

SERVICE MANUAL

FOR JACKSON MODEL:

MODEL 24P-NSU

**DGSC MANUAL NUMBER:
S6161-A1-FSC010-17228**



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P/N 7610-100-37-00 (Revision C)

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MANUFACTURERS WARRANTY

ONE YEAR LIMITED PARTS & LABOR WARRANTY

ALL NEW JACKSON DISHWASHERS ARE WARRANTED TO THE ORIGINAL PURCHASER TO BE FREE FROM DEFECTS IN MATERIAL OR WORKMANSHIP, UNDER NORMAL USE AND OPERATION FOR A PERIOD OF (1) ONE YEAR FROM THE DATE OF PURCHASE, BUT IN NO EVENT TO EXCEED (18) EIGHTEEN MONTHS FROM THE DATE OF SHIPMENT FROM THE FACTORY.

Jackson MSC agrees under this warranty to repair or replace, at its discretion, any original part which fails under normal use due to faulty material or workmanship during the warranty period, providing the equipment has been unaltered, and has been properly installed, maintained and operated in accordance with the applicable factory instruction manual furnished with the machine and the failure is reported to the authorized service agency within the warranty period. This includes the use of factory specified genuine replacement parts, purchased directly from a Jackson authorized parts distributor or service agency. Use of generic replacement parts may create a hazard and void warranty certification.

The labor to repair or replace such failed part will be paid by Jackson MSC, within the continental United States, Hawaii and Canada, during the warranty period provided a Jackson MSC authorized service agency, or those having prior authorization from the factory, performs the service. Any repair work by persons other than a Jackson MSC authorized service agency is the sole responsibility of the customer. Labor coverage is limited to regular hourly rates, overtime premiums and emergency service charges will not be paid by Jackson MSC.

Accessory components not installed by the factory carry a (1) one year parts warranty only. Accessory components such as table limit switches, pressure regulators, pre rinse units, etc. that are shipped with the unit and installed at the site are included. Labor to repair or replace these components is not covered by Jackson MSC.

This warranty is void if failure is a direct result from shipping, handling, fire, water, accident, misuse, acts of god, attempted repair by unauthorized persons, improper installation, if serial number has been removed or altered, or if unit is used for purpose other than it was originally intended.

TRAVEL LIMITATIONS

Jackson MSC limits warranty travel time to (2) two hours and mileage to (100) one hundred miles. Jackson MSC will not pay for travel time and mileage that exceeds this, or any fees such as those for air or boat travel without prior authorization.

WARRANTY REGISTRATION CARD

The warranty registration card supplied with the machine must be returned to Jackson MSC within 30 days to validate the warranty.

REPLACEMENT PARTS WARRANTY

Jackson replacement parts are warranted for a period of 90 days from the date of installation or 180 days from the date of shipment from the factory, whichever ever occurs first.

PRODUCT CHANGES AND UPDATES

Jackson MSC reserves the right to make changes in design and specification of any equipment as engineering or necessity requires.

THIS IS THE ENTIRE AND ONLY WARRANTY OF JACKSON MSC. JACKSON'S LIABILITY ON ANY CLAIM OF ANY KIND, INCLUDING NEGLIGENCE, WITH RESPECT TO THE GOODS OR SERVICES COVERED HEREUNDER, SHALL IN NO CASE EXCEED THE PRICE OF THE GOODS OR SERVICES OR PART THEREOF WHICH GIVES RISE TO THE CLAIM.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING FOR FITNESS OR MERCHANTABILITY, THAT ARE NOT SET FORTH HEREIN, OR THAT EXTEND BEYOND THE DURATION HEREOF. UNDER NO CIRCUMSTANCES WILL JACKSON MSC BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECT OR CONSEQUENTIAL, OR FOR THE DAMAGES IN THE NATURE OF PENALTIES, ARISING OUT OF THE USE OR INABILITY TO USE ANY OF ITS PRODUCTS.

