

# Model 1537Q

## SOLID FUEL WARM AIR FURNACE

Owners Manual



**\*FOR PARALLEL INSTALLATION WITH AN  
EXISTING FORCED AIR, GAS OR OIL  
FIRED FURNACE (U.S. ONLY)  
\*FOR INSTALLATION AS A CENTRAL FURNACE**

**CAUTION:**  
Read All Instructions Carefully Before  
Starting the Installation or Operating the  
Furnace.

**Improper Installation May  
Void Your Warranty**

**Save This Manual For  
Future Reference**

**DO NOT USE THIS FURNACE IN A MOBILE HOME OR TRAILER**



**UNITED STATES STOVE COMPANY**  
227 Industrial Park Road  
P.O.Box 151  
South Pittsburg, TN 37380  
(423) 837-2100



851239B 10/98

# CONGRATULATIONS!

You've purchased one of America's Finest Wood and Coal Burning Furnaces. By heating with wood and coal you're helping to CONSERVE AMERICA'S ENERGY! Wood is our Renewable Energy Resource. Please do your part to preserve our wood supply. Plant at least one tree each year. Future generations will thank you.

**NOTE: YOUR UNIT MUST BE INSTALLED BY A QUALIFIED FURNACE INSTALLER. IMPROPER INSTALLATION COULD VOID YOUR WARRANTY!**

**NOTE: (See Page 5, First Paragraph)**

## tools and materials needed

### TOOLS

Pencil  
6 Foot Folding Rule or Tape  
Tin Snips  
Drill, Hand or Electric  
Drill Bit (For Sheet Metal Screws) 1/8" Dia.  
Screw Driver (Blade-Type)  
Gloves  
Sabre Saw  
5/16" Nut Driver or  
5/16" Socket with Ratchet

### MATERIALS

6" Pipe, 6" Elbow, Collar and Thimble; as required  
(24 gauge min.)  
1/2" Sheet Metal Screws  
6" Inside Diameter Listed Residential Type or  
Building Heating Appliance Chimney or Existing  
Masonry Chimney (SEE Page 8).  
Electrical Wiring  
6" Draft Regulator  
1/2" Conduit  
(Conduit Connectors)  
Furnace Cement (Manufacturer Recommends:  
Rutland Black - Code 78 or Equivalent  
Plenum and Duct Work as Required

# Caution Labels

Your Furnace has the following labels. Read and obey all labels.

**DANGER: RISK OF FIRE OR EXPLOSION.**

**DO NOT** burn garbage, gasoline, drain oil, or other flammable liquids.

**WARNING: FIRE HAZARD.**

**DO NOT** operate with fire draft exceeding .06 inches W.C.

**DO NOT** operate with fuel loading or ash removal doors open.

**DO NOT** store fuel or other combustible material within the marked installation clearances.

**DO NOT** store fuels, paints, thinners, flammable liquids, or other highly volatile substances in the furnace room.

**CAUTION: HOT SURFACES**

Keep children away.

Do not touch during operation.

<p><b>CAUTION!</b> <b>INSPECT FLUE PIPES, FLUE PIPE JOINTS AND FLUE PIPE SEALS REGULARLY TO ENSURE THAT SMOKE AND FLUE GASES ARE NOT DRAWN INTO, AND CIRCULATED BY, THE AIR CIRCULATION SYSTEM.</b></p>	<p><b>CAUTION!</b> <b>CLEANOUT OF THE HEAT EXCHANGER, FLUE PIPE, CHIMNEY, AND DRAFT INDUCER IF USED, IS ESPECIALLY IMPORTANT AT THE END OF THE HEATING SEASON TO MINIMIZE CORROSION DURING THE SUMMER MONTHS, CAUSED BY ACCUMULATED ASH.</b></p>
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**SAFETY NOTICE:** If this heater is not properly installed, a house fire may result. For your safety, follow the installation directions. Contact local building or fire officials about restrictions and installation inspection requirements in your area.

# rules for safe installation and operation

Read these rules and the instructions carefully. Failure to follow them will cause a hazard that could result in death, serious bodily injury, and/or property damage.

1. Check your local codes. This installation must comply with their rulings.
2. Do not install this furnace in a mobile home or trailer.
3. Always connect this furnace to a chimney and vent to the outside. Never vent to another room or inside a building.
4. Do not connect this furnace to an aluminum Type B gas vent. This is not safe and is prohibited by the National Fire Protection Association Code. This furnace requires a masonry or listed factory built chimney for residential type or building heating appliance chimney. Use a 6" diameter chimney or larger, that is high enough to give a good draft. (See Page 8)
5. Be sure that if a masonry chimney is used, it is safely constructed and in good repair. Have the chimney inspected by the Fire Department or an inspector.
6. Inspect chimney connector and chimney before and frequently during the heating season for any deposit of creosote or soot which must be removed (see Chimney Maintenance, page 21.)
7. Provide air for combustion into the room where the furnace is located. If the intake is not in the same room, air must have free access to the room.
8. **CAST IRON PARTS MUST BE "SEASONED" TO AVOID CRACKING. BUILD ONLY SMALL FIRES ON FIRST USE.**
9. To prevent injury, do not allow anyone to use this furnace who is unfamiliar with the correct operation of the furnace.
10. For further information on using your furnace safely, obtain a copy of the National Fire Protection Association (NFPA) publication "Chimney's, Fireplaces and Solid Fuel Burning Appliances" NFPA 211. The address of the NFPA is Batterymarch Park, Quincy, MA 02269.
11. Keep the ashpit section free of excess ashes. Do not allow ashes to stack higher than the sides of the ash pan.
12. **DISPOSAL OF ASHES** - Place ashes in a metal container with a tight fitting lid. Keep the closed container on a noncombustible floor or on the ground, well away from all combustible materials. Keep the ashes in the closed container until all cinders have thoroughly cooled. The ashes may be buried in the ground or picked up by a refuse collector.
13. **CAUTION** - The special paints used on your furnace may give off some smoke while they are curing during first few fires. Build small fires at first. The metal used in construction of the furnace and duct work has a light coating of oil. This could give off smoke and/or odors from registers when furnace is used for the first time. This should disappear after a short period of time. Once this burn-off has occurred, it should not reoccur.
14. **CARING FOR PAINTED PARTS** - This furnace has a painted outside jacket, which is durable but it will not stand rough handling or abuse. When installing you furnace, use care in handling. Clean with soap and warm water when furnace is not hot. **DO NOT** use any acids or scouring soap, as these wear and dull the finish. **DISCOLORATION WILL OCCUR IF THE FURNACE IS OVERFIRED. FOLLOW OPERATING INSTRUCTIONS CAREFULLY.**
15. Keep the feed and ash doors closed at all times except while tending the furnace.

Your Furnace is designed to be installed in a parallel air flow arrangement with a gas or oil-fired forced air upflow-type central furnace, or it may be installed as a central furnace.

## HOW THE FURNACE FUNCTIONS

Your Supplemental Furnace is designed to be a supplemental or central heating source for your home. This solid fuel furnace may be installed in conjunction with a properly operating central furnace that is listed or certified in accordance with nationally recognized safety standards and equipped with the required controls and other safety features and which has been installed with appropriate standards of National Fire Protection Association with installation clearances specified in the furnace nameplate marking. The installation must be accomplished by a qualified agency (one who is engaged in, and is responsible for, or is thoroughly familiar with the installation and operation of the gas, oil, and solid fuel burning heating appliances, who is experienced in such work, familiar with all precautions required, and has complied with all the requirements of the authority having jurisdiction.) The installation shall be in strict accordance with the manufacturer's installation instructions furnished with the solid fuel furnace.

The chimney connector of the furnace is to be installed to provide clearances to combustible material not less than specified in the individual classifications and marked on the furnace. The chimney connector must be connected to a chimney suitable for use with residential type or building heating appliances which burn solid fuel.

The furnace is designed to operate in either parallel or series air flow arrangement with the central furnace or as a central furnace.

**PARALLEL INSTALLATION:** The design is such that when the blower comes on,

the blower on the central system also comes on. The blower will only come on when the temperature in the plenum has reached the setting on the blower control. This is to insure that there is sufficient warm air in the system to make it efficient for the unit to operate. When the central system thermostat calls for heat, the central system will operate by the burner igniting and the blower coming on. It is possible that both systems will operate simultaneously. It is recommended that for the most efficient use of your Supplemental Furnace, that it be fired as much as possible in order to reduce the demand on your existing central heating system. This unit has an optional motorized natural draft kit that operates from a wall thermostat. When the temperature falls below the setting on the wall thermostat, the motorized natural draft will open to increase heat.

The warm air supply outlet of the supplementary furnace shall not be connected to the cold air return inlet of the central furnace because the possibility exists of components of the central furnace overheating and causing the central furnace to operate other than is intended.

**SERIES INSTALLATION:** This type of installation uses only the blowers of the existing central furnace. The solid fuel fan/limit control must also control the functions of the existing furnace. All electrical power must come from a single branch circuit (see Fig. 15).

**CENTRAL FURNACE INSTALLATION:** As a central furnace, the unit functions independently of any other system. The blower will come on when the plenum temperature reaches the setting on the blower control.

# Model 1537Q Dimensions

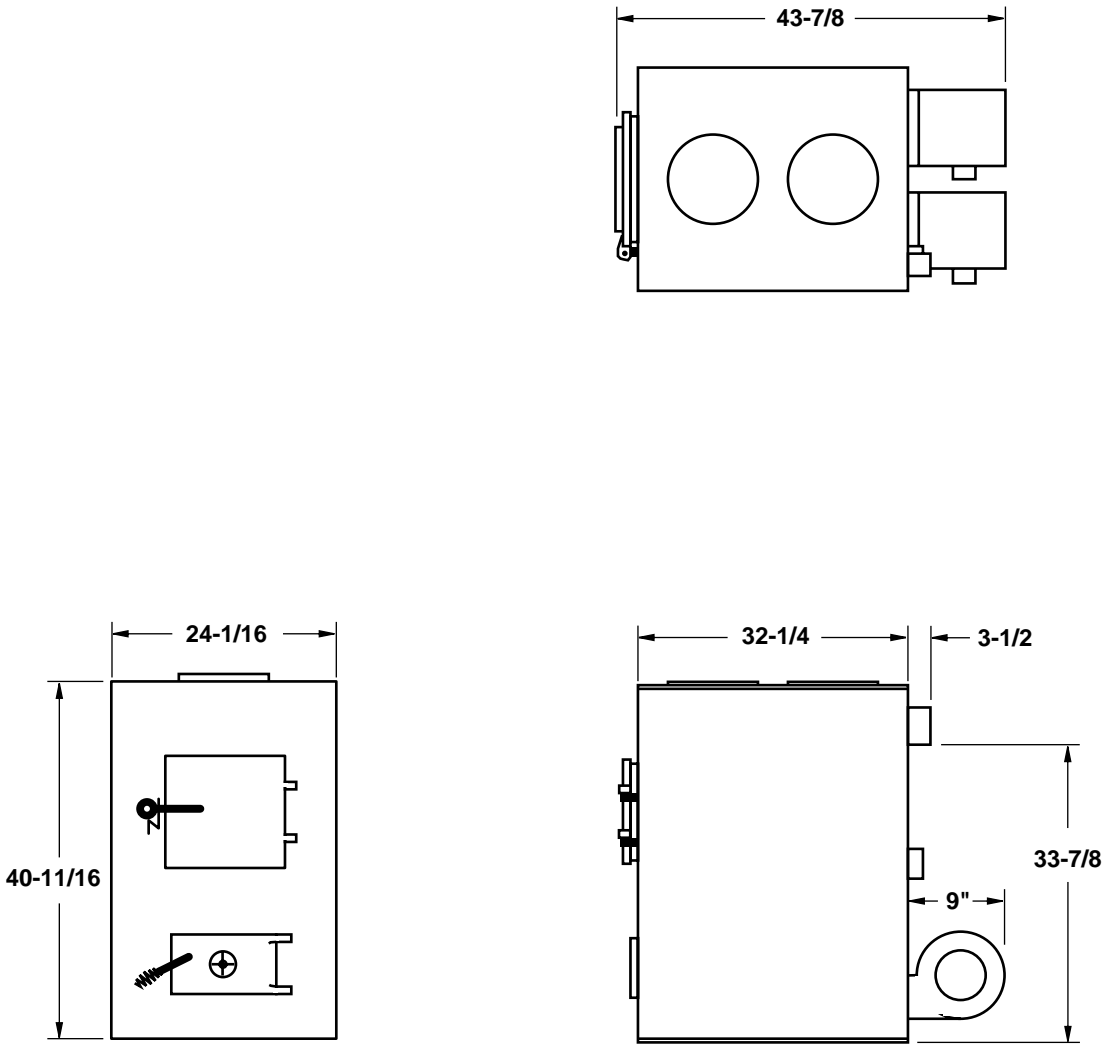
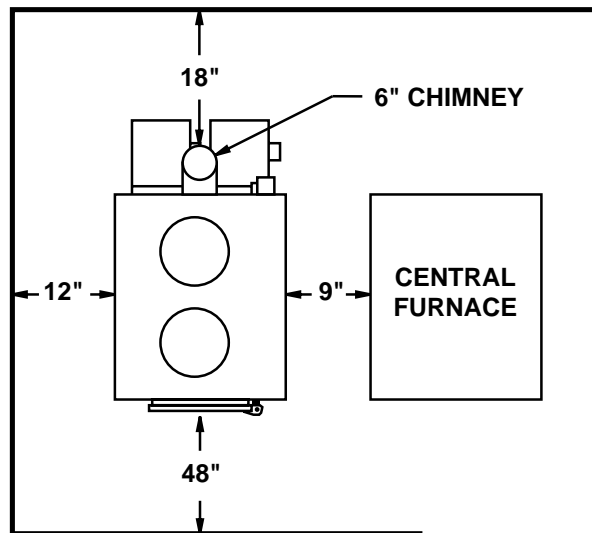


FIG. 1

FIG. 2



## Locating the Furnace

1. The furnace should be located in the same room as the central system and as close as possible, but no closer than 9". There should be no wall between the furnace and the warm air outlet duct that is connected directly to the warm air outlet plenum of the central furnace. See Fig. 2.

