

INSTRUCTIONS FOR LINING #142 DOUBLE LENGTH, or #125
SINGLE DOOR FURNACE.

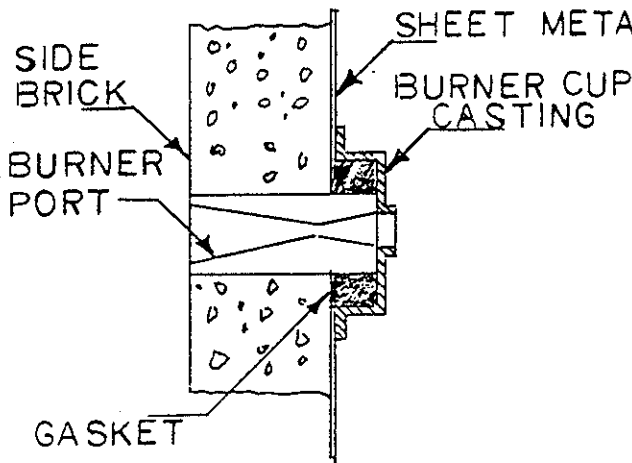
1. Remove the front casting, port cup castings (on side of furnace) and remove the old lining.
2. Place left rear side brick (18½" long) in position.
3. Cement left side of back brick and set in place with hole toward top.
4. Put cement on left side and back of one bottom brick and set in place.
5. Put cement on the right side of the back brick and bottom brick and position the right rear side brick (17" long)
6. Cement top of the side bricks and back brick and slide the top rear brick (13½" long) into place.
7. Check all cemented joints to make sure enough cement has been used.
8. Place cement on the side and bottom of one hearth rest and set in place against back brick and centered between the side bricks.
9. Put port cups on rear half of furnace, and using the port cups as a guide, take a 7/8" drill and bore a hole through the brick lining. Remove port cups and enlarge the hole in the side brick to 2" diameter, using the 7/8" hole as a center guide.
10. Consult Form No. 1069-R for installing the burner ports.
11. Put small amount of cement along back edge of left side brick (17" long) and set in place.
12. Cement left side and back of bottom brick and set in place.
13. Cement left side and back of bottom filler (7/8" x 2½" x 12-7/8") and set in place.
14. Put cement on right side of bottom brick and on back edge of right side brick (18½" long) and set right side brick in place.
15. Cement top of side bricks and back edge of the top center brick (11½" long) and slide top center brick in position. Cement back edge of top front brick (10½" long) and slide top front brick into position.
16. Check all cemented joints making sure enough cement has been used.
17. Cement all front surfaces using thickened cement and position front frame brick. Replace front casting
18. Install remaining burner ports following steps No. 9 and No. 10.
19. Lay paper, on the inside bottom of the furnace to catch the brick dust. Use the holes in the sheet metal as a guide and drill holes through the top brick to the size shown on drawing B-149-3. A hole saw can be used or a small drill can be used. The hole can be finished to size with a file.

20. Place cement on the side and bottom of the hearth rests. Place in position at front and in center of furnace. Be sure top of hearth rests in center are level with hearth rests on each end.

DOOR LINING

1. To pour door lining, lay $\frac{1}{2}$ " insulation block in the bottom of door casting.
2. Mix 25 pounds of castable material to an even consistency. Add $2\frac{1}{2}$ to 3 quarts of water to the castable, mix thoroughly and pour into the door casting.
3. Use a stiff straight edge and level the castable even with the sides of the door.

REPLACING PORT & GASKET IN OVEN FURNACES



Break the union in the piping. Loosen the screws and remove the cup casting. Remove the old gasket and any cement from the cup casting.

If the burner port is cracked or deteriorated remove it by tapping the sides lightly to break it loose or crack it. Remove any chunks of cement that remain on the side brick.