ITEMS NOT COVERED

This warranty does not cover cleaning or deliming of the unit or any component such as, but not limited to, wash arms, rinse arms or strainers at anytime. Nor does it cover adjustments such as, but not limited to timer cams, thermostats or doors, beyond 30 days from the date of installation. In addition, the warranty will only cover the replacement of wear items such as curtains, drain balls, door guides or gaskets during the first 30 days after installation. Also, not covered are conditions caused by the use of incorrect (non-Commercial) grade detergents, incorrect water temperature or pressure, or hard water conditions.



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S P E C I F I C A T I O N S

OPERATING CAPACITY	
Racks per hour	21
Dishes per hour	525
Glasses per hour	525
OPERATING CYCLE	
Wash time-seconds	120
Rinse time-seconds	15
Total Cycle-seconds	150
WASH TANK CAPACITY (Gallons)	5.65
RINSE TANK CAPACITY (Gallons)	3
WASH PUMP CAPACITY (GPM)	60
WATER REQUIREMENTS	
Inlet Temperature F.	140
Gallons per hour	52.3
Flow pressure, PSI	20
Flow, gallons per minute	7.1
Inlet size, NPT	1/2"
Drain size, OD	1-1/2"
WASH PUMP MOTOR (HP)	1/2
WASH HEATER (KW)	1.0
RINSE HEATER (KW)	6.7
ELECTRICAL REQUIREMENTS	
Volts	440
Phase	3
Cycle	60
TOTAL LOAD AMPS.	17.6
DIMENSIONS	
Height, with Top	36"
Height, without Top	34-1/2
Width	28-1/2
Clearance, Wall to Machine	2-1/4
Depth	24"
Maximum height for Dishes	14"
Rack size	19-3/4

INSTALLATION INSTRUCTIONS

SAFETY PRECAUTIONS

Never try to repair or replace any part of the dishwasher unless it is specifically recommended in this manual. All servicing should be done by a authorized service technician. There are no user servicable parts.. Safety precautions in this manual are preceded by the words WARNING or CAUTION and are very important. WARNING means there is the possibility of personal injury to yourself or others. CAUTION means there is the possibility of damage to the machine.

UNPACKING AND INSPECTION

STEPS :

1. Remove wooden blocks securing carton to skid and lift box up and off of machine.
2. Remove bolts securing machine to skid.

The following parts are supplied with the dishmachine and are packed inside of machine:

1. INSTRUCTION MANUAL
2. STRAINER
3. COMPLETE WASH HEAD ASSEMBLY WITH RETAINING PIN
4. COMPLETE LOWER RINSE ARM ASSEMBLY
5. ADJUSTABLE FEET (4 EACH)
6. DECK MOUNTING TRACKS (2 EACH)
7. DECK MOUNTING TRACK CAPS (4 EACH)
8. TUBE BRUSH
9. RACKS (2 EACH)

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INSTALLATION INSTRUCTIONS

DECK MOUNTING OF DISHMACHINE

The dishmachine must be secured in place using the deck mounting tracks and caps provided with machine.

S T E P S : REFER TO FIGURE 1

1. Install the (4) adjustable feet provided into screw holes where shipping bolts were removed earlier.
2. Adjust the level of the dishmachine by screwing the adjustable feet in or out. The front of the machine should be adjusted 1/4" to 1/2" higher than the back
3. Install the deck mounting hardware as shown in FIGURE 1 to the deck at location where dishmachine will be permanently positioned. Install 3/8 inch stainless steel lug bolts to secure tracks and caps to deck.
4. Drill holes into deck as shown in FIGURE 1 and insure rear holes are located 2-1/4 inch from wall.
5. The tracks and the rear end caps may be tightened at this time.
6. Slide dishmachine onto tracks and into position at rear end caps.
7. Install front end caps into place and adjust if necessary to remove any movement of machine, if possible, tack weld tracks to deck.

GRAVITY DRAIN SYSTEM

The drain from the dishmachine is a gravity drain system and should have the proper drop from the machine to floor drain system.

