INSTALLATION INSTRUCTIONS FOR NO. 568 FURNACE WITH MANUAL TEMPERATURE CONTROL & PILOT SAFETY

A. Connect 115 Volt Electrical Source to leads from "On-Off" Switch, as shown on Wiring Diagram.

B. If the Mixing Tee and blower assembly are packed seperately, connect them to the furnace piping.

C. Supply gas to piping. The inlet pressure should not exceed (4) ounces on Natural Gas or (6) ounces on LP Gas.

FORM NO. 43

LIGHTING INSTRUCTIONS FOR BLOWER TYPE FURNACES WITH MANUAL TEMPERATURE CONTROLS AND SAFETY UNIT

After Wiring and Piping connections are completed, make sure the #1 lever handle valve is closed and the electrical "On-Off" Switch is "Off".

1. Depress the push button by-pass valve and ignite the pilot burners. After the pilots have burned for (40) seconds, depress the button on top of the C-850 Baso Switch. Release the button on the Baso Switch and on the By-Pass Valve. The pilots should remain burning. If not, repeat step #1.

2. Turn the electrical switch to "On"; the blower motor will run and the"main gas solenoid valve will open".

3. Set the blower air shutter about 1/4" Open.

4. If you are operating an oven furnace, open the door.

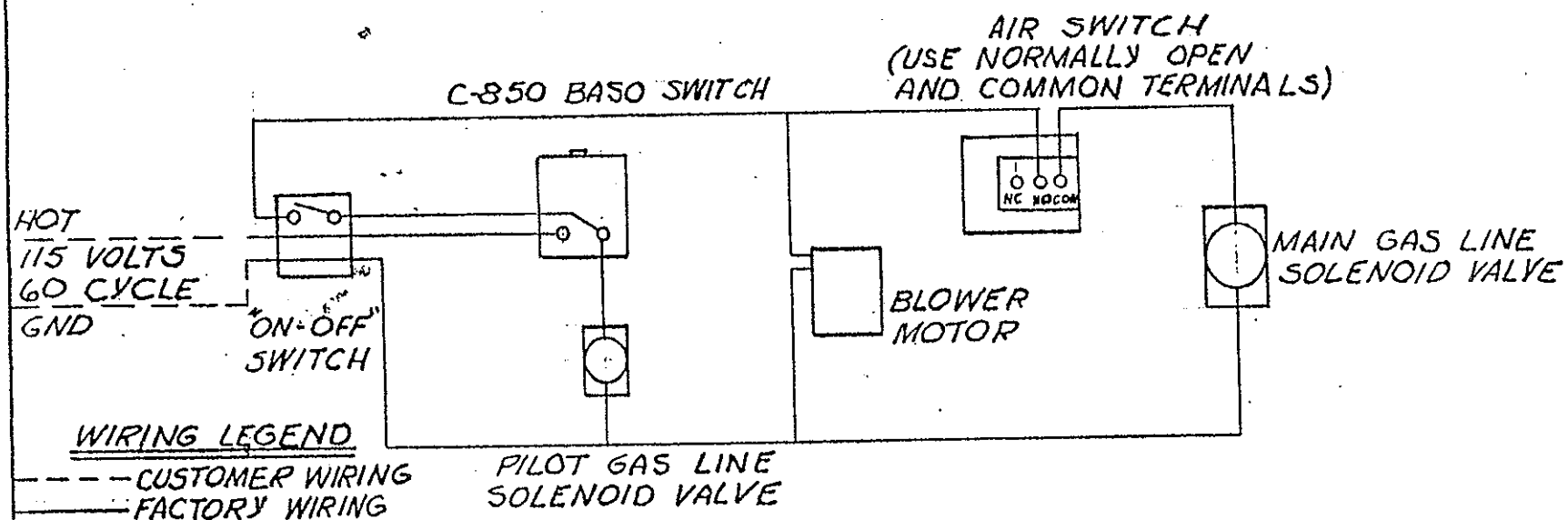
5. With both pilots burning and the blower motor running, slowly open the #1 lever handle valve until the main burners ignite. Make minor adjustments to the valve to obtain a steady roar from the burners. The oven furnace door can now be closed.

