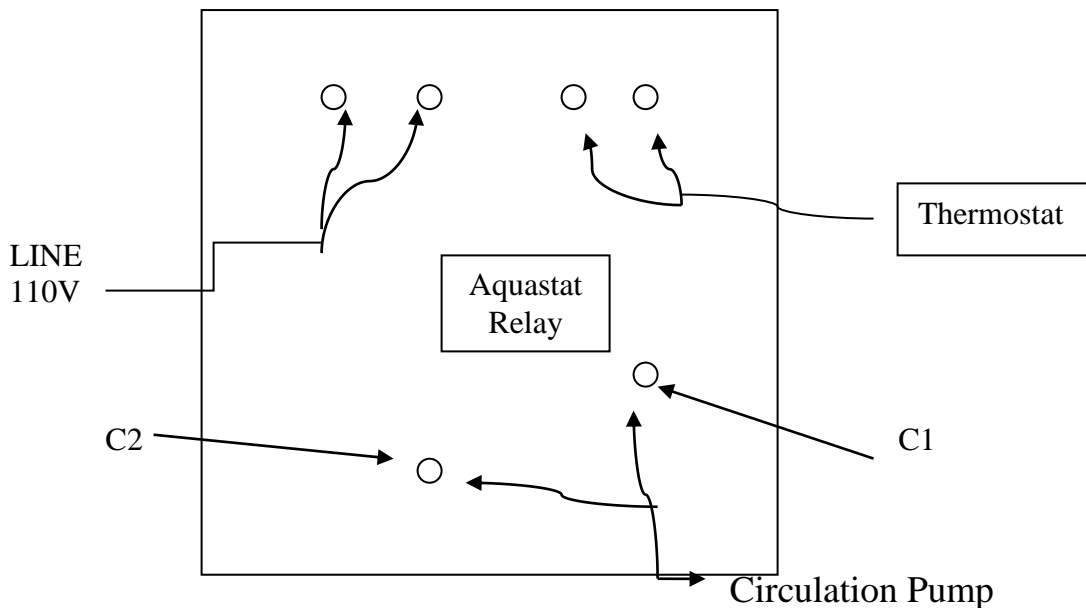


Figure 4: Electrical Wiring

# Fuel Requirements

## PELLET QUALITY

Your America's Heat Pellet Boiler is designed to burn APFI/FFI, "Premium" or "Standard Quality" wood pellets. Pellets that are soft, contain excessive amounts of loose sawdust, have been or are wet, produce clinkers and/or heavy ash will result in reduced performance and may actually cause the fire to go out.

## PFI PELLET STANDARDS

The Pellet Fuel Institute standards for residential quality pellets are:

Length	1.5 inches, maximum
Diameter	.235 to .350 inches (approx. 1/4" to 3/8")
Fines	.2# maximum per 40# bag
Salts	.005 % by weight, maximum
Ash Content:	
• Premium Quality	.75% by weight, maximum (.3# per 40# of pellets)
• Standard Quality	2.5% by weight, maximum (1# per 40# of pellets)

Note: Never use colored paper, cardboard, solvents, trash, or garbage in your pellet stove.

When burning wood pellets, LMF strongly recommends selecting a product that has been certified by a third testing organization such as: The Pellet Fuels Institute, ENplus, or CANplus. Good quality pellets should have the following:

- a) Dimensions: 1.5 inches of maximum length, between 0.23 – 0.285 inches diameter, using smaller pellets will pack into the burn pot and restrict air flow causing less efficient combustion, larger pellets may cause restrictions/jamming in the feed system.
- b) Density: Minimum 38 lbs/cu ft.
- c) Trace metals: Less than 100mg/kg
- d) Inorganic fines: Less than or equal to 1%
- e) Ash Content: Maximum of 2%
- f) Chlorides: Less than or equal to 300 ppm (parts per million) by weight
- g) Contains no demolition or construction waste

## **DO NOT BURN:**

1. Garbage
2. Lawn clippings or yard waste
3. Materials containing rubber, including tires
4. Materials containing plastic
5. Waste petroleum products, paints, paint thinners, or asphalt products
6. Asbestos or materials containing asbestos
7. Construction or demolition waste
8. Railroad ties or pressure treated lumber
9. Manure or animal remains
10. Salt water driftwood or other previously salt water saturated materials
11. Unseasoned wood
12. Paper products, cardboard, plywood, or particleboard. The prohibition against burning these materials does not prohibit the use of fire starters made from paper, cardboard, saw dust, wax, and similar substances for the purpose of starting a fire in an affected wood boiler. Gelled fire starter approved for use in biomass appliances may be used. Do not use chemicals or fluids to start the fire.

