

# ENTERPRISE CAST IRON WOOD FURNACE

“AIRTIGHT”

## SECTION: 1 8130B - 1 WOOD FIRED FURNACE

### OWNERS MANUAL



Some features of the Enterprise Wood furnace are: Heavy cast iron combustion chamber cast iron flue collars heavy-gauge steel radiator tubes and smoke pipe extension large cast iron airtight fire door with kaowool gasket, primary and secondary air control combination fan-and-temperature-limit control insulated and scientifically baffled steel casing.

### INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS:

Read these instructions carefully. Consult your local authorities concerning local fire safety regulations. Installation must be made in accordance with the Local, Provincial or State codes in your area which may differ from this manual. Always comply with the most severe application. Proper installation and use will ensure safe and satisfactory performance. Improper installation or use could result in voiding your warranty.



**ENTERPRISE FAWCETT**  
Making Wood Stoves Since 1852

73 Lorne Street  
Sackville, NB  
E4L 4A2

We reserve the right to make improvements and design modifications without notification.

Phone: 506-536-1160  
Fax: 506-536-1820  
Email: [enterpri@nbnet.nb.ca](mailto:enterpri@nbnet.nb.ca)

## **INSTALLATION:**

The Enterprise 8130B-1 is a heavy duty cast iron wood burning furnace of the forced air type. It is designed to heat buildings with a heat loss of up to 150,000 BTU. Because of the weight of the furnace, and to facilitate its installation, this furnace is only partly assembled at the factory. The remainder of the assembly must be done at the site. It is recommended that the services of an experienced heating system designer and installer be engaged to complete the installation. If possible the furnace should be located within eight feet of the chimney, on a non-combustible floor.

The successful operation of the 8130B-1A (add on) furnace depends on its proper installation, especially with regard to connecting it to a chimney in good condition that will produce a normal draft .04 - .07 inches W.C. (1.02 mm - 1.78 mm).

## **IMPORTANT:**

Connect this appliance to one of the following chimneys:

- ▶ A masonry chimney conforming to Provincial regulations or in the absence of such regulations, to the requirements of the national building code.
- ▶ A factory built chimney conforming to the requirements, OF U.C. S629 standard for 650° C (1200° F) factory built chimneys.

## **CAUTION:**

The equipment will be installed in accordance with the manufacturer's instructions and in a manner acceptable to the regulatory authority by mechanics licensed to perform this service. When required by the regulatory authority, such mechanics will be licensed to perform this service.

The installation will comply with the applicable requirements of C.S.A. Standard B365, Installation Code for Solid Fuel Burning Appliances and equipment or to the requirements of the authority having jurisdiction in the area.

Install the furnace on a noncombustible floor. If possible a minimum of 24" (61 cm) to allow for easy servicing or a maximum of not over 8' - 10' (2.4 - 3m) to ensure a safe chimney connection. The chimney connector (flue pipe) should always have an upward rise from furnace to chimney of not less than ¼" per lineal foot (2 cm per metre).

The connecting collar pipe provided with each furnace is 8" in diameter by 12" long and constructed of 11 guage steel. This piece is inserted over the cast iron pipe extension, cemented and bolted in place. The 8" smoke pipe (tapered end) is then inserted into the extension steel pipe, each joint connected in this manner to allow soot and creosote to flow back into the furnace. Do not use more than two 90° elbows.

## **NOTE:**

A solid fuel burning appliance will not be connected to a chimney or flue already serving a fireplace or incinerator.

## **THIS FURNACE WILL NOT BE INSTALLED IN A MOBILE HOME.**

The chimney should extend at least 2 feet (61 cm) higher than the highest point of the roof, 10 feet (3m) away or 3 feet (91 cm) above the peak if it comes through the roof at that point.

## **OPERATING INSTRUCTIONS:**

The 8130B-1 is a wood burning, forced air furnace. It can be used as your primary source of heat or as an alternate to some other fuel. The firebox and part of the radiator are constructed of cast iron. In order to properly season these castings and avoid cracking, it is recommended that the first three or four fires be of low intensity. At no time should the level of fuel be above the upper hinge of the fire door. To obtain the best efficiency it is recommended that small or medium sized fires, with the fuel burning brightly, be used. Large, smouldering fires will burn for a long time, but they are very inefficient and tend to overheat the house. The following recommendations are made for your convenience and safety. Please follow them.

### **TYPE OF FUEL:**

This unit is intended solely for wood burning. Do not burn salted wood or drift wood, gasoline, naphtha, engine oil, plastics or any petroleum product, manufactured fire logs or garbage. Best results will be obtained by using hardwood such as birch or maple that has been air dried for at least one year after cutting. Load fuel carefully to avoid damage to the unit. Do not load fuel above the level of the upper hinge of the fire door. Make sure that the flue draft regulator is adjusted so that the draft will not exceed 0.05 in W.C.

### **NEVER USE CHEMICALS OR FLAMMABLE FLUIDS TO START THE FIRE.**

### **EXCESSIVE OR RUNAWAY FIRE:**

This furnace is designed that, when operated properly, a runaway fire will not occur. However, should one occur due to improper fuel or excessive loading, observe the following procedure:

- ▶ Close the combustion air damper either manually or by lowering the thermostat setting.
- ▶ Manually close the secondary air shutter, and any other sources of air to the fire.
- ▶ Set the draft regulator wide open to reduce the draft through the furnace.
- ▶ The excessive heat caused by any extreme fire may damage the furnace safety controls. The operation of these controls should be checked before the furnace is returned to service.

### **SOOT FIRE:**

For soot fires burning in the flue passages of the furnace, follow the same procedure as for any runaway fire. If a soot fire occurs in the chimney, close off all sources of air through the furnace, close the draft regulator and call the Fire Department.

### **ELECTRIC POWER FAILURE:**

Should you wish to operate this furnace during a power failure, observe the following procedure.

- ▶ Remove the blower compartment door.
- ▶ Move the lever on the draft damper motor to the manual position. Do not forget to move this lever back to the "Auto" position when power is restored.
- ▶ Make sure all duct and register dampers are open.
- ▶ To avoid excessive furnace temperature use only small fires during a power failure. Do not expect to maintain maximum comfort while the power is off for long periods.

## **SERVICE AND CLEANING:**

The following procedure is recommended for servicing and cleaning this furnace.

- ▶ Inspect the radiator tubes and smoke pipe monthly for any sign of soot or creosote. Clean as required, or at least once each heating season.
- ▶ Clean the air filter monthly and replace each year.
- ▶ Lubricate the blower motor annually with 4-6 drops of SAE 30 oil in each bearing.
- ▶ Never let ashes build up beyond the level of the fire door sill. When removing ashes always use a metal container.
- ▶ For proper service and maintenance call your Enterprise Heating Dealer.

## **CAUTION:**

Flue products can contain carbon monoxide, particularly when the wood fire is starved for air (made to burn at a slow rate). Be sure that all flue pipe joints fit tightly. Replace any sections that show corrosion.

## **FURNACE ASSEMBLY:**

1. Position the furnace base on a non-combustible floor and place the cast iron firebox on the base. Centre the firebox from side to side and make sure that the front edge of the firebox is flush with the front edge of the base. When properly positioned the firebox legs should be directly above the steel ribs which are welded to the under side of the base. See Figure 1A and 1B.
2. From the quart can provided with the furnace, fill the groove on top of the firebox and on the inside of the lower cast front with furnace cement. Install the lower cast front with the hardware provided. See Figure 2.
3. Put furnace cement in the grooves around the clean-out openings on the inside of the upper cast front and bolt this front to the lower front. See Figure 3.
4. Place the radiator section on top of the firebox, making sure that the cement completely seals all joints. Smooth off and remove excess cement. Using a bolt, washer and nut from the hardware kit, bolt the upper front to the radiator. See Figure 4.
5. Bolt the front plenum flange to the upper cast front. Sheet metal screw one set of air baffles to each side panel, using the holes provided. The right angle baffle should be near the top and the 45 degree baffle should be about midway on the side panel. Install the side panel that is opposite the blower side, using bolts to fasten it to the cast front and sheet metal screws to fasten it to the base. See Figure 5.
6. Cut the opening for the blower shoe in the other side panel. This opening will be 20" wide and 12" high and should be located 5" from the front edge and 1½" from the bottom edge of the side panel. Attach the blower shoe to the side panel by notching the flange and bending the tabs over. Install the heavy gauge steel smoke extension and make sure that the joint is tightly sealed with the furnace cement provided. Install the side panel, rear plenum flange and rear casing panel using the bolts and sheet metal screws provided. See Figure 7. Connect blower No. BPW10.
8. Install the three clean-out covers, making sure that the bosses are well seated in the lugs. These covers are equipped with gaskets to ensure a leak proof seal. Mount the M847A damper motor on the front edge of the right-hand casing panel using two sheet metal screws and the holes provided in the casing panel.

Mount the 4" x 4" electrical junction box on the face of the right-hand casing using two sheet metal screws and the hole provided in the panel. Install the AT20B transformer in the upper front knock out of the 4" x 4" junction box. Using the chain provided with the damper motor, connect the damper motor to the primary air damper and remove the excess chain. See Figure 7. Install the barometric damper and the smoke pipe. Refer to the instructions provided with the barometric damper. Install the steel heat shield above the upper cast front. See Figure 8 for the completed furnace assembly.

9. Attach the plenum chambers to the furnace and blower. Install the combination fan/limit control on the front surface of the warm air plenum chamber by cutting a 1" hole in the plenum and installing the mounting bracket, part No. 107342. The centre of this hole should be 12" above the top of the furnace and is equal distance from each side of the plenum chamber. Install the combination control making sure that there sensing element is inserted to its full length. Tighten the retaining bolt in the mounting bracket.