2. The unit will require installation with the following clearances:
- Unit to sidewall . . . . . 12" (305 mm)
  - Unit to backwall . . . . . 30" (760 mm)
  - Chimney connector pipe to sidewall . . . . . 21" (530 mm)
  - Chimney connector pipe to backwall . . . . . 18" (460 mm)
  - Hot air ducts to combustibles . . . . . 6" (150 mm)

**NOTE: Install only on a noncombustible floor.**  
(REFER TO FIG. 2 & 3)

3. Place the furnace on a noncombustible floor.
4. Check figures 2 and 3. Be sure you have the clearances shown from the furnace and the connector pipe to combustible surfaces. If you have a solid brick or stone wall behind your heater, you can place the furnace as close as you wish to the wall. If the wall is only faced with brick or stone, treat it as a combustible wall.

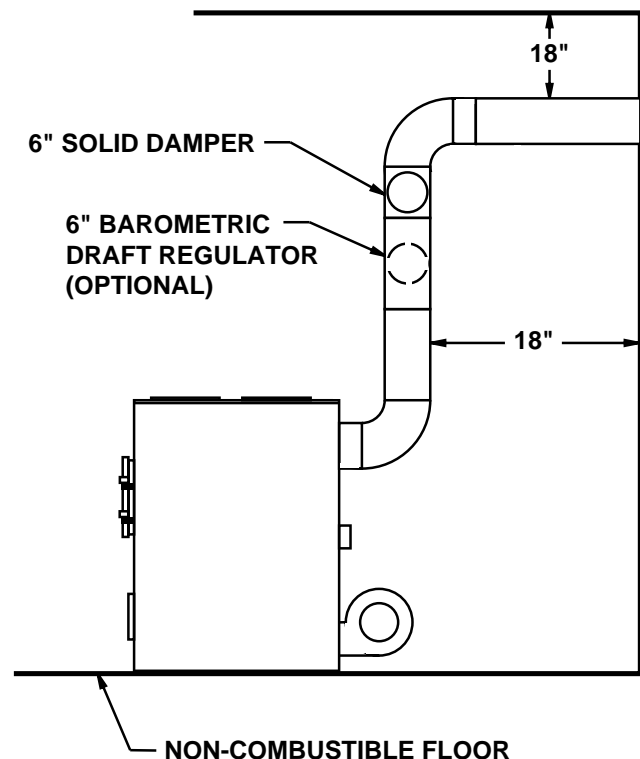
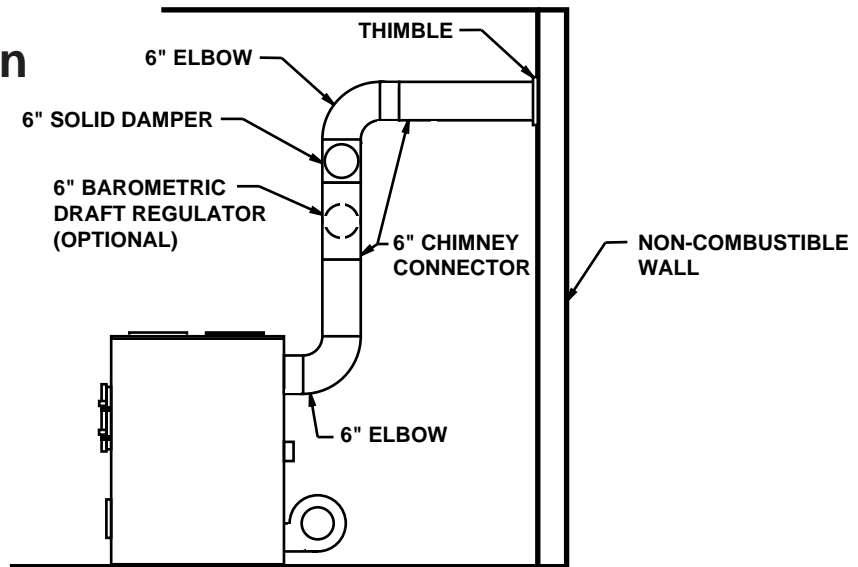


FIG. 3

# chimney connection

FIG. 4



## MASONRY CHIMNEY

Before using an existing masonry chimney, clean the chimney and inspect the flue liner to be sure it is safe to use. Make repairs before attaching the furnace. See Page 4, item 5.

Look at Fig. 4. The connector pipe and fittings you will need to connect directly to a masonry chimney are shown.

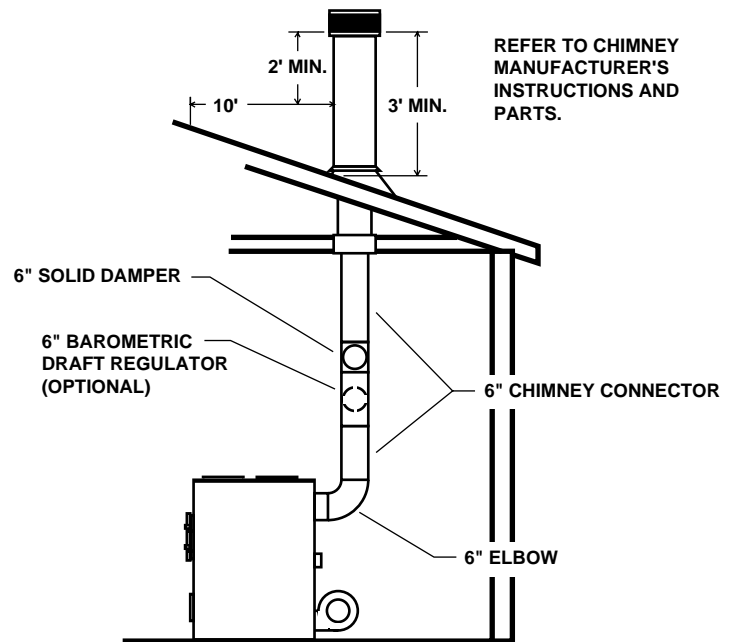
The chimney connection should be as short as possible.

If the connector pipe must go through a combustible wall before entering the masonry chimney, consult a qualified mason or chimney dealer. The installation must conform to local fire codes, and N.F.P.A. 211.

### **DO NOT CONNECT THIS FURNACE TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

The chimney used for a furnace must not be used to ventilate the cellar or basement. If there is a cleanout opening at the base of the chimney, close it tightly.

FIG. 5



## LISTED FACTORY BUILT CHIMNEY

Carefully follow chimney manufacturer's instructions. Use only a Listed Residential Type or Building Heating Appliance Chimney. If your chimney starts at the ceiling (Fig. 5), you will need enough 6" pipe to reach the ceiling.

The top of the chimney must be at least 3 feet above the roof and be at least 2 feet higher than any point of the roof within 10 feet (Fig. 5).



# Rules for Connector Pipe Installation

1. The crimped end of the chimney connector fits inside the furnace flue collar. Install additional chimney connector and elbow with the CRIMPED END TOWARD THE FURNACE. This will allow any condensation in the flue to run back into the furnace. Use 6" dia. (minimum 24 gauge) black chimney connector.
2. Slope any horizontal pipe upward toward the chimney at least 1/4 inch for each foot of horizontal run.
3. You must have at least 18 inches of clearance between any horizontal piping and the ceiling. (See Fig. 3)
4. The chimney connector must not extend into the chimney flue (See Fig. 6).
5. Seal each chimney connector pipe joint with furnace cement. Also seal the pipe at the chimney.
6. Use 3 sheet metal screws at each chimney pipe joint to make the piping rigid.
7. The chimney connector may include a section for a barometric draft regulator between the furnace and the chimney (Fig. 4, 5, 6, & 7). The barometric draft regulator must be installed in the same room (same pressure zone) as the furnace.
8. Install the barometric draft regulator strictly in accordance with the instructions that are provided with the barometric draft regulator.
9. A solid damper can be placed between the barometric draft regulator and the chimney. (Fig. 4, 5, 6, & 7)

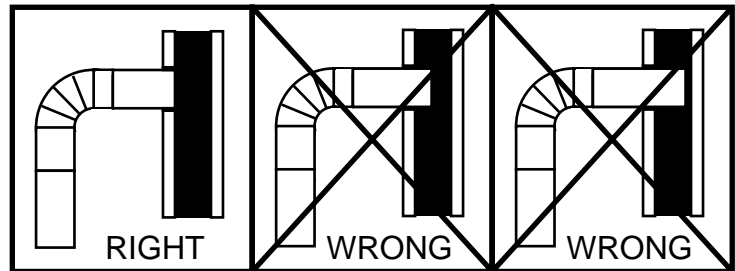


FIG. 6

## Adjusting the Barometric Draft Regulator

1. Drill a hole in the chimney connector within 18" of the flue collar below the barometric draft regulator just large enough for the tube of the manometer.
2. Build a fire after all chimney connections have been made.
3. Use a manometer to measure the draft in the flue. (U.S. Stove Model DG-26)
4. Adjust the barometric draft regulator to obtain a draft of 0.05" - 0.06" W.C. under stable conditions.

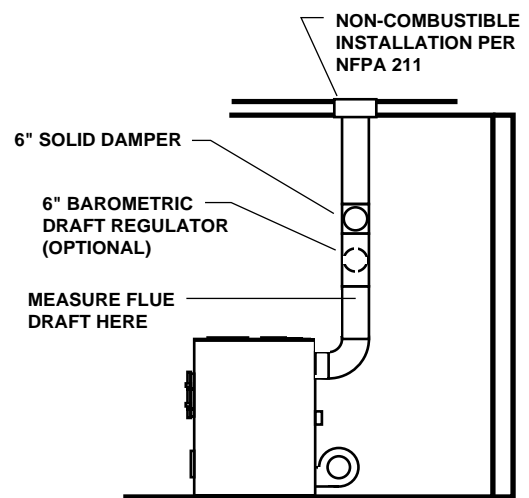


FIG. 7

# Assembly of Furnace

Your furnace requires the following items to be assembled or installed by the service person:

- Feed Door Handle
- Feed Door Latch
- Smoke Curtain
- Blowers and Blower Controls
- Electrical Connections

1. Remove all parts from inside the furnace and inspect for damage, including the firebrick as some breakage could occur during shipment.
2. Assemble the feed door handle as shown in Figure 8. Install the latch as illustrated in Figure 9.
3. Attach the smoke curtain to the firebox as shown in Figure 10.
4. Install Honeywell thermostat on rear of furnace cabinet as shown in Figure 11.
5. Remove blowers from cartons. Attach clip nuts as per Figure 11. Install blowers and gaskets with 1/4"-20 x 3/4" bolts as shown.
6. Wire right side blower first per wiring diagram (Figure 12) and replace cover on junction box on blower.
7. Wire left blower same as above and replace cover.
8. Complete all wiring in junction box by referral to the wiring diagram and Figure 11 - Blower and Component Assembly. Replace cover on junction box.
9. Check operation of shaker grates with grate handle before operating furnace.