## **Burner Lighting**

**\*\*\*IMPORTANT:** On the initial lighting of the boiler, add only approx. 2-3 cups of wood pellets to the hopper. Continue with steps 2 thru 7. As the fuel source feeds into the hopper auger, add only small amounts of fuel until the fire is established and the feeding system is working properly. This procedure should be followed at the beginning of each heating season. This procedure should also be followed if the hopper is allowed to empty and the resulting sticky smoke film coats the hopper feed auger.

1. Turn on the electrical power to the boiler.
2. Turn the thermostat to highest setting.
3. Fill burner with pellets to the lower set of air holes located on the inside of the burner.
4. Liberally fill burner to the top with kindling wood and paper, light paper and close the door. NOTE: Gelled fire starter may be used as a substitute.
5. Depress switch to start position. This will activate the combustion blower only. Continue to depress switch to start position for three to five minutes or until auger motors are activated. (Fuel will not begin to auger until boiler has reached operating temperature and auger motors are activated.)
6. Turn switch to "ON" position.
7. Set wall thermostat to temperature desired.
8. It may be necessary to add kindling wood a couple of times before the fuel source is completely ignited.

**NOTE: If the burner has been used, all leftover ash and clinkers must be thoroughly removed from the burner before lighting instructions above.**

## Operation

After the burner has been lit and operating temperature has been reached, you need only to set the thermostat to the desired temperature. The thermostat will turn the boiler circulating pump on and off to sustain the desired temperature.

A typical boiler cycle would be:

1. Thermostat activates aquastat relay to turn circulating pump on. Aquastat also activates fuel feed system, feeding the burner with your chosen fuel source to maintain water temperature.
2. When the thermostat setting is satisfied, the thermostat will shut off the aquastat relay.
3. On low fire, the boiler timer will activate, auguring a specified amount of wood pellets or biomass products to sustain burner fire.

### **CLINKER BUILDUP**

The AMERICAS HEAT® boiler feeds the fuel into the bottom of the burner, therefore creating the most efficient fuel consumption. The residual ashes (clinkers) are then spilled over the top of the burner ring, falling into the ash pan below. This process, essentially, self cleans the burner chamber. Wood pellets leave from .5% to 4% ash residue.

**CAUTION:** If the boiler is installed in an unsuitable application, causing the boiler to run on high fire for extended amounts of time or if certain varieties of wood pellets (i.e. low grade pellets) are burned, large clinkers can form resulting in boiler inefficiency and possible fire outage.

The large clinkers must be loosened with a clinker tool (provided) and removed manually or the clinkers could render the boiler inoperable.

## Maintenance

### **DAILY**

1. Inspect burner. Clinkers will be pushed out of the top of the burner as fuel is augured into the burner. Clinkers that appear to be stuck to the side of the burner should be broken loose. Large clinkers, that may appear, must be manually pushed over the top of the burner with a clinker tool.
2. Check fuel level in holding bin for adequate supply.

### **WEEKLY**

Check contents of ash drawer and empty as needed. Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground well away from the combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally disbursed, they should be retained in the closed container until all clinkers have thoroughly cooled.




**MONTHLY** (See Figure 5)

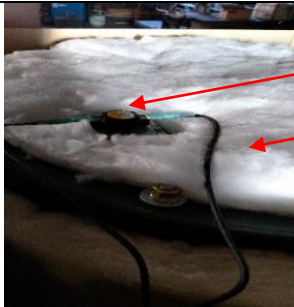

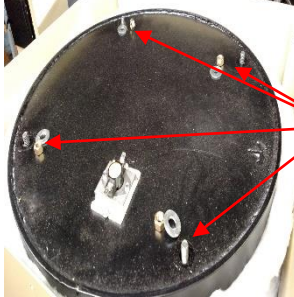


Check flue tubes for ash build-up. Clean as required.

**ANNUALLY** (See Figure 5)

1. Remove and inspect all chimney pipe connections; clean out ash build-up. Clean ash build-up from flue tubes.
2. Clean, oil, and inspect all blower and auger motors.

