Peterson
MACHINE TOOL INC.

MODEL
BK17A
BAKE KLEAN OVEN

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INSTRUCTION MANUAL
and
SERVICE PARTS LISTING

July 7, 1993

MODEL BK17A
BAKE KLEAN OVEN

This is your complete Set-Up, Operation and Maintenance Instruction Manual on your Model BK17A Bake Klean Oven. This manual should be read thoroughly before installing or attempting to operate this machine. Failure to do so may result in damage to the machine or possible personal injury.

CONTENTS PAGE

WARNINGS

* Read Operator's Manual carefully before attempting to operate or adjust this machine.
* This machine must be grounded in accordance with the National Electrical Code.
* All operators must wear protective gloves and clothing to guard against burns when using this oven.
* Keep door closed at all times except when loading or unloading parts or for repeated burner ignition (see burner adjustment).
* Do not attempt to operate this oven with the door even partially open.
* Never use petroleum based solvents to clean this oven as it may be an ignition source for ignitable vapor or gas.
* NO SMOKING within 10 feet of this oven. Oil or greasy parts give off flammable vapors when heated.
* Metals that melt under 900° F. cannot be heat stripped.

UTILITY REQUIREMENTS

Electrical:

The BK17A Bake Klean Oven electrical requirements consist of 115 volt, 60 Hz and 5 amp service. A manual disconnect capable of being locked into an "*off*" position must be provided by the customer with the properly sized fuses to protect the machine circuit.

Gas Service:

The BK17A is equipped with 2) 150,000 BTU/hr direct spark ignition burners. Electrodes immersed in the flame function to both spark ignite and electronically monitor the flame.

The gas line should preferably be a separate line direct from the meter. When using an existing line, determine whether it can handle the new load. A 1" gas line with a 6" W.C. is recommended for natural gas installation. The installer should provide the necessary drip leg and external shut off valve to complete the installation. The maximum gas pressure to a burner must be less than 14" W.C. or an additional gas pressure regulator must be installed ahead of the burner. If the gas supply pipe is over 30 feet in length or contains many pipe fittings, increase the pipe size to 1-1/4". For propane gas a 11" to 14" W.C. is required.

NOTE: W.C. = inches of water column
Inches of water X 0.5781 = Ounces/sq. inch

The gas valves on the burners have built-in regulators which reduce the pressure to 3-1/2" W.C. This pressure is used in the calculation of the orifice size and should not be tampered with unless directed to do so by the factory. Both natural and LP gas will burn at this pressure. The only difference between settings for natural and LP gas is the orifice size and the air adjustment.

BK17A INSULATION & COMBUSTION CHAMBER MATERIAL

NOTE: Some of the insulation used in your BK17A Bake Klean Oven is a hardboard type called Pyroboard. This type insulation requires a final curing process.

The first time the oven is put into operation the insulation will begin to turn black. Once darkened, the insulation will become lighter, but at a slower rate until the insulation is again white.

This curing process will in no way hinder the operation of the oven or the ability to heat clean parts.

Trade Name: Pyroboard

Desirable Features:

* Asbestos-free
* Lightweight
* Low Shrinkage
* Low Heat Storage
* Excellent Insulation Properties
* High Temperature Stability
* Excellent Thermal Shock Resistance
* Good Sound Absorption

Specifications:

Continuous Use Temperature:	2300° F.
Melting Point:	3200° F.
Normal Density:	18 lb/cu. ft.

Pyroboard is a rigid, high temperature board made by the vacuum-forming of ceramic fibers. Pyroboard can be subjected to direct flame. Its relatively low mass permits almost immediate "*heat-ups*" which is a definite aid in combustion performance. This faster heat up time results in lower energy consumption for the user. The low mass of the board also exhibits maximum insulating properties in a minimum amount of space. This and Pyroboard's lightweight characteristic results in a lighter, yet more efficient, oven. The additional feature of good sound absorption in the board results in a smooth, more quiet operating oven.

BAKE KLEAN OVEN
MATERIAL SAFETY DATA

This Bake Klean Oven is designed to remove limited amounts of grease, paint, carbon and other combustible materials from reclaimable rebuildable parts. This unit will clean engine blocks and cylinder heads without the use of chemicals, debond brakeshoes, regular and disc types. Coatings which may contain chlorine (PVC), fluorine (Teflon), lead, any elements other than carbon, hydrogen and oxygen must not be processed as they will form dangerous, toxic and corrosive by-products.

The Bake Oven accomplishes the cleaning action by heating the parts to a high enough temperature to char the combustible material (grease, oil, paint, varnish, etc.) on the parts within so that the combustible material is converted to smoke and ashes. For engine blocks and cylinder heads the oven temperature is set for 650° F. or lower. For brake shoes, starters, generators, etc., the temperature inside the unit should be 750° F. (398° C.). During the entire cycle, the smoke and gases given off by the combustible materials are drawn through an afterburner compartment, where their temperature is raised to about 1400° F. (760° C.) to completely burn them before discharge to the atmosphere. The discharged effluent consists primarily of carbon dioxide and water vapor which are invisible, odorless and harmless.

The Bake Oven is not designed as an "*incinerator*" of anything other than hydrocarbon coatings on metal parts. It is sized to handle only that amount of combustible material usually found on such parts. Combustible material is only a small percentage of the total weight of a coated metal part and any attempt to burn other parts or materials may not prove satisfactory. Rubber or plastic coated building wire or cable MUST NOT BE BURNED in the unit as the amount of combustible material on even a small load may exceed its capacity to burn the smoke. A practical load limit of 8% combustibles by weight should be observed. Loads saturated with heavy combustibles such as grease laden sludge cannot be processed properly in this oven.

As epoxy materials have their own self-contained oxygen source needed for combustion, epoxy-encapsulated parts are harder to burn than conventional insulations. To minimize the chances of runaway temperatures, epoxy-encapsulated parts should be limited loads and carefully processed alone. Do not burn aluminum parts in the same load with epoxy-encapsulated parts.

Shops using both a solvent stripping method (trichloroethylene) and a Bake Oven should carefully analyze their locations to make sure they are properly isolated one from the other. This unit and every other gas-burning appliance should be well isolated or sealed off from solvent systems because the solvent vapors, heavier than air, can be drawn into gas burners and decomposed into harmful products

including hydrochloric acid fumes which will corrode and destroy equipment, building and anything else it contacts.

Very thin parts and aluminum parts can be safely processed in this unit, but they should not be burned in the same load as epoxy-encapsulated parts. Also, they should be placed near the bottom of the unit to keep them out of the flames of other parts should the other parts ignite. *Parts made of zinc, "pewter" or "die cast" (unless aluminum die casting) cannot be burned since this material melts between 600 and 800°F. (315-425°C.) depending upon the alloy.* If there is any doubt about the material being zinc or aluminum, a simple test with concentrated nitric acid diluted 50-50 with water will tell the difference. (Nitric acid can be obtained from chemical supply houses, or, in many cases, from local electroplaters.) One drop of this solution on a zinc part will involve many bubbles and a fast action; on aluminum there will be no reaction. (The parts must be clean of paint or grease.) If the part is zinc, it must be cold-stripped, solvent-stripped or very cautiously torch-stripped by hand.

When operating the oven and temperature runaway occurs, from combustion of excessive oil, grease or solvent on parts, *do not* attempt to open the oven door or turn off the oven. The insulation used in the oven is rated at 2300°F. If the temperature should approach this level or a dangerous situation is feared, call your local fire department immediately. Do not attempt to correct the situation yourself.

Refractory insulation that has become wet or saturated may have begun to deteriorate and must be examined before attempting to put the oven back into service. Upon visual examination the parts should have maintained relatively smooth surfaces and should not have suffered any slump or distortion. If the insulation has not suffered any apparent structural deterioration as a result of having become wet, then the concern should be the safe and complete drying of the insulation before returning to service. The drying can be accomplished by extended exposure to dry ambient air. Or the drying process can be accelerated by exposing the parts to dry warm air such as might be provided by a hand-held hair dryer. It should be noted that ettempting to dry "wet refractory insulation" too rapidly at temperatures in excess of 250° F increases the likelihood of suffering materials or equipment damage from steam swelling or explosion.

LOCATION INSTRUCTIONS

Several factors should be considered in planning for the location of your BK17A Bake Klean Oven.

1. Proper location of the BK17A can greatly improve the flow of parts to be cleaned through your cleaning department, and an improper location can cause a bottleneck and lost time in unnecessary material handling.

2. Consideration should be given to the location of the machine in order that the cart may be positioned beneath an overhead crane or monorail hoist to facilitate loading heavy blocks or heads onto the cart.

3. The area around the oven will be exposed to quick changes of temperature. For this reason the oven should be located as far as possible from stored finished goods or any flammable materials.

4. This machine is intended for indoor use only. It is not intended for outdoor use unless proper protection from the elements is provided. Wind and transient air currents will cause problems with the gas burners. Take time to install the machine properly and protect it from the weather. Check that the heating plant area has sufficient ventilation for the gas burners. If the heating appliance is located in an area of unusually tight construction, or if a large exhaust fan is installed in the building, provision must be made for an outside air supply near the burner area. Install a permanently open grill, sized at not less than one square inch free area per 5,000 BTU of burner input.

5. The machine should be leveled and shimmed until it is solid. At least two corners should be anchored to the floor with concrete anchors, preferably diagonally opposite corners after the machine is leveled.

6. For maximum efficiency, make certain that an area at least 30" wide extending the length of the machine can be kept clear of obstructions or other machinery for use in operating the machine.

7. The machine should be located so the vent stack can be easily and properly located.

8. A customer supplied manual disconnect switch should be in the operator's view when he or she is standing at the machine's control panel.

SET-UP INSTRUCTIONS

NOTE: It is the customer's responsibility to furnish a fused disconnect for this machine. This disconnect must be located within 50 feet of the machine and must be in the operator's line of sight as he stands at the machine's electrical panel.

1. This machine requires 115 volt, 60 Hz, 5 amp electrical service. It is completely prewired and tested and will require only a standard three pronged, 115 volt, grounded receptacle that is properly sized to meet local codes.

   The Model DS24 gas conversion burner used on this appliance requires 115V-1Ø power to operate. This 115V-1Ø power should be connected to the terminals marked 1 and 2 on the burner terminal strip. The burner wiring has been altered at the factory to make its use on this appliance more practical. Do not add any additional wiring.

2. The BK17A comes equipped with three 42" sections of 8" triple wall stainless steel stacking that is rated at 1,000°F. continuous. There will need to be enough stacking to extend at least 24" above a flat roof or 30" above and 10 feet horizontal distance from a pitched roof (See Fig. 1-1). The stacking should also be at least 12 feet from any adjoining building that extends above the height of the stack. A rain cap and flashing should also be installed on the stacking to prevent any moisture from damaging the oven. (SEE INSTALLATION INSTRUCTION FOR TRIP-L-WALL ON FOLLOWING PAGES.)

   No manually adjustable flue pipe damper is permitted on any gas conversion installation. The stacking should be high enough above the rooftop and/or obstructions to be reasonably free of down drafts. Excessive back pressure (down draft) on burner can force heat into burners and cause burner failure.