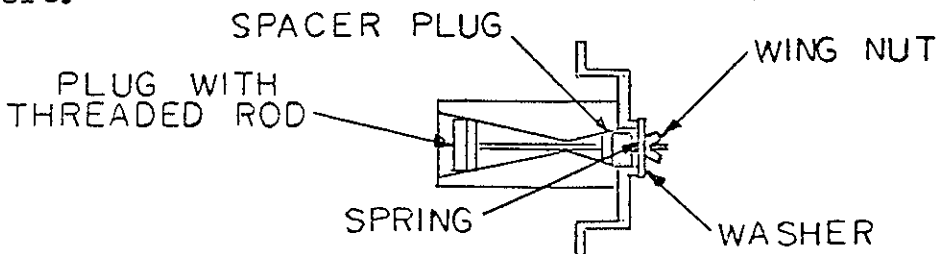
If the burner port is okay and doesn't have to be removed. Place the new burner port (provided) in the center of the burner cup casting, with the small port hole against the casting. Fasten the port in position using

the holding fixture provided. (See sketch at bottom of page.) Place the gasket strip inside the cup casting and around the burner port. Using your thumbs or a block of wood, press the gasket material down, inside the cup casting until it is just above the top of the cup casting.



Disassemble the holding fixture and remove the burner port by rotating it gently. Put a thin layer of cement around the outside of the burner port that is in the side brick. Put a thin layer of cement on the side brick next to the burner port.

Slide the gasket and cup casting over the burner port by rotating the cup casting. Line up the holes in the sheet metal side and cup casting. Tighten the screws and pull the cup casting against the sheet metal side. Make sure the end of the burner port is against the cup casting and the holes through the center are lined up and clear of cement. If the old burner port is to be replaced, repeat the same procedure as above except do not remove the burner port from the cup casting. Put a 1/8" layer of cement around the outside of the burner port. Insert the port through the hole in the side brick. Line up the holes in the sheet metal and cup casting. Use the screws and draw the burner port and cup casting in place. Make sure the end of the burner port is against the cup casting and the holes through the center are lined up and clear of cement. If the hole in the side brick was too large, fill in the space with cement. Allow the cement to set for about one hour, then gently, remove the holding fixture and proceed to another port.