10. Connect the power supply to the 4" x 4" junction box and refer to the wiring diagram. See Figure 9 to insure that all electrical connections are correct.

11. Complete the installation of the duct system. The furnace is now ready to operate.

**CAUTION:**

The chimney should be at least 15' (4.6 m) in height, minimum size should be a 8" x 8" (20 x 20 cm) standard tile lining, or 7" in diameter (17.8 cm) if round.

When the furnace is installed, the draft damper (barometric) should not be adjusted above .06" (1.52mm) W.C., if this setting is exceeded the fire could burn out of control.

In locating the furnace observe the following clearances from combustibles:

Front: (Fire door) - 48" (122 cm)

Sides: 6" (15.3 cm)

Rear: 24" (61 cm) Leave ample space for cleaning and servicing

Chimney Connector: (Flue Pipe) 18" (46 cm) floor non-combustible.

Warm Air Plenum Chamber and first 6' (183 cm) of duct 6" from combustibles. This includes duct branches from the main trunk within 6' (183 cm) and any single branch leads taken from the plenum.

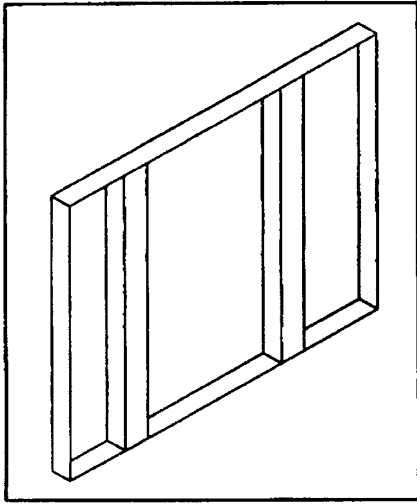
For further information on reduced clearances to combustibles, check with your local building and fire codes. Also C.S.A. Standard B365M, 1980 installation Code for Solid Fuel Burning Appliances and Equipment.

Clearances to combustibles may be reduced only as approved by the local regulatory authority.

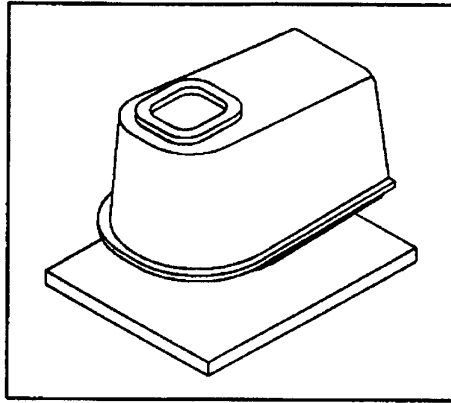
**CAUTION:**

When installing, adhere to clearances and installations, the consequence of using makeshift compromises could be unsafe and dangerous.

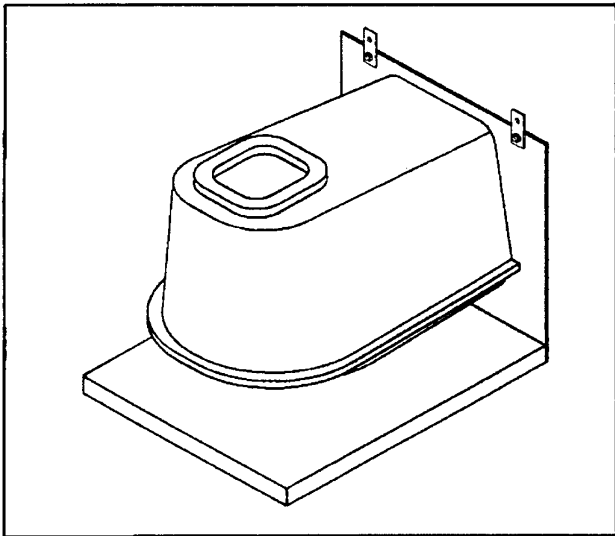




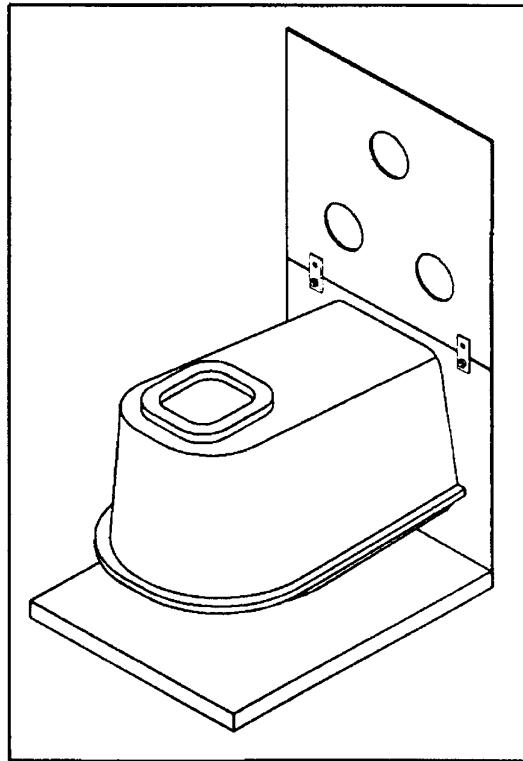
**FIG 1A: UNDER SIDE OF BASE**



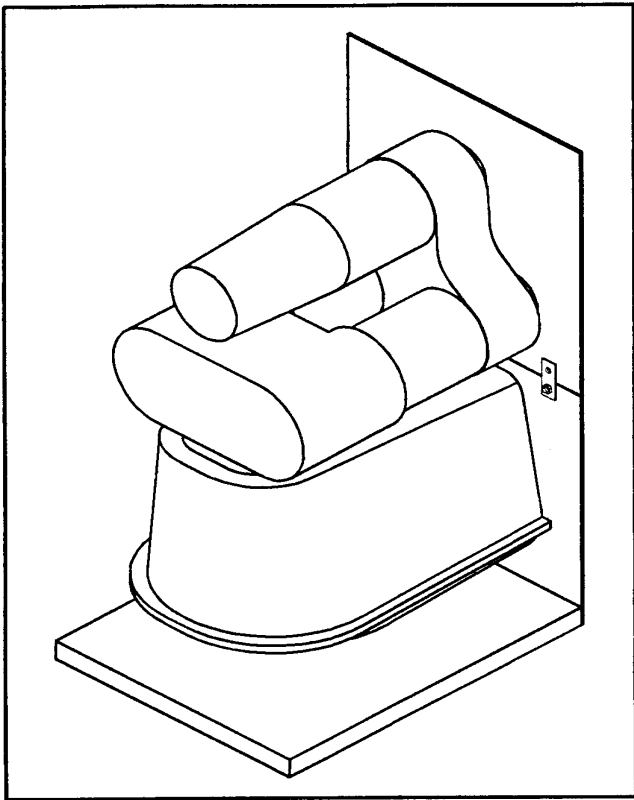
**FIG 1B: FIREBOX MOUNTED ON BASE**



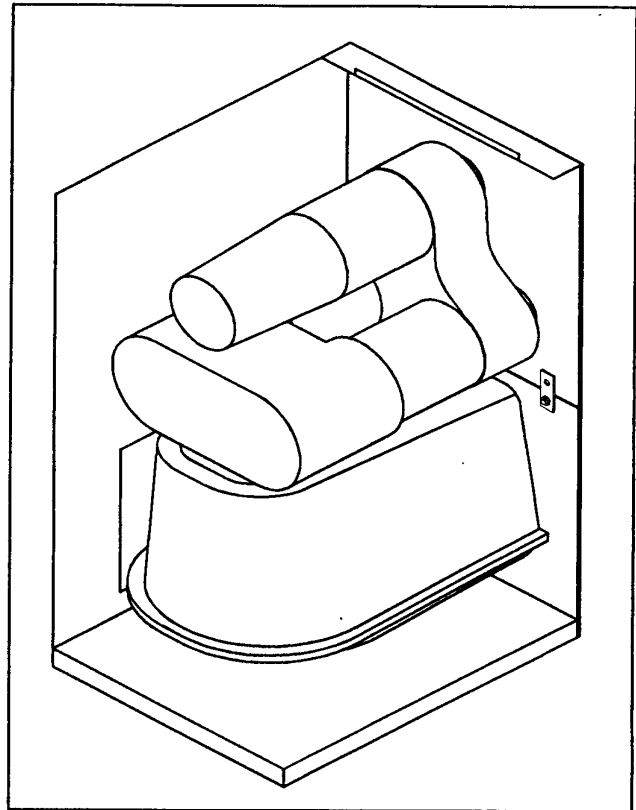
**FIG 2: LOWER CAST MOUNTED TO FIREBOX**