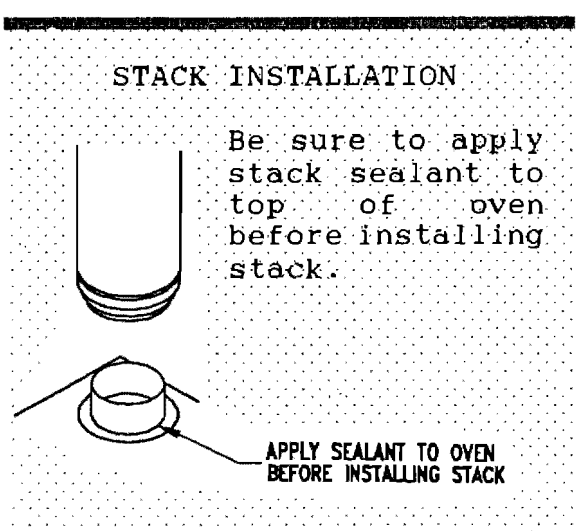
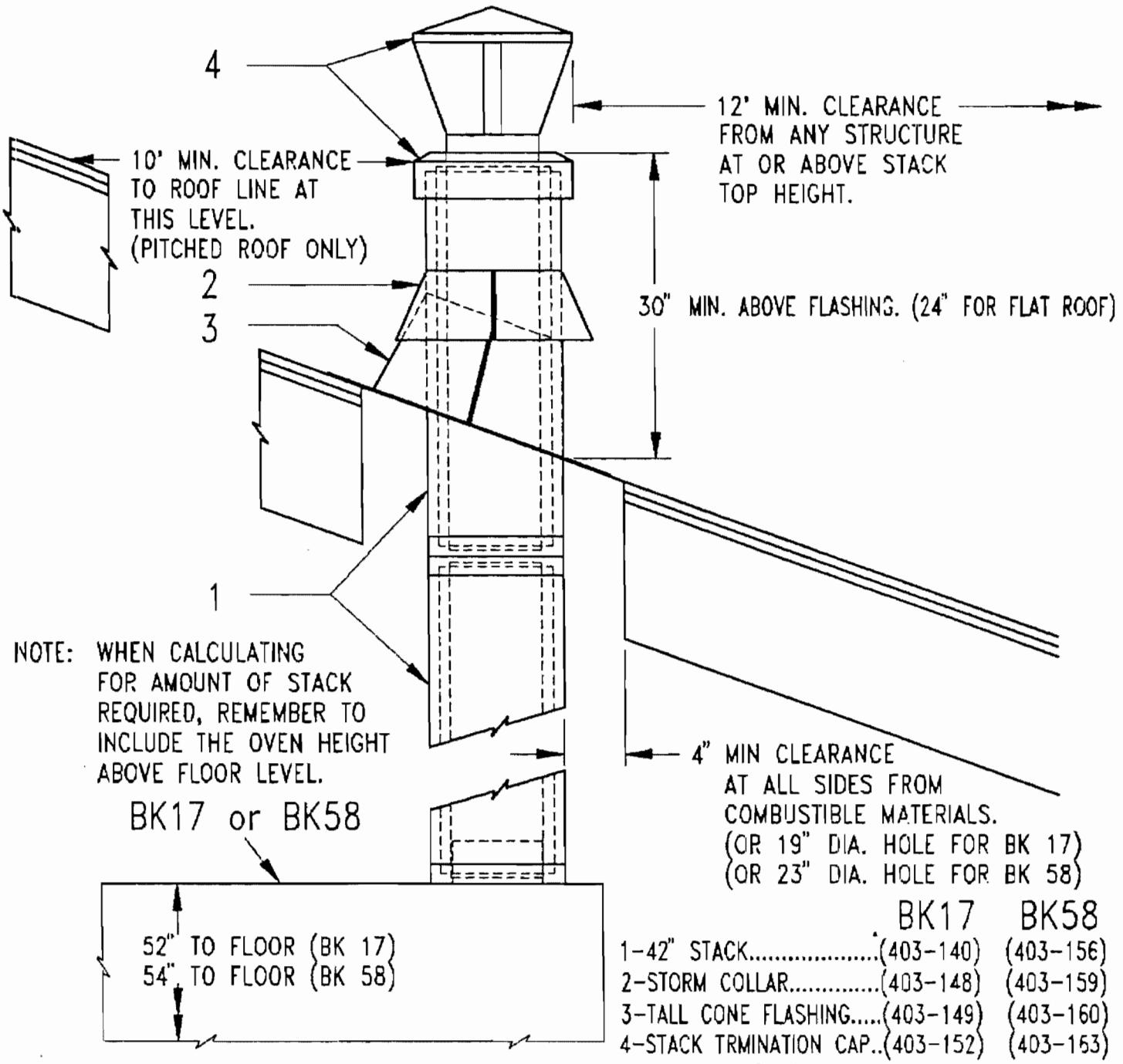


Fig.1

3. The removable outside cart tracks should be installed using bolt and nut provided and then leveled using the adjustable feet so the tracks will hinge up and down freely. Due to heat expansion, the tracks have a slight adjustment that allows them to be moved away from the oven if necessary.

TYPICAL STACK INSTALLATION
USING "TALL CONE FLASHING" ON SLOPED ROOF



	BK17	BK58
1-42" STACK.....	(403-140)	(403-156)
2-STORM COLLAR.....	(403-148)	(403-159)
3-TALL CONE FLASHING.....	(403-149)	(403-160)
4-STACK TRMINATION CAP.. AND CLOSURE RING	(403-152)	(403-163)

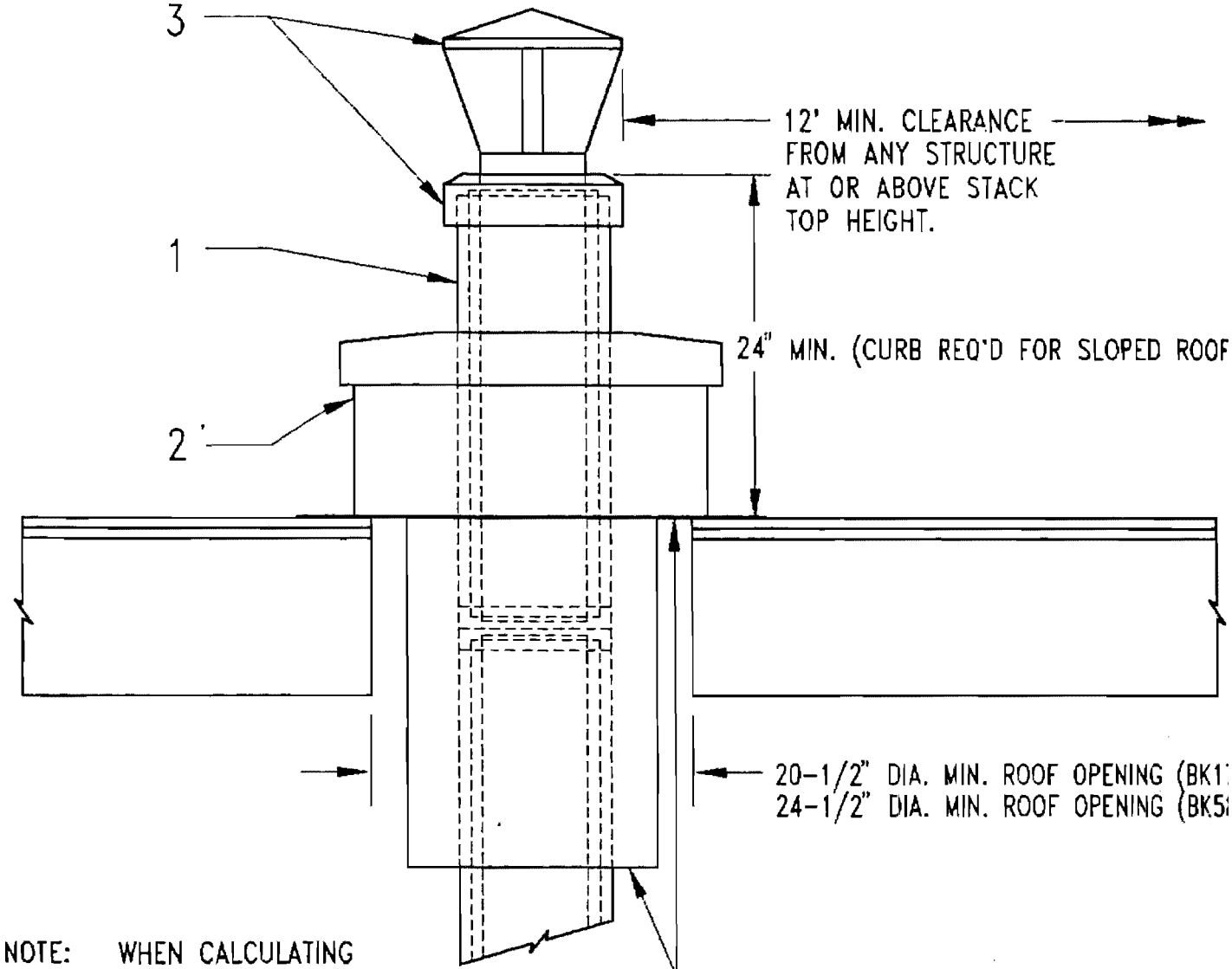
NOTE: When the stack passes through combustible material, some codes will require the use of a penetration assembly. (Part #KI 403-150 for BK 17)(Part #KI 403-161 for BK 58)

With the use of the penetration assembly, the storm collar & roof flashing need not be used as they are part of the penetration assembly.

(See Fig. 2-2 Penetration Ass'y Inst.)

Fig. 1-1

TYPICAL "ROOF PENETRATION ASSEMBLY" INSTALLATION ON FLAT ROOF



	BK17	BK58
1-42" STACK SECTION.....	(403-140)	(403-156)
2-ROOF PENETRATION ASSEMBLY....	(403-150)	(403-161)
3-STACK TERMINATION CAP..... AND CLOSURE RING	(403-152)	(403-163)

Fig. 2-2

MODEL VSI-III CONSTRUCTION

Triple wall piping is constructed by adding an additional wall to the outside of the standard double wall piping. This creates two, rather than one, air spaces between the inner and outer walls (Figure 1). The result is lower outer wall skin temperatures, an important feature if clearances around the system are limited.

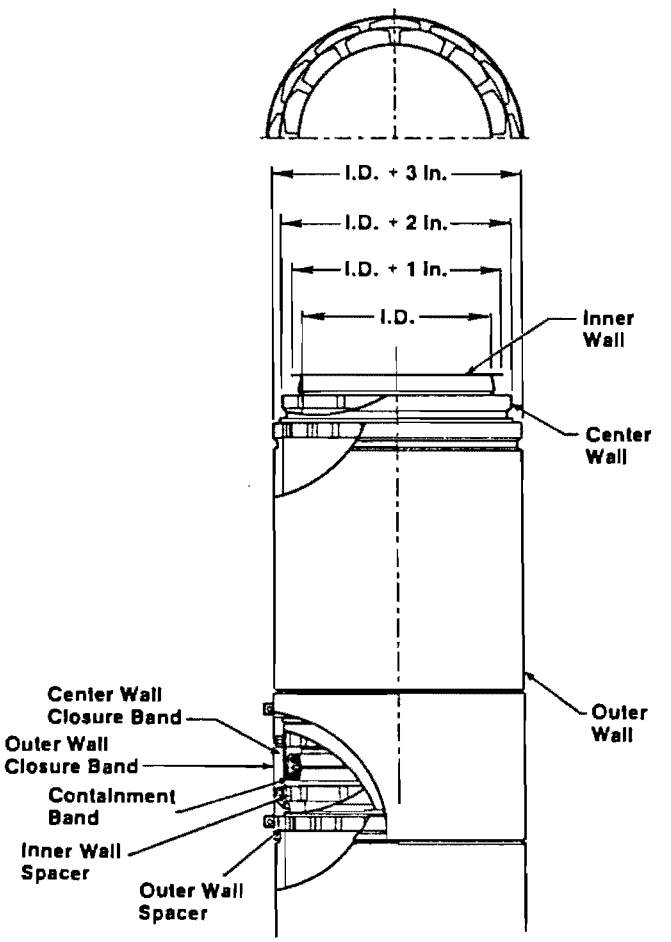


FIGURE 1 Model VSI-III Triple Wall Chimney . Pipe construction and joint details

LOAD BEARING

When installing VSI piping, always remember that the inner wall is the load bearing member of the piping. All pipe supports, such as Stack Support, Wall Support, and Roof Support Assemblies must be connected to the inner wall flanges.

Outer and center walls are not designed to bear loads. They act as jackets to maintain insulating air spaces and to protect the inner pipe from condensation and mechanical damage. Never connect system supports to the outer or center walls or pierce these walls.

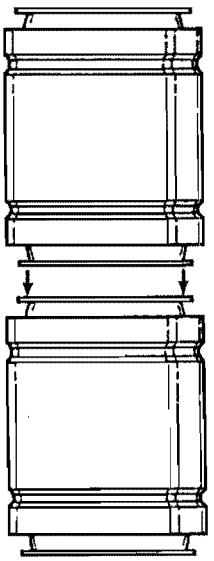


FIGURE 4 Basic Assembly Step 1: Butt adjoining inner wall flanges together.

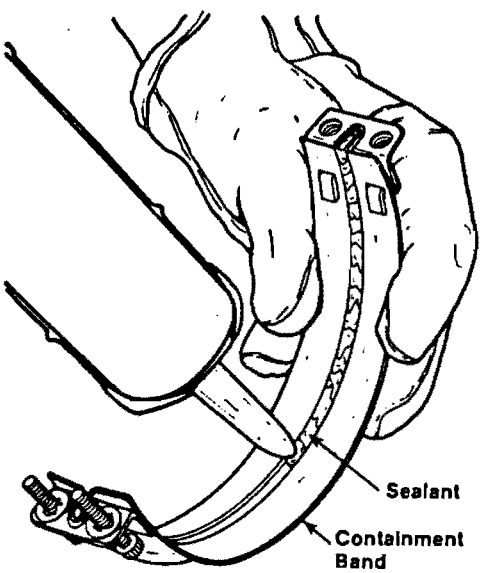


FIGURE 5 Basic Assembly Step 2: Fill deep V-groove of Containment Band with sealant.