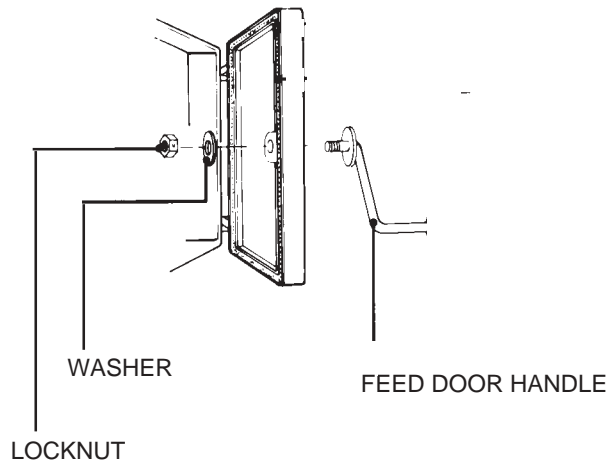


FIG. 8

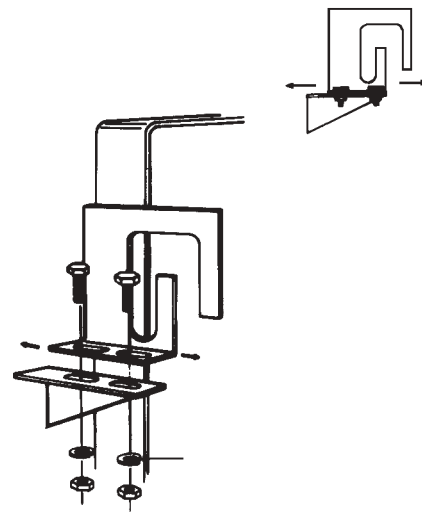


FIG. 9

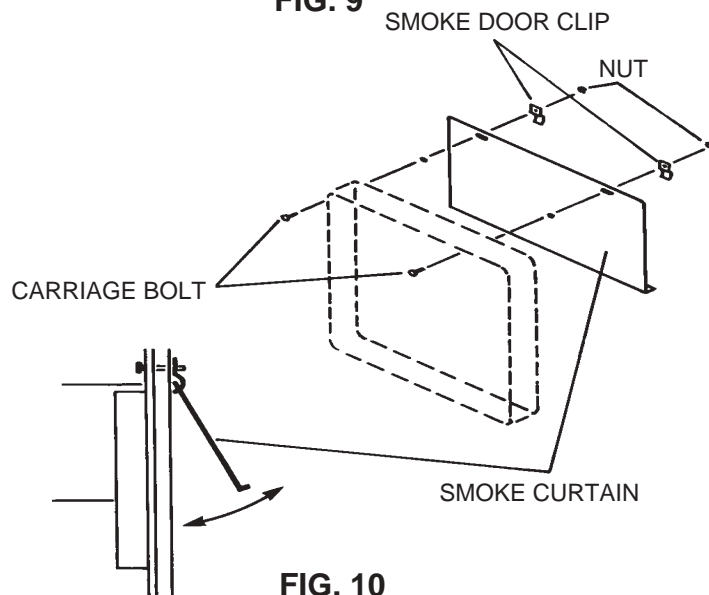
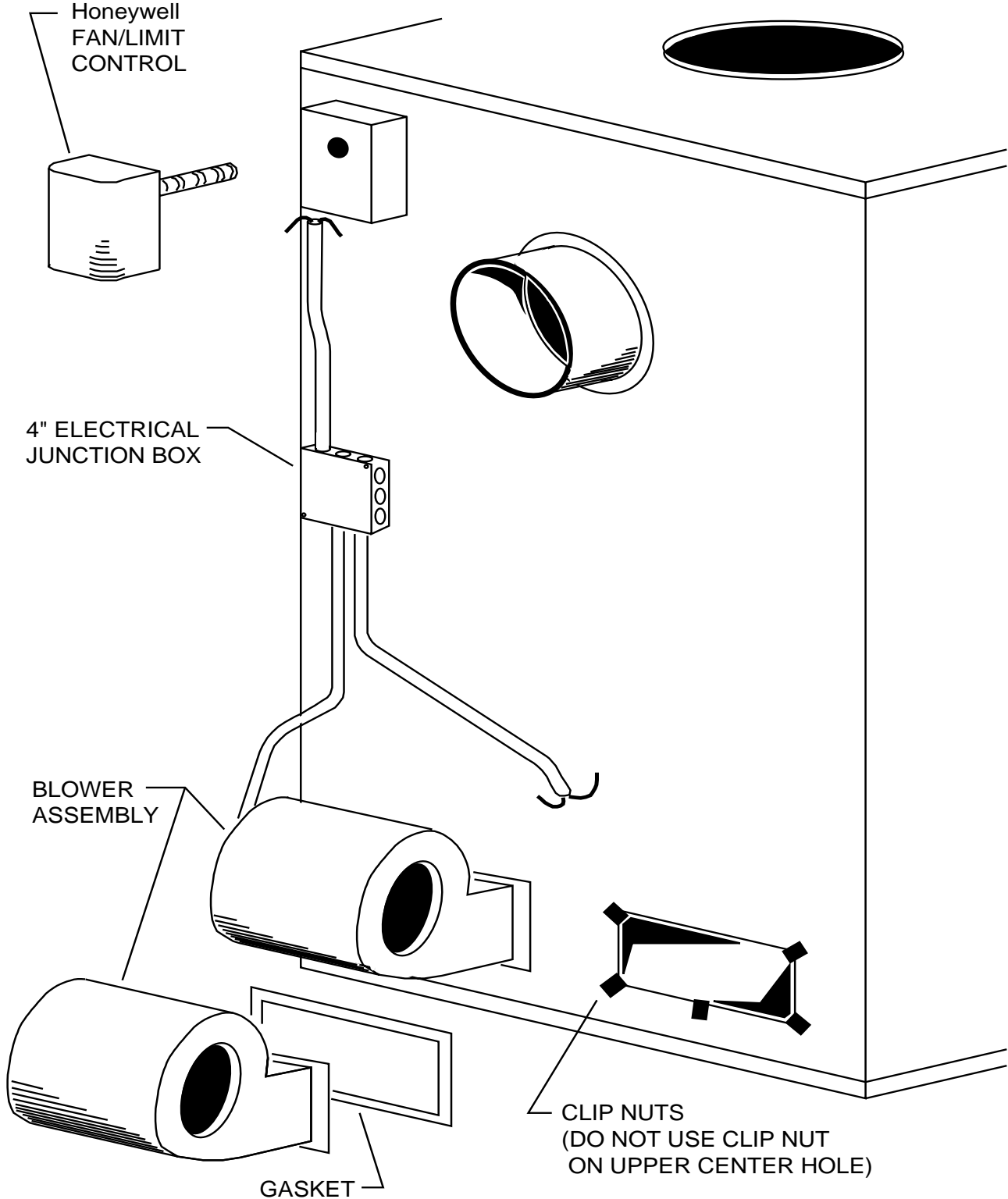


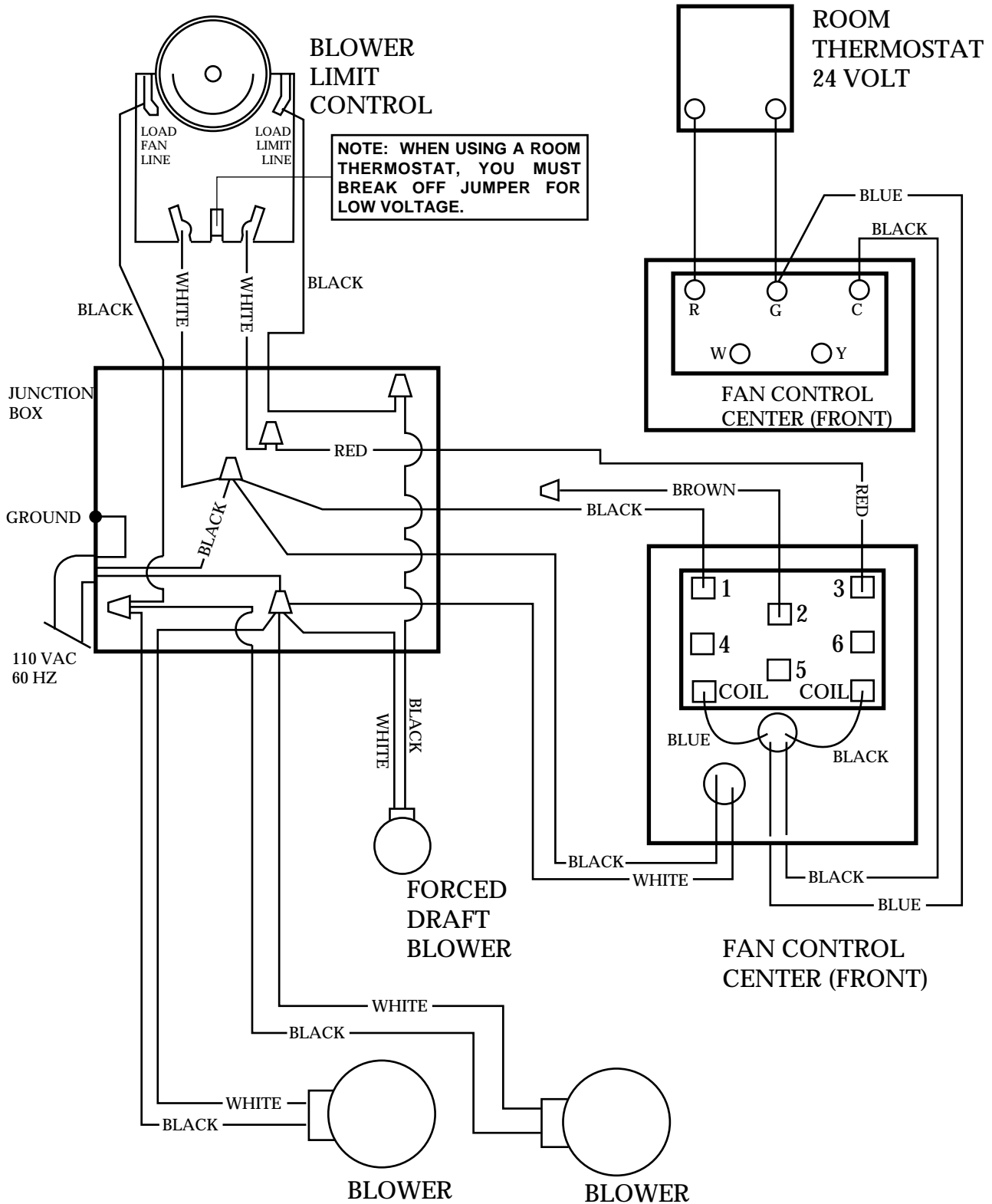
FIG. 10

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# Blower & Component Assembly - FIG. 11



# Model 1537Q Wiring Diagram - FIG. 12



# Installation

**Please see all methods of Installation in Appendix at the rear of this booklet.**

This is a furnace, not a free standing stove. You must direct heated air from 8" outlets away from the furnace, or it will not function properly.

1. This installation must be done by a qualified heating equipment installer.

2. The installation is to be done in compliance with National Fire Protection Association installation standards: No. 89M, 90B, 211, 70 (National Electric Code) and Uniform Mechanical Code 913, 6-4, in the states where applicable. (Their code offers connecting smoke pipe connectors into chimney with other fuel burning appliances.)

3. Rooms large in comparison with size of the appliances:

a) Wood or Coal Burning Furnace needs air for combustion and circulation to house.

b) Provision must be made to make up this air and not starve gas or oil furnace of combustion air.

c) Have "Authority Having Jurisdiction" determine that air is of adequate makeup. (Reference N.F.P.A. Nos. 30 & 54, Code for Installation of Gas & Oil Equipment)

4. Have "Authority Having Jurisdiction" to inspect all chimneys and installations for adequate venting and for compliance with standard and local codes and regulations regarding installation of wood burning appliances.

5. Installation of Supplemental Heat Application to Existing Central System. (See Fig. 2 for typical installation.)

a) Place Wood or Coal Burning Furnace so that the chimney connector will be as short as possible and avoiding unnecessary sharp turns in the smoke pipe connector and the installation of devices that would create excessive resistance to the flow of flue gases.

b) Locate the Wood or Coal Burning Furnace as close as practical to the existing central hot air heating system, maintaining clearances as stated on the label below the fuel door.

c) Clearances from combustible materials must be complied with as stated on the label below the fuel door:

Unit to Combustible:

Front: 48"

Back: 30"

Sides: 12"

Plenum to Ceiling: 6"

Pipe to Combustible:

Sides: 21"

Back: 18"

The installation must be made only on a noncombustible floor.

d) Install the smoke pipe connector to the chimney with 26-gauge pipe and elbows (to be purchased separately), maintaining the proper clearances for the specific model. Make sure that the proper clearances as stated on the label and earlier in this manual are maintained. Seal the smoke pipe in the chimney with furnace cement. (The chimney connector shall be securely supported, and joints fastened with sheet metal screws or rivets.)

e) Install 8" diameter heat pipe to plenum of the central hot air furnace. Use 26-gauge pipe and connectors (to be purchased separately). (See Fig. 14) If central air conditioning is installed in the plenum, install heat pipe above the air conditioning unit. Secure heat pipe connection with supports and sheet metal screws.

f) Connect electrical supply in the electrical junction box that is mounted on the back of the Wood Burning Furnace. See Wiring Diagram (Fig. 12). Remove the cover from electrical junction box connect power supply wires to wires designated, using wire nuts. The power cord supplied may be used for installation, if permitted by local codes and regulations. If the power cord supplied cannot be used, the power supply wiring must be 90 degrees Centigrade in a metal cable and should be completed by a qualified installer complying with NFPA Standard No. 70 and local codes.

g) Optional Plenum Fan Control Switch (Part No. 11PCS) is available for installation on the plenum of central hot air heating furnace. The purpose of this switch is to activate the circulating fan of the central hot air heating furnace when the temperature in the plenum exceeds 120 degrees Fahrenheit. The switch would activate the fan at 120 degrees Fahrenheit, and would shut off the circulating fan when the temperature in the plenum is reduced to 100 degrees Fahrenheit. This avoids overheating the plenum.