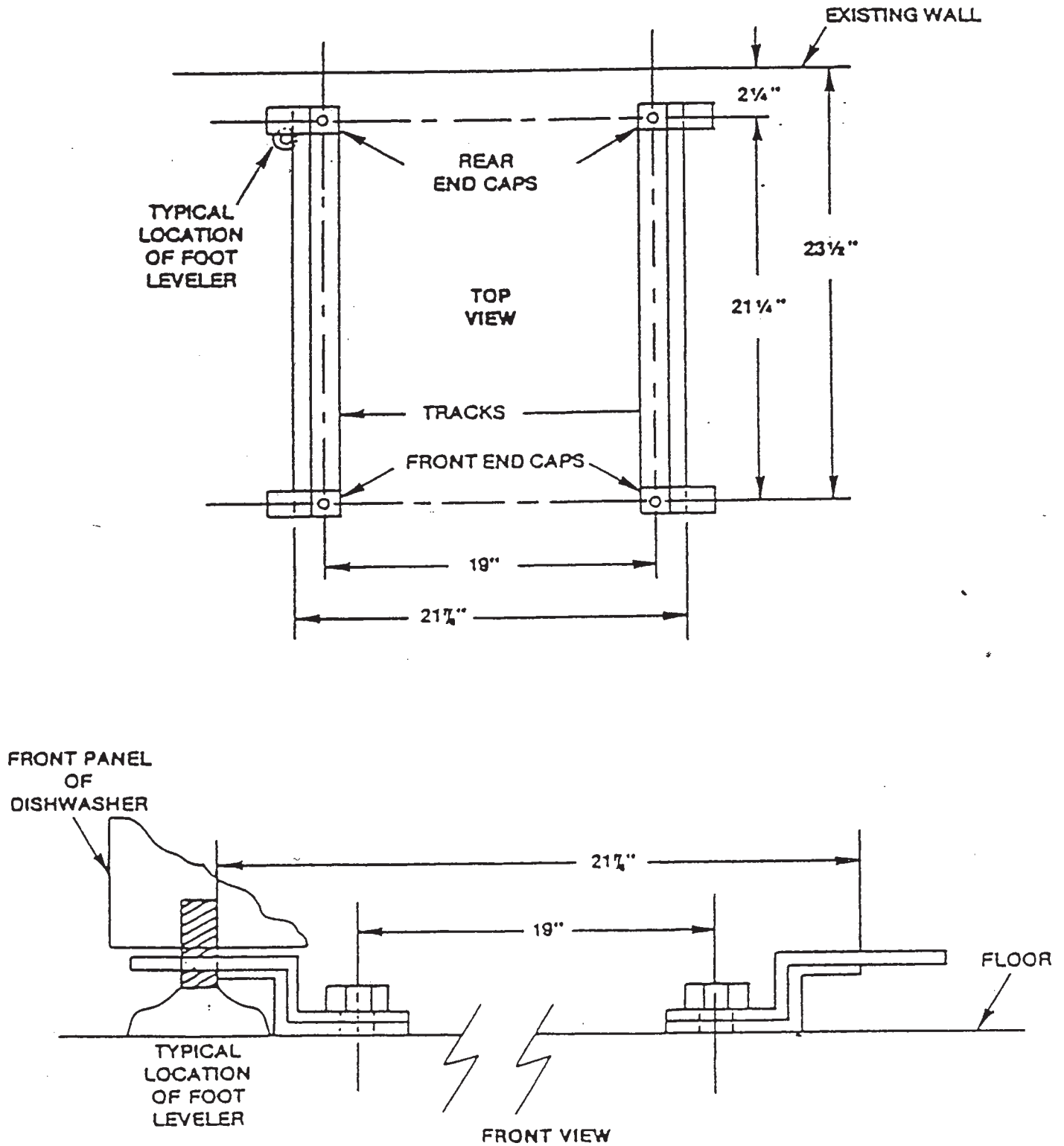
S T E P S : REFER TO FIGURE 2

1. Install hose to drain tube located at left rear of machine as shown in FIGURE 2. Drain tube is 1-1/2 inches in diameter and 7 inches from floor.