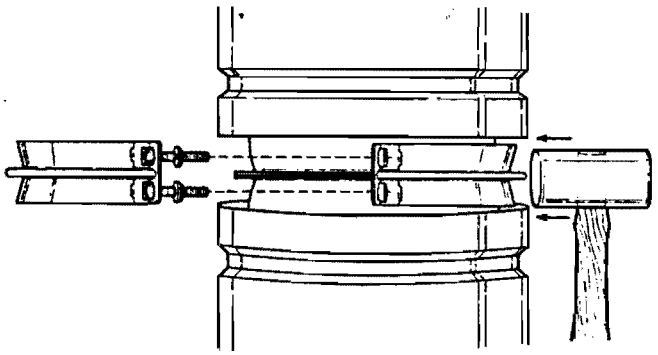


FIGURE 6 Basic Assembly Step 3: Fit Containment Band over inner wall flanges. Seat flanges in band by tapping with mallet.

4. Make sure both inner wall flanges are inside the Containment Band V-groove. Now completely seat the band by tightening down the fasteners in small steps (Figure 7). Tighten in an alternating pattern, and tap on the band with the mallet after each tightening cycle to help seat the band completely and evenly around the joint.

CAUTION

If power driving tools are used to tighten bolts, they must be equipped with a properly adjusted clutch to avoid over-tightening and damage.

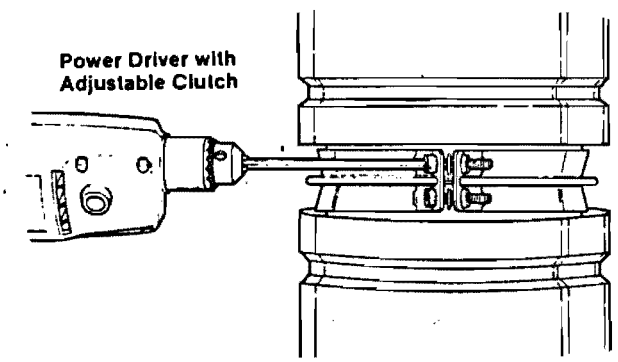


FIGURE 7 Basic Assembly Step 4: Tighten Containment Band fasteners using alternating pattern.

5. Install the needed Closure Bands. A 4-1/2" wide Closure Band is installed to cover the gap between adjoining center wall in Model VSI-III triple wall pipe. Wrap the Closure Band around the pipe so it covers the gap. Make sure the small flanges on both ends of the Closure Band fit inside the beads or grooves in the pipe wall (Figure 8).

6. Tighten the Closure Band fasteners until the band is snug around the pipe (Figure 9). NOTE: Closure Bands must be free to float within the grooves or beads of the pipe. Do not over-tighten. NEVER FASTEN SCREWS OR RIVETS THROUGH THE WALLS OF THE PIPE TO HOLD CLOSURE BANDS OR ANY OTHER PARTS IN PLACE.

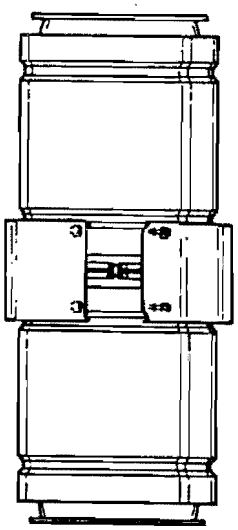


FIGURE 8 Basic Assembly Step 5: Fit Closure Band over gap between adjoining outer pipe walls.

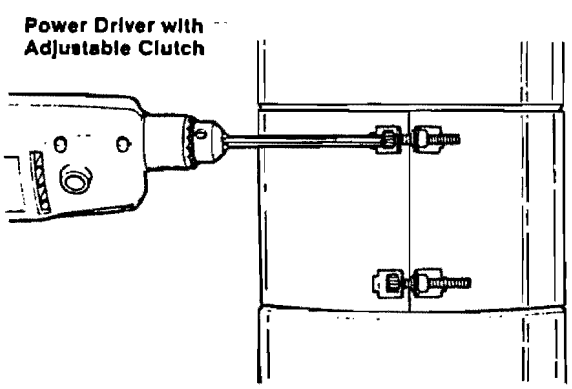


FIGURE 9 Basic Assembly Step 6: Tighten Closure Band fasteners using alternating pattern.

7. On Model VSI-III triple wall joints, an 8" wide Closure band is installed to bridge the gap between adjoining outer walls (Figure 10). It is installed exactly like the band outlined in steps 5 and 6 above.

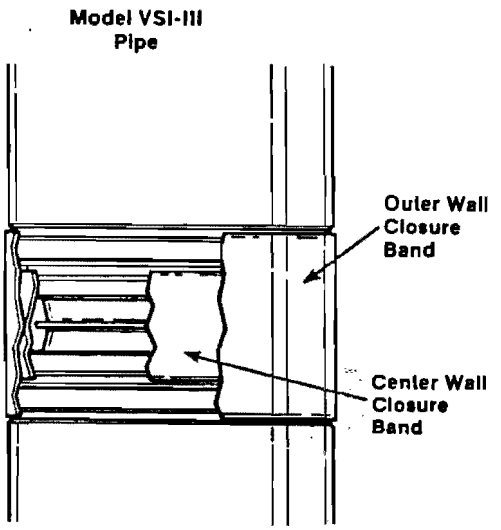


FIGURE 10 Basic Assembly Step 7: Triple Wall Systems only. Install Closure Band between adjoining outer walls, bridges center wall gap.

MOISTURE/WEATHER PROTECTION

Follow these precautions:

1. The use of all stainless steel construction is recommended at above roof levels or where components are exposed to weather or excessive moisture.
2. For sloped, angled, or horizontal runs of pipe, install the outer wall Closure Band with its fasteners at the bottom to help with water run-off (Figure 11A).

3. For vertical, sloped, or angled runs of pipe, apply a continuous bead of sealant at the joint between the upper edge of the outer wall Closure Band and the outer wall. The overlapping seam of the Closure Band should also be sealed (Figure 11B). DO NOT apply sealant at the bottom edge of the Closure Band.

4. DO NOT seal the Closure Band to outer pipe walls on horizontal runs of piping.

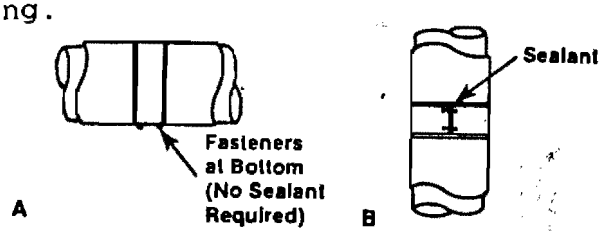


FIGURE 11 Weatherizing precautions: (A) Position fasteners to aid water runoff and (B) seal upper and side seams.

SETTING THERMOSTAT SETPOINT

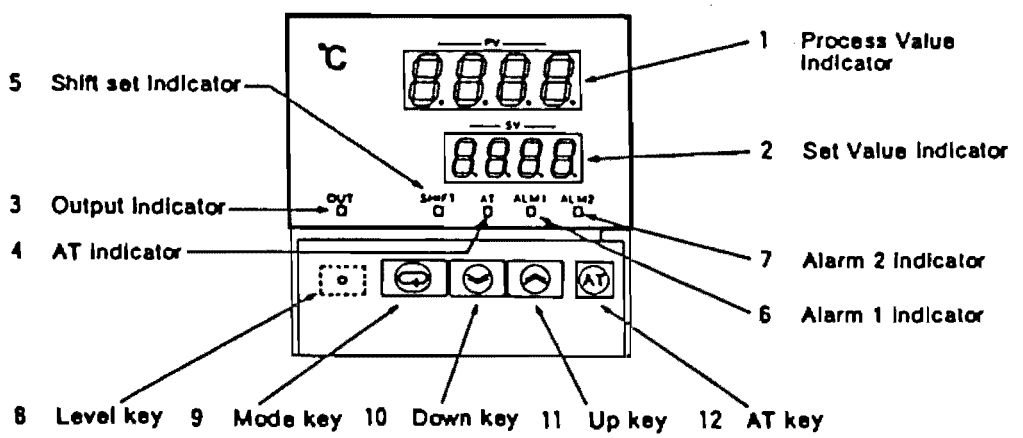
1. The BK17A Bake Klean Oven is equipped with a digital controller responsible for controlling the primary and secondary burners as well as the OTS (over temperature suppression) system.

2. To set the temperature at which the primary burner will operate, depress the #11 Up key or #10 Down key to increase or decrease the temp setting. The setting will be displayed on #2 Set Value indicator. The temperature will increase or decrease one degree for each push. When the key is held down for one second or more, the set value will step 50 units in one second. The setpoint should never be set above 1200°F. or below 0°F. This setpoint will indicate the baking temperature of the oven. The normal baking temperature for cast heads and blocks is in the 600-750°F. range.

NOTE: Due to the combustion of contaminates on the parts of large loads, the temperature indicator may continue to rise after the primary burner has shut down. It is good practice on large dirty loads to set the cut-off temperature of the primary burner 50° below the actual desired temperature range.

3. The temperature at which the secondary burner will ignite is set by first depressing the #9 Mode key once to display alarm one. Then use #10 & #11 Up & Down keys to set the desired set point temperature. Smoke and volatile vapors will become present around 350°F., so the secondary burner should be set accordingly. No volatile substances should be allowed to pass through the oven without first being completely oxidized by the afterburner.

4. The BK17A comes equipped with an OTS (over temperature suppression) system as standard equipment. The temperature setting for the OTS should be 75-100° higher than the processing temperature. To set push #9 Mode key until alarm two is displayed. Then use #10 & #11 Up & Down keys to set the desired set point temperature.



BURNER ADJUSTMENT INSTRUCTIONS

1. The machine should be adjusted so that the burner side is a minimum of 24" from the nearest side wall. This is necessary to allow the operator access to the burner for adjustments.

2. Open the main gas valve to allow gas flow to the burner. Check all joints for gas leaks. This should be done by a qualified plumber.

3. To shut down the burner, depress burner control knob lightly and turn to the "*off*" position.

4. To light the burner, turn knob counterclockwise to stop at "*on*". Knob cannot be set between "*pilot*" and "*on*".

5. Set the Thermostat Controller to the desired setpoints. Refer to the section "*Setting Thermostat Setpoints*". Switch the control panel switch to "*on*" and the 6-hour timer to one of the timed positions. Be sure to turn the selector knob on the timer past "1" before setting the final time. At this time the primary burner should ignite and will stay on until the primary setpoint is reached. The secondary burner will not ignite until the bottom setpoint of the thermostat is reached and will stay on until the baking cycle is complete.

6. Repeat Step 5 to make sure the burner will re-ignite every time.

   WARNING: Any time a gas burner is cycled on and off, repeatedly, unspent gas fumes may accumulate in the baking chamber. Open the oven door and allow at least one minute for the gas to dissipate before the burner re-ignition. Failure to do so could result in an explosion and/or fire.

   CAUTION: Do not attempt to operate the burner with the back cover removed since blower air will be lost.

