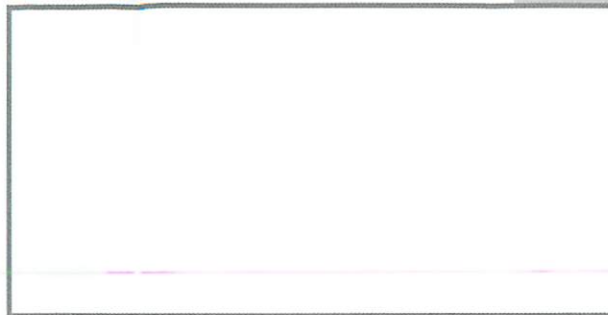


Many times problems with heating are blamed on the furnace itself. What must be remembered is that heat is the result of a system of which the furnace is only one element. Your Atwood Hydro Flame furnace is designed for years of trouble free operation but should problems develop, always check the following items before actually trouble shooting the furnace itself.

1. Gas Pressure
2. Voltage
3. Ducting
4. Return Air

For more information contact your dealer/distributor at:



Atwood's website also has information on a wide variety of products available from seven major product lines, water heaters, furnaces, ranges and cooktops, windows and doors, glass products, seating systems and chassis components including jacks, couplers, hitch balls, 5th wheel systems and more. To learn more, visit Atwood online, at:

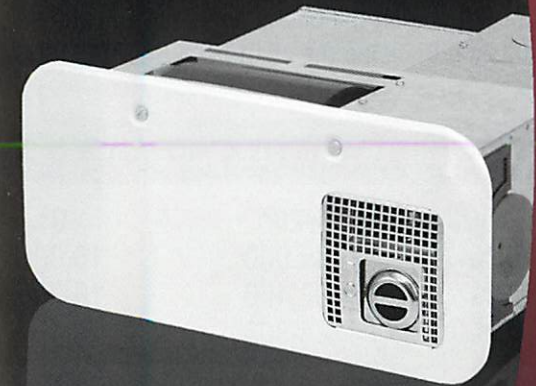
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Understanding an Atwood Furnace System



 **Atwood**

1. GAS PRESSURE

Gas Pressure should be set at a minimum of 11" of Water Column with a minimum of 50% and ideally 100% of the gas appliances operating smoothly.

It is ironic that furnaces use LP Gas to generate heat when it gets cold outside yet cold itself is an inhibitor of LP gas. To put it another way, the BTU capacity of LP per volume decreases as the outside temperature get colder. Therefore, based on how full the LP tanks are, the temperature outside, and the size of the furnace (number of BTU's), there may not be enough gas to sustain ignition.

For example, let's say that a 40,000 BTU furnace will not ignite. While the first impulse would be that the burner or valve is bad, we check and discover that the 65lb LP bottle on the unit is only 40% full and it is 0°F outside. By using the chart below we find that

the vaporization capacity of the tank in these conditions is only 38,500 BTU's and because of this the furnace will not ignite.

By using a commercially available electric blanket tank heater, you can raise the temperature of the bottles and increase the BTU capacity. This in turn would allow the furnace to operate properly. So keep in mind that a furnace problem is not always a component problem.

2. VOLTAGE

Voltage to the furnace should be between 10.5 and 13.5 volts DC during operation. Voltage below 10.5 and above 13.5 will adversely affect the operation of the furnace. Test with both the lights ON and OFF. In addition check operation with the battery, converter, or generator if applicable. Do not use a test light, as it does not provide enough useful information.

3. DUCTING

Due to the various BTU outputs, furnaces require a minimum number of square inches of heating ducts (excluding closeable outlets) to operate correctly. This minimum number of ducts is called out in the installation instruction. Check for proper duct connections at the furnace and heat registers, reconnect if necessary. Look for collapsed ducts or ducts with holes in them; if any problems are found, repair. Heat ducts must also be clean and clear of obstructions. Many times, people are unaware that ducting is running through a storage compartment, and when articles are stored in the compartment, they crush the duct. Fortunately, soft ducting is usually easy to correct.

4. RETURN AIR

The return air passage should meet the minimum square inches as specified in the installation instruction of the particular model furnace. This air passage should be clean and clear of obstructions. Do not put air filters in this passageway. Blocking this area will substantially decrease the return air causing: less air delivery to the registers, short cycling of the furnace, limiting of the furnace. Do not store combustibles in this compartment.

Safety and Maintenance checks should be performed on a furnace every year, but only by a qualified technician. Make sure the technician checks the following: Air Wheel, Burner, Combustion Chamber, Control Compartment, Ducting, Gas Pressure, Gas Supply, Gaskets, Motor, Return Air, Venting, Voltage Wire Connections.

20 LB. (30 LB. BOTTLE MULTIPLY X 1.40)

% FULL	+20°	0°	-5°	-10°	-15°
60%	36,000	18,000	12,750	8,500	4,250
50%	32,400	16,200	12,150	8,100	4,050
40%	28,800	14,400	11,400	7,600	3,800
30%	25,200	12,600	10,450	7,300	3,150
20%	21,600	10,800	8,100	5,400	2,700
10%	16,200	8,100	6,075	4,050	2,025

19 GALLON WATER CAPACITY ASME LP GAS TANK BTU AVAILABLE AT

% FULL	+20°	0°	-5°	-10°	-15°
60%	95,600	47,800	36,000	23,900	12,100
50%	86,000	43,000	32,250	21,500	11,750
40%	77,000	38,500	29,250	19,250	9,625
30%	68,000	34,000	25,500	17,000	8,500
20%	58,000	29,000	21,750	14,500	7,250
10%	43,200	21,600	16,200	10,800	5,400

* Source: RVIA Troubleshooting Clinic Handbook