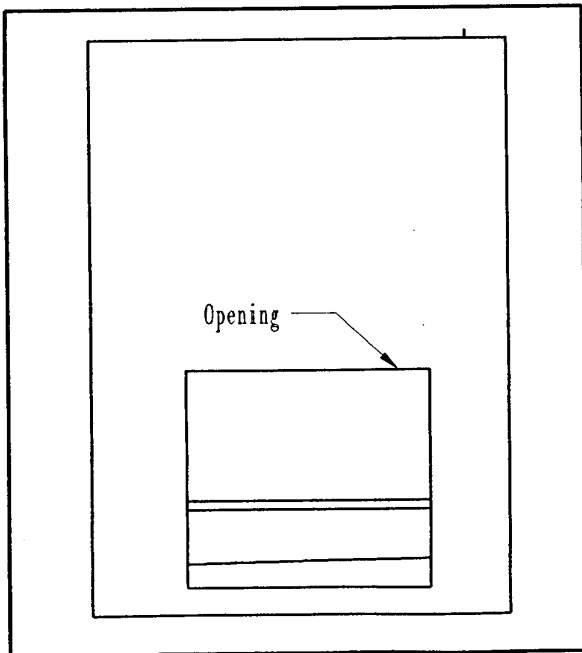
**FIG 3: UPPER CAST FRONT IN PLACE**



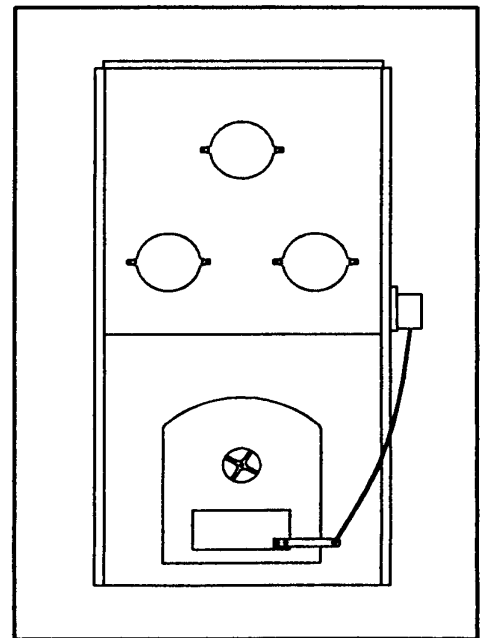
**FIG 4: RADIATOR IN POSITION**



**FIG 5: FRONT PLENUM AND LEFT SIDE PANEL WITH AIR Baffles**



**FIG 6: OPENING FOR BLOWER SHOE**



**FIG 7: CAST FRONT WITH CLEAN OUT COVERS, DAMPER MOTOR, TRANSFORMER AND JUNCTION BOX MOUNTED**

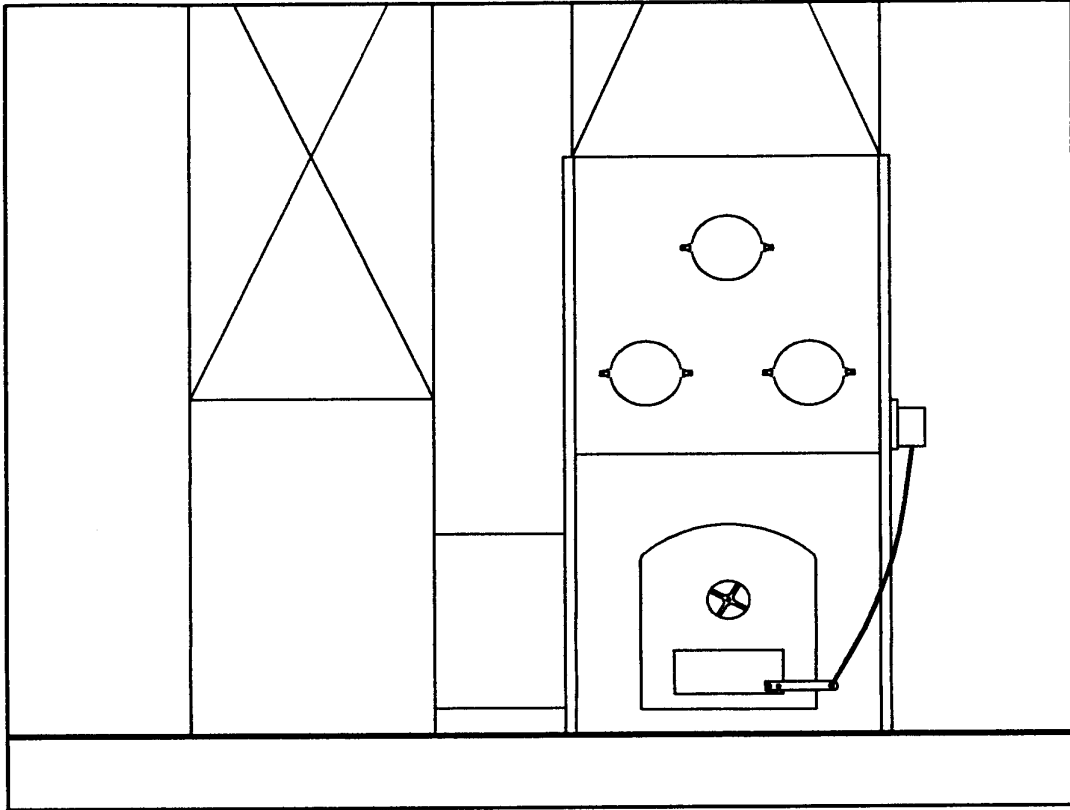


FIG 8: COMPLETE ASSEMBLY

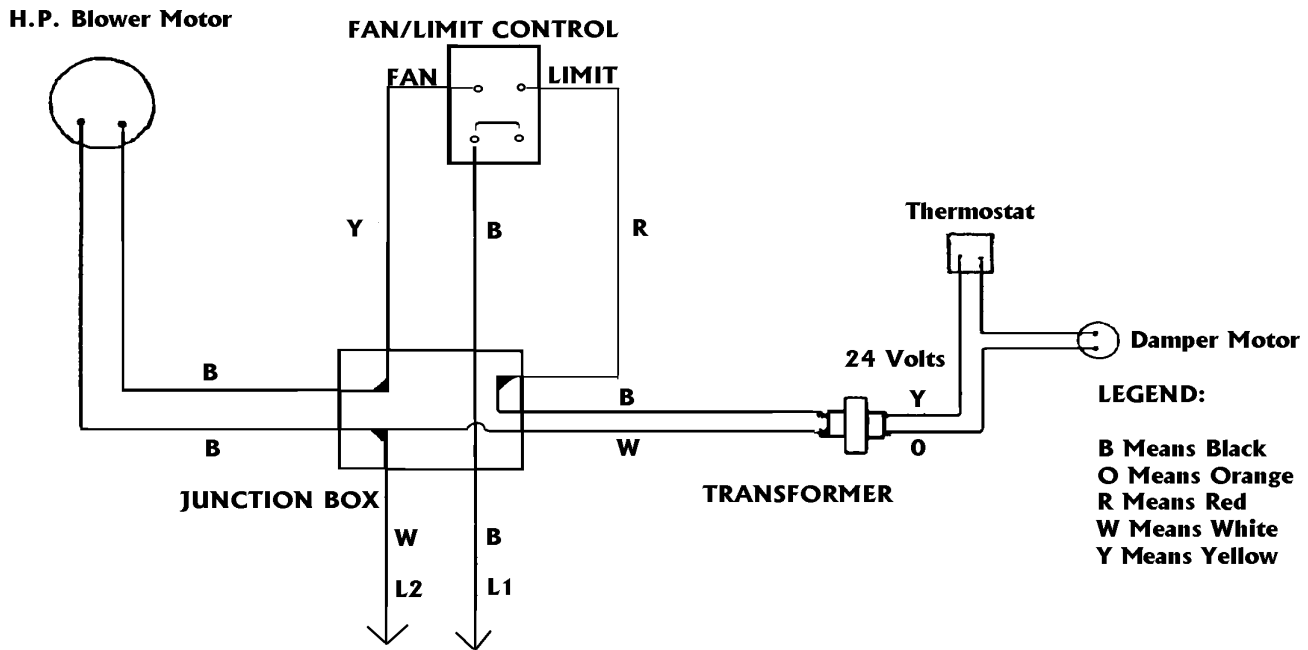
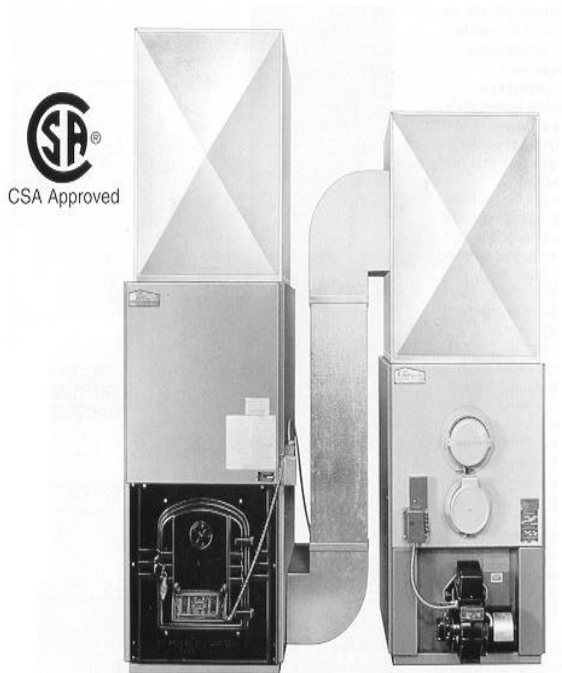


FIG 9: Schematic Wiring Diagram

# OWNERS MANUAL

## SECTION: 2

### 8130B-1A Forced Air Wood Fired Furnace For Downstream Add-On



**P**airs up with any make of oil furnace for a fail-safe, lower-cost heating alternative. The Enterprise wood furnace was, of course, designed to twin perfectly with the Enterprise Oil Furnace. And it does! Because both are CSA approved and both operate in the 80% efficiency range.

However, doubling up any oil furnace with the Enterprise Wood Furnace is nothing to sneeze at. In fact, it changes that oil heating system into a wood/oil system immediately and with surprising economy. And that makes a lot of sense (and dollars) these days!