7. The air shutter is located on the regulator side of the burner (Fig. 1-2). It should be adjusted to provide a quiet, soft flame blue at the burner nozzle with well defined orange and yellow tips for natural gas or well defined yellow tips for propane gas. The air shutter has been adjusted at the factory, but may need readjustment due to a change in gas pressure or air flow conditions. <u>If readjustment is necessary, the primary burner flame should never protrude from the burning chamber more than 1". It should never come in contact with the parts being cleaned or the cart holding them.</u>

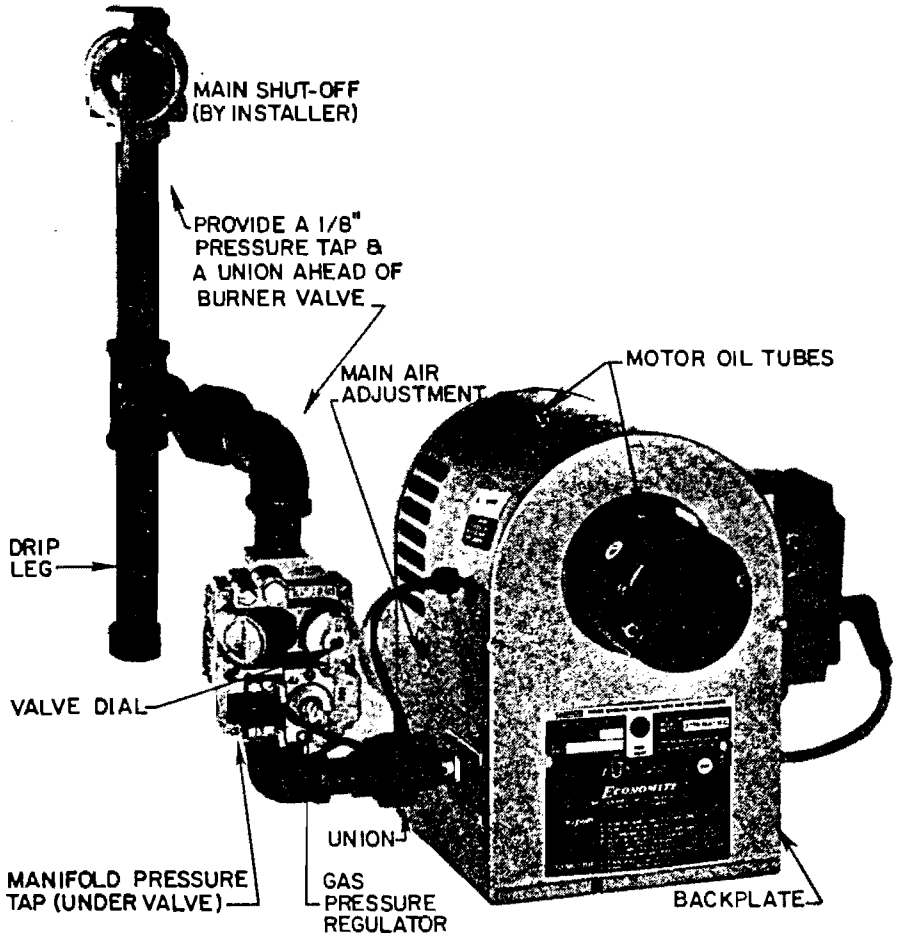


Figure 1-2

OPERATING INSTRUCTIONS

1. Verify that all the previous instructions have been followed and checked before putting the machine into operation.

2. Parts to be cleaned should be loaded and put into the oven and the door closed before the oven is started. The length of the heat-up and bake time is dependent on the amount and positioning of parts. The larger the load the longer the heat-up and the longer the bake time should be to obtain the desired results. A small load that is spaced with distance between parts will have a quicker heat-up time than the same load packed together. Parts should be loaded and arranged carefully to prevent wall or door insulation damages.

3. In cold weather it may be desirable to reduce the low setpoint, bringing the afterburner on quicker to improve the stack draft.

4. Aluminum parts should always be processed below 600°F. Parts made of zinc, "*pewter*" or "*die cast*" (unless aluminum die casting) cannot be baked since this material melts between 600-800°F. (315-425°C.) depending upon the alloy.

5. A typical cycle will be from 1 to 3 hours depending on the size of the load and the amount of combustibles to be baked off. Daily usage of the machine will provide the experience necessary to determine exact times and temperatures.

6. Care should be taken not to heat or cool certain parts too quickly. Warpage may occur if temperature changes occur too quickly.

7. Once the parts have been sufficiently cleaned and the oven shut off, cracking the door slightly will accelerate the cooling. A slow cool down rate is achieved by leaving the door closed. The controller will continue to monitor the oven temperature while cool down proceeds.

8. After processing, it is recommended that the parts be run through a steel shot blasting machine, a spray washer or a glass bead blasting cabinet to remove all the charred material.

MAINTENANCE INSTRUCTIONS

NOTE: The BK17A was designed for low maintenance operation but the instructions listed below must be followed to keep the oven operating in a satisfactory manner.

1. The four cart casters have a bushing type bearing arrangement on their axles. A light film of graphite or high temperature grease should be applied to the bearings frequently. High temperature grease (0-2000°F.) is available from the factory in 16 oz. cartridges. Part # for the grease is KI 808-299. It is made by Bostik Chemical Group and it is also known as Never-Seez.

   WARNING: Too much of a lower temperature grease will actually increase the friction between sleeve and bearing.

2. The floor of the heating chamber should be cleaned periodically as ash and residue build-up becomes apparent.

OTS SYSTEM INSTRUCTIONS
(OVER TEMPERATURE SUPPRESSION)

WATER: A fresh water supply with a recommended pressure of 40 psi. must be installed for the OTS system. Once the water has been connected the system should be tested to ensure the nozzle is not plugged and will allow water mist to pass.

OTS TEST: The OTS test button located on the electrical panel allows the user to check the system for proper operation. Pressing the button allows water to flow through the nozzle into the baking chamber, indicating the system is free from obstruction and ready to operate.

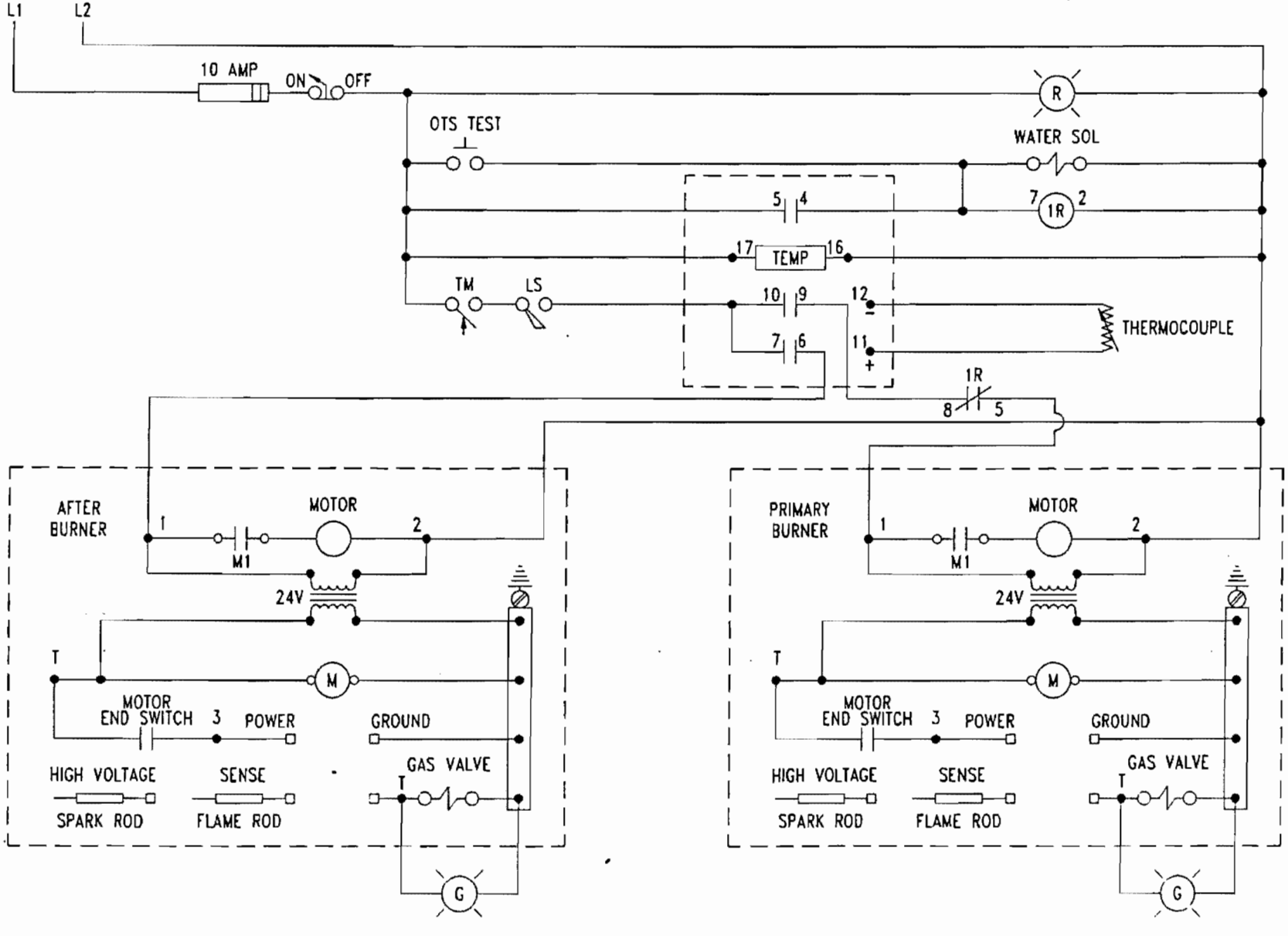
It is good practice to test the OTS before each load to make sure the nozzle is not plugged and the prove the system is operational. If the nozzle becomes plugged it can be removed from the inside and cleaned. The nozzle is screwed into a pipe coupling and has a hex head for easy removal. The orifice in the nozzle is very small and dirt or dust particles can cause it to become plugged.

The OTS temperature setting should be set at 75-100˚F. higher than the processing temperature. For detailed instructions on setting refer to "SETTING THERMOSTAT SETPOINT" paragraph 4.

MODEL BK-17A

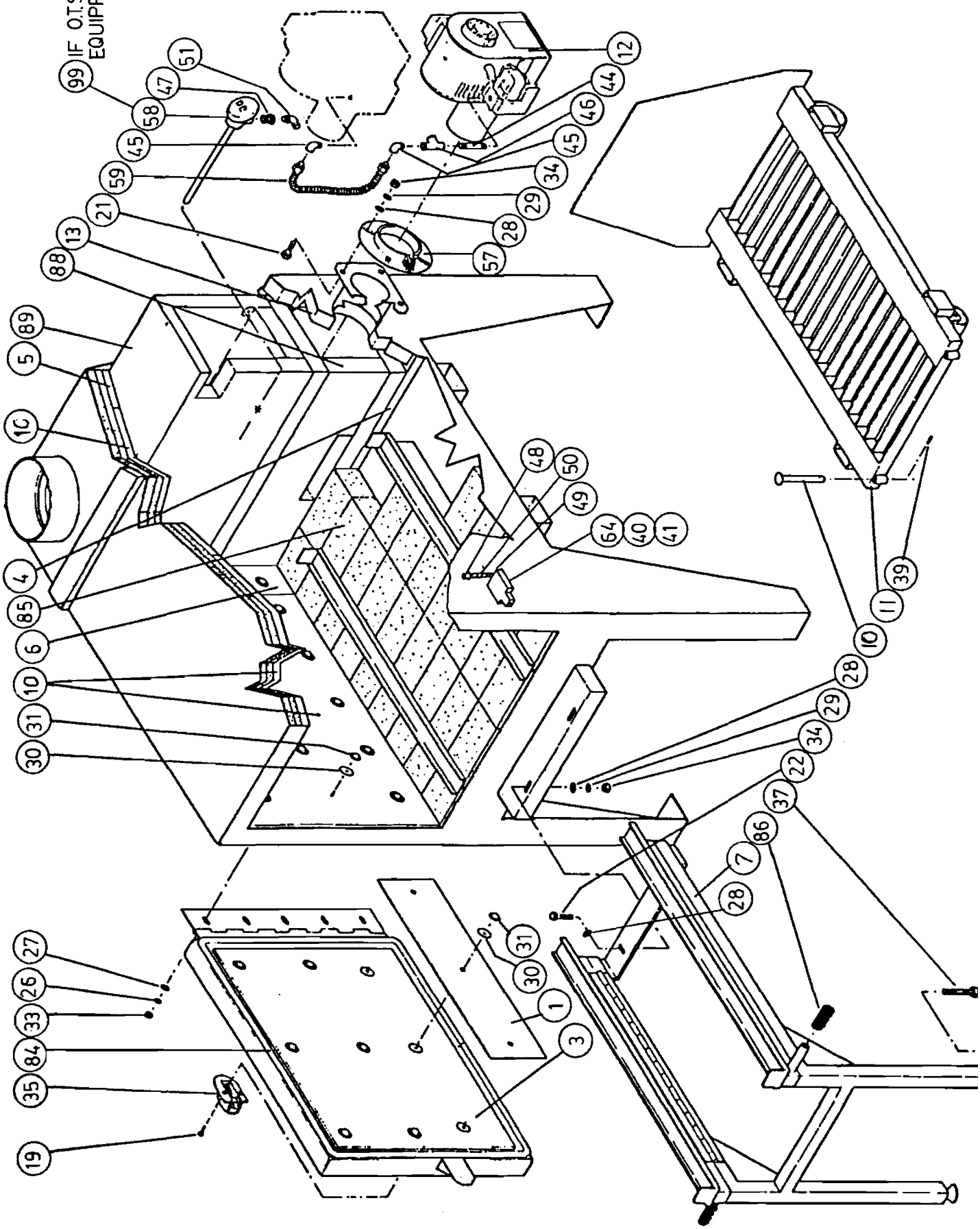
NOTE: CUSTOMER IS TO PROVIDE MAIN DISCONNECT LINE VOLTAGE INPUT 115V-1ø