6. After the furnace has warmed up, adjust the No. 1 valve to obtain a sharp tail of flame. No flame means not enough gas; a long, lazy flame means too much gas. OUT THE EXHAUST OPENING

7. If it is desired to increase the gas input, open the blower air shutter slightly to decrease the tail of flame. Then open the #1 valve slightly to bring back the sharp tail of flame. Repeat this procedure until the maximum or desired gas input is reached.

8. To shut down the furnace, turn off the #1 lever handle valve and turn the electric switch to "Off".

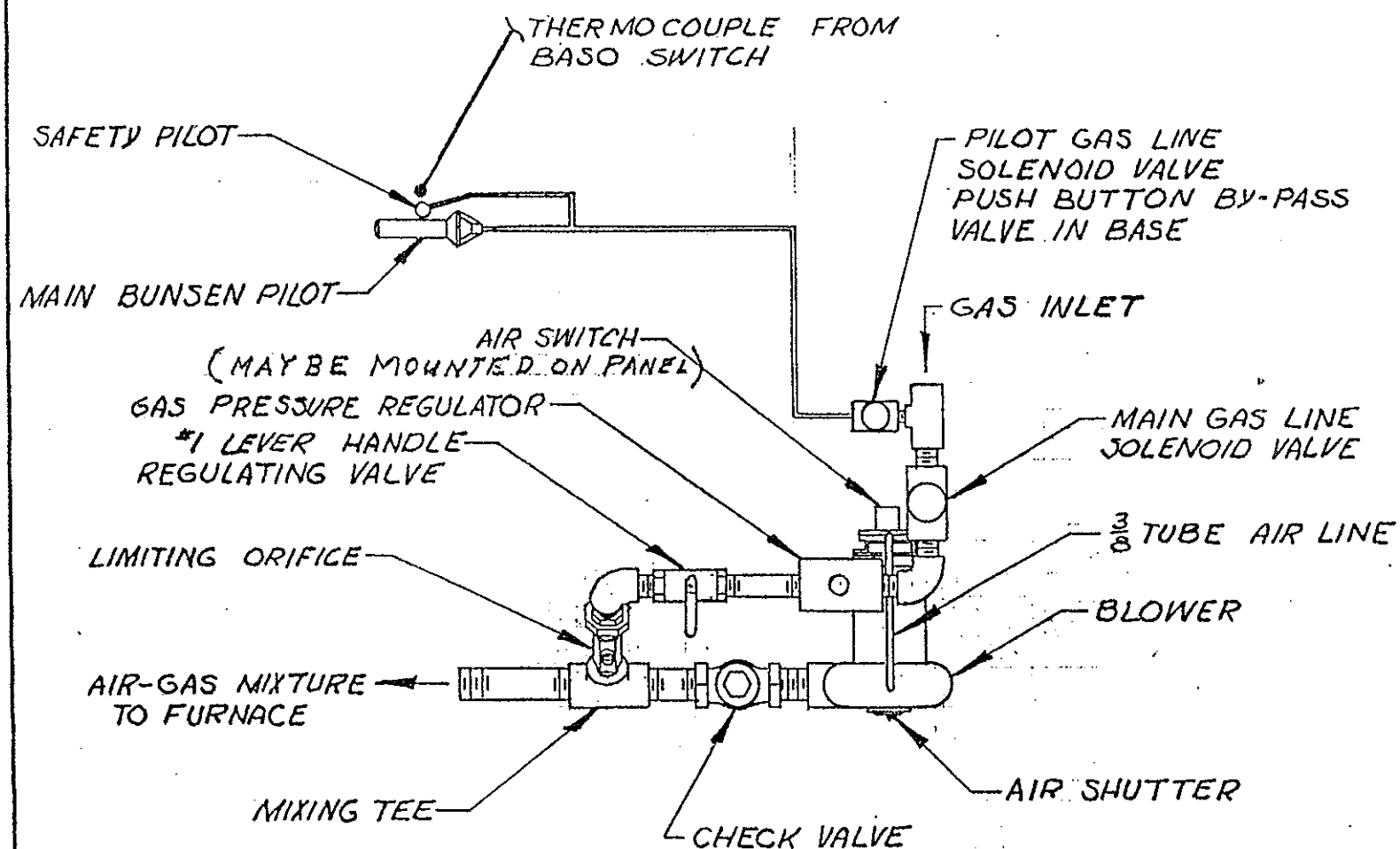
A-



WIRING DIAGRAM-# BLOWER TYPE FURNACE WITH MANUAL TEMPERATURE CONTROL AND SAFETY

Mat'l		Title —			
JOHNSON GAS APPLIANCE COMPANY CEDAR RAPIDS, IOWA		Dwn.	GDD	Scale	
		Ck'd			
		Appr.		A-	
Used On —		Date	1-10-64	FORM 44	

A-FORM 45



PIPING DIAGRAM-# BLOWER TYPE FURNACE WITH MANUAL TEMPERATURE AND SAFETY

Mat'l		Title —			
JOHNSON GAS APPLIANCE COMPANY CEDAR RAPIDS, IOWA		Dwn.	[illegible]	Scale	
		Ck'd		A-FORM 45	
		Appr.			
Used On —		Date	1-8-64		

FOR MAXIMUM SERVICE FROM STEEL POTS

1. CARRY A NEUTRAL OR SLIGHTLY REDUCING FLAME AT ALL TIMES. A SHORT TAIL OF FLAME SHOULD BE VISIBLE FROM THE STACK OF THE FURNACE WHEN YOU HAVE A REDUCING FLAME.