**BOILER MONTHLY /ANNUALLY CLEANING PROCEDURE**

<p>1. Make sure the fire in the burn pot is completely extinguished.</p>		
<p>2. After confirming the fire is out and the unit is cool to the touch. Place a cover over the burn pot opening so the ashes don't fall into the pot.</p>		<p>Heat Shield Cover over burn pot opening</p>
<p>3. Remove the heat shield from above the burn pot. If you do not remove the heat shield, the ash will fall onto the heat shield and not be removed from the unit. <b><i>Close the fire chamber door during cleaning to reduce ash exiting the unit.</i></b></p>		<p>Heat Shield removed – Heat Exchanger tubes will be viewable</p>
<p>4. Remove the 4 sheet metal screws from the boilers top cover. There is 1 screw on each side. A 5/16" socket, wrench, or nut driver will be required to back the screws out. After the screws are removed, lift the sheet metal top off the unit.</p>		<p>5/16" head sheet metal screws</p>

<p>5. After the sheet metal cover has been removed, the insulation and low limit switch will be visible. Remove the 2 black wires from the low limit switch, then lift the white insulation pad off the top of the boiler. The wires can be reconnected on either side during reassembly.</p>		<p>110F Low Limit Switch Insulation Pad</p>
<p>6. With the insulation pad removed, the four 3/8" studs will be visible. Using a 9/16" wrench or socket, remove the 4 brass nuts and washers that hold the lid in place. <b>Removing this cover will not allow access to the water jacket or water vessels.</b></p>		<p>3/8" studs with brass nuts and washers – 4</p>
<p>7. With the 9/16" brass nuts removed from the studs, the steel top can be lifted off to access the top of the boiler vessel and heat exchanger tubes.</p>		<p>4 Nuts and washers removed from studs.</p>
<p>8. When the boiler top is removed you will see the heat exchanger tubes. Remove all ash from inside this area. Use a metal scooper or an approved ash vacuum to remove the ashes from this area and discard them safely and properly</p>		<p>Exposed heat exchanger tubes. Example of a properly cleaned exhaust area.</p>
<p>9. Using the brush supplied with the boiler. Insert the brush, bristle end first, into each heat exchanger tube. Use an up and down motion to clear each tube of ash. Dislodged ash will fall below to the cover you placed on the burn pot.</p>		<p>Boiler cleaning brush inserted into heat exchanger tubes</p>





<p>10. Remove the flu pipe that is attached to your boiler. Clean all ash from the boilers flu exhaust exit. <b><u>Recommended: Clean the boilers entire exhaust system when cleaning the boiler.</u></b></p>	 <p>Example: Properly cleaned boiler exhaust flu.</p>
<p>11. Remove all ash from the cover you placed on the burn pot, then remove ash from ash pan collection area. Cleaning ash from your unit is now complete. Reassemble the boiler in the opposite manner it was unassembled.</p> <p>12. Before Reassembling: Check the underside of the lid and wipe off any deposits and be sure the rope gasket is in good condition. Replace gasket if needed.</p>	 <p>Underside of boiler top. Rope Gasket visible in this position Replace with 3/4" diameter UL approved fiberglass rope gasket and use UL approved gasket cement to apply the gasket if needed.</p>

Figure 5: Boiler Monthly/Annually Cleaning Procedure

## Summary of Settings & Operation

### HIGH FIRE

Adjustment of the opening on the combustion blower inlet controls fuel air mixture on high fire only. This opening should be adjusted during the high fire mode of operation to obtain an intense flame that consumes the fuel at the same rate it is augured in.

### LOW FIRE

Adjustment of the chimney draft controls the rate of burn on the low fire mode of operation. Chimney draft must remain below .04 inches W.C. and constant. The use of a second automatic barometric damper may be necessary on some installations to insure the precise draft control. A setting of .02 - .03 is ideal. In most installations, the counter weight on the automatic barometric dampers should be set on the minimum setting. Adjusting the on and off cycle time settings on the low fire timer controls the amount of fuel fed to the firepot during the low fire mode of operation. The initial setting of this low fire timer is "6 minutes OFF" and "2 minutes ON". After approximately 24 hours of operation, a layer of ashes and clinkers form in the combustion area. After this layer of ash and clinkers form, the off time can be increased to reduce the amount of fuel consumed during this "low fire" mode of operation. The low fire timer is located **inside** the electrical box where the On/Off toggle switch is located. (See Figure 6)