FULL LOAD AMPERE DRAW IS 5 AT 115V-1ø INPUT
8/15/91

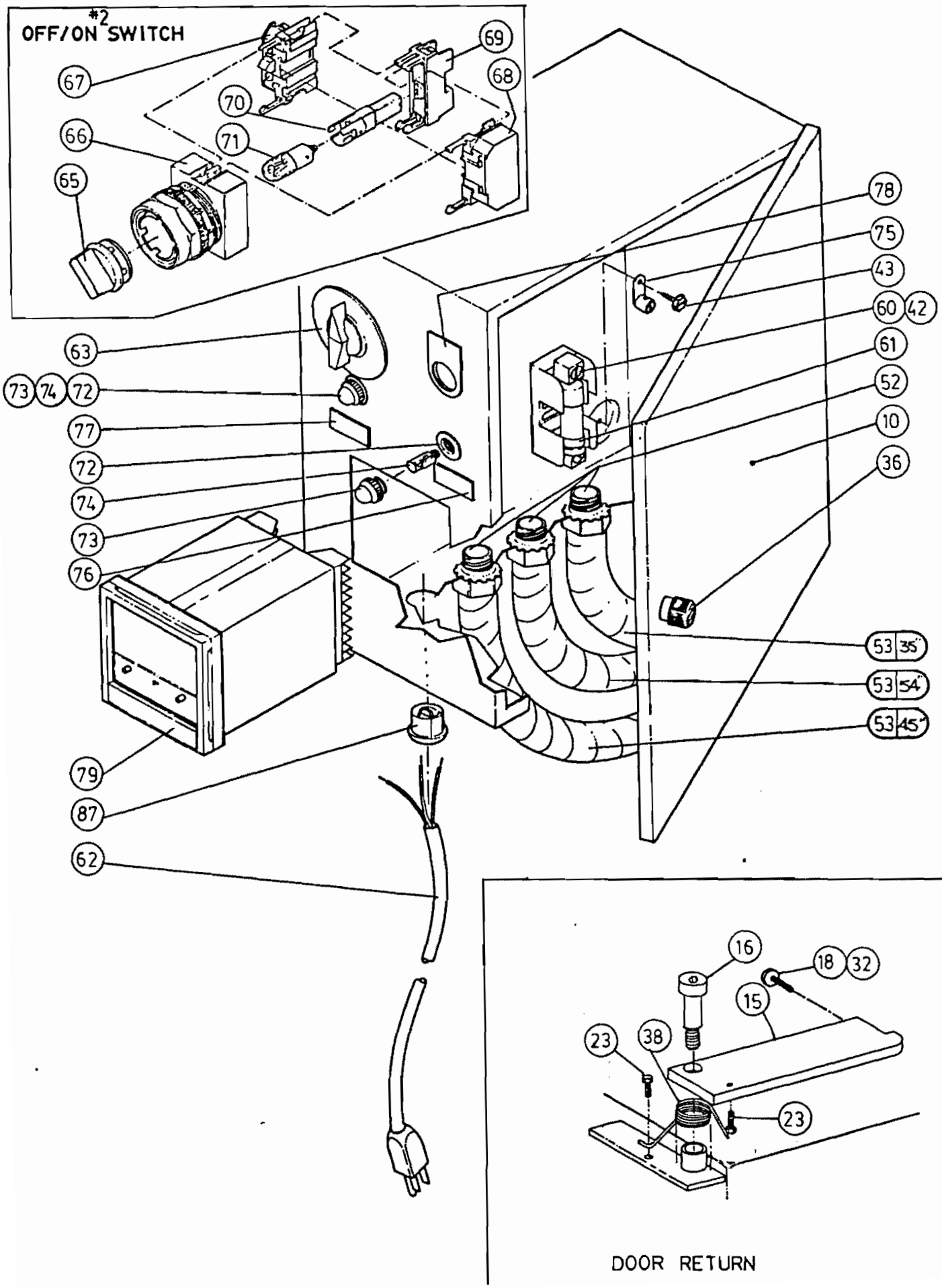


BK17

Bake-Klean Oven



BK17 BAKE-KLEAN OVEN



SERVICE PARTS LISTING
MODEL BK17A

No.	Part#	Description	Qty.
1.	KI 4939	Front Door Protector	1
2.	KI 4940	On/Off Switch	1
3.	KI 4948	Door Insulation Panel	1
4.	KI 4949	Floor Insulation Panel	1
5.	KI 4950	Top Insulation Panel	1
6.	KI 4951	Side Insulation Panel	2
7.	KI 4959	Track Leg W.A.	1
8.	KI 4961	Insulation Panel	4
9.	KI 4962	Enclosure W.A.	1
10.	KI 4968	Stop Rod W.A.	2
11.	KI 4969	Cart W.A.	1
12.	KI 4977	Burner Assembly	2
13.	KI 4981	Chamber End Insulation Panel	2
14.	KI 4994*	Hook W.A.	2
15.	KI 5300	Return Arm	1
16.	KI 108-063	5/8" x 1-3/4" Shoulder Bolt	1
17.	KI 101-001	1/4" x 3/4" Hex Bolt	2
18.	KI 101-002	1/4" x 3/4" Carriage Bolt	1
19.	KI 101-010	5/16" x 3/4" Hex Bolt	2
21.	KI 101-035	3/8" x 1" Hex Bolt	9
22.	KI 101-037	3/8" x 1-1/4" Hex Bolt	2
23.	KI 101-163	1/4-20 x 3/8" Cap Screw	2
24.	KI 102-001	1/4" Flat Washer	2
25.	KI 102-003	1/4" Lock Washer	2
26.	KI 102-007	5/16" Lock Washer	5
27.	KI 102-008	5/16" Flat Washer	5
28.	KI 102-011	3/8" Flat Washer	12
29.	KI 102-012	3/8" Lock Washer	10
30.	KI 102-044	1/2" Self Locking Washer	82
31.	KI 102-045	Capped Speed Washer	65
32.	KI 103-001	1/4" Hex Nut	3
33.	KI 103-007	5/16" Hex Nut	5
34.	KI 103-014	3/8" Hex Nut	10
35.	KI 109-005	Latch Body and Strike	1
36.	KI 109-045	Enclosure Latch	1
37.	KI 109-065	Jig Leveling Foot	2
38.	KI 109-160	Torsion Spring	1
39.	KI 110-012	1/8" x 1" Roll/Spring Pin	2
40.	KI 112-045	#10/24 Hex Nut	2
41.	KI 112-047	#10/24 x 1/2" Machine Screw	2
42.	KI 112-082	#8 x 1/2" Hex Tapping Screw	2
43.	KI 112-090	#10 x 5/8" Hex Tapping Screw	4
44.	KI 214-056	1/2" x 4" Pipe Nipple	1
45.	KI 214-059	1/2" 90° Street Elbow	2
46.	KI 214-071	1/2" x 1/2" x 3/4" Tee	1
47.	KI 214-076	3/4" x 1/2" Hex Bushing	1

SERVICE PARTS LISTING
MODEL BK17A (CONT'D)

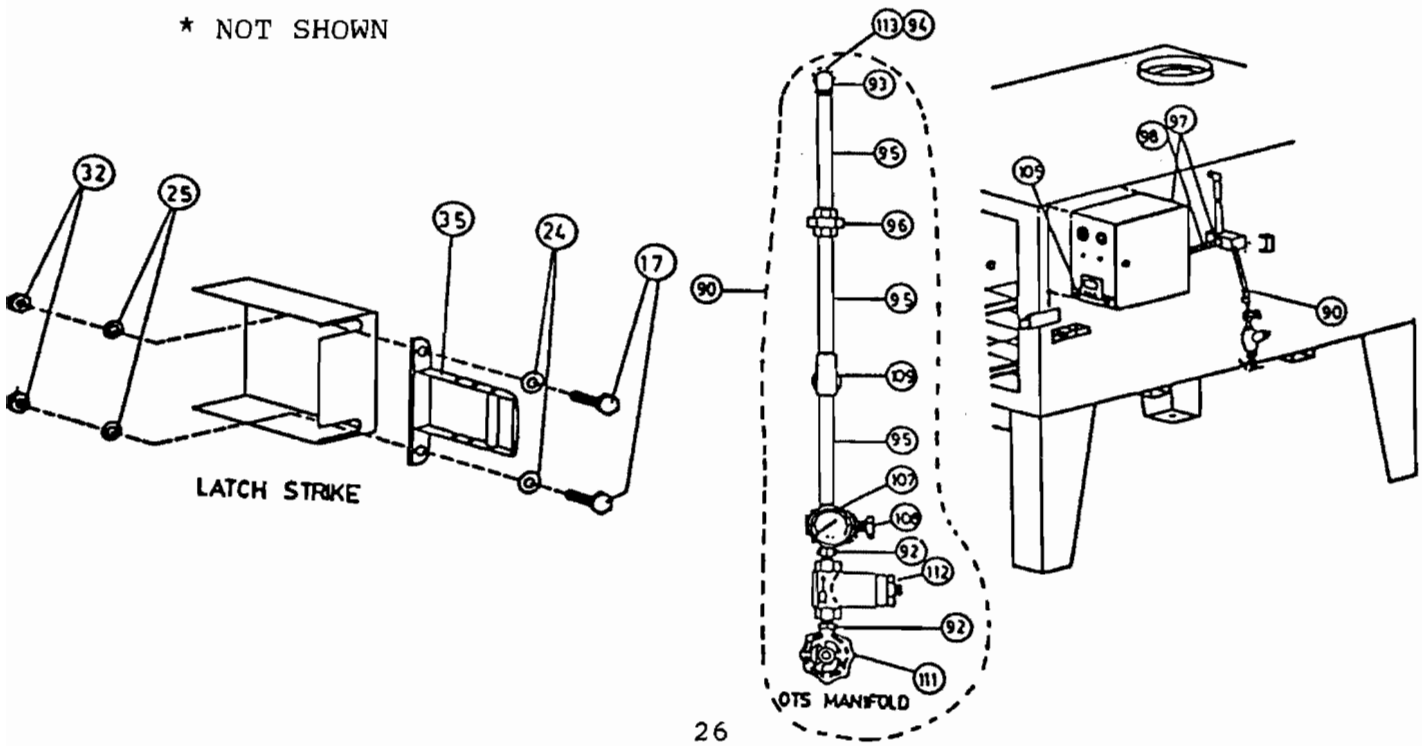
No.	Part#	Description	Qty.
48.	KI 219-002	3/8" Box Connector	1
49.	KI 219-003	3/8" 90° Box Connector	1
50.	KI 219-010	3/8" Greenfield Conduit	4"
51.	KI 219-071	1/2" 90° Box Connector Elbow	1
52.	KI 219-072	1/2" Box Connector	3
53.	KI 219-073	1/2" EMT Flex Tubing	134"
54.	KI 329-025	3-1/4" Caster	4
55.	KI 329-026	Axle and Nut for Caster	1
56.	KI 329-027	Washer for Caster	1
57.	KI 401-003	Mount Flange	2
58.	KI 403-027	Type K Dual Element Thermocouple	1
59.	KI 403-120	Flex Gas Line 1/2" x 24" w/Fittings	1
60.	KI 535-110	1-Pole Fuse Block	1
61.	KI 535-174	10 Amp Fuse	1
62.	KI 536-029	12 Ft. Cord Set 16/3	1
63.	KI 538-010	6-Hour Timer	1
64.	KI 538-064	Push Button Limit Switch	1
65.	KI 538-095	Red Knob	1
66.	KI 538-102	Operator	1
67.	KI 538-108	Contact Block	1
68.	KI 538-112	Dummy Contact Block	1
69.	KI 538-116	Adaptor	1
70.	KI 538-117	Lamp Holder	1
71.	KI 538-118	115V Lamp	1
72.	KI 539-050	Mini Lamp Socket	2
73.	KI 539-053	Green Jeweled Lens	2
74.	KI 539-055	24V Lamp	2
75.	KI 540-001	#4 Grounding Terminal Lug	1
76.	KI 540-072	Legend Plate: Primary	1
77.	KI 540-073	Legend Plate: Secondary	1
78.	KI 540-105	Legend Plate: On/Off	1
79.	KI 541-010	Temperature Control	1
80.	KI 654-005*	Heat Gloves	1 pr.
81.	KI 658-017*	Stack Sealant	TUBE
82.	KI 658-018*	Flame Safe Sealant	TUBE
83.	KI 658-019*	Hi Temp Silicone	TUBE
84.	KI 659-016	3/4" x 1-1/2" Tadpole Seal	112"
85.	KI 659-017	Insulating Fire Brick	36
86.	KI 808-017	Handle Grip	2
87.	KI 808-025	7/8" Strain Bushing	1
88.	KI 809-060	Cast Primary Chamber	1
89.	KI 809-061	Cast Afterburner Chamber	1