#### **INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS:**

Read these instructions carefully. Consult your local authorities concerning local fire safety regulations. Installation must be made in accordance with the Local, Provincial or State codes in your area which may differ from this manual. Always comply with the most severe application. Proper installation and use will ensure safe and satisfactory performance. Improper installation or use could result in voiding your warranty

## **CAUTION**

Do not connect the ductwork so that a reverse air flow is possible.

Operate the oil fired unit periodically to ensure that it will operate satisfactorily when needed.

Do not relocate any of the safety controls in the original furnace installation.

## **WARNING:**

Not certified for installation using a divider in the plenum of an oil furnace.

THE BLOWER WILL NOT BE CHANGED as this would void the certification of the oil unit.

An add-on unit will only be installed onto a furnace, duct system and chimney which are in good operating condition.

A check will be made of the air flow through the existing heating system to determine if an add-on furnace can be used.

## **INSTALLATION:**

This furnace may be installed on an Oil Furnace with the following input capacities: .85, 1.00, 1.20, 1.25, 1.35, 1.50 G.P.H. (U.S.)

The transfer connector duct size is to be not less than 20" x 16" (508 mm x 406 mm) with not more than two 90° elbows.

Do not use duct elbows having an inside diameter less than 6" (150 mm). The add-on is not certified for installation using a divider in the plenum of the oil furnace.

Refer to Figure 1 as a guide for installation.

A record of your readings should be kept as these are to be reset to the same values to maintain the air flow though the furnace after the add-on has been completed.

## **The following temperature rise method or static pressure method may be used:**

### **AIR TEMPERATURE RISE METHOD - Figure 2:**

- ▶ Two thermometers are required to do this. A mercury or dial-type thermometer that will read 250 F or more, one for the warm air (or supply) side of the system and the other for the return air. (A regular room-type thermometer would do for the return air.
- ▶ Drill a hole in the warm air plenum chamber of the existing oil furnace just large enough to take the thermometer (protect it from radiant heat). Turn up the thermostat well above room temperature so the furnace will not shut off during the test, allow the furnace and blower to run continuously until the thermometer in the warm air levels off (reaches) its maximum. This should take about 20-30 minutes.

- ▶ Take a reading in the return air (this will be approximately the same as the house temperature). If it is about 75° F the warm air should read approximately 160° F or 85 ° F higher. A rise through the furnace of 85° F ± is normal for the average heating system. After the add-on, this reading will be taken again in the oil furnace plenum. See Figure 2X.
- ▶ A check of air velocity at 1 or 2 of the main registers could be recorded. This reading should be maintained after the add-on.

**NOTE:** Many available thermometers may have a lengthy lag causing it to be slow in levelling off. To get an accurate reading you will need to allow time for this. The time lag may be checked by observing the correct temperature indication when immersed in boiling water.

### **THE STATIC PRESSURE - Figure 3:**

- ▶ The static pressure will be measured with a suitable gauge. The pressure is to be taken at the warm air plenum chamber to determine the flow of the air through the existing heating system. A normal residential heating system should show a reading of near .20" W.C.

### **NOTE:**

A velocity type instrument similar to the Alnor Velometer is a simple method to check pressure in inches of Water Column. A small hole is required in the plenum chamber. A flexible tube with a suction cup is placed over the hole allowing the air stream to pass through a special jet, showing a direct reading by a needle on the instrument dial.

An inclined draft gauge, similar to the Dwyer's Manometer, may be used to check static pressure. Use this instrument as directed by the manufacturer. A reading is taken along an inclined glass tube in which there is coloured fluid. This same type of instrument may be used to check the flue at the smoke pipe.

- ▶ After the add-on has been installed, the air flow through the system must be maintained as found in the existing system, see Figure 4. Changing the blower pulley or motor pulley or both can give increased pressures. It may be necessary to increase the motor H.P., be sure consumption is within the rating of this motor.
- ▶ By changing the blower pulley or motor pulley, or both, the temperature rise through the oil furnace can be increased or decreased. Reducing the blower speed will increase the temperature rise and increasing the blower speed will reduce the temperature rise through the oil unit. You must change the blower speed to maintain a temperature rise of approximately 85° F ±. Similarly, alter the blower speed to obtain a static pressure reading of approximately .20" W.C. in the wood furnace plenum and not over .40" W.C. in the oil furnace plenum.
- ▶ By re-establishing the readings of the original system means our wood furnace is compatible with the existing system and will give optimum satisfaction.
- ▶ To get the air flow required through the furnace and to keep the blower noise at as low a level as possible, it may be necessary to consider relieving some of the pressure in the duct system. This can be done by adding more return or warm air or both, especially if locations can be found to improve the overall comfort satisfaction.

## **CAUTION:**

The equipment will be installed in accordance with the manufacturers instructions and in a manner acceptable to the regulatory authority, such mechanics will be licensed to perform this service.

The installation will comply with the applicable requirements of C.S.A. Standard B365, "Installation Code for Solid Fuel Burning Appliances and Equipment," and if changes are made to the installations of the existing heating system, this will comply with C.S.A. Standard B139, "Installation Code of Oil Burning Equipment," see Figure 1.

## **TO OPERATE FURNACE DURING POWER FAILURE:**

The vent panel at the bottom of the furnace casing on the side opposite the transfer connecting duct, see Figure 5, should be removed to allow air to circulate through the system. If in a furnace room the door should be left open, the basement door to the house should be left open to allow the return air from the main part of the living quarters to flow to the furnace.

The fire should be kept under control and tended frequently.

Do not load the fuel above the latch door.

The primary draft on the fire door should never be opened more than **C**".

The Enterprise 8130B-1A is a heavy duty cast iron wood burning furnace of the forced air type. Because of the weight of the furnace, and to facilitate its installation, this furnace is only partly assembled at the factory. The remainder of the assembly must be done at the site. It is recommended that the services of an experienced heating system designer and installer be engaged to complete the installation. If possible, the furnace should be located within eight feet of the chimney, on a non-combustible floor.

## **IMPORTANT:**

Connect this furnace to one of the following chimneys:

- ▶ A masonry chimney conforming to Provincial regulations, or in the absence of such regulations, to the requirements of the National Building Code.
- ▶ A factory-built chimney, conforming to the requirements of ULC S629 Standard for 650° C (1200° F) factory built chimneys.

## **Minimum Clearance:**

Front: (Fire door) - 48" (122 cm)  
Side 1: 24" (61 cm)  
Side 2: 6" (15.3 cm)  
Flue Pipe: 18" (46 cm)  
Floor: Non-combustible  
Plenum and first 6' of duct - 6"

## **ASSEMBLY:**

Disconnect all warm air trunk ducts and round pipe leads from the existing oil furnace plenum chamber. The plenum is to be removed and replaced with a shorter one. Minimum 26".

Position the furnace base on the non-combustible floor. The base should be placed 27¼" away from the oil unit parallel to and on the side to which it is to be connected. Place the cast iron firebox on the base. Centre the firebox from side to side and make sure that the front edge of the firebox is flush with the front edge of the base. When properly positioned the firebox legs should be directly above the steel runs, which are welded to the under side of the base.

From the quart can provided with the furnace, fill the groove on top of the firebox and on the inside of the lower cast front with furnace cement. Install the lower cast front with the hardware provided. See Figure 2.

Put furnace cement in the grooves around the clean-out openings on the inside of the upper cast front and bolt this front to the lower front. See Figure 3. The foil-faced fibreglass cemented onto the bottom and sides of the lower cast front and the sides of the upper cast front is to improve the air seal at these joints.

Place the radiator section on top of the firebox, making sure that the cement completely seals all joints. Smooth off and remove excess cement. Using a bolt, ¼" x 3 ½", washer and nut from the hardware kit, bolt the upper front to the radiator. See Figure 4.

Bolt the front plenum flange to the upper cast front. Sheet metal screw one set of air baffles to each side panel using the holes provided. The right angle baffle should be near the top and the 45° baffle should be about midway on the side panel. The two inside panels are provided with precut openings 20" x 16". One to be used for the transfer connecting duct and the other to take the vent panel, which can be removed for power failure operation, see Figure 5. The foil-faced fibreglass is extended to the bottom of all panels to fit against the sides of the base to improve the air seal at these joints. Install the side panel that is Opposite the oil furnace, using bolts to fasten it to the cast front and sheet metal screws to fasten it to the base. See Figure 5.

Mount one of the transfer duct elbows on the other side panel. Install the heavy gauge steel smoke extension and make sure that the joint is tightly sealed with the furnace cement provided. Install the side panel, rear plenum flange and rear casing panel using the bolts and sheet metal screws provided. See Figure 6.

Install the three clean-outs covers, making sure that they are fastened securely. These covers are equipped with gaskets to insure a leak proof seal. Mount the M847A damper motor on the front edge of the junction box mounting bracket using two sheet metal screws and the holes provided.

Mount the 4" x 4" electrical junction box on the face of the mounting bracket using two sheet metal screws and the holes provided. Install the AT20B transformer in the upper front knock out of the 4" x 4" junction box. Using the chain provided with the damper and remove the excess chain, see Figure 7A. Install the barometric damper and the smoke pipe. Refer to the instructions provided with the barometric damper. Install the steel heat shield over the upper cast front.

Attach the plenum chamber to the furnace. Install the combination fan/limit control and the operator/interlock control on the front of the plenum by using the control mounting bracket provided. Using this bracket as a

template, mark the two  $\frac{3}{4}$ " holes in the plenum, the fan/limit is always in the centre of the plenum, the operator/interlock is installed on the side next to the connecting duct to the oil furnace. The bracket is mounted  $1\frac{1}{4}$ " from the front of the plenum with sheet metal screws in the two holes provided. Bolt both controls securely to this bracket. Another stand off bracket is fastened to the top front corner of the furnace to keep the conduit  $1\frac{1}{4}$ " from the side of the furnace. See Figure 6.