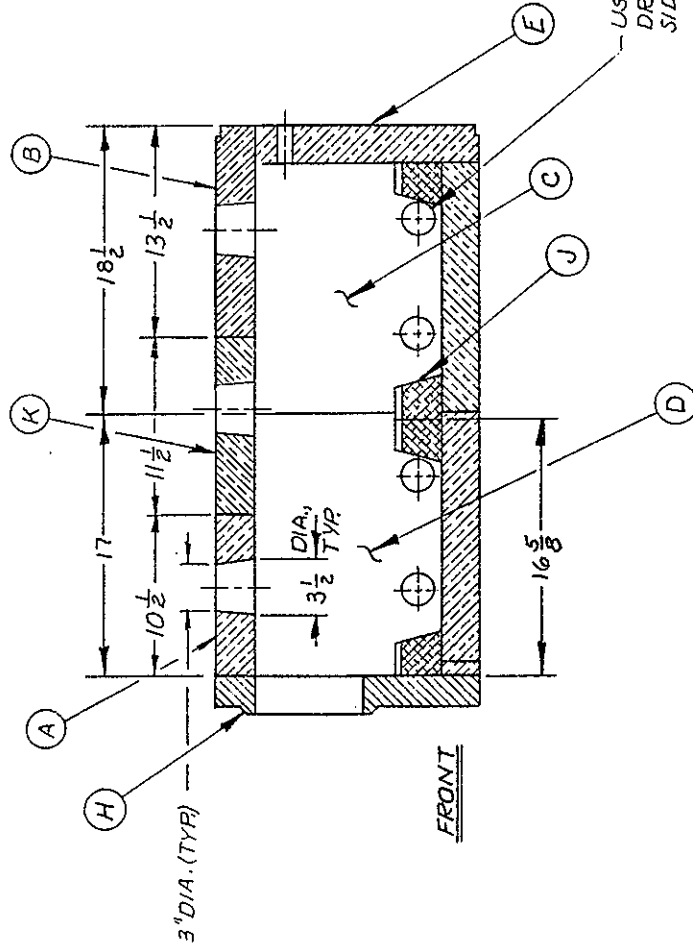


REDUCED TO "A" SIZE ON 8-21-90

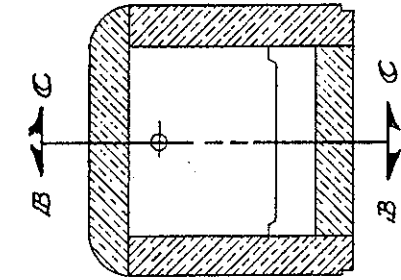
FORM NO. 149-3

SYM	PART NO.	QTY	ITEM
A		1	BRICK #5-TOP (CUT TO 10 1/2" LONG)
B		1	BRICK #5-TOP (CUT TO 13 1/2" LONG)
C	A-142-21	2	BRICK #4-SIDE
D		2	BRICK #4-SIDE (CUT TO 17" LONG)
E	A-142-67	1	*1/42. BACK BRICK - MACHINED
F	A-142-23	2	BRICK #6-BOTTOM
G	A-149-23	1	BOTTOM FILLER (3/8 x 2 1/2 x 12 7/8)
H	B-142-CL	1	*1/42. FRONT FRAME BRICK ASSY.
J	B-142-13	4	*1/42 HEARTH REST
K		1	BRICK-TOP (CUT TO 11 1/2" LONG)

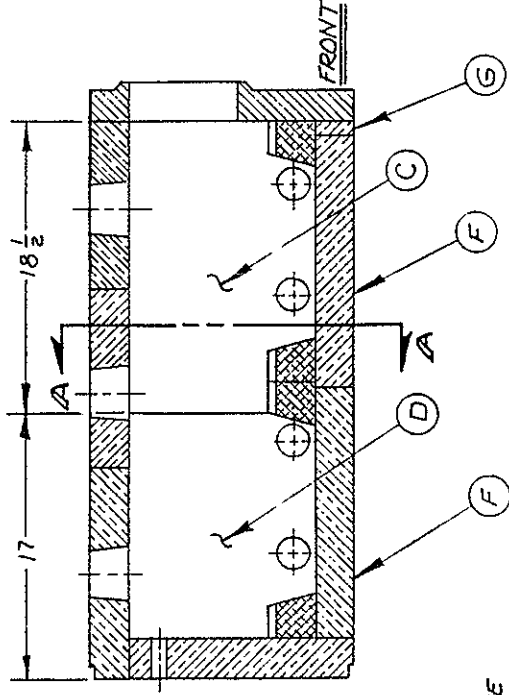
B-149-3



SECTION B-B



SECTION A-A



SECTION C-C

USING SHIELD AS A TEMPLATE
DRILL 8 HOLE, 2" DIA. THRU
SIDE BRICKS. (4 EACH SIDE)

3	CUT 10 1/2 WAS A-142-20, CUT 13 1/2 WAS 17, ITEM "K" ADDED	12-2-80
2	B-142-CL WAS B-142-32; A-149-23 ADDED	B-13-80
*A-142-67 WAS B-142-22. *B-149-23 ADDED B-15-66 BEDBORN FEE FCO-146		

Mat'l	Title - LINING FOR #142 DOUBLE LENGTH	Dwn.	Scale	1/8
	JOHNSON GAS APPLIANCE COMPANY CEDAR RAPIDS, IOWA	CK'D		
Used On -		Appr.		
		Date	1-4-65	

B-149-3

APPROVED COMPONENTS FOR INDUSTRIAL FURNACES

Approved components used on our industrial furnaces and power burners with flame rod or thermocouple safety and ultra-violet safety.

JOHNSON PARTS	APPROVAL		
	UL	CSA	OTHER
Baso Switch	√		
Baso Valve		√	AGA
Baso Thermocouple			AGA
Baso Pilot w/Orifice		√	AGA
Air Switch	√		
ITT Solenoid Valve	√		Factory Mutual
Transformer	√	√	
Lock Out Light	√		
Ignition Button	√	√	
1/30 Motor Bodine	√	√	
1/7 Carter Motor	√		
1/3 Motor w/ back Contact	√		
P & B Relay	√	√	
Speed Control Switch	√	√	
Start - Stop Switch			Top/Application Only
Ignition Wire	√		
All Other Wire	√		
3/4 Gas Pressure Regulator			AGA
OJ21 Ignitor Plug	√		
Gas Adjustment Valve	√		
Fireye Control	√		
Flame Rod 12"	√		
Scanner	√		