# Repair Parts

## Electrical

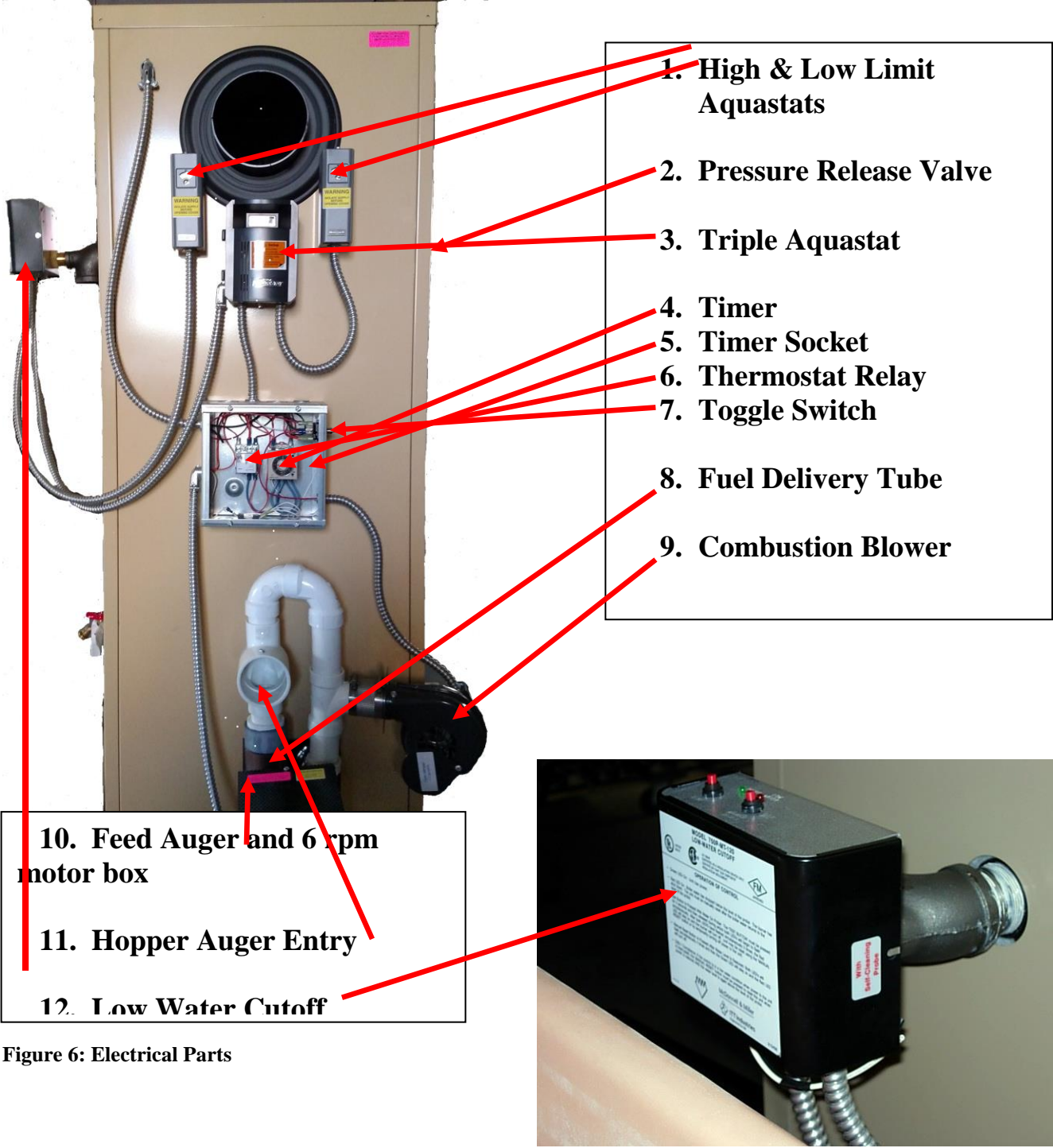
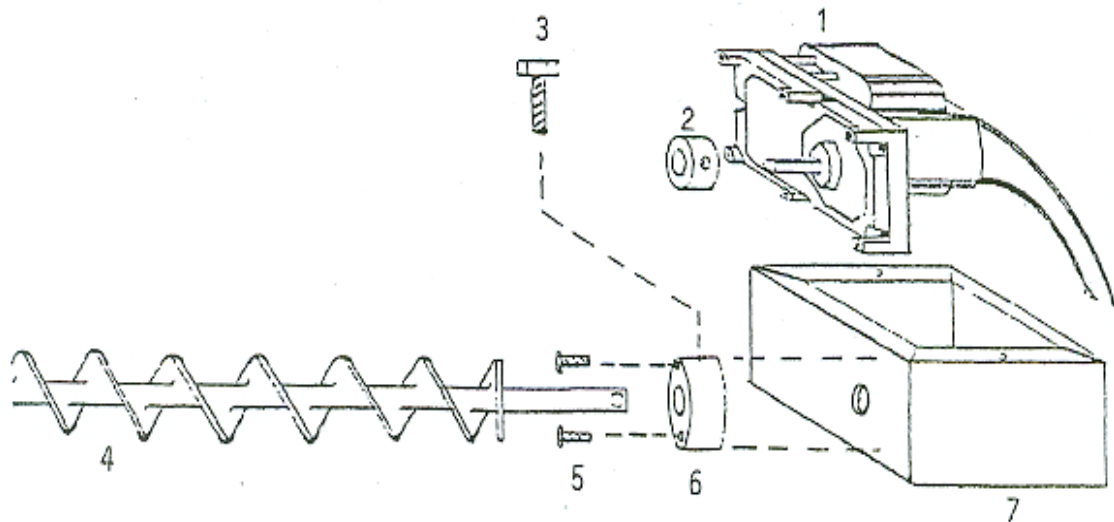