Connect the existing warm air ducts to the wood furnace plenum chamber. It will be necessary for all warm air ducts and all round pipe extending from the plenum to be lowered, to ensure a clearance of a minimum of 6" from combustible materials, as shown on the front of each furnace.

An extension is required on the 4" x 4" electrical junction box of the existing oil furnace. Refer to wiring instructions and diagram to insure that all the electrical connections are correct.

Check to see that the installation of the heating system is complete. Now test the heating system in a manner previously described to insure that it is ready to operate satisfactorily.

### **OPERATING INSTRUCTIONS:**

The 8130B-1A is a wood burning, forced air furnace. It can be used as your primary source of heat or as an alternate to some other fuel. The firebox and part of the radiator are constructed of cast iron. In order to properly season these castings and avoid cracking it is recommended that the first three or four fires be of low intensity. At no time should the level of fuel be above the upper hinge of the fire door. To obtain the best efficiency, it is recommended that small or medium sized fires, with the fuel burning brightly, be used. Large, smouldering fires will burn for a long time, but they are very inefficient and tend to over-heat the house. The following recommendations are made for your convenience and safety. Please follow them.

### **TYPE OF FUEL:**

Thus, unit is intended solely for wood burning. DO NOT BURN salted wood or drift wood, gasoline, naphtha, engine oil, plastics or any petroleum product, manufactured fire logs or garbage. Best results will be obtained by using hardwood such as birch or maple that has been air dried for at least one year after cutting. Load fuel above the level of the upper hinge of the fire door. Make sure that the flue draft regulator is adjusted so that the draft will not exceed 0.05" W.C.

### **NEVER USE CHEMICALS OR FLAMMABLE FLUIDS TO START THE FIRE.**

### **EXCESSIVE OR RUN-AWAY FIRE:**

This furnace is designed that, when operated properly, a run-away fire will not occur. However, should one occur due to improper fuel or excessive loading, observe the following procedure:

- ▶ Close the combustion air damper either manually or by lowering the thermostat setting.
- ▶ Manually close the secondary air shutter, and any other sources of air to the fire.
- ▶ Set the draft regulator wide open to reduce the draft through the furnace.
- ▶ The excessive heat caused by any extreme fire may damage the furnace safety controls. The operation of these controls should be checked before the furnace is returned to service.

### **SOOT FIRE:**

For soot fires burning in the flue passages of the furnace, follow the same procedure as for any run-away fire. If a soot fire occurs in the chimney, close off all sources of air through the furnace, close the draft regulator and call the Fire Department.

### **ELECTRIC POWER FAILURE:**

Should you wish to operate this furnace during a power failure, observe the following procedure.

- ▶ Remove the blower compartment door.
- ▶ Move the lever on the draft damper motor to the manual position. Do not forget to move this lever back to the “Auto” position when power is restored.
- ▶ Make sure all duct and register dampers are open.
- ▶ To avoid excessive furnace temperature use only small fires during a power failure. Do not expect to maintain maximum comfort while the power is off for long periods.

### **SERVICE AND CLEANING:**

The following procedure is recommended for servicing and cleaning this furnace.

- ▶ Inspect the radiator tubes and smoke pipe monthly for any sign of soot or creosote. Clean as required, or at least once each heating season.
- ▶ Clean the air filter monthly and replace each year.
- ▶ Lubricate the blower motor annually with 4-6 drops of SAE 30 oil in each bearing.
- ▶ Never let ashes build up beyond the level of the fire door sill. When removing ashes always use a metal container.
- ▶ For proper service and maintenance call your Enterprise Heating Dealer.

### **CAUTION:**

Flue products can contain carbon monoxide, particularly when the wood fire is starved for air (made to burn at a slow rate). Be sure that all flue pipe joints fit tightly. Replace any sections that show corrosion.

### **WIRING INSTRUCTIONS FOR 8130B-1A WOOD FURNACE WHEN ADDING TO AN OIL FURNACE:**

See assembly instructions regarding installation of Wood Furnace Electrical box, damper motor, transformer (24v) fan and limit controls, and connecting wires (in BX cable) to and from wood furnace to oil furnace, installing junction box collar on oil furnace junction box. Also, note possible increase in H.P. of blower motor.

In connecting the four 14 ga. Solid T.E.W. wires coming from the wood furnace junction box. (Two black, one white, one red).

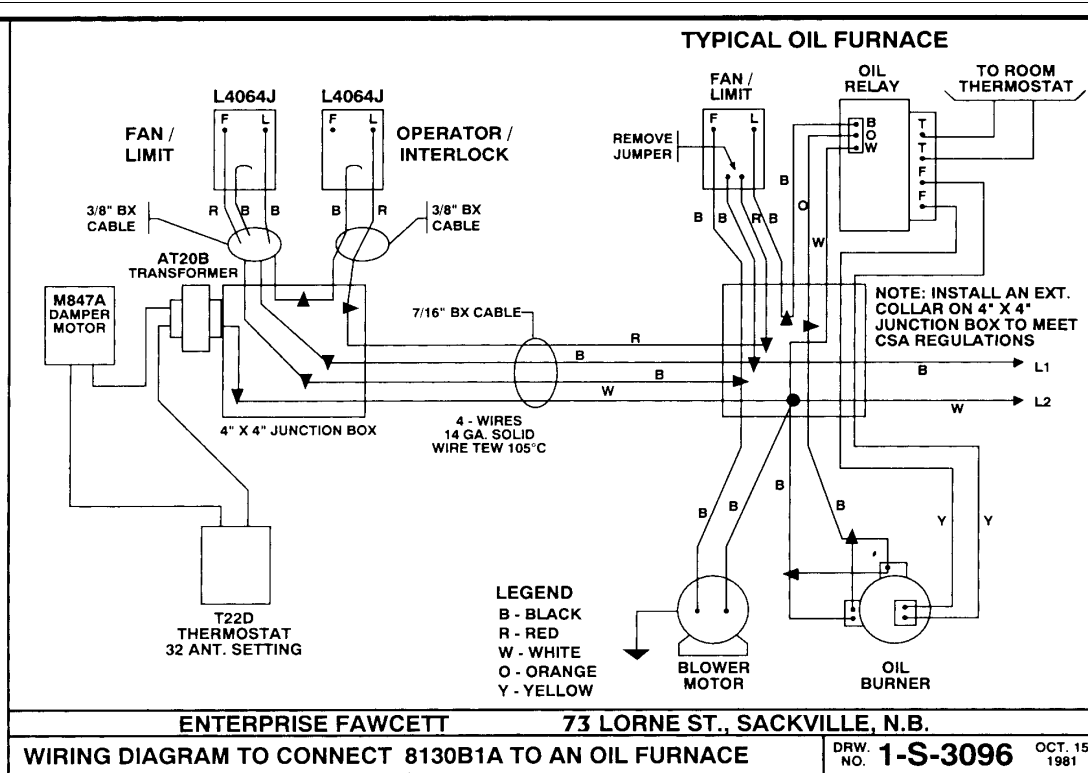
Connect white wire coming from white wire of 24 volt transformer to white neutral wire in oil junction.

Connect black wire coming from bottom of Wood Furnace fan and limit connection (leave jumper in) to black "L1" wire in oil furnace junction box.

Connect black wire from upper connection of Wood Furnace fan and limit control (fan side) to black wires coming from upper fan connection of oil fan and limit going to black wire of blower motor.

Connect red wire coming from operator/interlock control (upper connection) and black wire of 24V Transformer to bottom of fan and limit of oil furnace limit side, remove jumper.

Wiring Wood Furnace junction box wires. See wiring diagram for circuits.



**GENERAL OPERATING INSTRUCTIONS**

1. This unit is intended solely for wood burning. Do not burn salted wood or drift wood, gasoline, naphtha, engine oil, plastics or any petroleum product, manufactured fire logs or garbage.
2. Load fuel carefully to avoid damage to the unit. It is unsafe to fire with wood above the level of the upper hinge of the fire door.
3. Never use chemicals or fluids to start the fire.
4. It is unsafe to adjust the flue draft above 0.05 in W.C.
5. Never let ashes build up to the point where they can fall out the fire door. Discard ashes into a metal container only.
6. The furnace heat exchange flue pipe and chimney must be cleaned at least once each heating season to prevent soot fires. Keep the furnace and flue pipe in good condition.

**In the event of a "run-away" fire**, close the combustion air damper either manually or by lowering the thermostat setting and manually close the secondary air shutter. Set the barometric draft regulator wide open to reduce the draft through the furnace. The excessive heat caused by an extreme fire may damage the furnace safety controls. Their operation should be checked before the furnace is returned to service.

**In the event of a chimney fire**, close all sources of air to the fire. Do not remove the flue pipes until the fire is completely out. Call the fire department.

The installation clearances of this furnace are as follows:

Fire Door - 48" (125 cm.)	Side 1 - 24" (60 cm.)
Flue Door - 18" (46 cm.)	Side 2 - 6" (15 cm.)

Plenum & first 6 ft. of duct - 6"  
 Floor - Non Combustible

**Caution:** *Never store fuel or any combustible material within the installation clearances of furnace.*

For safety keep fire door tightly closed.

Refer to the Owners Manual for details of installation and operation.