* NOT SHOWN

SERVICE PARTS LISTING
MODEL BK17A (CONT'D)

No.	Part#	Description	Qty.
90.	KI 4895	OTS Water Manifold	1
91.	KI 112-081*	#8 x 3/8" Hex Tapping Screw	2
92.	KI 214-024	1/4" Hex Pipe Nipple	2
93.	KI 214-219	1/4" 90° Elbow	1
94.	KI 214-220	1/4" Coupler	1
95.	KI 214-221	1/4" x 3" Pipe Nipple	3
96.	KI 214-224	1/4" Pipe Union	1
97.	KI 219-002	3/8" Box Connector	2
98.	KI 219-010	3/8" Greenfield Conduit	9"
99.	KI 533-033*	8-Pin Socket	1
100.	KI 533-028*	8-Pin Relay	1
101.	KI 538-096*	Push Button Operator	1
102.	KI 538-098*	TW Series Button Flush	1
103.	KI 538-108*	Normally Open Contact Block	1
104.	KI 538-112*	Dummy Contact Block	1
105.	KI 540-115	Legend Plate: OTS Test	1
107.	KI 712-002	1/8" Air Gauge	1
108.	KI 712-022	1/4" NPT Pressure Regulator	1
109A.	KI 713-052	115V Coil Only	1
109B.	KI 713-058	Solenoid Valve Only	1
110.	KI 804-126*	Decal: Timer (6-Hour)	1
111.	KI 808-019	1/4" Gate Valve	1
112.	KI 808-073	1/4" FPT Strainer	1
113.	KI 808-113	OTS Spray Nozzle	1

* NOT SHOWN

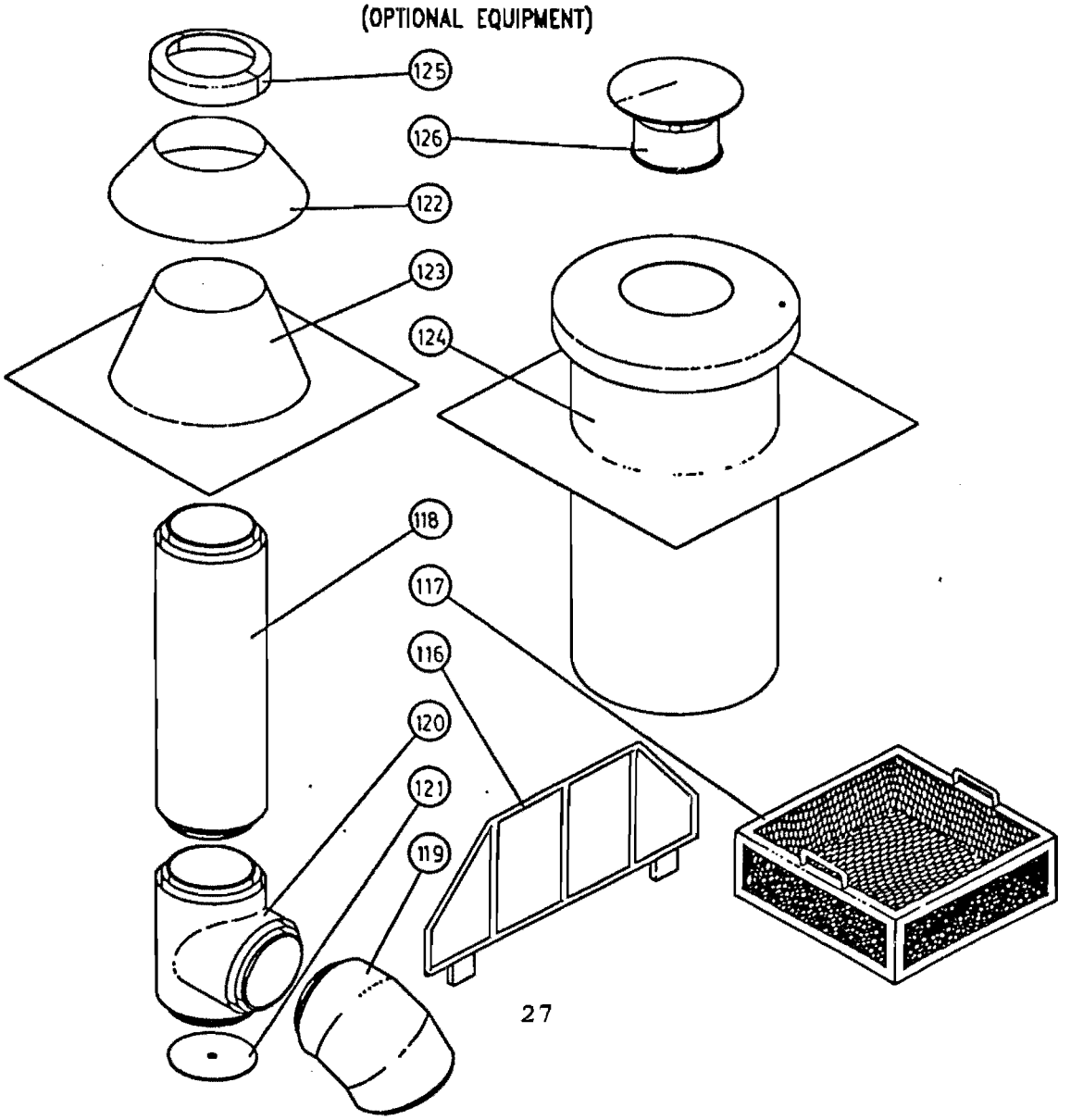


SERVICE PARTS LISTING
BK17A OPTIONAL EQUIPMENT

No.	Part#	Description	Qty.
116.	KI 4985	Cart Sides	2
117.	KI 4999	Parts Basket	1
118.	KI 403-140	Stack Section	-
119.	KI 403-145	45° Elbow	-
120.	KI 403-146	90° Tee	-
121.	KI 403-147	Drain Plug for 403-146	-
122.	KI 403-148	Storm Collar	-
123.	KI 403-149	Tall Cone Flashing	-
124.	KI 403-150	Penetration Assembly	-
125.	KI 403-151	Closure Ring (comes with 403-152)	-
126.	KI 403-152	Rain Camp & Closure Ring	-

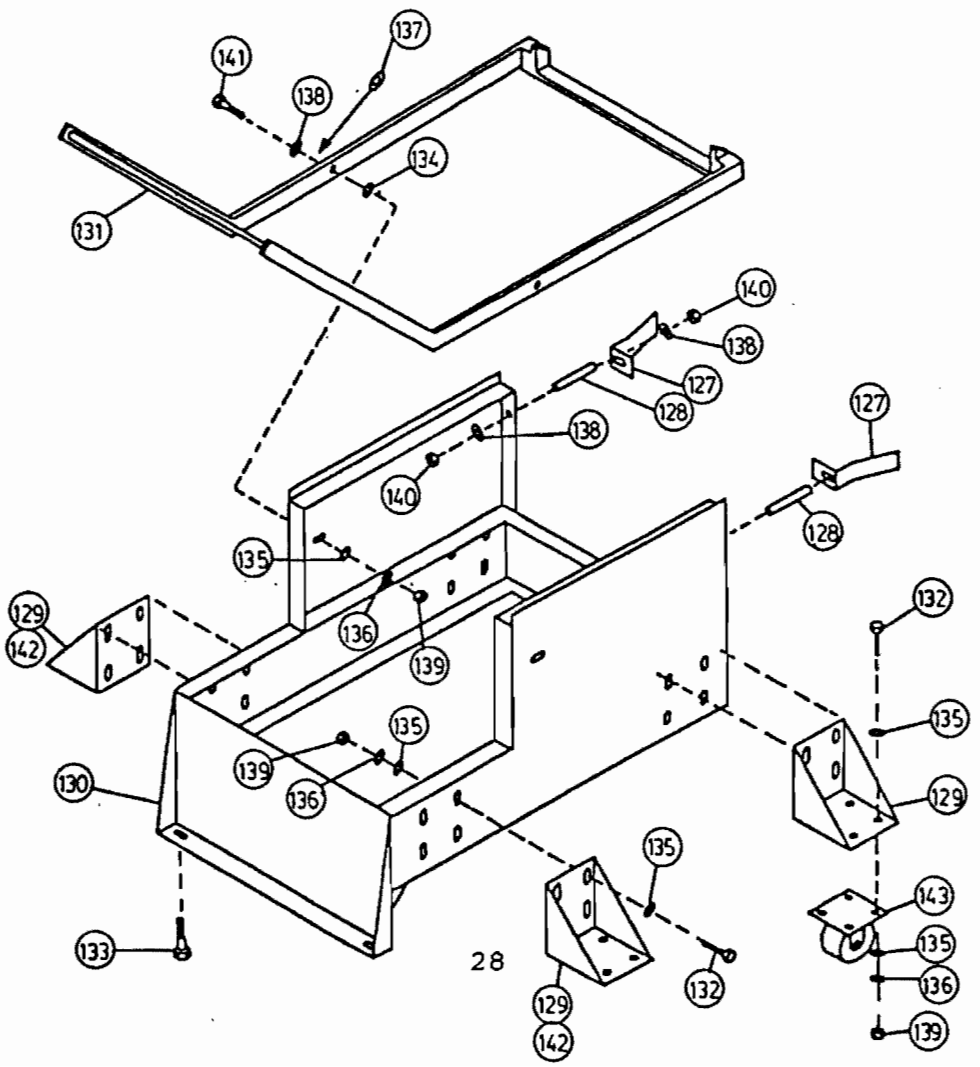
BK17A

(OPTIONAL EQUIPMENT)



SERVICE PARTS LISTING
BK WAGON OPTION

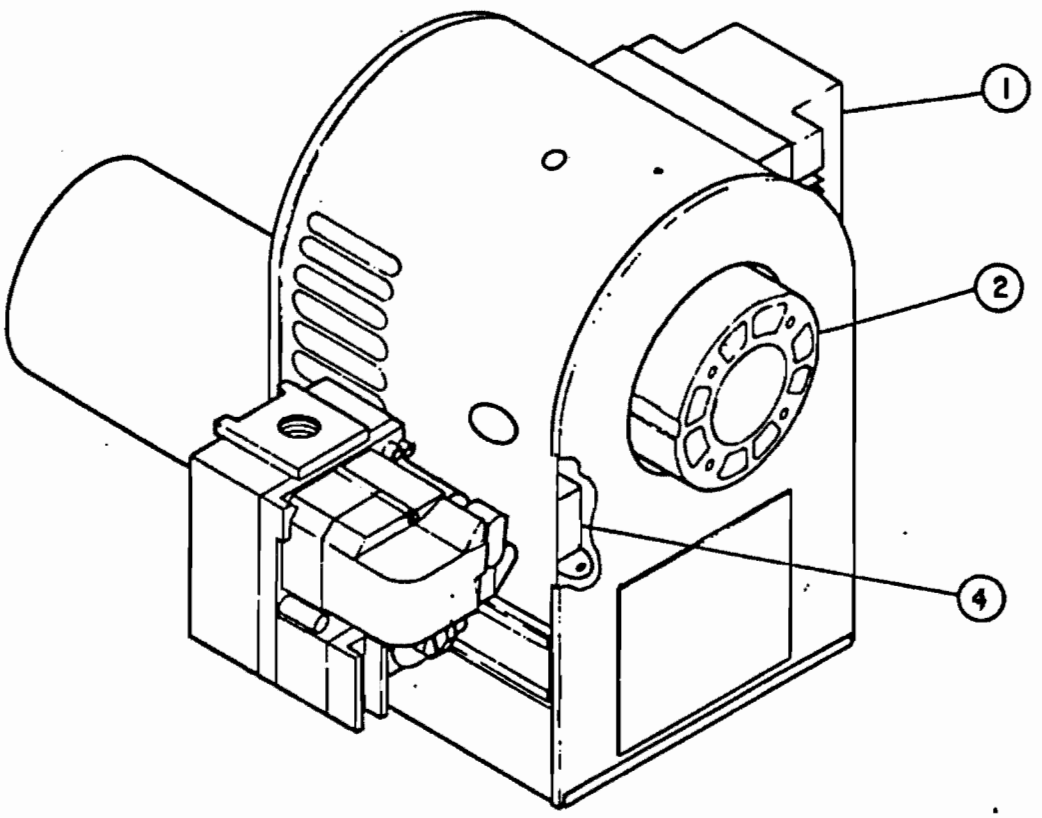
No.	Part#	Description	Qty.
127.	KI 5951	Dolly Guides	2
128.	KI 5952	Dolly Stop Bolts	2
129.	KI 5953	Caster Mount W.A.	4
130.	KI 5956	Dolly W.A.	1
131.	KI 5964	Catch W.A.	1
132.	KI 101-035	3/8" x 1" Hex Bolt	32
133.	KI 101-061	1/2" x 1" Hex Bolt	2
134.	KI 102-008	5/16" Flat Washer	2
135.	KI 102-011	3/8" Flat Washer	66
136.	KI 102-012	3/8" Lock Washer	34
137.	KI 102-016	7/16" Flat Washer	4
138.	KI 102-020	1/2" Flat Washer	8
139.	KI 103-014	3/8" Hex Nut	34
140.	KI 103-027	1/2" Hex Nut	4
141.	KI 108-049	1/2" x 5/8" Shoulder Bolt	2
142.	KI 329-035	Swivel Caster 4"	2
143.	KI 329-036	Rigid Caster 4"	2

