

hydro flame TM Furnaces  
by Atwood@  
LIGHTING INSTRUCTIONS  
ALL FURNACES  
7900-11  
8012-11  
8500-IV  
8900-111

2 Stage Furnaces

THIS INFORMATION MUST BE ATTACHED  
TO THE APPLIANCE AT ALL TIMES  
SEE INSTALLATION AND OWNERS' MANUAL  
FOR COMPLETE INSTRUCTIONS AND  
MAINTENANCE ITEMS FOR YOUR MODEL UNIT !

9/7/05 LITERATURE NUMBER MPD 32025

## FOR YOUR SAFETY READ

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

### BEFORE OPERATING

- A. 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.
- B. **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.

#### WHAT TO DO IF YOU SMELL GAS

- Evacuate all persons from the vehicle.
- Shut off the gas supply at the gas container or source.
- **DO NOT** touch any electrical switch, or use any phone or radio in the vehicle.
- **DO NOT** start the vehicle's engine or electric generator.
- Contact the nearest gas supplier or qualified service technician for repairs.
- If you cannot reach a gas supplier or qualified Service Technician, contact the nearest fire department.
- **DO NOT** turn on gas supply until gas leak(s) has been repaired.

- C. Use only your hand to turn a gas control valve. Never use tools. If the valve will not turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in fire or explosion.
- D. Do not use the 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 underwater.

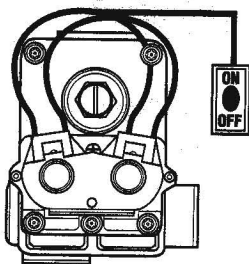
### OPERATING INSTRUCTIONS

1. **STOP!** Read the safety information above.
2. Set the thermostat to the lowest setting.
3. Turn off all electric power to the appliance.
4. This appliance is equipped with an ignition device which automatically lights the burner. **DO NOT** try to light the burner by hand.
5. Open the control access panel.
6. Turn off switch (circuit breaker or manual switch) to the OFF position.
7. Wait (5) minutes to clear out any gas. Then smell for gas, including near the floor.
8. If you smell gas, **STOP!** Follow **B** under **FOR YOUR SAFETY READ**. If you don't smell gas, go the the next step.
9. Turn the valve power switch to the ON position.
10. Close the access panel.
11. Turn all electric power to the appliance ON.
12. Set thermostat to desired setting.

- If the appliance will not operate, follow the instructions "To Turn Off Gas To Appliance" and call your Service Technician or gas supplier.

## TO TURN OFF GAS TO APPLIANCE

- Set the thermostat to lowest setting.
- Turn off all electric power to the appliance if service is to be performed.
- Open the access panel to turn off electrical switch. Models with no exterior access door have a switch located outside of the furnace on the left side.
- Close the control access panel.



## INSTALLATION INSTRUCTIONS

### ALL FURNACES - General Wiring Instructions

These furnaces are for indoor installation and must be installed in accordance with the manufacturer's instructions and local codes or, in the absence of local codes, the Recreational vehicles Standards ANSI A119.2 or CAN/CSA 22.4 RV.

### 8500-IV SERIES - Wiring Instructions

The connections are for low-voltage battery or direct current only. Do not connect to 120 or 240 volts AC. Use a NEC Class (1) supply and thermostat conductors. Use a thermostat suitable for 12 volt DC.

### 7900-IV & 8012 SERIES- Clearance to Combustibles

Top of casing = .0" Front = 0." Left Side = .0" \* = From screw heads  
Back of casing = .0" Bottom = 0." Right Side = .0"

Red wire (+) 12 VDC supply

Black wire (-) 12 VDC supply

White wire Thermostat

Any wiring replacement must be replace with equivalent type 105°C wire or better.

### 8500-IV SERIES- Clearance to Combustibles

Top of casing = .5" Front = 0." Left Side = .5" \* = From screw heads  
Back of casing = 1.0" Bottom = 0." Right Side = .5" or side plate

Duct 1/4" for first 3 feet. Thermal efficiency 76% (see rating plate for amperage). No air filter to be used. Unit must have 65 sq in. in return air opening. Static pressure 0.10 inch w.c. Motor is permanently lubricated.