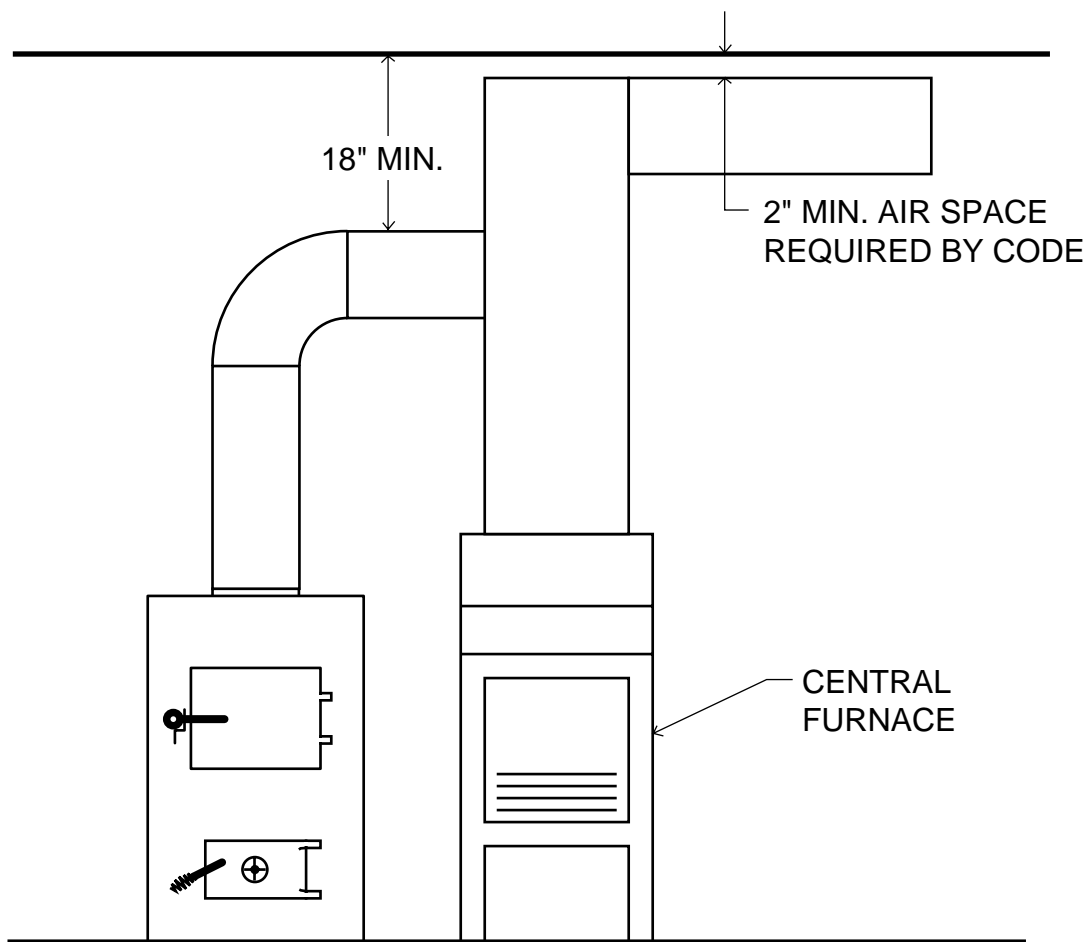
The electrical supply for operation of this fan control switch is to be obtained from same electrical supply as the central hot air heating system. (See Fig. 14) Follow the instructions of the wiring diagram (Fig. 15). Do not make connections across Limit Control in the furnace.

Make electrical connections in electrical junction box presently mounted on the furnace. Make electrical connections in accordance with NFPA Standard No. 70 and local codes in the power supply junction box (See Fig. 15). The wiring to complete the connections should be 18 AWG minimum copper and 90 degrees Centigrade in a cable.

# Power Failure Instructions:

Operation after loss of power —

- 1 Remove filter if provided.
- 2 Do not expect to keep home at normal temperatures.
- 3 Do not load fuel above bottom of feed door.
- 4 Set ash pan spin draft maximum one turn open.



(U.S. ONLY)  
FIG. 13

# Central Installation (U. S. & Canada)

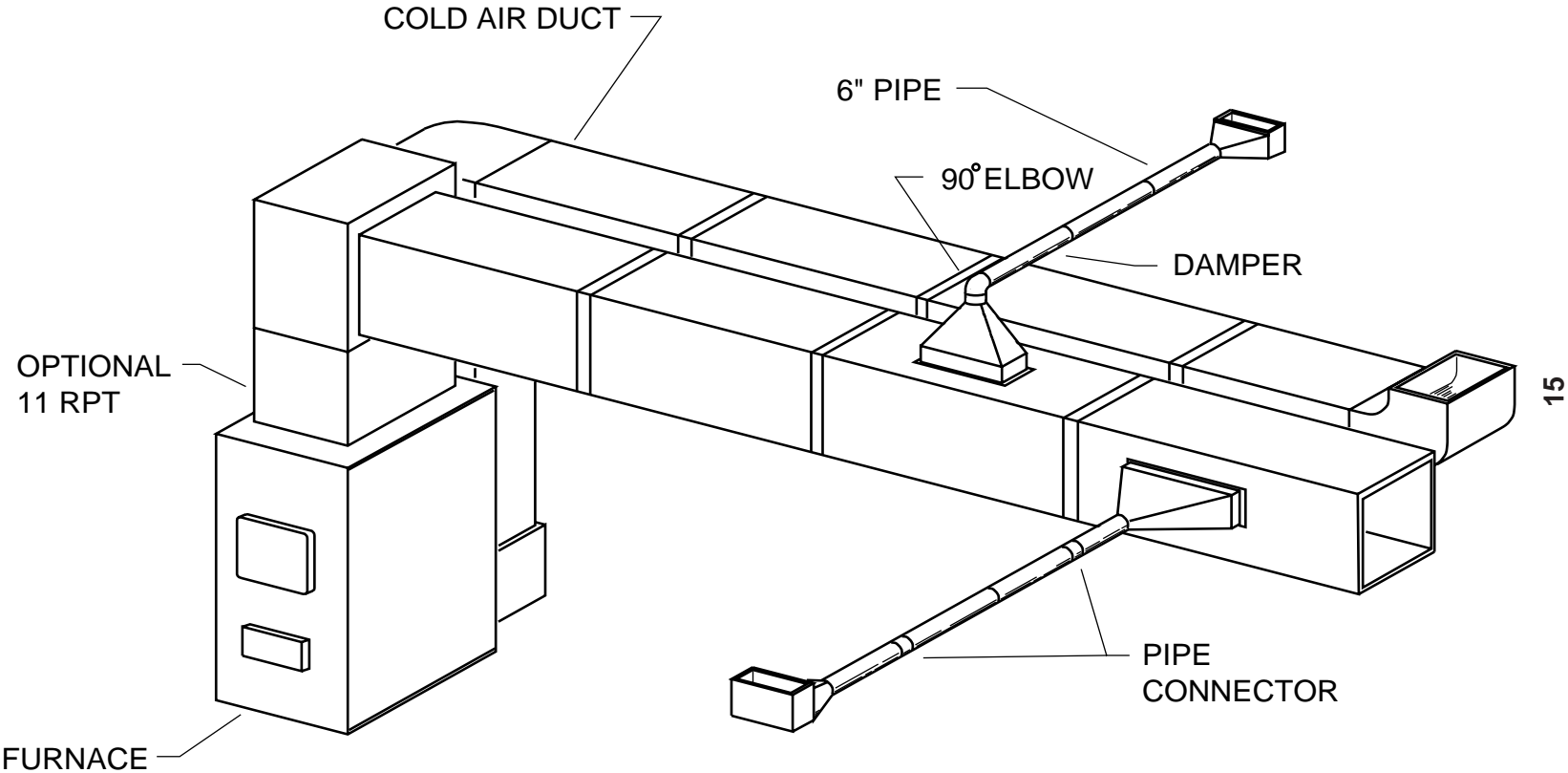
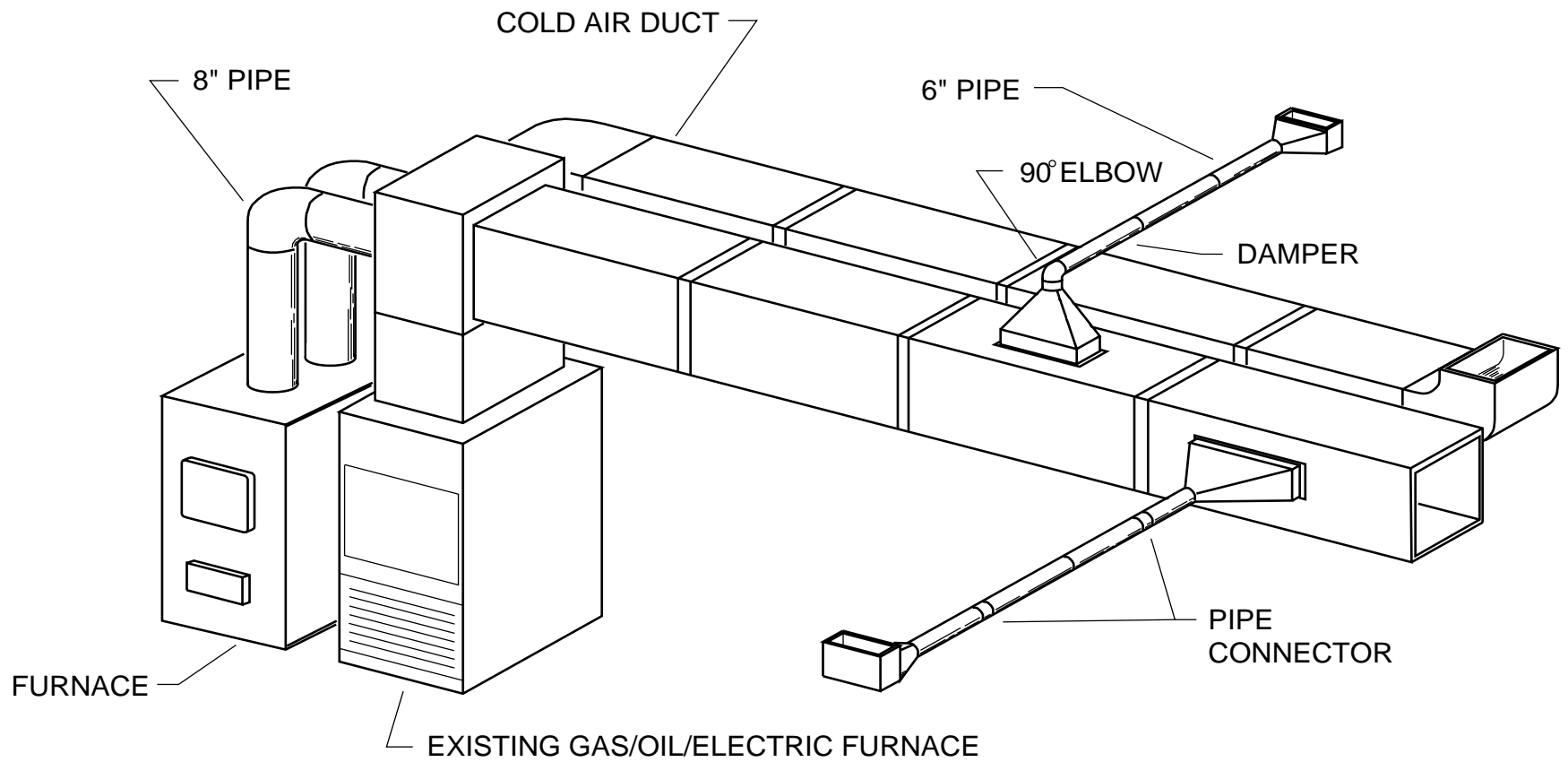