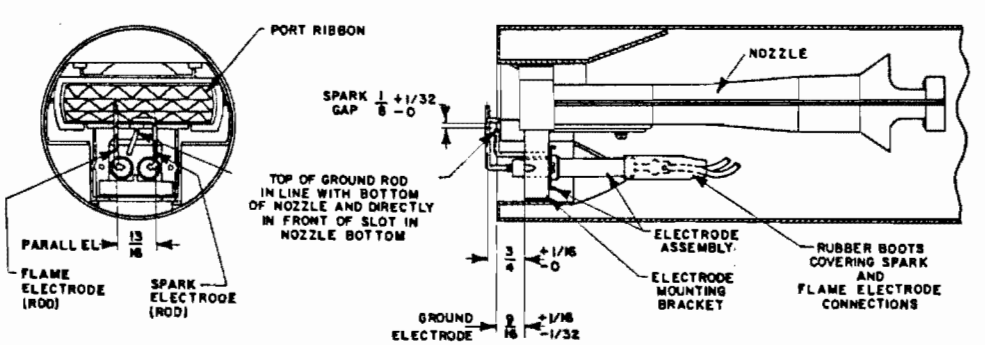


SERVICE PARTS LISTING
GAS BURNER

No.	Part#	Description	Qty.
1.	KI 401-006*	Ignition Control Board (Honeywell) . .	1
2.	KI 401-007	Multi-Use Motor Kit	1
3.	KI 401-009	Electrodes	1
4.	KI 401-010	Transformer 24V	1

* NOTE: When ordering control board, check brand name. Earlier machines need to order KI 401-004 (Fenwall) Ignition Control Board.





SPECIFICATIONS AND DATA

CABINET:	Heavy gauge sheet steel with all welded construction.
FLOOR:	3" thick insulating fire brick.
INSULATION:	Walls and ceilings are lined with two continuous layers of 1" ceramic fiber blanket and one 1" layer of fiberglass board insulation. The insulation is fastened in place using stainless steel pins and locking washers with caps.
ELECTRICAL SERVICE:	110-125 volt, 50-60 Hz, single phase current with 5 amp draw.
BURNERS:	Natural or propane gas burners with a maximum output of 150,000 BTUs per hour.
VENT STACK:	Triple wall positive pressure stacking designed for lower "*skin*" temperatures. Made in sections for easy installation.
EXPLOSION RELIEF:	Required on all ovens and furnaces. The door is equipped with an explosion relief latch in the event of excessive internal pressure. A safety switch on the oven will automatically shut down burners when the door opens.
NORMAL RECLAIMING TIME AND TEMPERATURE:	1-3 hours plus cooling time at 0-750°F.
OUTSIDE DIMENSIONS:	54" Wide x 94" Deep x 57" High
WORKING AREA:	31" Wide x 40" Deep x 19" High
INSIDE DIMENSIONS:	31" Wide x 41" Deep x 24" High
APPROXIMATE SHIPPING WEIGHT:	1150 Pounds

IF YOU HAVE A QUESTION OR PROBLEM

Your BK17A Bake Klean Oven was designed with operator convenience and efficiency in mind and manufactured to strict quality standards.

This machine was tested prior to shipment and judged to be in perfect condition when it left the factory.

If you have any questions regarding service or set-up, please call (316) 767-6721 or feel free to use our National Wats line number 800-835-3528 and ask for our Service Department. One of our personnel qualified to handle service calls will be glad to assist you in resolving your questions.

BK17A TROUBLE CHART

I. The red on/off switch does not become illuminated when the switch is in the "*on*" position.

   A. If the temperature indicator displays temperature, then check for a burned out light bulb on the on/off switch.

   B. If the temperature indicator does not display temperature then check for blown fuse in the electrical panel. Voltage is 115V on the outlet of the fuse and at the on/off switch.

II. Burners will not ignite and blower fan is not running.

   A. Check limit switch on the door. The door has to be closed and limit switch engaged for burners to ignite.

III. The primary burner cycles on/off frequently and the flame protrudes out into the cleaning chamber from the combustion chamber.

   A. Increase air on the primary burner until the flame is blue and only an occasional finger of flame, less than 1", juts into the cleaning chamber.

IV. Fan motor will not run.

   A. Confirm 115V between terminals #1 and #2.

   B. Check 24V* operating control circuit:
      1. Between left terminal T and GND.
         a. If no voltage, transformer is defective.
         b. If very low voltage*, circuit is overloaded or transformer is defective.
      2. Between right terminal T and GND.
         a. If no voltage, circuit between T and T is open.

   C. Check for 115V between motor relay terminal #4 and strip terminal #2:
      1. If no voltage, motor relay is defective.
      2. If voltage present, motor is defective.

V. Motor runs in repeated cycles - no flame present.

   A. Motor relay drops out due to low voltage*.
      1. Check valve circuits for ground or overload.

VI. Motor runs continuously but no flame.

   A. Check that both the manual main shut-off valve and the

combination gas valve are in the full "*on*" position.

B. Turn burner power off for a minimum of 30 seconds to "*reset*" Spark Ignition Module control.
   1. Burner lights and runs normally. Continue with step VI.C.4, VII.A and VII.B.3 in case of borderline gas pressure or electrical conditions.
   2. Flame on momentarily. Continue with step VII.
   3. No flame.
      a. Check for 24V between strip terminal #3 and GND.
         1. If no voltage, interlock switch is defective.
      b. Check for 24V between Spark Ignition Module control "24V" (power) terminal and GND.
         1. If no voltage, wire from strip terminal #3 to Spark Ignition Module 24V terminal is defective.

C. Turn burner control off for a minimum of 30 seconds to "*reset*" the electronic control for each of the following steps. Tests are valid only during the 6 second trial for ignition.
   1. Check for 24V between Spark Ignition Module "*valve*" power terminal and GND. No voltage, defective control.
   2. Check for 24V between valve TH terminal and GND.
      a. No voltage, verify that wire from valve terminal TR is connected to strip GND terminal. "*Reset*" Spark Ignition MOdule and repeat step 2. No voltage, defective wire.
      b. With voltage, "*reset*" Spark Ignition Module and listen for audible "*click*" as first valve operator opens. Observe green lights on control panel. These lights are wired in series with gas valve and will become illuminated whenever 24V is present at valve.
         1. No "*click*", replace valve.
         2. With "*click*", continue step VI.C.4.
   3. Check for ignition spark (spark length approximately 1/8") observe closely when visually checking the spark. Since this is a capacitor discharge system, the spark is faint and thread-like and may be overlooked in bright light.
      a. Between control high voltage terminal and ground. No spark, defective control.
      b. Check for spark between electrode tip and top of ground rod. If electrode tip is not visible with burner mounted, but spark can be heard, continue with step C.4. If spark cannot be heard, remove nozzle and ground it solidly to burner housing for spark test.

4. Connect manometer to combination valve "*manifold pressure*" tap and, during trial for ignition, check gas pressure.
   a. Pressure between 2" and 4" W.C. and steady, perform step VI.C.3.
   b. Zero, erratic, low or high pressure confirms that the pressure to the combination valve inlet is between 5" and 14" W.C.; replace valve pressure regulator.

VII. Flame on only during 6-second trial for ignition.

A. With motor running check burner line voltage terminals for 115V as follows:
   1. Between 1 and L2 - 115V: voltage OK.
   2. Between 1 and GND - 115V: ground OK.
   3. Between 2 and GND - none: neutral OK.

B. Follow "*reset*" procedures as specified in step VI.C.
   1. Disconnect sensor from control terminal, "*reset*" control by turning burner control off for a minimum of 10 seconds and check for 105V between sensor terminal and ground. No voltage, defective control.
   2. Check sensor wire for continuity.
   3. Connect DC microamp meter in series with sensor wire and control terminal. With flame on, flame signal should be at least 2 microamps. Adjust ignitor flame gas pressure per step VI.C.4. Obtain acceptable signal and note gas pressure and signal strength for future reference.

VIII. Short flame.

A. Low gas pressure.
B. Air shutter open too far.
C. Spud orifice too small.

IX. Long lazy flame.

A. High gas pressure.
B. Air shutter closed too far.
C. Dirty blower wheel.
D. Spud orifice too large.

X. Gas fails to shut off.

A. Defective combination valve.

* Normal low voltage: Motor running -24 volts minimum. Automatic valve energized -21 volts minimum.

CONTROL SYSTEM SERVICE NOTES

A. MAINTENANCE INSTRUCTIONS

Check the burner flame periodically. A proper natural gas flame will be quiet and appear blue at the burner face with well defined orange tips. A proper propane gas flame will be quiet and appear blue at the burner face with well defined yellow tips. An improper flame which is too rich will appear billowy and yellow with hazy tips. This indicates that the blower may need cleaning. An improper flame which is too lean will be noisy and appear short and all blue or purple. Burner readjustment may be indicated by flames that are too rich or too lean.

B. NOZZLE ASSEMBLY

The nozzle and electrode assembly can be removed as a unit by removing the burner backplate, disconnecting the pipe union and removing the curved orifice pipe. For complete removal, the electrode leads must also be disconnected. Service will normally consist of inspection and cleaning, particularly the removal of any dirt or scale in the port ribbon. Check the electrodes for serious burning and the insulators for cracks. The electrode assembly is no adjustable; if defective replace with a new one. When reconnecting the electrode leads refer to (Figure 5) for the correct hook up. Be sure to replace the rubber boots over the electrodes and treat the electrode leads with care. Because of high voltage any damage to the insulation is a potential electrical leak path. When reassembling make sure the orifice pipe enters the nozzle.

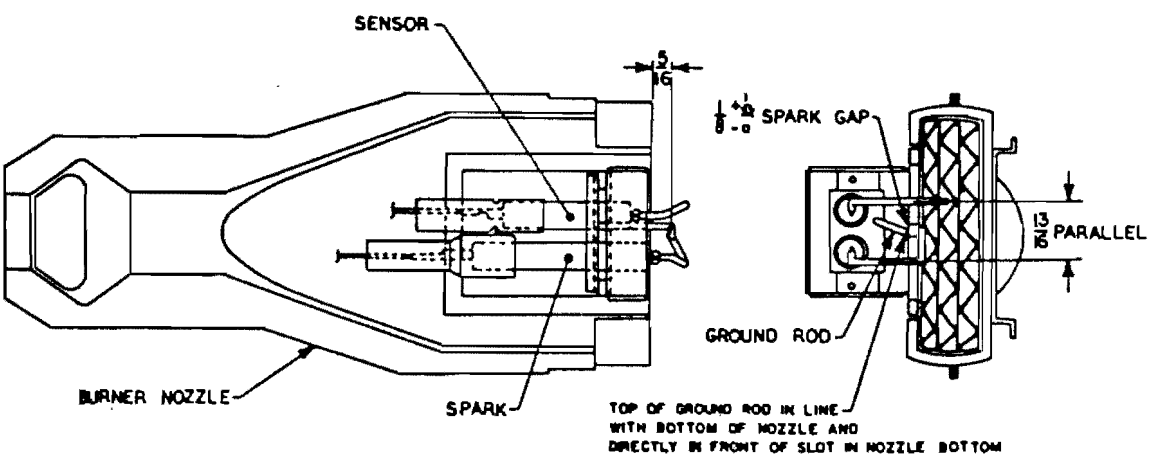


Figure 5. - Nozzle Assembly

C. CONTROL SYSTEM

1. A shorted, grounded or open electrode circuit will cause the control board to lock out since it will be unable to produce the spark or sense the flame. The trouble may be persistent, in which case the faulty part should be obvious. However, the problem may be intermittent, requiring careful inspection of the electrode insulators. Due to the high voltage involved (15,000 volts) even hairline cracks in the spark insulator can allow electrical leakage. Carefully examine the lead wires for insulation damage such as cracks or marred areas. Make sure the high tension lead from the control board is connected to the long electrode and that both connections are covered with the rubber boots.