### 85, 89, 1522, 2334 & 2540 DC UNITS - Wire Colors

Red wire (+) 12 VDC supply Green wire Ground 24 VAC thermostat

Yellow wire (-) 12 VDC supply (2) Blue wire

Any wiring replacement must be replace with equivalent type 105°C wire or better.

### 8900-III SERIES

The furnace installation (whether in recreation vehicle, alcove or closet, or on combustible flooring) must have provisions for ventilating air. The furnace is designed for use without air filters. The furnace must be installed in accordance with manufacturer's instructions, local codes or, in the absence of local codes, National Fuel Gas Code ANSI Z223.1 and the American National Standard for recreational vehicles ANSI A-119-2. For complete code information, refer to the installation manual.

### 8900-III & 2540 MODELS ONLY - Clearance to Combustibles

Top of casing = .5" Front = 0." Left Side = 1.0" \* = From screw heads  
Back of casing = .5" Bottom = 0." Right Side = 1.0" or side plate

Duct 1/4" for first 3 feet. Thermal efficiency 76% (see rating plate for amperage). No air filter to be used. Unit must have 65 sq in. in return air opening. Static pressure 0.10 inch w.c. Motor is permanently lubricated.

### 89 AC & 89 AC with no door UNITS - Wire Colors

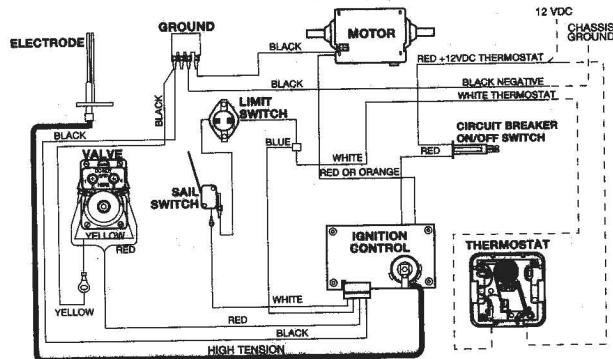
black wire 120 Volts supply (2) Blue wire 24 VAC Thermostat

white wire 120 Volts supply Green wire Ground

Any wiring replacement must be replace with equivalent type 105°C wire or better.

# 7900-II & 8012-II DC WIRING

## Pictorial Diagram



**IMPORTANT:** If any original wire has to be replaced, it must be replaced with type 105°C or its equivalent. Terminal Block on 85 Models only.

### ALL 8900-III AC Models ONLY - Gas Type Conversion Instructions

Units having an "AC" in the model number comes equipped with a convertible gas control and is supplied with an alternate main burner orifice. Natural gas orifices are marked with an "N" next to the stamped orifice size on the orifice. The control regulator plug is used to change the gas pressure setting to 10.5" w.c. for propane and 3.5 w.c. for natural gas.

A conversion kit has been supplied by the manufacturer to convert the furnace to an alternate fuel.

1. Shut off Gas and Electrical at main sources.
2. Remove vent assembly from burner area.
3. Disconnect the gas line. L/D model remove Inlet Manifold.
4. Remove cover and (4) screws holding burner box assembly
5. Remove the wires from the valve and electrode. Pull the assembly.
6. Remove (2) screws holding the burner and remove orifice. Replace with correct orifice for type of gas to be used.
7. Change the regulator plug by unscrewing the valve and turning plug to read the correct type of gas at the bottom of the plug. Insert plug back into valve and finger tighten.
8. Replace burner and all other parts in reverse order.
9. Place sticker provided with orifice on furnace in plain view to show the unit has been converted to the new type of gas being used.