2. WHILE THE POT IS COOLING DOWN, SEE THAT ALL OPENINGS ARE CLOSED. IF LEFT OPEN, CURRENTS OF AIR CIRCULATE THROUGH THE FURNACE, FORMING A SCALE OF OXIDE ON THE POT. UNDER NO CIRCUMSTANCES, USE THE AIR LINE TO ACCOMPLISH MORE RAPID COOLING OF THE FURNACE.

3. INFILTRATION OF CYANIDE OR OTHER SALTS INTO THE COMBUSTION CHAMBER SHOULD BE PREVENTED. AT THE TEMPERATURES FOUND IN THE COMBUSTION CHAMBER, THE SALTS WILL DECOMPOSE AND ATTACK BOTH POT AND FURNACE LINING. IF THERE IS A TENDENCY FOR THE SALTS TO SEEP OR SPLASH INTO THE COMBUSTION CHAMBER THIS CAN BE OVERCOME BY PLACING A RING OF DRY, POWDERED FIRE CLAY UNDER THE FLANGE OF THE POT WHEN IT IS PLACED IN SERVICE.

4. SHOULD A SALT POT ACCIDENTALLY GIVE OUT IN THE FURNACE, SPILLING ITS CONTENTS INTO THE COMBUSTION CHAMBER, SEE THAT ALL OF THE SALT IS CLEANED OUT BEFORE INSTALLING A REPLACEMENT AND RESUMING OPERATION.

5. REMOVE ALL SLUDGE OR SEDIMENT FROM THE POT AT LEAST ONCE A DAY AND EVEN MORE OFTEN IF THE FURNACE IS BEING OPERATED CONTINUOUSLY. IF ALLOWED TO REMAIN, IT ACTS AS A HEAT INSULATOR, CAUSING LOCAL OVER HEATING AND PREMATURE FAILURE OF THE POT.

6. NEVER FORCE THE FURNACE IN BRINGING THE BATH UP TO TEMPERATURE OR IN AN ATTEMPT TO SPEED UP PRODUCTION. SEE THAT FLUE GAS TEMPERATURE IS AT A MINIMUM. FORCING THE FIRE RESULTS IN EXCESSIVE COMBUSTION CHAMBER TEMPERATURES, SHORTENING THE LIFE OF THE POT AND OF THE FURNACE LINING.