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FIGURE 1

INSTALLATION OF DECK HARDWARE TO SECURE DISHMACHINE



I N S T A L L A T I O N I N S T R U C T I O N S

STEAM EQUALIZING VENT

The steam equalizing vent is located on the back upper left corner of the dishmachine. The vent should not be blocked or prevented from venting steam off from inside of unit. Under-counter machines installed inside of cabinet are not excluded from this requirement.

S T E P S : REFER TO FIGURE 2

1. Install 1-1/4 inch pipe to equalizing vent fitting and connect to appropriate venting system. NOTE: Do not pipe steam line downward toward floor, this will restrict venting of steam.

ELECTRICAL POWER CONNECTION

WARNING: All field wiring connections must conform to the Local and National electrical codes. Install proper circuit breaker, wire and conduit size.

MACHINE DATA PLATE is located at top of inner door.

S T E P S : REFER TO FIGURE 2

1. Remove control box side panel and lay aside.
2. Make electrical connection thru conduit hole provided at rear of box and connect 440 VOLT, 60 HZ, 3 PHASE service to terminal block marked L1, L2 and L3. Connect GROUND WIRE to grounding lug provided.

CAUTION: INJURY OR DEATH MAY OCCUR FROM SHOCK IF MACHINE IS NOT PROPERLY GROUNDED.

WARNING: DO NOT CONNECT WILD/HOT LEG OF 3 PHASE POWER TO L1 OR L2. CHECK LEGS TO GROUND FOR PROPER VOLTAGES.

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DIMENSIONAL DATA

The technical drawings illustrate the dimensions for the vacuum breaker assembly:

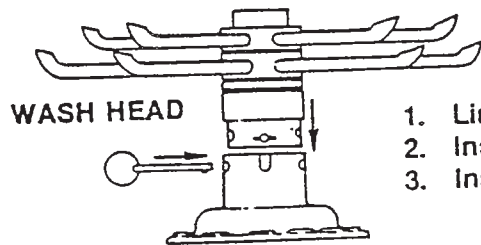
- Side View (Left):** Shows a vertical assembly with a top flange. Dimensions include a 4 1/2" horizontal offset and a 5 1/2" vertical offset. Callouts A, B, and C are present.
- Front View (Middle):** Shows the front of the unit with a vacuum breaker on top. Dimensions include a 4 1/2" horizontal offset and a 2 1/2" vertical offset. Callouts A, B, and C are present.
- Top View (Right):** Shows the top of the unit with a 24" width and a 20 1/4" depth. Dimensions include a 2 1/4" horizontal offset, a 24" vertical offset, and a 2 1/2" horizontal offset. Callouts A, B, and C are present. A note indicates "2 1/2\" CLEARANCE REQUIRED MACHINE TO WALL".

A-ELECTRICAL HOOK UP
B-1/4" F.S.P.S. WATER INLET
C-1/4" DRAIN CONNECTION
D-EQUALIZING VENT 1 1/4"

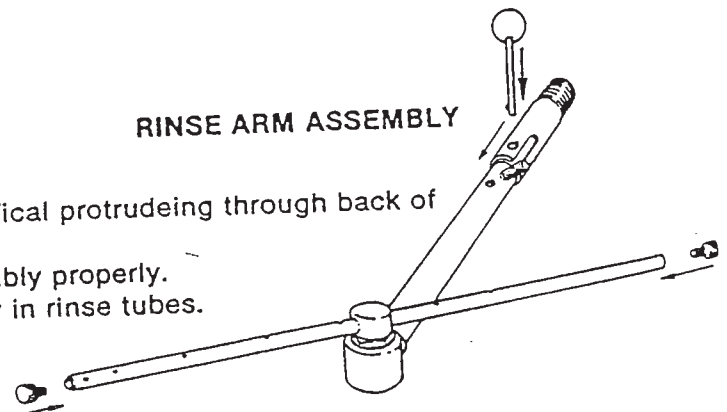
REFERENCE ONLY
SUBJECT TO CHANGE

INSTALLATION OF WASH SPRAY HEAD AND RINSE SPRAY ASSEMBLIES

Installation of Wash Head and Rinse Arm Assemblies: (Items disassembled for shipment)



1. Line holes up on wash head assembly to match slots in pump housing.
2. Insert wash head assembly down into upper pump housing as far as possible.
3. Insert retaining pin to secure wash head to pump housing.