Figure 6: Electrical Parts

Key #	Part number	Part description
1	L6006A-1269	High & low Limit Aquastat
2	10-407-05	Pressure Relief Valve
3	L8124C-1102	Triple Aquastat
4	1620	Timer
5	1600	Timer Socket
6	1580	Thermostat Relay
7	1680	Toggle Switch
8	2160	Fuel Delivery Tube
9	1860	Combustion Blower
10	1900	Furnace Auger Motor (see page 12)
11	1880	2 RPM Hopper Auger Motor 100,000 btu Boiler (see page 13)
11	1901	3 RPM Hopper Auger Motor 170,000 BTU Boiler (See Page 13)
12	750P-MT-120	Low Water Cutoff

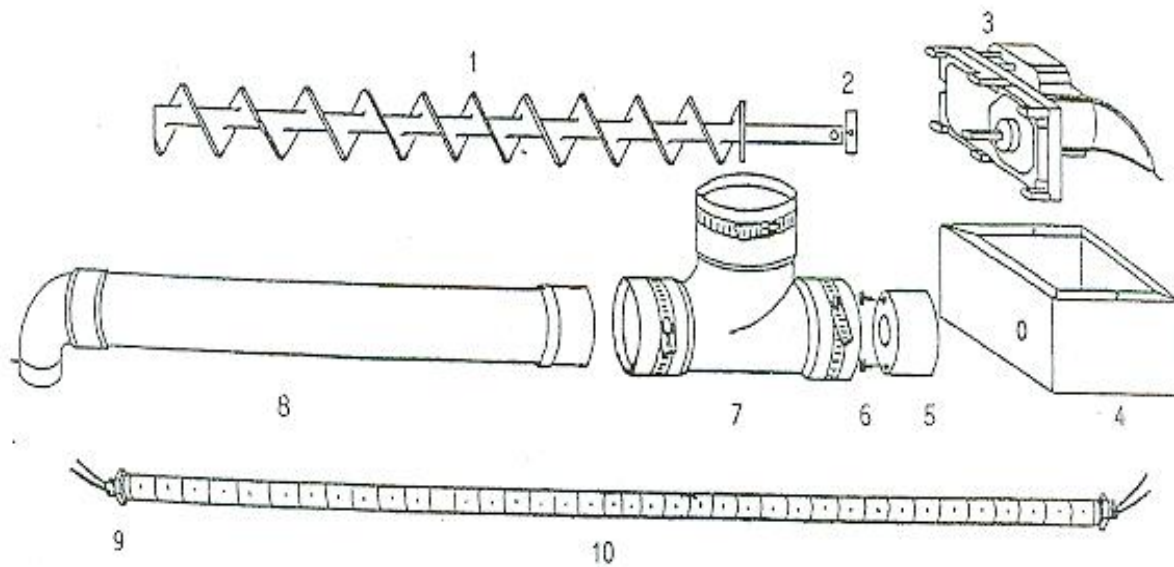
### Furnace Auger



KEY #	PART NUMBER	PART DESCRIPTION
1	1900	FURNACE AUGER MOTOR
2	3180	LOCK COLLAR
3	1980	1/4 x 1/2 SELF TAPPING BOLT
4	3200	BURNER AUGER
5	2070	SHEET METAL SCREW, #10 x 1 3/4
6	3000	AUGER SUPPORT
7	1410	6 x 6 BOX