**DIRECTIVES-GÉNÉRALES**

1. Cette fournaise est conçue pour brûler uniquement du bois. Il ne faut donc pas y introduire les combustibles suivants. Le bois imbibé de sel ou le bois flotté, l'essence, le naphtha, l'huile à moteur, le plastique les produits pétroliers, les ordures et les bûches artificielles.
2. Intrudisez le bois de chauffage soigneusement dans le foyer afin de ne pas endommager ce dernier. Il est dangereux de remplir la fournaise plus haut que le niveau de la charnière supérieure de la porte du four.
3. Il ne faut jamais utiliser ni produits chimiques ni liquides pour allumer le feu.
4. Il est dangereux de calibrer le registre de tirage du tuyau de cheminée au-dessus de 0.05 pouces d'eau (0.13 cm.).
5. Ne laissez jamais la cendre s'accumuler au point où elle peut tomber par la porte du foyer; jetez la cendre dans un récipient métallique.
6. Il faut nettoyer au moins une fois par saison l'échangeur de chaleur, le tuyau de tirage et la cheminée, pour éviter que la suie ne prenne feu. On recommande d'entretenir soigneusement la fournaise et le tuyau du tirage.

**En cas de feu incontrôlable**, fermez le registre de la prise d'air principale, soit à la main soit en baissant le thermostat, et fermez à l'aiman la prise d'air secondaire. Ouvrez entièrement le registre de tirage barométrique afin de réduire le tirage à l'intérieur de la fournaise. La chaleur excessive produite par un feu trop vif peut endommager les dispositifs de sécurité de la fournaise. Vérifiez leur état et leur fonctionnement avant de remettre la fournaise en marche.

**Dans le cas d'un feu de cheminée**, fermez toutes les ouvertures d'air qui mènent au feu. N'enlevez pas les tuyaux avant que le feu soit éteint. Appelez le service des incendies.

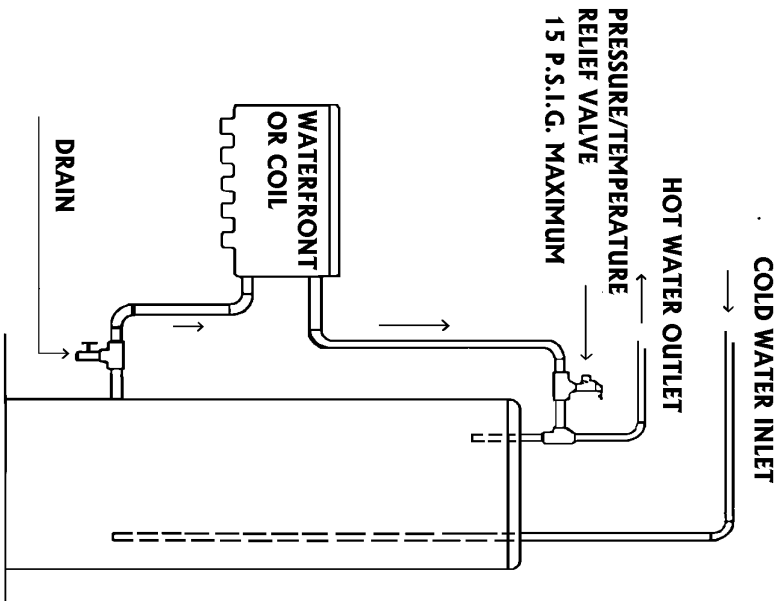
Laissez libres les espaces sécuritaires suivants autour de la fournaise:

- Devant la porte du foyer - 48" (125 cm.)
- Autour du tuyau de tirage - 18" (46 cm.)
- Près de la chambre de distribution de chaleur et autour des six premiers pieds (1.8m) des conduits d'air chaud - 6" (15 cm.)
- Sur le côté no. 1 - 24" (60 cm.)
- Sur le côté no. 2 - 6" (15 cm.)

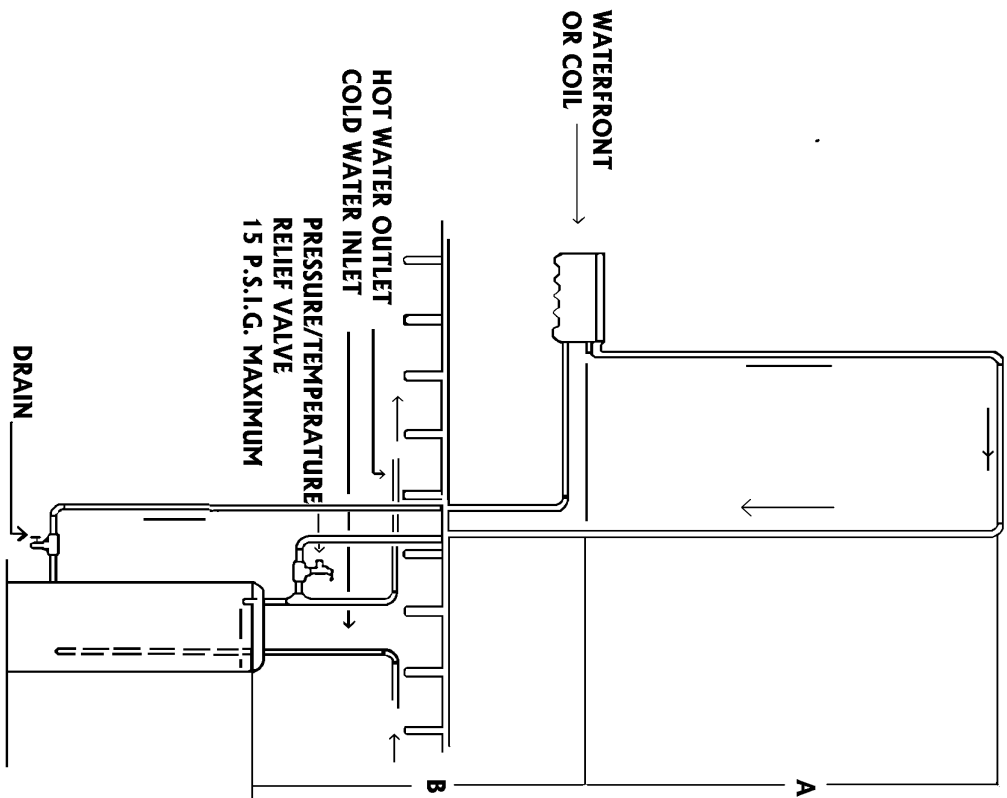
Le plancher doit être à l'épreuve du feu.

**Attention:** *Il ne jamais entreposer ni bois ni toute autre matière inflammable à l'intérieur des espaces sécuritaires autour de la fournaise.*

Pour fins de sécurité, garder la porte d'alimentation fermée hermétiquement. Voir le manuel de l'usage pour les détails d'installation et de fonctionnement.



WATERFRONT & TANK  
AT SAME LEVEL



NOTE: DIMENSION "A"  
SHOULD ALWAYS  
EXCEED DIMENSION  
"B" BY AT LEAST 12  
INCHES OR 30 CM.

WATERFRONT ABOVE  
TANK

WATERFRONT INSTALLATION DIAGRAM

**WARNING: WARM AIR PLENUM AND FIRST SIX FEET OF ALL DUCTS AND ROUND PIPE EXTENDING FROM THE PLENUM WILL HAVE A CLEARANCE OF NOT LESS THAN 6" INCHES FROM COMBUSTIBLE MATERIAL**