1. Line up stud to match with slot in nipple.
2. Insert rinse arm assembly into female receptical protruding through back of machine.
3. Insert lanyard pin to secure rinse arm assembly properly.
4. Make certain end plugs are secured properly in rinse tubes.

PROCEED TO OPERATIONS

GENERAL INSTRUCTIONS

(OPERATION)

Note: Read the following instructions carefully. Proper operation of your Jackson Dishwasher will assure clean and sanitized glasses and dishes, at optimum efficiency.

Dish Preparation:

1. Scrape dishes thoroughly.
2. Pre-wash dishes by soaking or with hose.
3. Place dishes and cups in dish rack, cups upside down.
4. Place glasses and silverware in combination glass-silverware rack, glasses upside down. Scatter silverware loosely on bottom.

Note: Silverware in the upright position washes and rinses better than lying flat. These silverware compartment racks are available through your dealer or Service Agency.

Operating Instructions:

1. Install pan strainer and the wash and rinse arms. Close the door and push until the handle latches.
2. Push the On/Fill-Off/Drain switch to the up 'ON/FILL' position. The machine power light will come on and so will the rinse heaters. The machine will begin to fill automatically and stop by itself.
3. After the machine has completed filling, open the door and put in a rack of soiled dishes. Close the door.
4. After the door has been closed, the cycle light will come on. There will be a 2-second delay before the wash cycle begins.
5. The machine will wash for 130 seconds and rinse for 15 seconds. After the cycle has finished, the cycle light will go out.
6. Open the door and remove the sanitized dishes. The machine is ready for another cycle.
7. To manually wash, push the manual wash switch to the up 'Manual' position. The machine will wash indefinitely. This function can also be used to delime. To resume normal operation, push the manual wash switch to the down 'Auto' position.
8. To drain the machine, close the door and latch. Push the On/Fill-Off/Drain switch to the 'OFF' position. All machine functions will be off. Push On/Fill-Off/Drain switch down to the momentary drain position. This will begin the drain cycle. After the machine is drained, it will turn itself off.
9. Open the door. Remove and clean the pan strainer and the wash arms.
10. Wash heater protection is provided by two means. Primary protection is given by the water level control which senses the water level with a probe. If this should fail due to excessive build up on the probe, the secondary thermal protection will cut out the wash heater before damage occurs.
11. When the secondary heater protection has been used, it will be indicated by the illuminated red reset light. The following steps are necessary in this situation:
 - A. Turn off power supply.
 - B. Open the door and remove the wash and rinse arms and the pan strainer.
 - C. Locate the probe. It is in the wash sump on the left hand side.
 - D. Using a deliming compound and a brush, clean the probe.
 - E. Reinstall the wash and rinse arms and the pan strainer.
 - F. Push the reset button, located above the reset light.
 - G. Push On/Fill-Off/Drain switch to the 'ON/FILL' position. The machine should begin to fill. If it does not and the reset light comes on again, call an authorized service agency.

Detergent Recommendations and Rinse Additives:

We suggest that you contact your local Detergent Specialist for the correct detergent and rinse additives for your area. To help you until one can be reached, we suggest that you use a non-foaming dishwasher detergent, approximately three tablespoons in wash tank when machine is filled and one teaspoon each cycle or load thereafter. Dump the detergent on the pan strainer. This may have to be increased or decreased to obtain satisfactory results.

GENERAL INSTRUCTIONS

(PREVENTIVE MAINTENANCE)

(THE FOLLOWING IS TO BE PERFORMED AS NEEDED.)

Note: Read the following instructions carefully. Proper maintenance of your Jackson Dishwasher will ensure optimum service with a minimum of down time.