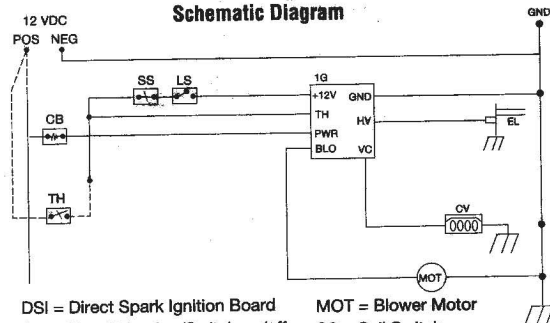
### ALL MODELS - WARNINGS

- Improper installation, adjustment, alterations, service or maintenance can cause loss of life, personal injury or property damage. Refer to the User's Information Manual provided with furnace. Installation and service must be performed by a qualified installer, service agency or the gas supplier.
- This compartment must be closed except when servicing.
- If not installed, operated and maintained in accordance with the manufacturer's instructions, this product could expose you to substances in fuel or from fuel combustion which can cause death or serious illness. Which are known to the state of California to cause cancer, birth defects or other reproductive harm.
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Do not use petroleum or citrus type cleaners on plastic parts.

### ALL MODELS - CAUTIONS

- See installation and operation instructions accompanying appliance for complete instructions.
- This furnace is not for use with air filters.
- Do not HI-POT the electrical system.
- This furnace must be installed so there are provisions for ventilating air supply.
- Do not twist gas valve during piping. Check all gas system fittings before firing.
- Units are approved for installation on combustible flooring.
- See instructions manual for installation of door assembly or vent assemblies.
- The gas side plate must be installed before furnace is test fired. Check for complete seal when installed vertical.

## Schematic Diagram

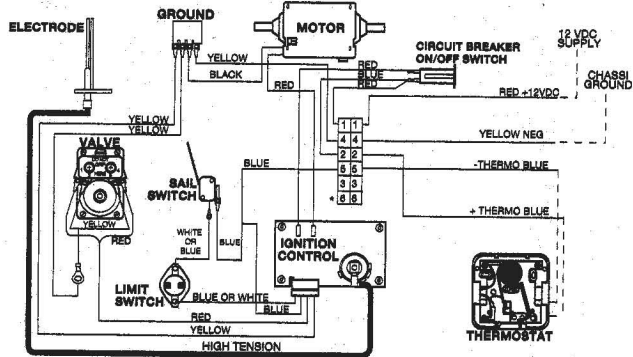


DSI = Direct Spark Ignition Board  
 CB = Circuit Breaker/Switch on/off  
 GND = Ground  
 GV = Gas Valve  
 EL = Electrode  
 VC = Valve Control

MOT = Blower Motor  
 SS = Sail Switch  
 TH = Thermostat  
 LS = Limit Switch  
 HV = High Voltage

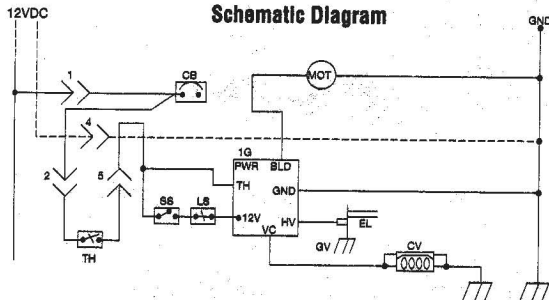
# 8500-IV & 8900-III DC WIRING

## Pictorial Diagram



**IMPORTANT:** If any original wire has to be replaced, it must be replaced with type 105°C or its equivalent. \*Terminal Block on 85 Models only.