FIG. 14

# Add-On Installation (U. S. Only)

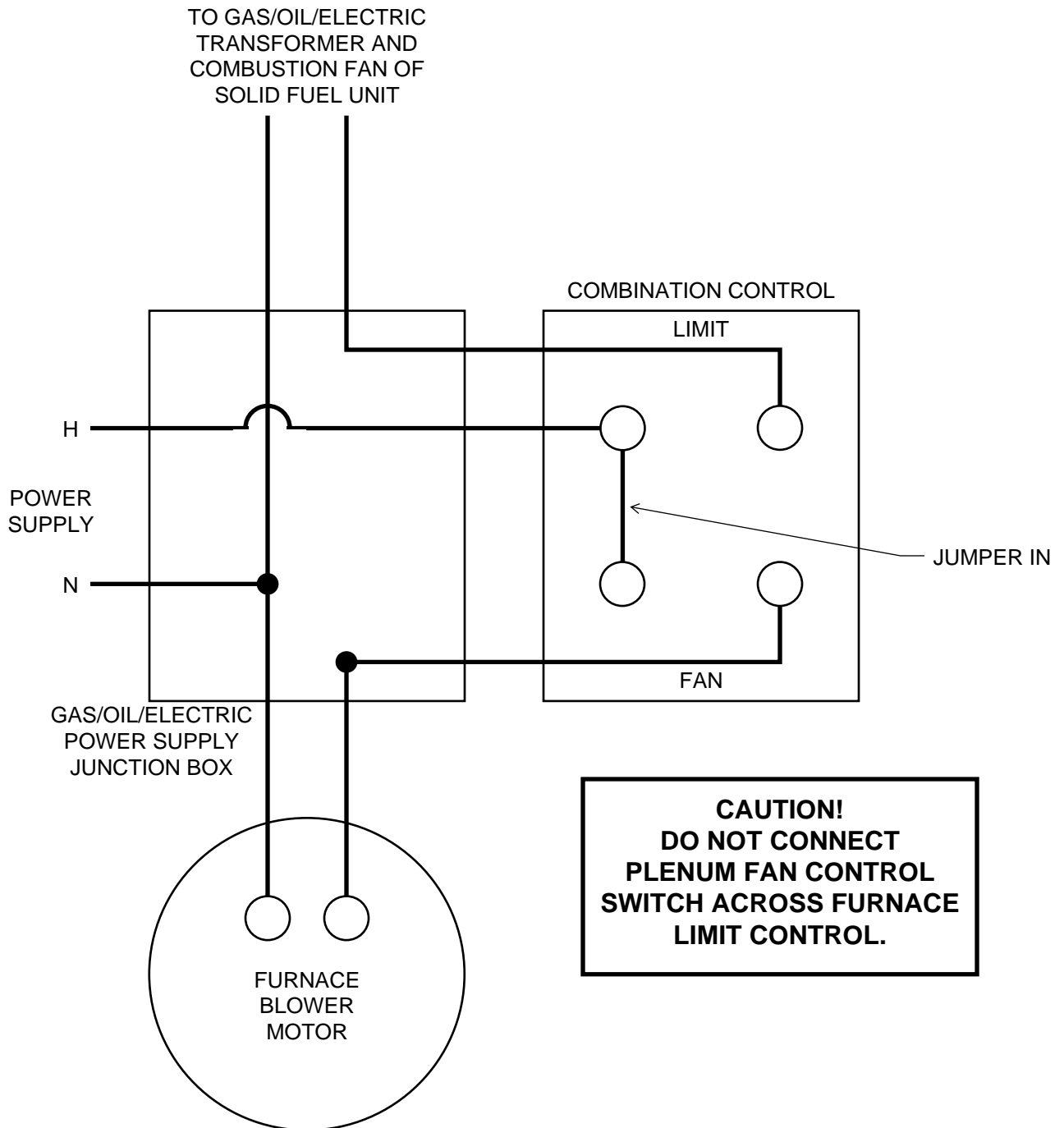


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FIG. 14-1



# Series Installation Wiring Diagram - FIG. 15



# operating instructions

Your Clayton Furnace is capable of burning Wood or Coal.

**WOOD BURNING:** (1) use Hardwood, 18" to 26", split and air dried (seasoned) for six months. (2) set thermostat to "HIGH" before opening feed door. (3) add wood to a convenient level.

**BURNING COAL:** Clayton Furnaces are capable of burning Bituminous coal and Anthracite coal. Anthracite is perhaps the best coal fuel because its long even burn time, high heat output, and cleanliness make it a good choice for the home. However, keep in mind it is a much more difficult fuel to use, requires more care and patience, is not so widely available, and is usually much more expensive than Bituminous.

**SIZE OF COAL:** Most sizes of Bituminous Coal will work in the Clayton Furnace; for best results we recommend large "nut" coal to small "egg" coal (1-3/4" diameter to 4" diameter). When burning Anthracite, use "egg" or "broken" with sizes between 2-5/16" thru 4-3/8". Note that it is important to the long life of your stove to buy coal which has been sized and cleaned. Cleaning insures removal of rocks and other minerals. Never use coal smaller than 1" or larger than 5" in diameter. Small sized coal will smother the fire. Too large a size of coal will not burn well.

**STOVE OPERATION:** All coal fires should be started with wood which will allow the fire to get hot enough to ignite the coal. The best ignition fires utilize dry pine or other resinous soft woods as kindling, with hard wood (oak, hickory, ash) added to increase the heat prior to addition of the coal.

**BURNING BITUMINOUS:** Once your kindling and wood fire has produced a bed of well established coals, start adding coal in layers allowing each to ignite before adding more. Bituminous has a high volatile content and, as a result, should be fired with the "conical method" - with the highest portion of your firebed in the center of the firebox. The first flames will be long and generally orange or yellow and produce quite a bit of smoke. As the gases burn off the flames become shorter, change color and produce less smoke.

Once the fire is WELL ESTABLISHED add coal to the center of the firebox forming the cone. Burning in this fashion allows heat to drive off the volatile gases, and turbulence created increases the burn efficiency. There will have to be some experimenting with the individual setup as no two chimney's or installations are going to be the same. Just remember to allow enough secondary air to enter the firebox and keep the stove pipe damper open so that volatiles are properly burned. Before refueling, take the time to break up the cone a little with a poker, especially if it has caked over or formed a crust. But, be careful not to mix the coal as this increases the chances of forming clinkers. When shaking the grate(s) be gentle. Just a few short movements - a couple of "cranks" is better than a lot of agitation. The objective is to remove a small amount of the ashes without disturbing the fire. Stop when you see a glow in the ashes or the first red coals fall into the ash pan. Excessive shaking wastes fuel and can expose the grate(s) to very high temperatures which can cause warpage or burnout.

For overnight operation (long duration burn time) shake the fire and add coal, retaining the center cone. Once the volatiles are burned off, close the feed door and adjust the stove pipe damper. Then adjust the thermostat to the desired heat level.

More MAINTENANCE will be need with bituminous than with anthracite coal as more soot will collect on heating surfaces and in pipes, requiring more frequent cleaning.

**ANTHRACITE:** Before starting the fire open - the stove pipe damper, turn the automatic thermostat to high, open the ash pit door and feed door, place newspaper and finely split kindling on the grate, light the paper, add larger hard wood after the kindling is burning brightly. **Caution: Never use gasoline, lantern fuel, kerosene, charcoal lighter fluid, or other flammable liquids to start or freshen up a fire in any heater.** Place the larger pieces of wood on the fire so that they are slightly separated and form a level for the addition of coal. It will take 10 to 20 minutes before this wood is thoroughly ignited. Adding coal too soon will cut the air supply and smother the fire.

Add a thin layer of coal (preferably smaller chunks) to the wood fire, being careful not to disturb it too much or cut off the draft. Then, add a second heavier layer after the coal is ignited and burning well. If necessary, add a third layer to bring the coal up to the top of the front liner (not above!). Be sure to close the ash door.

Before adding further fuel, be sure to leave a red spot of glowing coals in the center of the firebox to insure that the fire has not been smothered and to help ignite the gases given off by the new charge. A deep charge will give a more even heat and a longer fire, but it may take one to two hours before the whole bed is fully ignited.

When the fire is well established and the room is becoming warm, partially close the dampers. Some experimenting will have to take place with each particular setting of all dampers and controls as the chimney provides the draft necessary to not only exhaust the smoke, but to pull combustion air into the heater as well - and no two chimneys perform the same. Under ideal draft conditions one should be able to turn the secondary air supply on the feed door (some models) to a near closed position - but leave the ash pit damper at least partially open to prevent the fire from going out. Adjust the stove pipe damper to reduce the draft on the fire. With anthracite there will be short blue flames above the coal, except when the fire is started or a new charge is added. If, however, there is no flame then the fire needs more air from the bottom (unless it is near the end of its burn cycle and needs to be recharged).

Only when the coal is burned down to half its original depth it is time to add fresh coal. When doing so, open the stove pipe damper and turn the thermostat damper to high, which will allow the fire to burn off any accumulated gases. Open the feed door, and with a small rake, hoe, or hooked poker pull the glowing coals to the front of the firebox. Try not to disturb the fire too much. Next, add a fresh charge to the back being careful not to seal off the top. Close the feed door, but leave the spin damper (or thermostat) open for a few minutes until the volatile gases have burned off. It is not necessary to shake down the ashes each time you refuel the furnace. Experience will be your best teacher.

**BANKING THE FIRE:** For extended operation, such as overnight, the fire will need to be banked. To do so heap coal up along the sides and back of the firebox so that the fire gradually burns it over a longer period of time. The intensity of the fire will also be reduced without letting it go out. Follow the same procedure as for refueling. If possible, avoid shaking, as a heavier layer of ash will help reduce the intensity of the fire during this time. After loading let the fire establish itself for about 30 minutes. Then close your damper and automatic control to the point where the house does not become too cold. It is important that you begin banking early enough before retiring or leaving that you can make necessary adjustments after the fire is well established.

To revive a coal fire that is almost out, (1) open the ash door and stove pipe damper and close the spin damper on the door to get a good draft through the grate. (2) place a thin layer of dry coal over the entire top of the fire. **DO NOT POKE OR SHAKE THE FIRE AT THIS TIME!** (3) after the fresh coal has become well ignited shake the grate (just a little), refuel.

DO NOT burn coke, charcoal, high volatile bituminous coal, sub bituminous, lignite or cannel coal (sometimes called channel coal or candle coal). NEVER burn wax or chemically impregnated sawdust logs - their intended use is for fireplaces only. NEVER fill the stove or furnace above the firebrick or cast iron liner.

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**CAUTION**

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**GASES THAT ARE DRIVEN FROM FRESH COAL MUST BE BURNED OR THEY WILL ACCUMULATE AND EXPLODE. NEVER SMOTHER A FIRE WHEN ADDING FRESH COAL.**

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**CAUTION**

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**DO NOT OPERATE WITH THE FEED AND/OR ASH DOOR OPEN. THIS FURNACE IS DESIGNED FOR THERMOSTATIC OPERATION. OPERATION WITH ANY OF THESE DOORS OPEN WILL OVERHEAT AND DAMAGE THE FURNACE.**

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**CAUTION**

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**NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID, OR FLAMMABLE LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THE FURNACE.**

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**CAUTION**

---

**NEVER STORE FLAMMABLE LIQUIDS, ESPECIALLY GASOLINE, IN THE VICINITY OF THE FURNACE.**

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### ADJUSTING BLOWER LIMIT CONTROL SETTINGS

The temperature in the plenum of the warm air furnace at which the blower turns on or turns off, is controlled by the setting of the pointers in the blower limit control (See Fig. 12). These pointers may be adjusted through their entire range of settings to achieve the desired warm air output from the furnace. (See Fig. 16 Below)

1. Move both pointers towards the right (counter clockwise) - this increases the temperature setting at which the blower will turn on and off.
2. Move both pointers towards the left (clockwise) - this decreases the temperature setting at which the blower will turn on and off.
3. Move pointers away or apart from each other- this increases the time that the blower will run on each warm cycle.

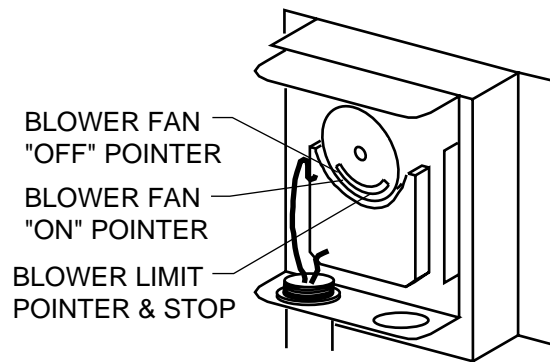


FIG. 16

## service hints

Do not expect a furnace to draw. It is the chimney that creates the draft. Smoke spillage into the house or excessive build-up of water or creosote in the chimney is not functioning properly. Correct the problem before using furnace. Possible causes are:

1. The connector pipe may be pushed into the chimney too far, stopping the draft (Fig. 6).
2. Do not connect two furnaces or a stove and a furnace into the same chimney flue.
3. The chimney used for a furnace must not be used to ventilate the cellar or basement. If there is a cleanout opening at the base of the chimney, it must be closed tightly.
4. If the chimney is operating too cool, water will condense in the chimney and run back into the furnace. Creosote formation will be rapid and may block the chimney. Operate the furnace at a high enough fire to keep the chimney warm preventing this condensation.
5. If the fire burns well but sometimes smokes or burns slowly, it may be caused by the chimney top being lower than another part of the house or a nearby tree. The wind blowing over a house or a tree, falls on top of the chimney like water over a dam, beating down the smoke. The top of the chimney should be at least 3 feet above the roof and be at least 2 feet higher than any point of the roof within 10 feet (Fig. 5).
6. See page 28 for list of trouble shooting tips.

**A DRAFT READING OF .05 TO .06 W.C. IS SUGGESTED FOR PROPER BURNING OF THIS UNIT WHEN USING WOOD OR BITUMINOUS COAL AS FUEL. WHEN USING ANTHRACITE COAL, THIS DRAFT READING IS A MINIMUM READING.**

## chimney maintenance

### Creosote and Soot - Formation and Need for Removal

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire.

When coal is burned, the products of combustion combine with moisture to form a soot residue which accumulates on the flue lining. When ignited, this soot makes an extremely hot fire.

The chimney should be inspected at least twice monthly during the heating season to determine if a creosote or soot build-up has occurred.