Figure 7: Furnace Auger Parts

## Hopper Auger

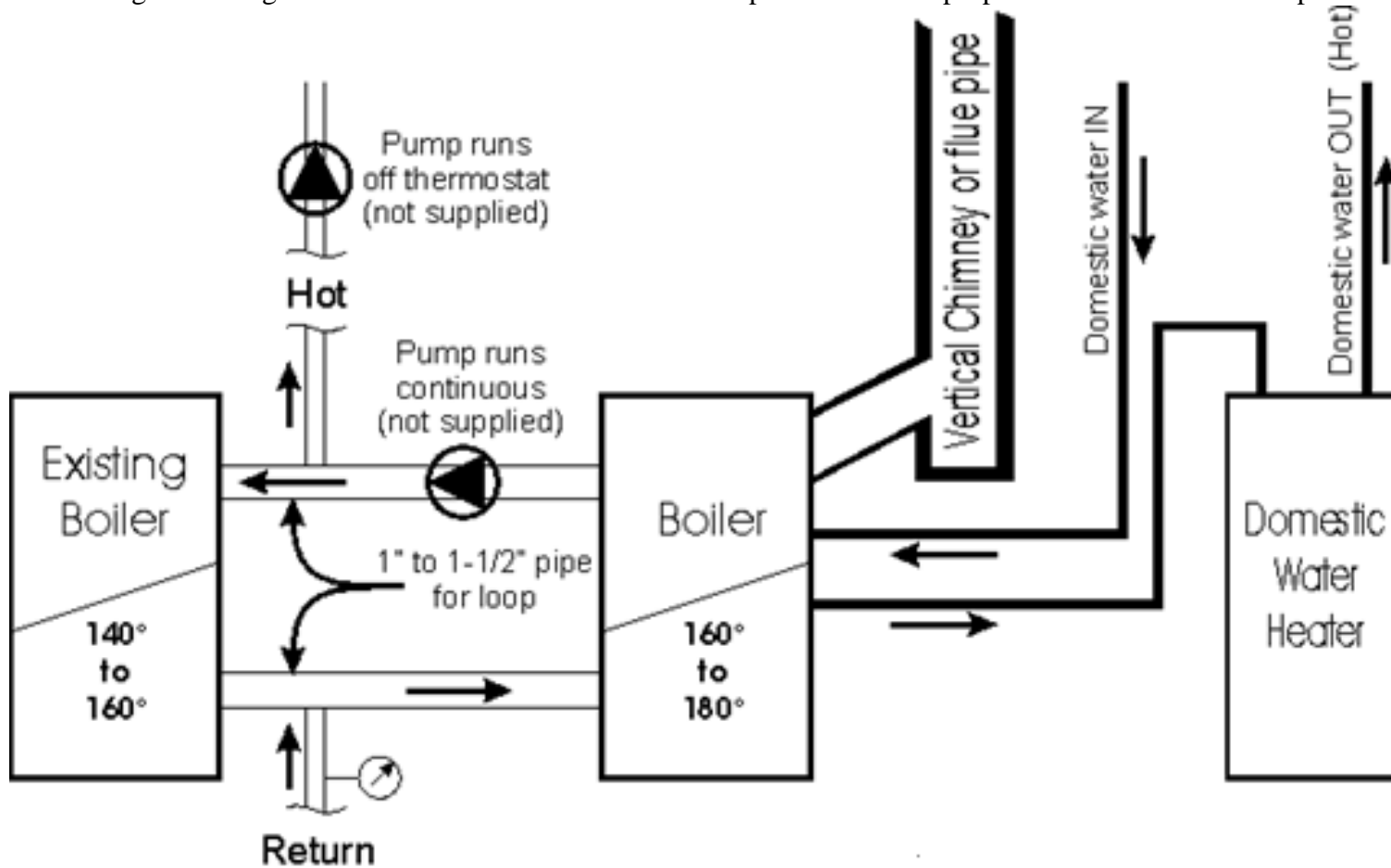


KEY #	PART NUMBER	PART DESCRIPTION
1	A-3220	HOPPER AUGER
2	3180	LOCK COLLAR
3	1880	HOPPER AUGER MOTOR
4	1410	6 x 6 BOX
5	A-3070	AUGER SUPPORT
6	2070	SHEET METAL SCREW, #10 x 1 3/4
7	7530	RUBBER TEE
8	A-7540	HOPPER AUGER TUBE
9	1480	CONDUIT FITTING
10	A-1550	FLEX CONDUIT

Figure 8: Hopper Auger Parts

## Basic Connection of Pellet Boiler to Existing Boiler

\*This is a general diagram. Consult with a Plumber or HVAC professional for proper connection and hook up\*



Basic idea of connecting a pellet boiler to existing boiler, with hot water option. Check with plumber for proper connection and pump sizes. You must also install shutoffs, unions, and drain valves for servicing.