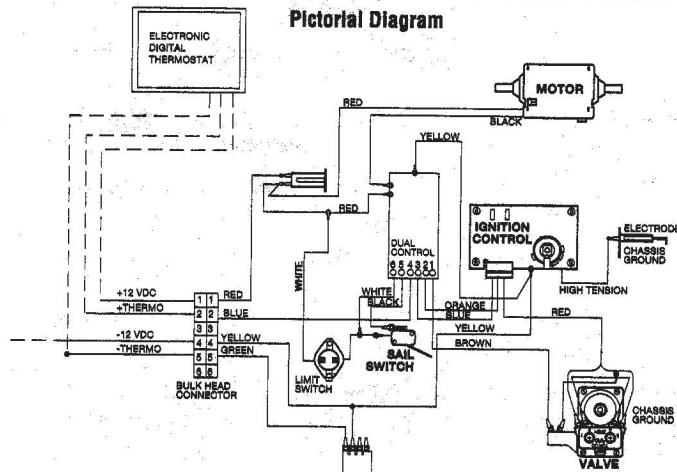
## Schematic Diagram



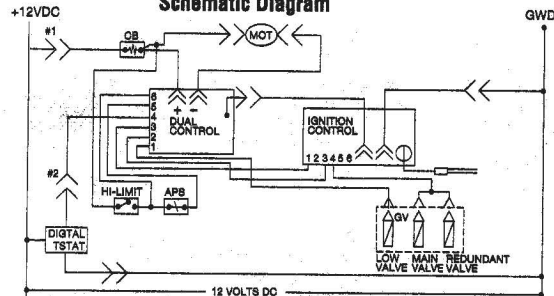
- CB = Circuit Breaker ON/OFF Switch
- GND = Ground
- GV = Gas Valve
- EL = Electrode
- FS = Flame Sensor
- MOT = Blower Motor
- SS = Sail Switch
- HV = High Voltage
- IG = Ignition Control
- TH = Thermostat
- LS = Limit Switch
- TR = Thermo Relay
- VC = Valve Control
- \*L/D Models Switches Located on Left Side of Casing

# 2-STAGE MODELS 2334, 2540 & 1522 WIRING

## Pictorial Diagram



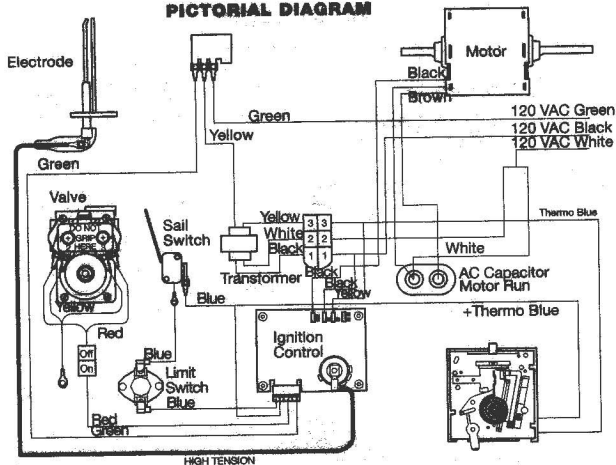
## Schematic Diagram



- \*CB = Circuit Breaker on/off
- GV = Gas Valve
- HI-LIMIT = Limit Switch
- GND = Ground
- HV = High Voltage
- EL = Electrode
- MOT = Blower Motor
- TH = Thermostat
- APS = Air Proof Switch
- \*L/D Models Switches Located on Left Side of Casing

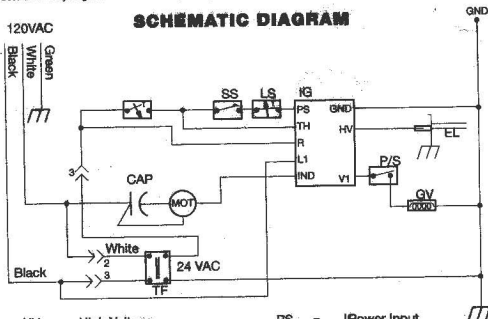
# 8900-III AC WIRING

## PICTORIAL DIAGRAM



**IMPORTANT** If any original wire has to be replaced, it must be replaced with the type 105 C or its equivalent.

## SCHEMATIC DIAGRAM



HV = High Voltage  
 GND = Ground  
 GV = Gas Valve  
 EL = Electrode  
 IG = Ignition Control  
 MOT = Blower Motor  
 IND = IG Blower Motor Output  
 V1 = Valve Control

PS = Blower Input  
 SS = Sail Switch  
 TH = Thermostat  
 LS = Limit Switch  
 CAP = Capacitor  
 P/S = Power Switch On/Off  
 TF = Transformer