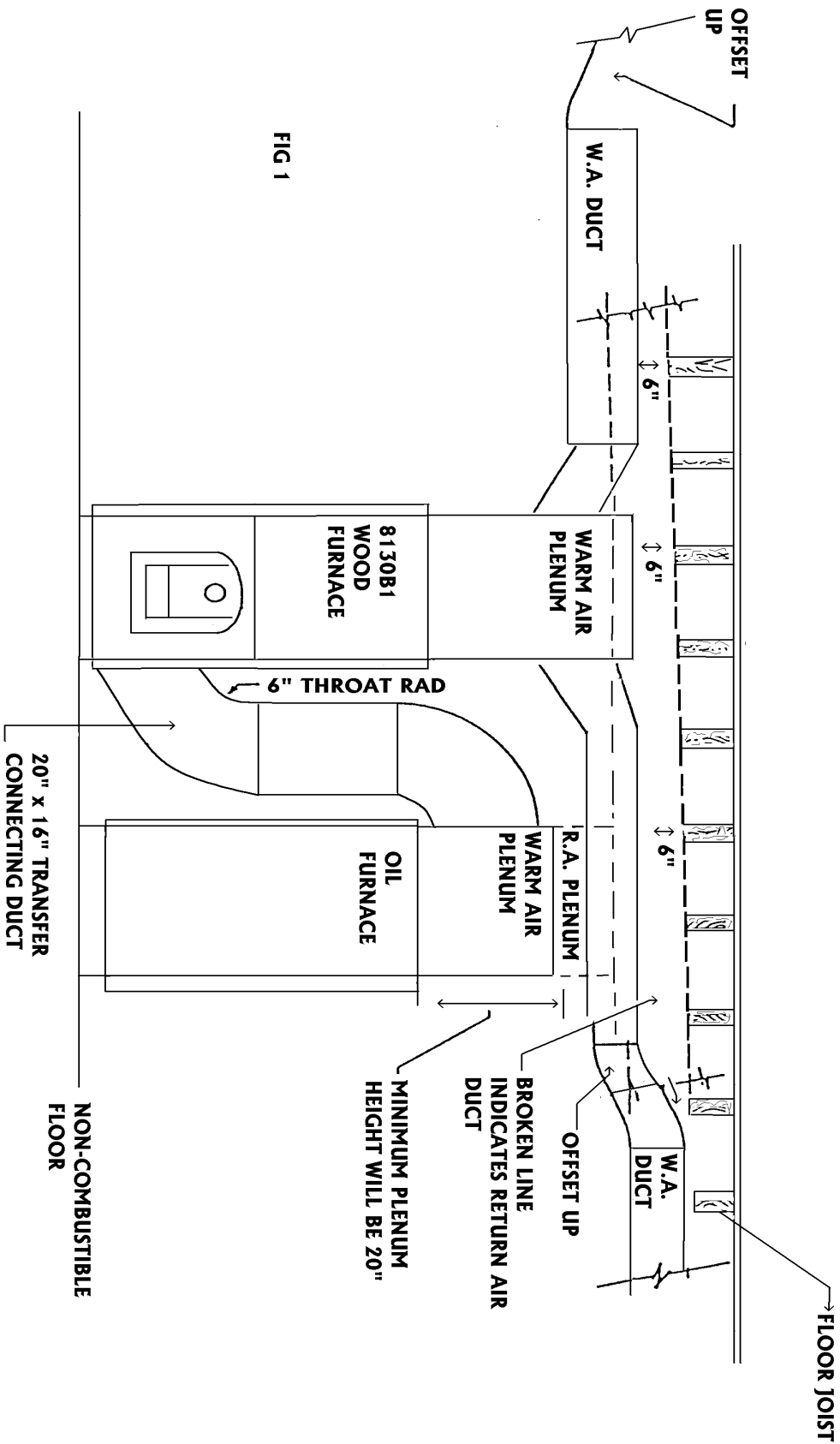
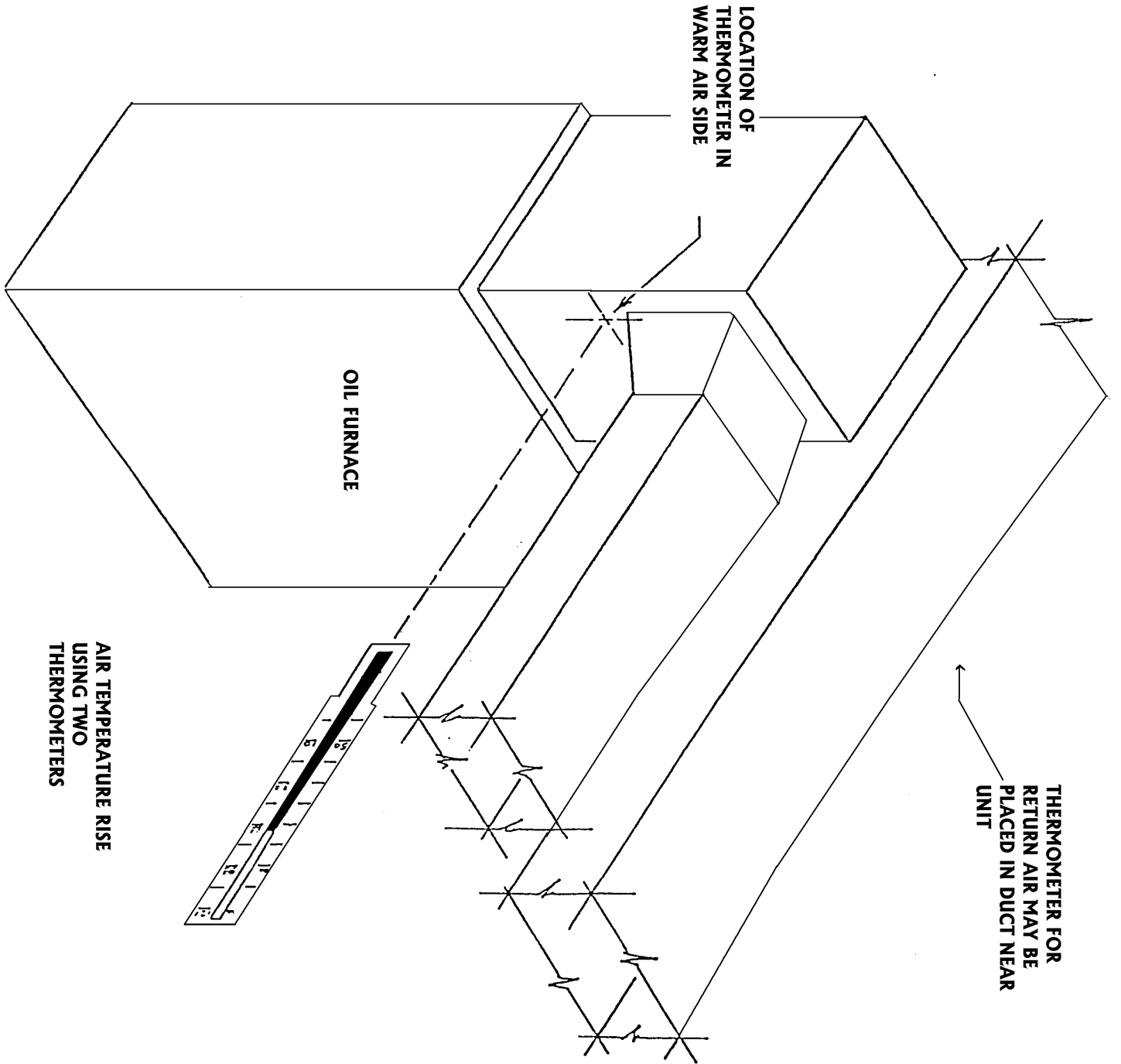


FIG 1

**NOTE: A 0.33MM thick (28 GA.) sheet of metal installed with a 2.5 MM (1 in.) air space may reduce the 150 MM (6 in.) clearance to 50 MM (2 in.)**

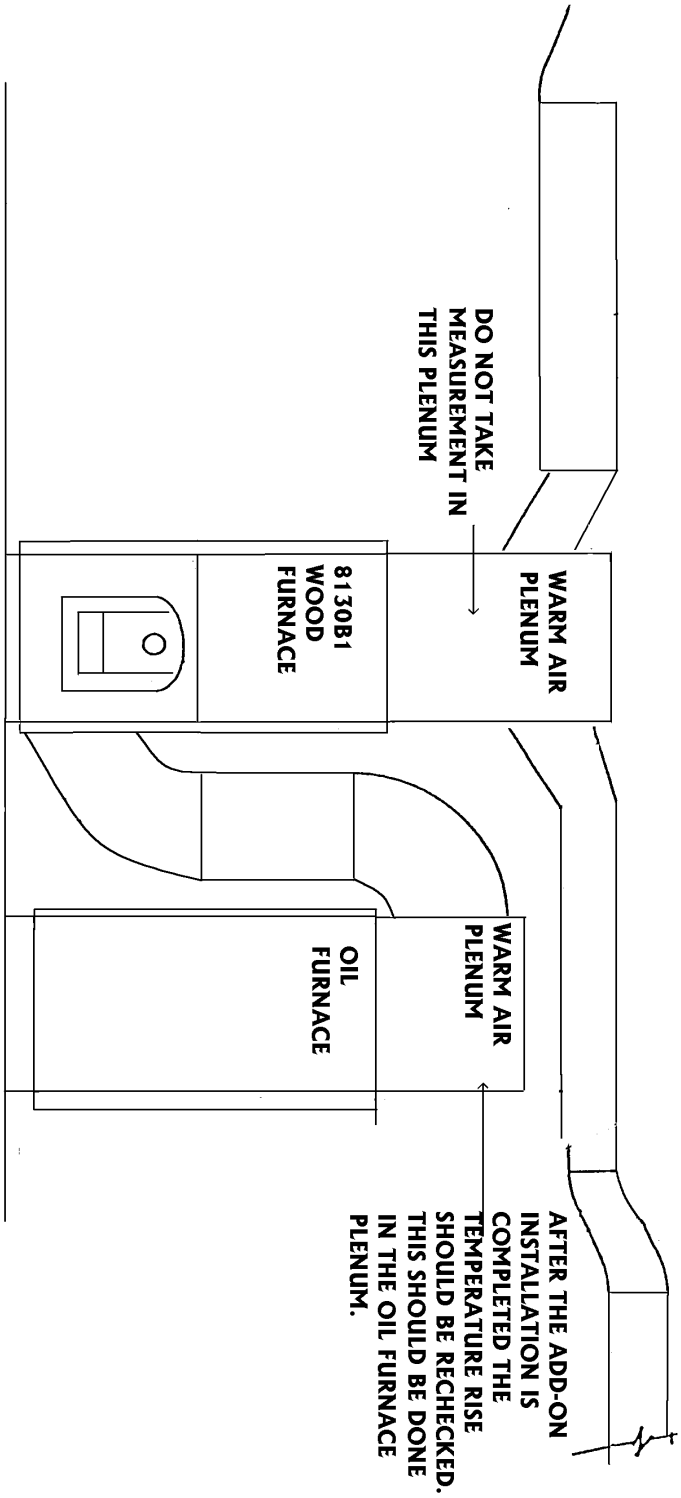
Refer to CSA installation code in your area.