Figure 9: Connection of Pellet Boiler to Existing Boiler

# Wiring Schematic for America's Heat AHB 100/170 Boiler

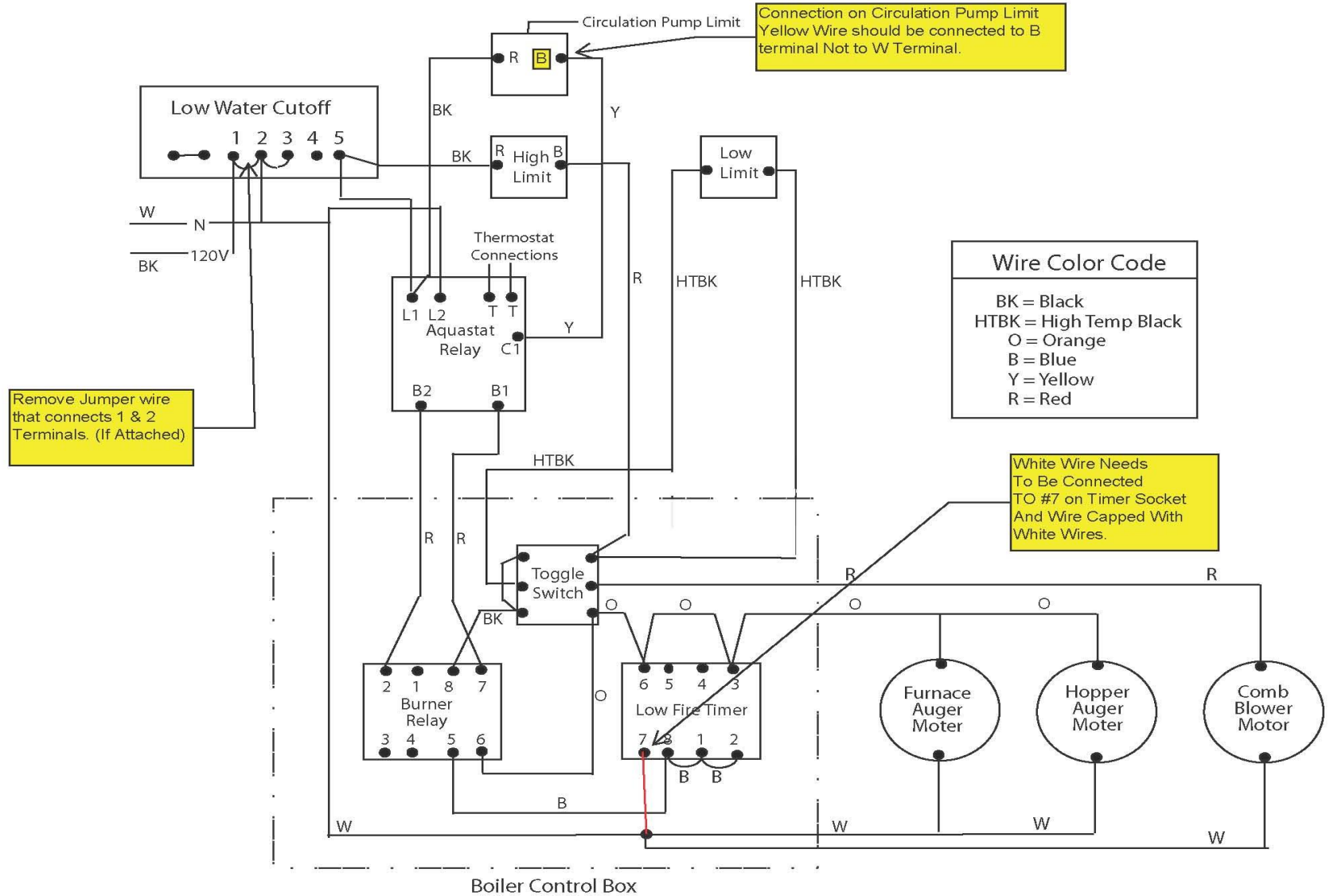


Figure 10: Wiring Schematic

# Warranty Limitations and Disclaimers of Liability

## LMF Manufacturing LTD - America's Heat Hydronic Heater (Boiler) Limited Warranty

America's Heat - LMF Manufacturing LTD honors a 5-year limited warranty on all steel fabricated parts, a 1-year warranty on all electrical components, and a 20 year manufacturer's limited warranty on the boilers pressurized water vessel. This warranty is non-transferable and will be honored to the original purchaser effective from the date of purchase (dated sales receipt confirming purchase from an authorized America's Heat dealer required).