2. Replace any damaged leads with factory supplied parts.

3. Electrical line connections at burner terminal board must be properly polarized: "*HOT*" to terminal #1, "*NEUTRAL*" to terminal #2.

4. The electrode gap is not critical; standard spacings vary from 1/8" to 5/32". If the gap is excessive due to erosion, if the electrodes are burned, or if the insulation is cracked, replace the assembly since it cannot be adjusted or repaired.

5. The electrodes must be properly located. Lock-out can result from misplacement caused by a damaged electrode assembly or mounting bracket, or from loose electrode mounting screws.

6. The control board is not repairable. However, before assuming it defective check all of the above as well as the following:
   a. Check for 22-24 volts at the terminals #3 and GND after motor reaches operating speed.
   b. With gas turned off, observe whether a spark occurs at the electrode gap after purge and during the five-second trial for ignition period. This is a capacitor discharge type system; thus the spark is faint and difficult to see in a bright light. If there is no spark, check point 1 above before assuming the board defective.
   c. Check for 22-24 volts at gas valve terminals during trial ignition period.

7. The above checks will generally suffice for field service. However, a microammeter can be used to accurately measure flame current and determine system efficiency. Current should be 4 mocroamperes or more.

D. FLAME SENSOR CIRCUIT

The S87 provides ac power to the flame sensor which the burner flame rectifies to direct current. If the flame signal back to the S87 is less than 1.5 microamperes dc, the system will lock out.

The output of the flame sensing circuit cannot be checked directly on the S87. Check the flame sensing circuit directly by checking the flame sensing current from the sensor of the S87 as follows.

1. Connect a meter (dc microammeter scale) in series with the flame signal ground wire as shown in Figure 11. Disconnect the ground wire at the S87. Connect the red (positive) meter lead to the free end of the ground wire. connect the black (negative) meter lead to the quick connect ground terminal on the S87.
2. Restart the system and read the meter. The flame sensor current must be al least 1.5 microamperes and steady. If the reading is less than 1.5 microamperes or unsteady, see LOW OR UNSTEADY FLAME CURRENT SECTION, below.

If a flame is present at sensor and a reading of 0 is obtained, check for a secondary ground connection to the 25V (GND) terminal. If secondary connection exists, temporarily remove connection and measure flame current.

LOW OR UNSTEADY FLAME CURRENT

If the current to the S87 flame circuit is less than 1.5 microamperes or is unsteady--check the burner flame, flame sensor location and electrical connections as follows.

Burner Flame
The flame sensor must be constantly immersed in flame. Check burner flame conditions as shown in Figure 12.

Flame Sensor
The flame signal is best when about 1" (25mm) of flame rod is immersed in the burner flame. A bent flame rod, bent mounting bracket or cracked ceramic insulator can affect flame signal. Replace flame sensor if necessary.

Electrical Connections and Shorts
Connections at the flame sensor must be clean and tight. If wiring needs replacement, use moisture-resistant No. 18 wire rated for continuous duty up to 105C (221°F).

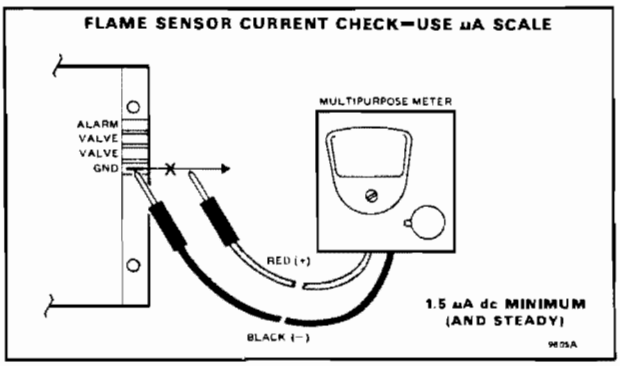


Figure 11 - S87 Flame Current Measurement

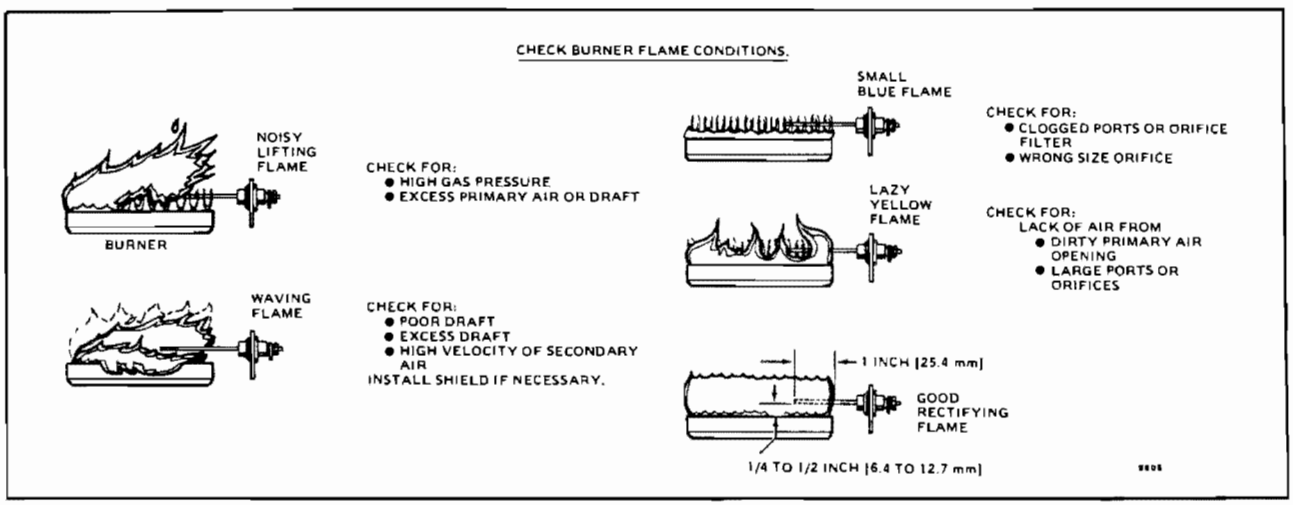


Figure 12 - Check Burner Flame Conditions

Peterson Machine Tool, Inc. Statement of Policies

Peterson Machine Tool, Inc., hereinafter referred to as Peterson, desires to fill your order with 100% accuracy. To do this, we must have the proper information. Below are listed several items of information that we must have in order to fill your order properly.

1. Please order machines by MODEL NUMBER from current price sheet.
2. Make certain that you SPECIFY THE PROPER PHASE AND VOLTAGE. Most Hot Tanks and all Spraycleans are wired for 240 volt, 3 phase power as standard equipment. Voltage must be verified for any Platen Grinder order. If you are in doubt, consult with an electrician to verify that you have 3 phase service into your building.
3. On Cleaning Tanks and Spraycleans, SPECIFY THE HEAT SOURCE, whether it is to be electric-heated, or gas-heated. In the case of gas heat, make certain to specify either natural gas or LP gas. Gas-fired units will be shipped set up for natural gas unless specified otherwise.
4. Specify and list the OPTIONAL ACCESSORIES that you will need for your operation. If you are in doubt as to your needs, we suggest you consult with the Peterson factory representative, or your local distributor.
5. If you have a preference, SPECIFY THE ROUTING that you desire. Please advise us of any special delivery instructions that will make your job of receiving your machine easier for you.

FREIGHT POLICY: Prices are F.O.B. Factory or Warehouse location.

STANDARD PETERSON LIMITED WARRANTY:
Peterson products are backed by many years experience in the manufacture of Automotive Shop Equipment. Every piece of Automotive Equipment bearing the name Peterson is sold with the following warranty: Products manufactured by Peterson are warranted to be free from defects in workmanship and material for a period of one year from the date of shipment with the exception of expendable wearing parts (e.g. airless blast thrower-blades, housing, feed gate and tumbler fixtures; dust bags and gloves; and electric heating elements) which are warranted for a period of 90 days from date of shipment. All claims must be made in writing for such defects within the stipulated time periods. Our liability under this warranty shall be limited to the repair or replacement, at our factory or in the field by Peterson representatives only, of parts or equipment manufactured by Peterson which, upon inspection by Peterson, are found to be defective.

This warranty does not cover damage or defects caused by carelessness of the operator, misuse, abuse or abnormal use which in any way impairs the proper functioning of the equipment or by the use or addition of parts not manufactured by Peterson or its suppliers.

Integral parts not manufactured by Peterson such as electric motors, switches, pumps, etc., used in our equipment, are warranted under the warranties extended by the original manufacturers. Peterson assumes no liability under such warranties and shall not be responsible for the repair or replacement of such parts without express authorization from the original manufacturer. Proper steps have been taken to provide protection against injuries to operators of Peterson equipment.

THIS WARRANTY IS EXPRESSLY MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE

Peterson cannot assume any responsibility for damage or loss after shipment is turned over to common carrier. Carefully inspect all shipments immediately. Report any damage to the carrier and Peterson immediately. Peterson will cooperate in any way possible to assist the purchaser in collection of his claim.

Peterson reserves the right to make changes, without notice, in materials, colors, design and accessories included with units.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

Peterson
MACHINE TOOL INC.
ASK A PETERSON USER.

5425 Antioch Drive
Shawnee Mission, Kansas 66202
Phone: (913) 432-7500 FAX: (913) 432-8970
Toll Free: (800) 255-6308 (U.S. & Canada)
USA Cable Address: Petmactinc TLX4-2532

FIELD SERVICE:

All Peterson products are backed by a network of field representatives who are capable of providing "first line" machine service, as well as any training that may be required. All rates quoted herein are rates in affect at the time of this printing and are subject to change at any time.

Peterson field representatives will instruct on the use of all purchased units as soon as possible after delivery. Further instruction needed due to changes in personnel can also be arranged at the current rate of $37.50 per hour, plus expenses.

Peterson field representatives can also be contacted for out-of-warranty service at the same rate of $37.50 per hour, plus applicable expenses. All charges made for training and service are to be paid directly to the servicing Peterson field representative and not to Peterson Machine Tool, Inc.

In addition to this network of field representatives, Peterson maintains a staff of qualified factory service specialists who are available for telephone consultation and may be scheduled for in-the-field service as deemed necessary.

Out-of-warranty service and/or machine reconditioning, done by factory personnel, will be charged the current rate of $37.50 per hour, plus actual travel and living expenses. (Daily labor charge not to exceed $300.00 per day). "Travel time" is considered "work time" for billing purposes.

VIOLATION OF SAFETY RULES AFFIXED TO THE MACHINES CAN LEAD TO INJURY.

REPAIR WORK AND OPERATING INSTRUCTIONS:

ALWAYS GIVE SERIAL NUMBER OF MACHINE WHEN ORDERING PARTS.

Each Peterson salesman is experienced in the servicing of Peterson equipment. On each call to your establishment, he will inspect the Peterson equipment being used in your shop. If at any time during his absence from your establishment, a Peterson machine should fail to function properly, advise us at the factory and we will have our representative call as soon as possible. If it is necessary to return equipment to us for repairs, we will so advise you. See "Returned Merchandise" below.

No charge will be made for service or parts when installed either at the factory or in the field if the machine is in the warranty period and upon inspection we find defective materials or workmanship. Likewise, no charge will be made for operating instructions provided the machine is in warranty period and operating instructions have not previously been provided on this particular machine.

Do not fail to contact us before returning any equipment as we may be able to help you either by mail or having our representative call.

RETURNED MERCHANDISE:

No merchandise is to be returned without the express written authorization of Peterson. If Peterson grants permission to return merchandise, it must be shipped transportation prepaid with machine parts properly oiled or greased to prevent rust and equipment properly crated. Peterson has the option of deducting up to 10% handling charge for any items returned. When returning equipment for repairs, always oil or grease machine parts to prevent rust, see that machines are properly crated and protected and prepay transportation. Any Cleaning Chemical and sludge has to be removed before shipment or the machine will be refused upon arrival at any Peterson facility.

TERMS:

Machines: For those customers who want to pay cash, terms are "2% 10 days, Net 30" from invoice date.
Low cost financing is available if credit is approved.
Parts: Terms are "1% 10 days, Net 30" from the invoice date.
If credit is not established, please include payment with order or authorize C.O.D. terms. All payments must be in U.S. dollars.
Finance charges up to 18% per annum may be charged for late payment.

GOVERNMENT BIDS:

Additional charges will be made for special packaging and marking if required by government contracts. Bidders are urged to review carefully the specifications supplied in invitations to bid, as well as all additional specifications referred to in the invitation.

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