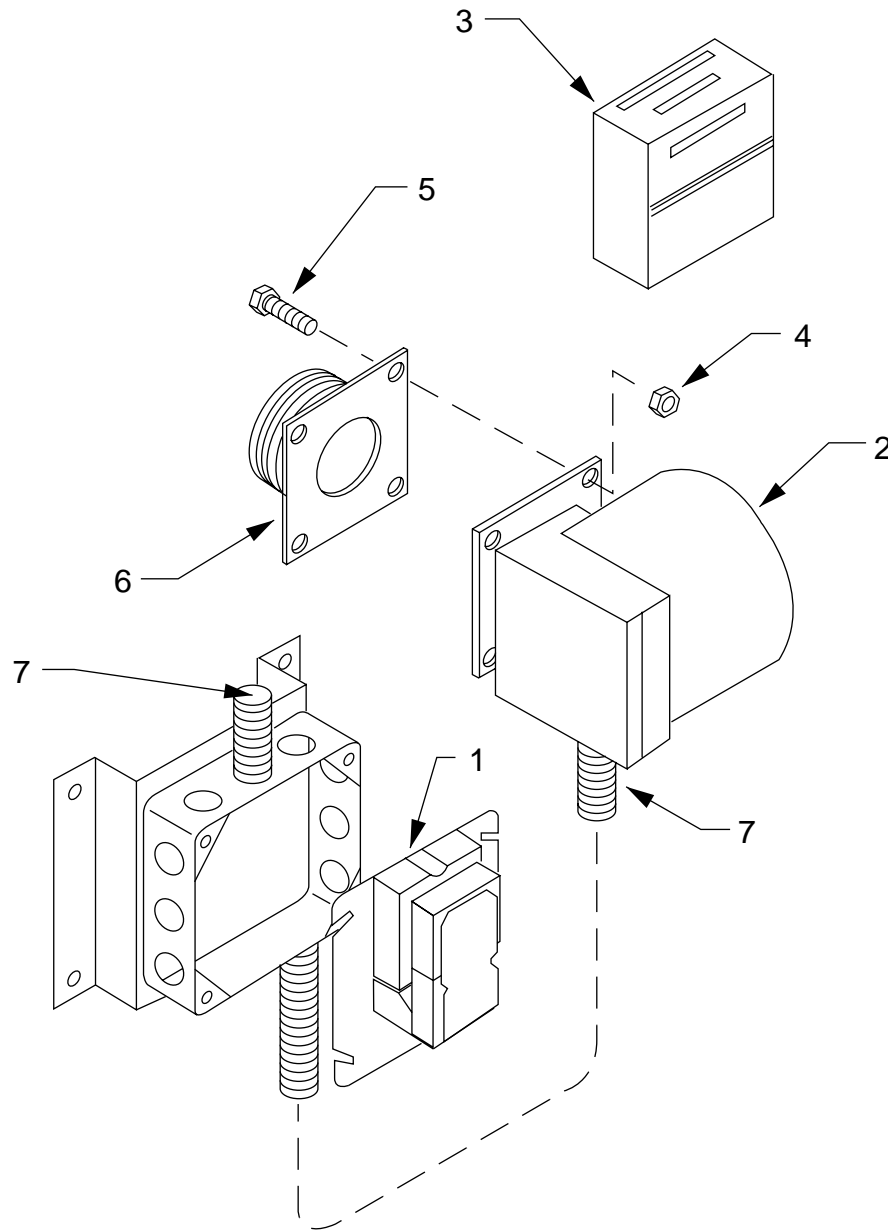
If soot or creosote has accumulated, it should be removed to reduce the risk of a chimney fire.

Chimney fires burn very hot. If the chimney catches fire, immediately call the fire department, then reduce the fire by closing the inlet air control. Pour a large quantity of coarse salt, baking soda or cool ashes on top of the fire in the firebox.

### CAUTION

**A Chimney fire may cause ignition of wall studs or rafters which you thought were a safe distance from the chimney. If you have a chimney fire, have your chimney inspected by a qualified person before using again.**

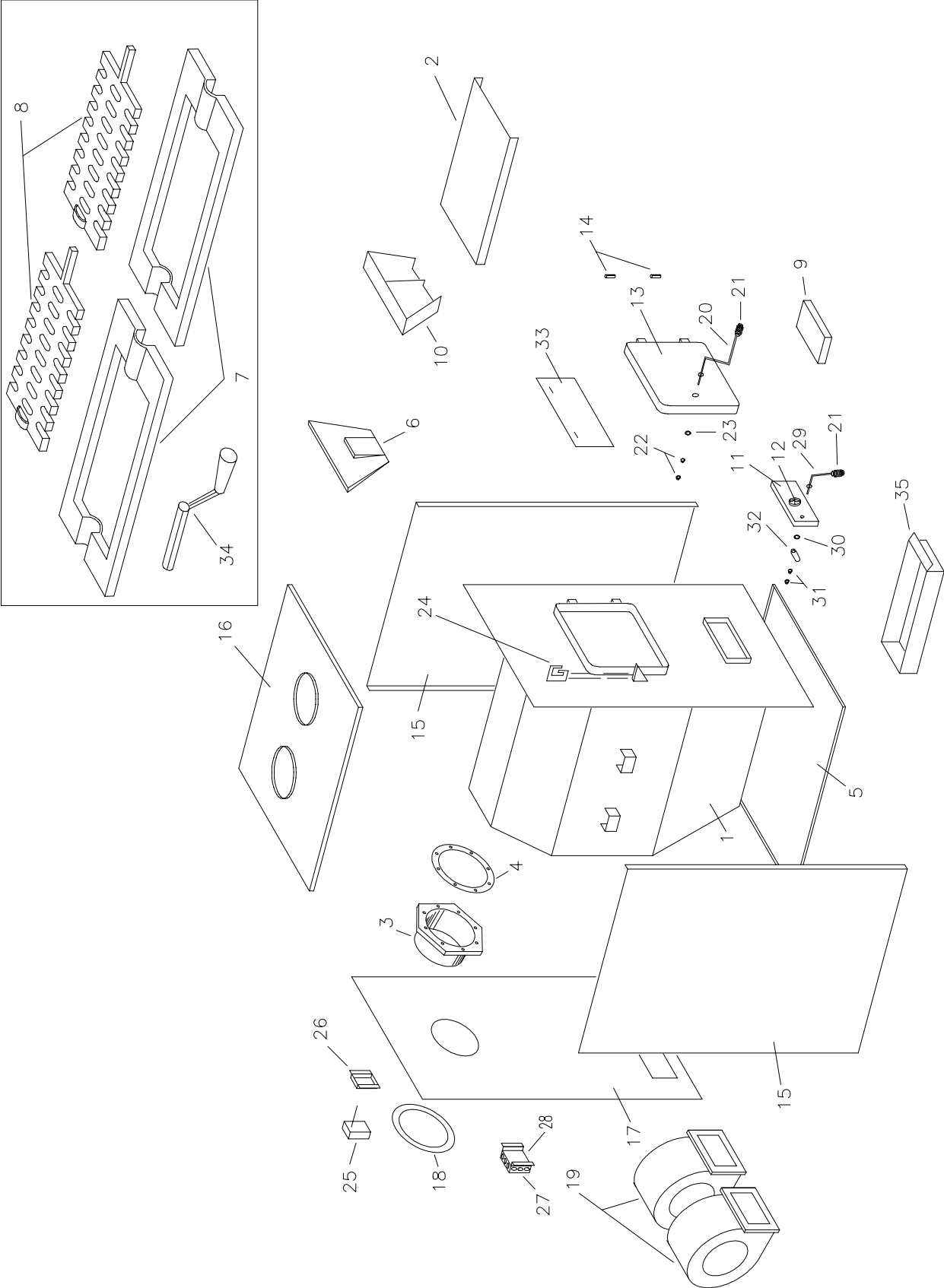
# 11DIK - DRAFT INDUCED KIT



KEY	PART NO.	DESCRIPTION	QTY.
1	80130	Fan Control Center	1
2	80243A	Forced Draft Blower	1
3	80129	Wall Thermostat	1
4	83250	Kep Nut (1/4-20)	4
5	83339	Hex Bolt (1/4-20 x 3/4) (BL,OX)	4
6	68618	Blower Mounting Plate	1
7	68231	Fan Control Cord Assembly	2
N/S	80006	Wire Nut 73B	4

N/S = NOT SHOWN

# Model 1537Q - Parts

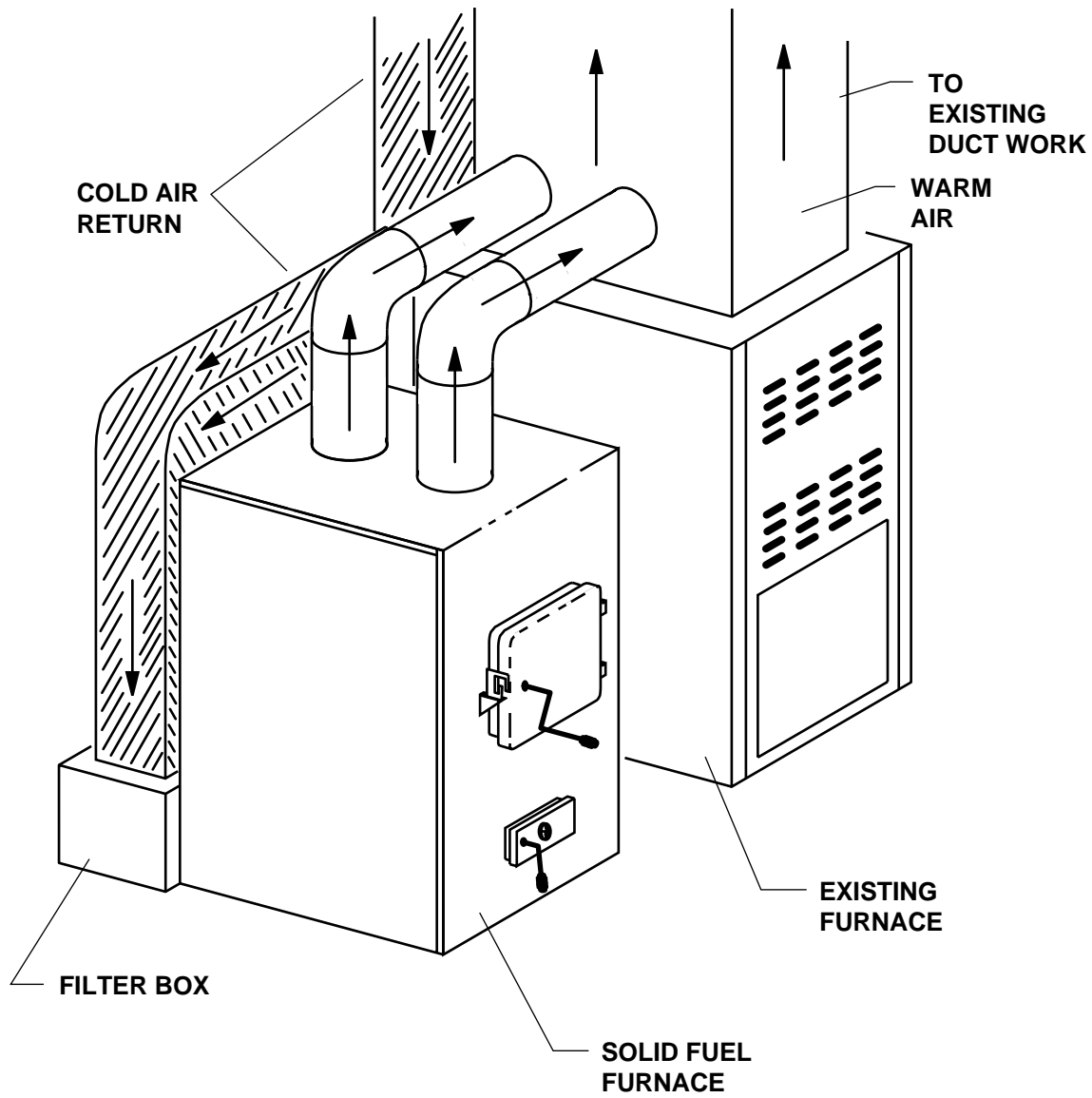


## Model 1537Q - Parts List

KEY	PART NO.	DESCRIPTION	QTY.
1	69092	Firebox Weldment	1
2	23398	Baffle	1
3	40246	Flue Collar Casting	1
4	88032	Flue Collar Gasket	1
N/S	83227	Bolt (1/4-20 x 1 MS, SL)	6
N/S	83250	Nut (Kep, 1/4-20)	6
5	69093	Cabinet Bottom Assembly	1
6	40258	Back Liner	1
7	40256	Shaker Frame	2
8	40257	Shaker Grate	2
9	89066	Firebrick	12
10	40269	Front Liner	1
11	68218	Ash Door Assembly	1
N/S	83476	Spacer	1
12	22824	Draft Control Knob	1
N/S	83345	3/8-16 x 1-3/4" Carr. Bolt	1
N/S	83450	Bolt (3/8-16 x 1-1/2)	2
N/S	83274	Locknut (3/8-16)	2
13	69091	Feed Door Assembly	1
14	C21399	Hinge Pin (5/16 x 1-1/2")	2
15	24512	Cabinet Side	2
16	69095	Cabinet Top Assembly	1
17	23459	Cabinet Back	1
18	22761	Flue Collar Ring	1
19	80230	Blower Motor	2
20	24179	Feed Door Handle	1
21	89574	Coil Door Handle (Brass Plated)	2
22	83444	Locknut (1/2-13)	2
23	83446	Flatwasher (9/16 ID)	1
24	23786	Door Latch	1
N/S	83409	Bolt (1/4 x 1/2 Hex)	2
N/S	80372	Nut (1/4 Hex)	2
N/S	23787	Smoke Door Clip	2
N/S	83445	Bolt (1/4-20 x 1-1/4")	2
N/S	83250	Nut (1/4-20 Kep)	2
25	80145	Limit Control	1
26	68234	Bracket (Blower Thermostat)	1
27	80131	Junction Box (4x4)	1
28	22140	Bracket (Relay Box)	1
29	24556	Ash Door Handle	1
30	83461	Handle Washer	1
31	83178	Nut (3/8-16 Jamb)	2
32	23445	Door Latch	1
33	23800	Smoke Curtain	1
34	40260	Shaker Handle	1
35	68228	Ash Pan Weldment	1
N/S	68231	Fan Control Cord Assembly (Flexible Conduit)	3
N/S	11DIK	Draft Induced Kit (See Page 21)	1