The following items are not covered under this warranty – burn pot, heat shield, cleaning brush, paint, stickers, all gaskets and seals, fuel hopper, hopper lid, and stand.

This warranty is null and void if your America's Heat appliance has not been installed, operated, cleaned and maintained in strict accordance with all guidelines identified within this owner's manual. This warranty does not cover damage, component failure or reduced performance due to misuse, mishandling, neglect, accident, alteration or willful abuse.

The limited warranty registration card must be completely filled out, signed and returned to LMF Manufacturing LTD within 30 days of purchase in order for this warranty to be valid.

All claims under this limited warranty must be made through the dealer from which the furnace was purchased. Check with dealer in advance for any costs to you when arranging a warranty call. Mileage or service charges are not covered by this warranty. Service charges vary from dealer to dealer. If upon inspection the dealer indicates that a limited warranty claim is justified and all conditions of this limited warranty have been met, the manufacturer's responsibilities and liabilities shall be to repair or replace, at the manufacturer's option, the defective part(s). All costs associated with removal, shipment to and from the dealer or manufacturer, any losses incurred during shipment and reinstallation, and any other losses incurred due to the appliance being removed and reinstalled, shall be covered by the appliance owner.

## Conditions and Exclusions

- There is no warranty, written or implied, on the performance of this America's Heat Appliance. The manufacturer has no control over the installation, day-to-day operation, cleaning, maintenance or quality of fuel burned in this appliance. All above identified factors are key to the performance of the appliance and are not under the control of the manufacturer.
- This warranty does not cover operational-related problems and damage caused by various issues such as but not limited to
  1. Over firing (caused by excessive feed rate).
  2. Damage caused by burning any heating medium other than fuels approved in the owners manual.
  3. Environmental conditions that restrict free flow of exhaust gasses from exiting the exhaust system (issues such as, but not limited to, downdraft or back draft, negative air pressure within the home caused by other mechanical systems within the home such as furnaces, clothes dryers, etc., improper ventilation, nearby trees or structures that can inhibit the free exit of exhaust gasses).
- In order for this warranty to be valid, the appliance must be installed by a qualified installer.

- This warranty is null and void if:
  1. Appliance has been operated in an environment contaminated by Chlorine, fluorine or other damaging chemicals.
  2. Appliance has been subjected to submersion in water or prolonged exposure to dampness or high humidity conditions.
- This warranty does not cover damage, component failure or reduced performance due to misuse, mishandling, neglect, accident, improper installation, alteration or willful abuse.
- America's Heat and LMF Manufacturing LTD is free of liability for any damages caused by this heating appliance. Incidental or consequential damages are not covered by this warranty.
- This warranty is null and void if the appliance's serial number has been removed or if it is found that the serial number has been changed with that of another identical appliance.
- This warranty is not valid for appliances used for commercial use.
- This warranty is not valid if the appliance has not been purchased from an authorized America's Heat Dealer.
- There is no warranty on damage caused by corrosion.

Neither the manufacturer, nor the suppliers to the purchaser, accepts responsibility, legal or otherwise for the incidental or consequential damage to property or persons resulting from the use of this product. Any warranty implied by law, including but not limited to implied warranties of merchantability or fitness, shall be limited to one (1) year from the date of original purchase. Whether a claim is made against the manufacturer based on the breach of this warranty or any other type of warranty expressed or implied by law, manufacturer shall in no event be liable for any special, indirect, consequential or other damages of any nature whatsoever in excess of the original purchase price of this product. All warranties by manufacturer are set forth herein and no claim shall be made against manufacturer on any oral warranty or representation.

Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations of implied warranties, so the limitations or exclusions set forth in this limited warranty may not apply to you. This limited warranty gives you specific legal rights and you may have other rights, which vary from state to state.



## America's Heat Warranty Information & Buyer Registration

Please enter the requested information in order to have your warranty application processed and to qualify for customer and technical support.

Full Name of Buyer: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State or Province: \_\_\_\_\_

Zip Code: \_\_\_\_\_

Country: \_\_\_\_\_

Phone #: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Place of Purchase: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Date of Installation: \_\_\_\_\_

Unit Serial Number: \_\_\_\_\_

Dealer's Name, if applicable: \_\_\_\_\_

Please Return To:

LMF Manufacturing  
51 Koppers Lane  
Montgomery, PA 17752

Tel: 570-769-7775  
Fax: 570-7741  
www.americasheat.com  
lmf@americasheat.com