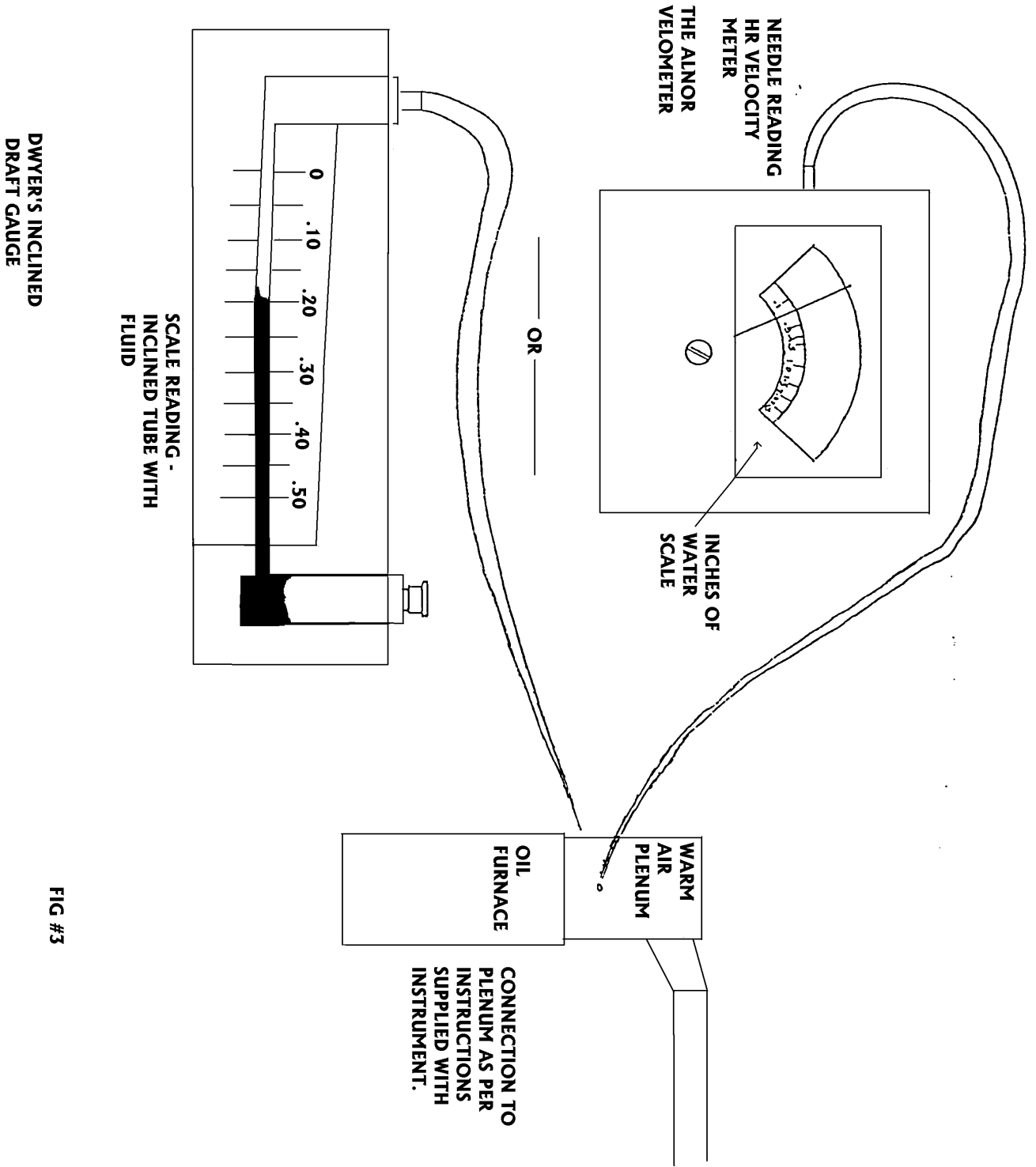
**FIG #2**

**AIR TEMPERATURE RISE  
USING TWO  
THERMOMETERS**

**AIR TEMPERATURE RISE -  
AFTER ADD ON**



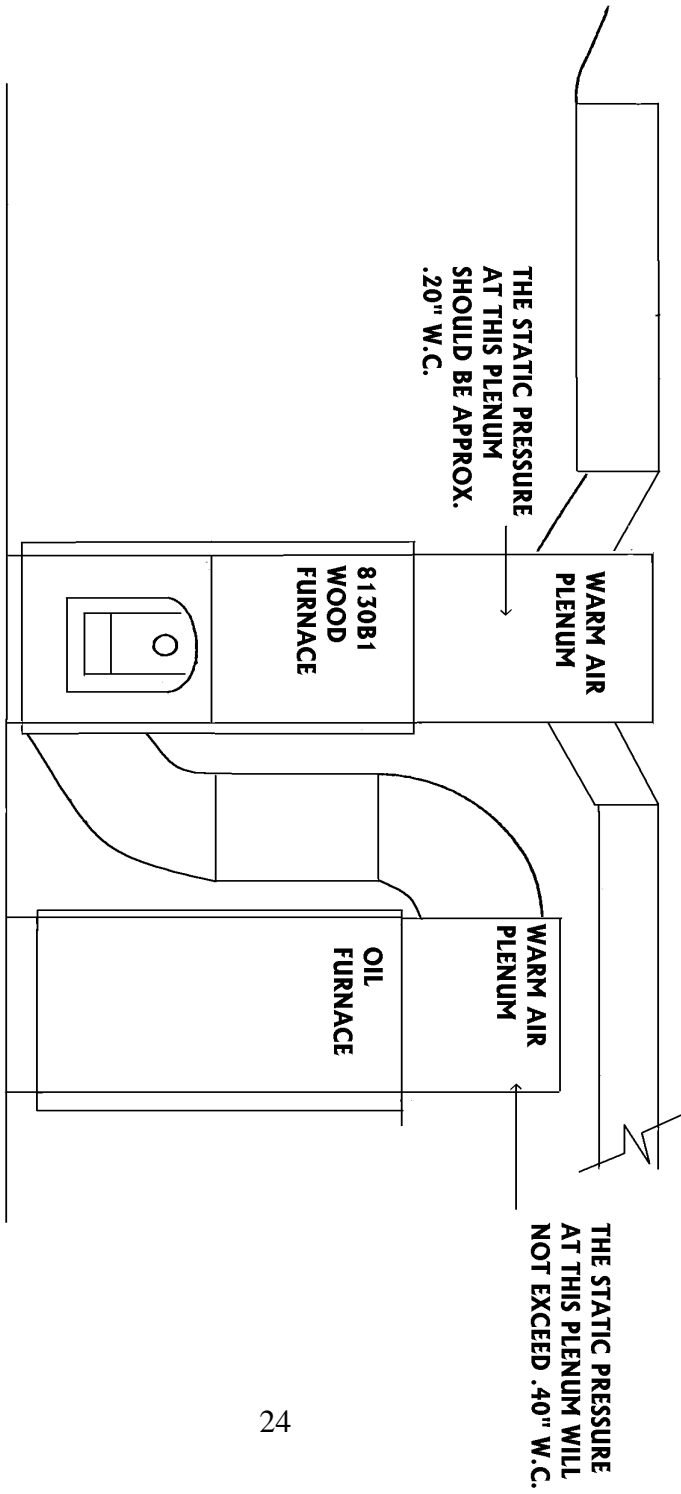
**FIG #2X**



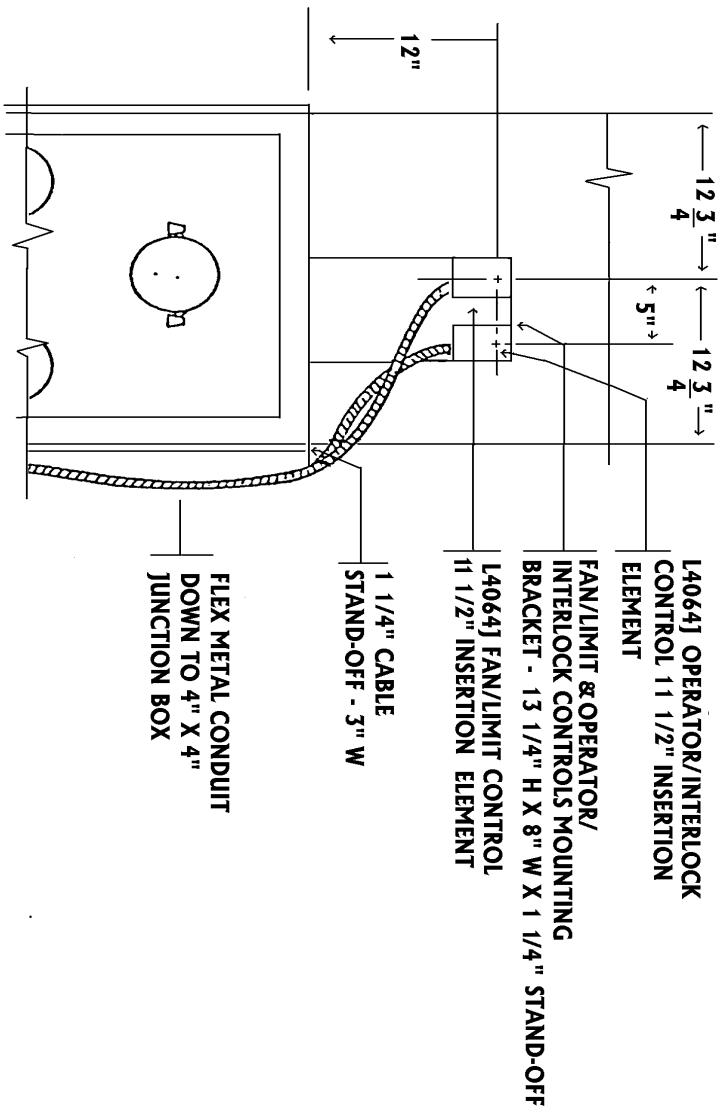
DWYER'S INCLINED  
DRAFT GAUGE

FIG #3

**STATIC PRESSURE  
READINGS IN INCHES  
WATER COLUMN AFTER  
WOOD FURNACE  
ADD-ON INSTALLED**



**FIG #4**



NOTE: THE OPERATOR/INTERLOCK SET 5" OFF CENTER WILL BE MOUNTED TO THAT SIDE ON WHICH THE TRANSFER CONNECTING DUCT IS LOCATED

FIG. 6

FIG. 6