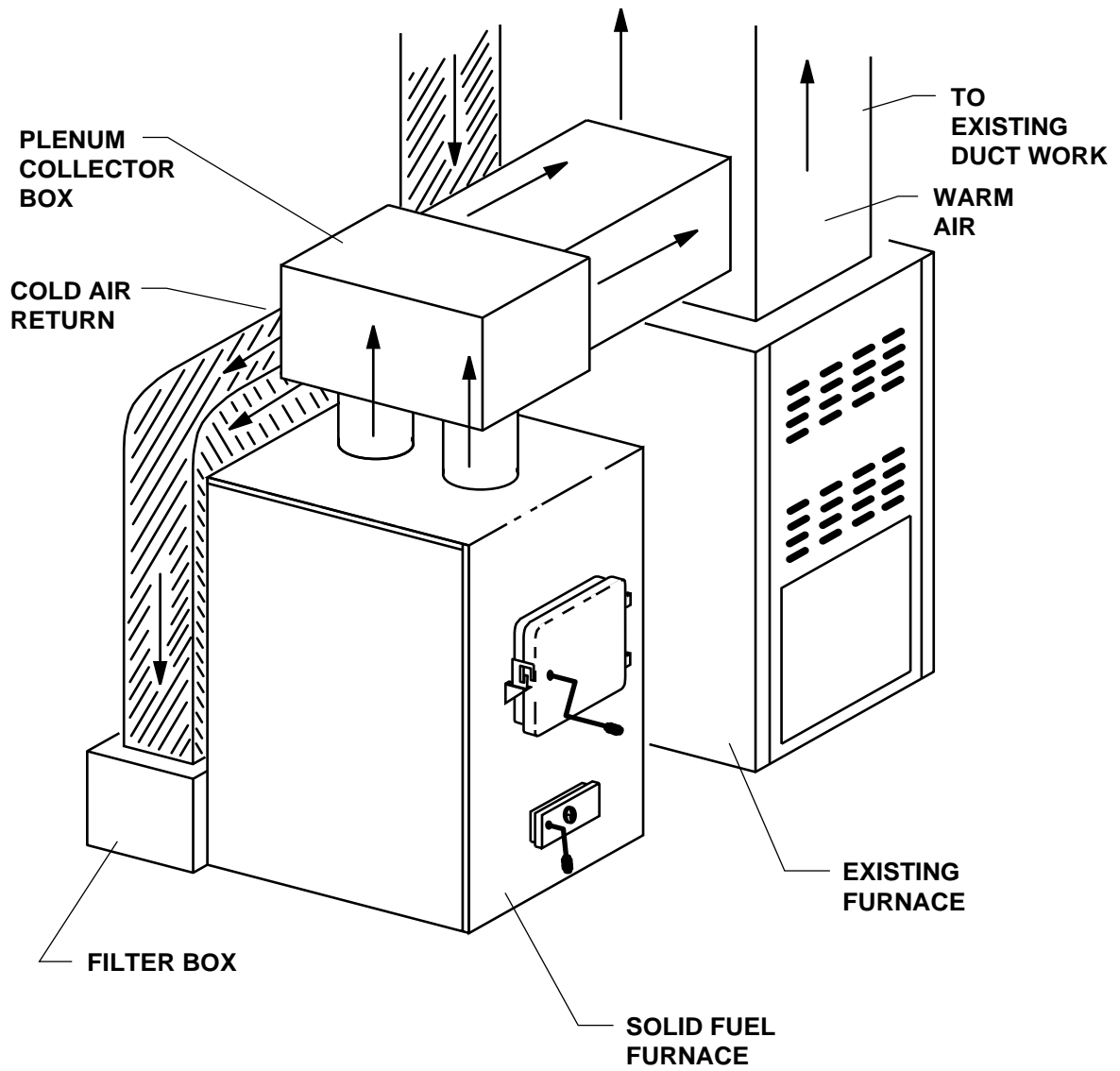
N/S = NOT SHOWN

# APPENDIX

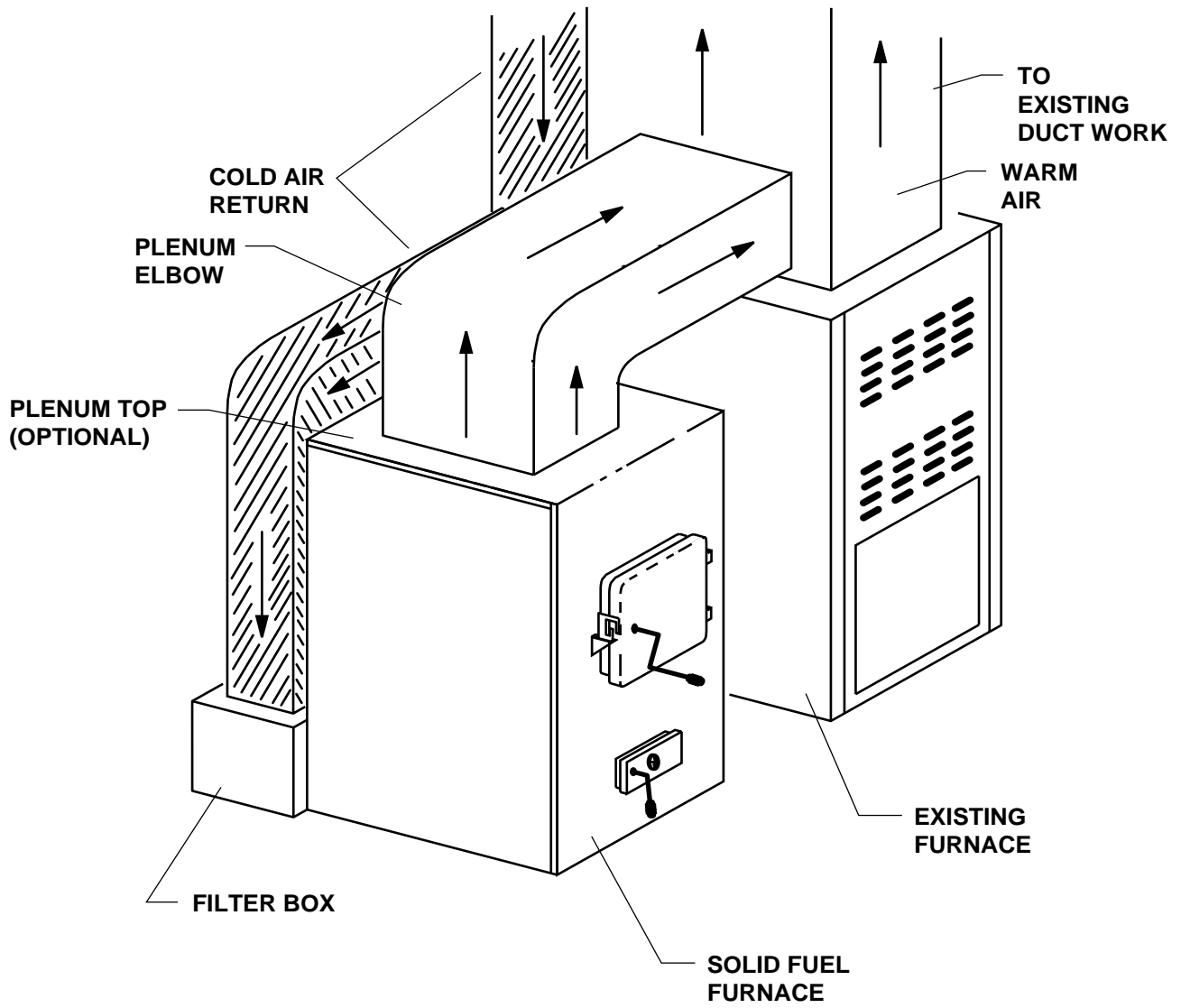


## INSTALLATION A



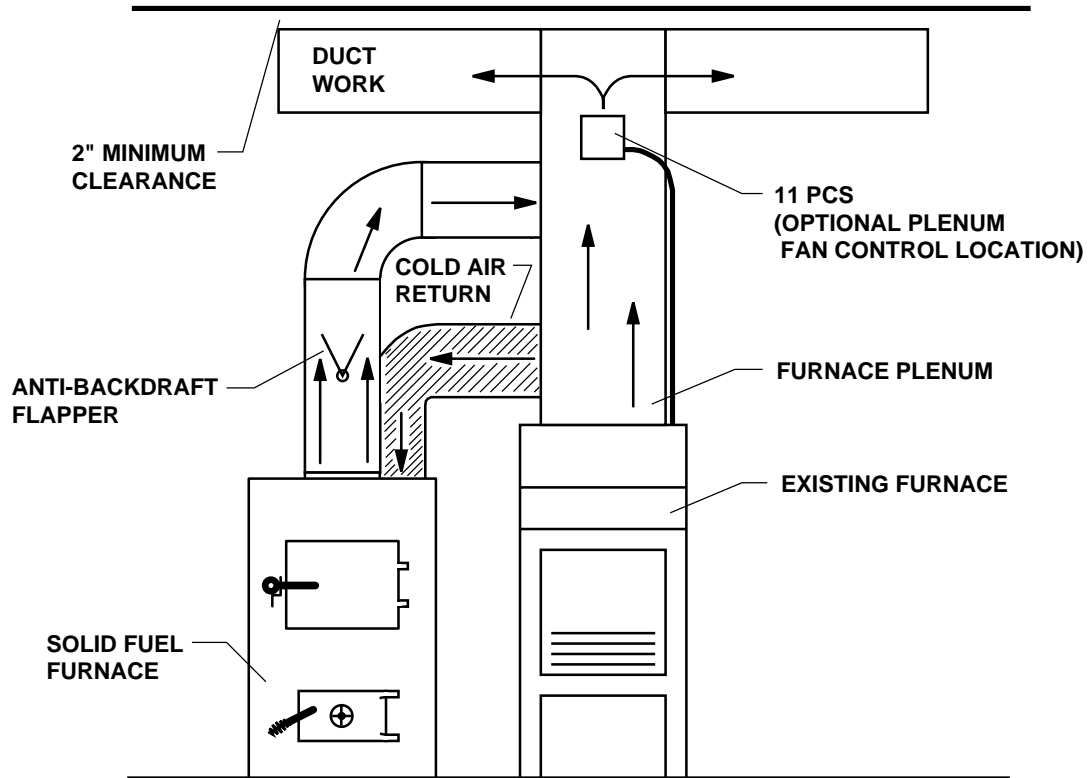


## INSTALLATION B

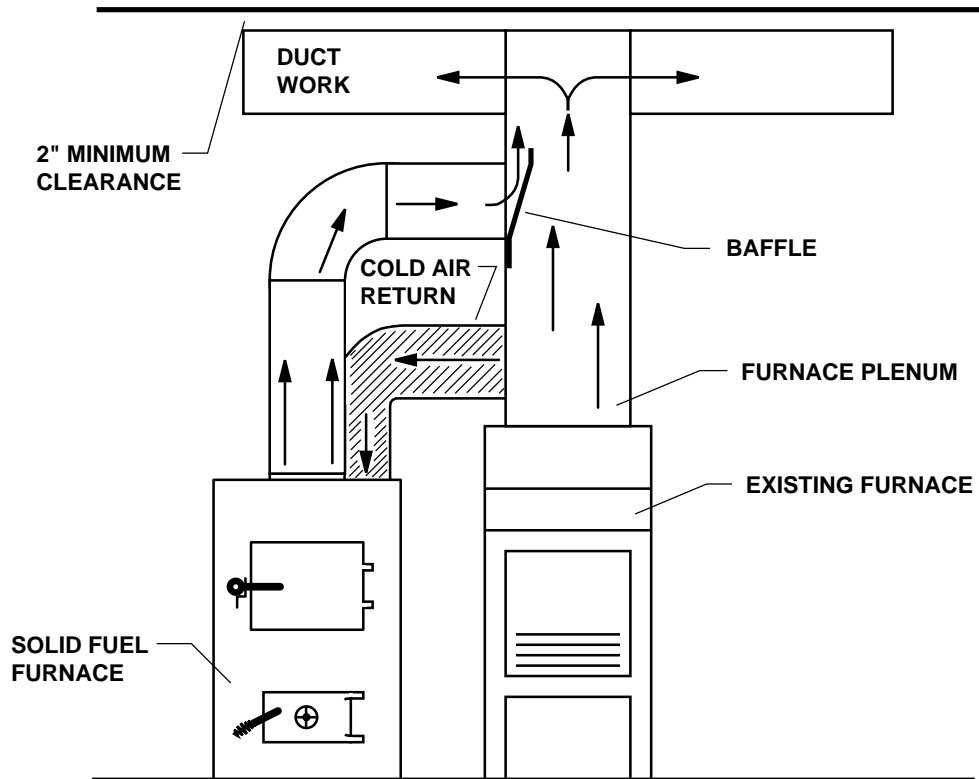


## INSTALLATION C

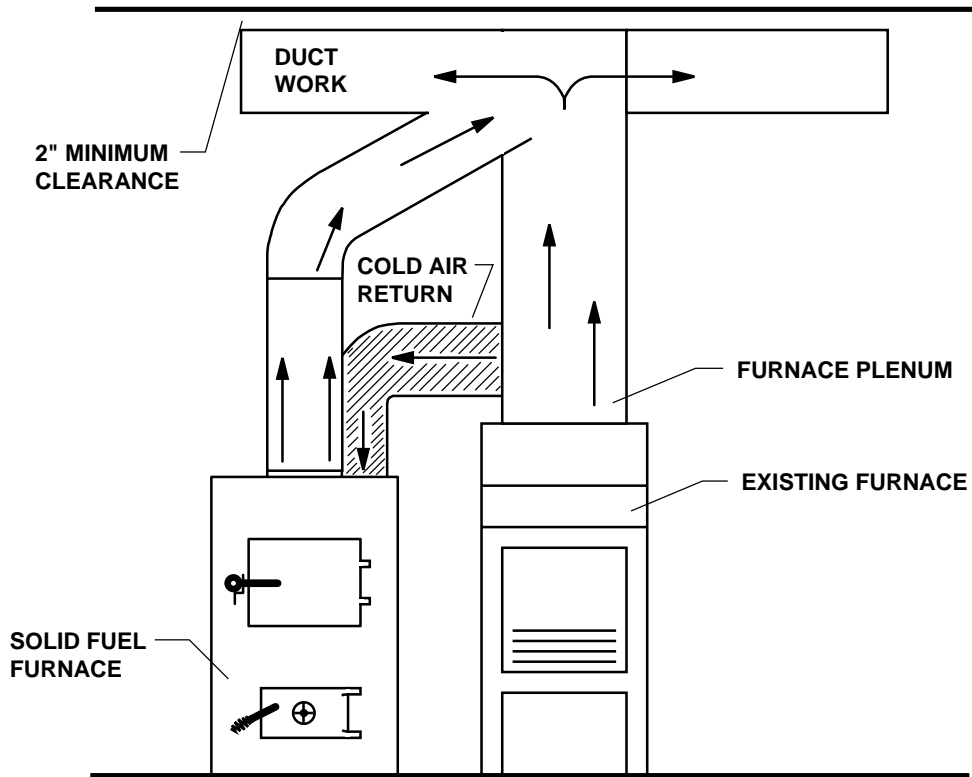
# INSTALLATION D (U. S. ONLY)



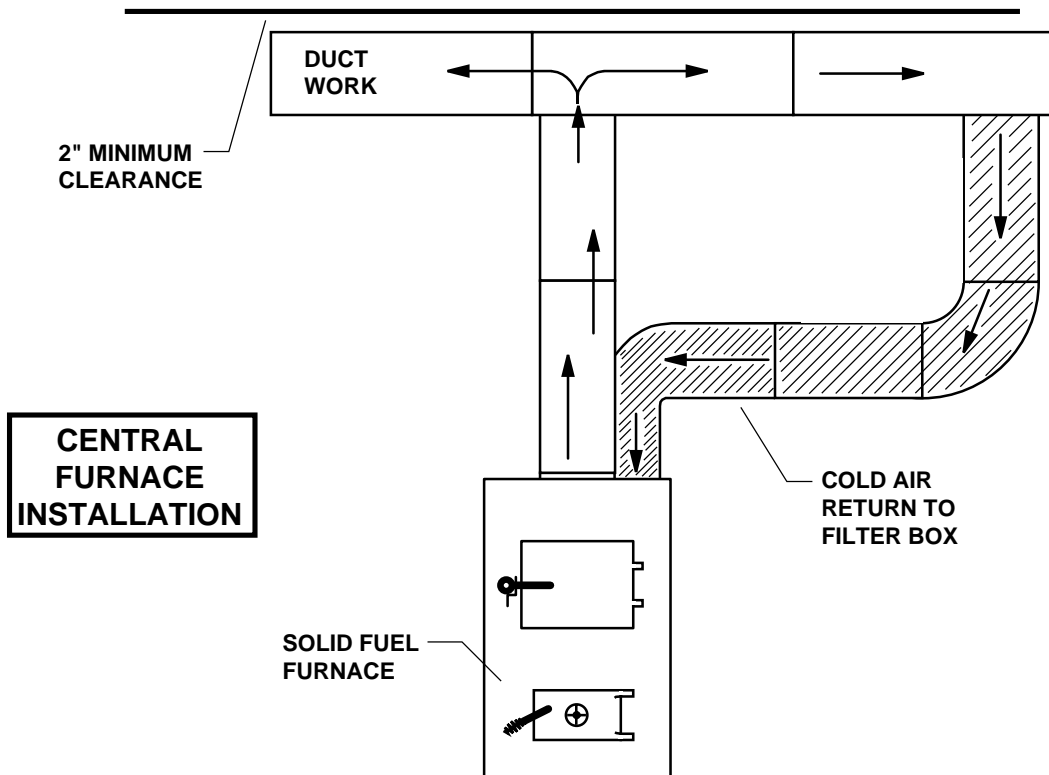
# INSTALLATION E (U. S. ONLY)



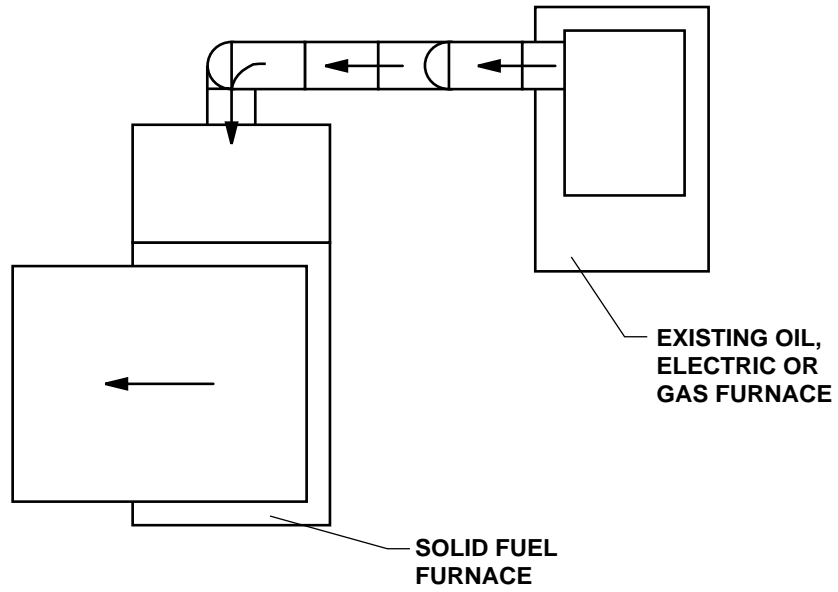
## INSTALLATION F



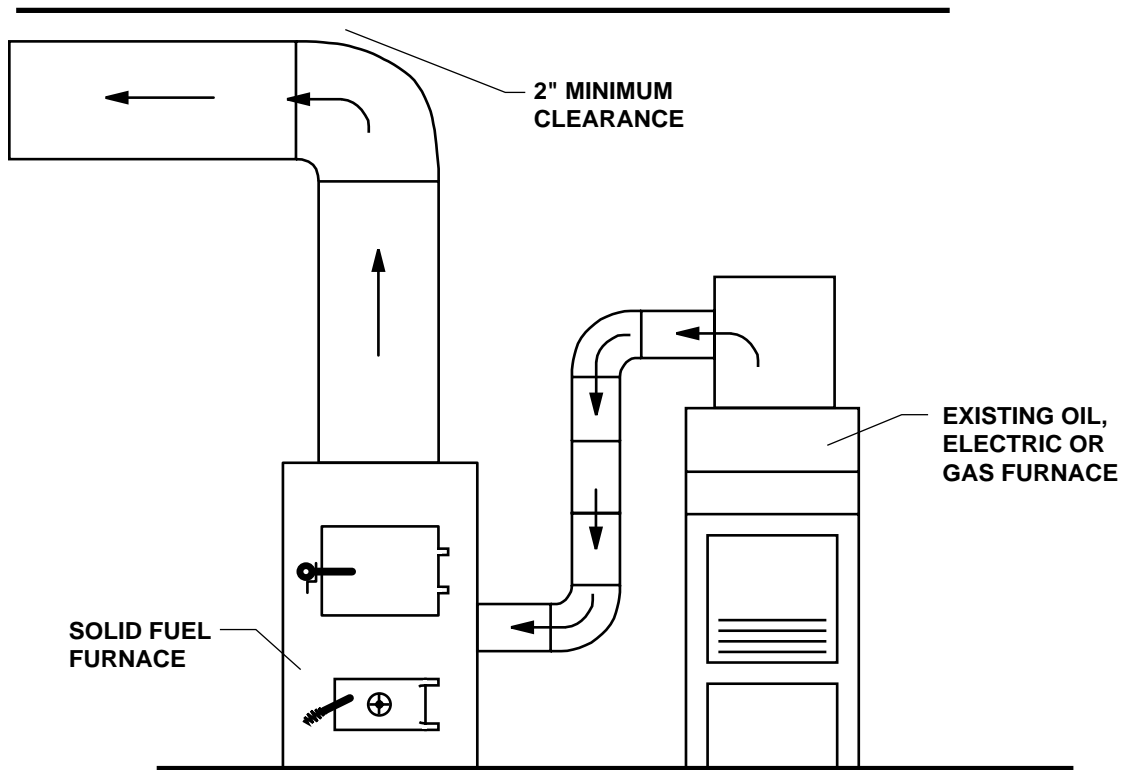
## INSTALLATION G



# INSTALLATION H



(TOP VIEW)



(FRONT VIEW)

## Trouble Shooting Tips for Warm Air Furnace

List of Problems	Possible Cause	Solutions
1. Smoking when feed door is open.	a) Insufficient draft. b) Clogged chimney or chimney connector. c) Down draft in chimney.	a) Set thermostat higher. b) Clean chimney. c) Add raincap to chimney.
2. Furnace does not heat.	a) Wood not seasoned and dry. b) Blower control set too low. c) Insufficient flue draft.	a) Allow wood to season in a dry, well ventilated area for six months. b) Set blower control to higher temperature (See Page 18). c) Set flue draft (See Page 9).
3. Blower does not run.	a) Improperly wired. b) Bad blower control. c) Bad relay. d) Bad blower motor.	a) Wire unit properly. b) Replace blower control. c) Replace relay. d) Replace blower.
4. No air from registers - fan running.	a) Registers are closed. b) Duct work improperly installed. c) Improper wiring between central furnace and Model 1537.	a) Open registers. b) Correct duct work installations. c) Wire unit properly.
5. Air from registers is not hot.	a) Blower control set too low. b) Bad blower control.	a) Adjust blower control to higher setting (See Page 18). b) Replace blower control.