7. TURN THE POT AROUND EACH DAY SO THAT A DIFFERENT PART IS EXPOSED TO THE HOTTEST GASES. (FOR ROUND POTS ONLY.)

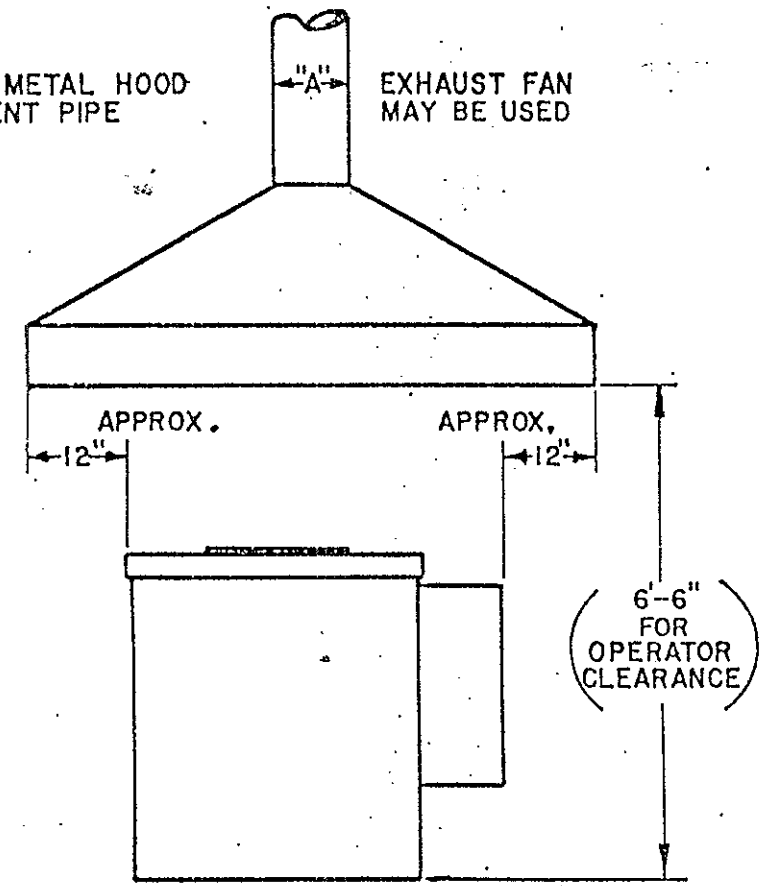
8. REMOVE THE POT FROM THE FURNACE AT REGULAR INTERVALS AND THOROUGHLY CLEAN THE INNER SURFACE.

9. WHILE CARRYING A SLIGHTLY REDUCING ATMOSPHERE REDUCES SCALE FORMATION TO A MINIMUM, A THIN SCALE WILL CONTINUE TO FORM ON THE OUTSIDE OF THE POT. HAMMER THIS OFF, FOR, IF ALLOWED TO REMAIN, IT MATERIALLY LESSENS THE HEAT CONDUCTIVITY OF THE CONTAINER.