6. Blower runs too long.	Blower control cut off set too low.	Set blower control cut off to higher setting (See Page 18)
7. Blower does not run long enough.	a) Blower control cut off set too high. b) Bad blower motor.	a) Set blower control cut off to lower setting (See Page 18). b) Replace blower.
8. Smoke and/or odor from registers when furnace is used for first time.	Oil from furnace and duct work.	The metal used in construction of the furnace and duct work has a light coating of oil. This should disappear after a short period of time. Once this burn-off has occurred, it should not reoccur.
9. Creosote build-up.	a) Burning green wood (not seasoned or dry). b) Thermostat setting too low for type fuel.	a) Burn only seasoned wood. b) Set thermostat higher to attain higher flue temperatures. This will aid in preventing build-up of creosote.
10. Flame spillage when feed door is open.	a) Insufficient draft. b) Smothering fire when adding fresh fuel.	a) Set thermostat higher. b) Add fuel so as not to smother fire.

# Notes

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## HOW TO ORDER REPAIR PARTS

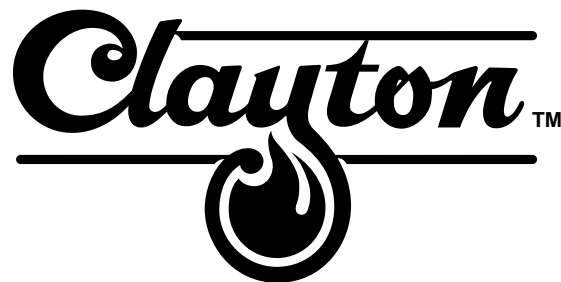
THIS MANUAL WILL HELP YOU OBTAIN EFFICIENT, DEPENDABLE SERVICE FROM YOUR JENSEN FURNACE, AND ENABLE YOU TO ORDER REPAIR PARTS CORRECTLY.

KEEP THIS MANUAL IN A SAFE PLACE FOR FUTURE REFERENCE.

WHEN WRITING, ALWAYS GIVE THE FULL MODEL NUMBER WHICH IS ON THE NAMEPLATE ATTACHED TO THE HEATER.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST:

1. THE PART NUMBER
2. THE PART DESCRIPTION
3. THE MODEL NUMBER: 1537Q
4. THE SERIAL NUMBER: \_\_\_\_\_



UNITED STATES STOVE COMPANY  
227 INDUSTRIAL PARK ROAD  
P.O. BOX 151  
SOUTH PITTSBURG, TN 37380  
(423) 837-2100





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