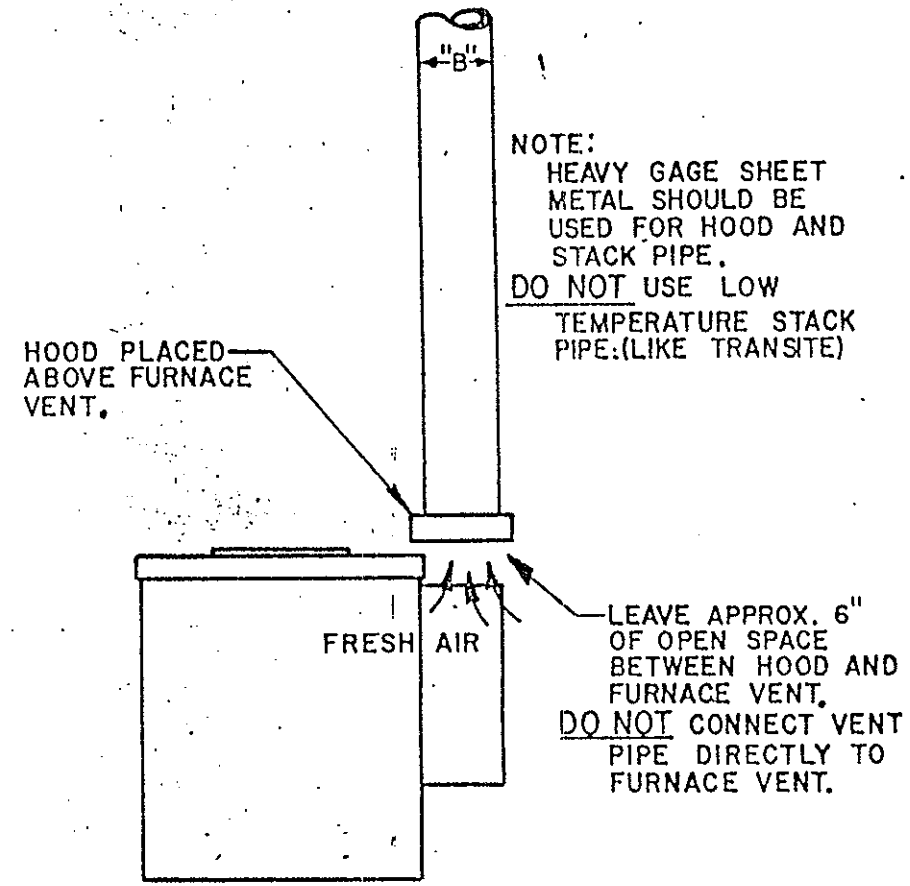
10. PROPER OPERATING CONDITIONS ARE EXTREMELY IMPORTANT FOR SATISFACTORY POT LIFE. BE SURE TO HAVE A TAIL OF FLAME VISIBLE FROM THE FURNACE STACK OPENING. FOLLOW FURNACE VENTING INSTRUCTIONS.

TWO SUGGESTED METHODS OF VENTING JOHNSON POT FURNACES

METHOD "1": FOR VENTING FURNACE EXHAUST AND FUMES FROM POT.



METHOD "2": FOR VENTING FURNACE EXHAUST ONLY.



DIAMETER FOR VENT PIPE

FURNACE NO.	DIMENSION "A"
510, 568, 580, F-900	8"
520, 565	10"
575	12"

DIAMETER FOR VENT PIPE

FURNACE NO.	DIMENSION "B"
510, 568, 580	6"
520, 565	8"
575	10"

VENTING REQUIREMENTS

JOHNSON FURNACES

1. POT FURNACES, FORGES, AND MELTING FURNACES

   SINGLE UNITS OR MULTIPLE INSTALLATIONS

   FOR EXHAUST HOODS APPROXIMATELY 6'6" TO 7' ABOVE FLOOR, THE EXHAUST FAN SHOULD BE SUFFICIENT TO PROVIDE A 200 FPM FACE VELOCITY AT THE HOOD.

2. OVEN TYPE FURNACES (INCLUDES OVEN FORGES)

   A. SINGLE INSTALLATIONS

      FOR SINGLE INSTALLATIONS THE VENT REQUIREMENTS SHOULD REDUCE FLUE GAS TEMPERATURE TO 500° OR BELOW. FOR CFM REQUIREMENTS DIVIDE BTU INPUT OF THE FURNACE BY 225. (APPLICABLE WHERE THE VENT HOOD IS 6" TO 8" ABOVE EXHAUST OPENINGS)

   B. FOR SINGLE OR MULTIPLE INSTALLATIONS WHEN SINGLE EXHAUST HOOD IS 6'6" TO 7' ABOVE FLOOR PROVIDE FOR A 200 FPM FACE VELOCITY.