1. **Remove all lime and corrosion deposits.**
 - a. Fill the machine with wash water as would ordinarily be done for washing.
 - b. Open door and place one cup or less of de-liming compound into the water. The compound is available from your detergent supplier.
 - c. Turn on the manual wash switch and allow to wash for five minutes.
 - d. Open door and examine the interior. All lime should be removed and parts should be shiny. If not, allow to wash for longer period.
 - e. After the interior is clean, with door closed, empty the wash water by turning switch to the "off/drain" position. Refill machine and allow to run for two minutes, then again drain the wash reservoir.
2. **Clean around overflow strainers and drain hole.**
 - a. Clean around overflow and strainer pan.
 - b. Clean around pump intake (toothbrush makes excellent tool for cleaning).
3. **Clean Y-strainer on incoming water line. (Water to machine must be turned off for this operation)**
 - a. Remove plug and clean strainer.
4. **Clean rinse tubes.**
 - a. Remove rinse assembly by disconnecting rinse feed pipe and removing end plugs on lower rinse.
 - b. Clean all rinse tubes and feed pipes with special brush supplied.
 - c. If spray holes in the rinse tubes are clogged, they may be cleaned with a pointed object.
5. **Clean wash head assembly.**
 - a. Remove pin holding wash head assembly to pump.
 - b. Clean assembly at sink by flushing water through spray jets.
 - c. If spray jets are still plugged, use sharp object to dislodge and flush again.
 - d. Reinstall wash and rinse assemblies. (See page with instructions.)
6. **Clean any deposits which may have built up on exterior moving parts.**
 - a. Clean around door gasket.
 - b. Using a soft bristle brush, clean around switches on exterior of control panel. (Use no water.)
 - c. Use soft bristle brush, dip in wash tank water and scrub inside door around gasket and hinges. Use clean cloth or paper towel to wipe off loose residue.

REMOVAL of RINSE and/or WASH HEAD ASSEMBLIES

(GENERAL INSTRUCTIONS)

1. Drain unit by placing switch in the off/drain position.
2. Open the door and allow the unit a few minutes to cool off.
3. Remove the pin holding the rinse feed pipe. Pull the feed pipe out of the nipple and lay it to one side.
4. Remove wash head assembly by pulling out the holding pin and lifting assembly. Place the wash head on a table for disassembly.
5. Locate Allen head set screw in the wash head cap, insert Allen wrench and loosen screw by turning counterclockwise.
6. Turn wash head cap counterclockwise until cap is removed and put cap in safe place.
7. Remove ¼ " stainless ball bearings carefully and put it in a receptacle in a safe place.
8. Lift and remove small manifold with short tubes. Put it in a safe place.
9. Remove ¼ " ball bearing in similar method to step #7.
10. Lift and remove large manifold with large length tubes similar to step #8.
11. Clean ball bearings by soaking in de-liming solution.
12. Ball bearing race ways may be cleaned by either brushing with de-liming solution (toothbrush makes excellent tool) or gently clean by rubbing with fine sandpaper or emery cloth.
13. Rinse ball bearings and manifolds thoroughly.
14. To reassemble, first fill lower race to capacity with ¼ " ball bearings, then remove one. This will give proper movement needed during rotation of assembly.
15. Replace lower manifold and fill race fully with ¼ " ball bearings. Repeat, removing one only.
16. Replace upper manifolds and repeat necessary parts of step #14.
17. Replace wash cap by screwing on center shaft clockwise, finger tight.
18. Back off wash cap about ¼ turn and tighten Allen set screw.
19. Rotate manifolds in opposite directions; see if they rotate freely. A rule of thumb is to select the longest tube in the bottom manifold and make sure it moves up and down at least ¼ " and no more than ¼ ".
20. Replace wash head assembly and rinse arm.
21. Close the front door and refill dishwasher.
22. Run through several cycles and recheck wash arms for easy movement. Adjust if necessary.

TIMER for MODEL 24 DISHWASHERS

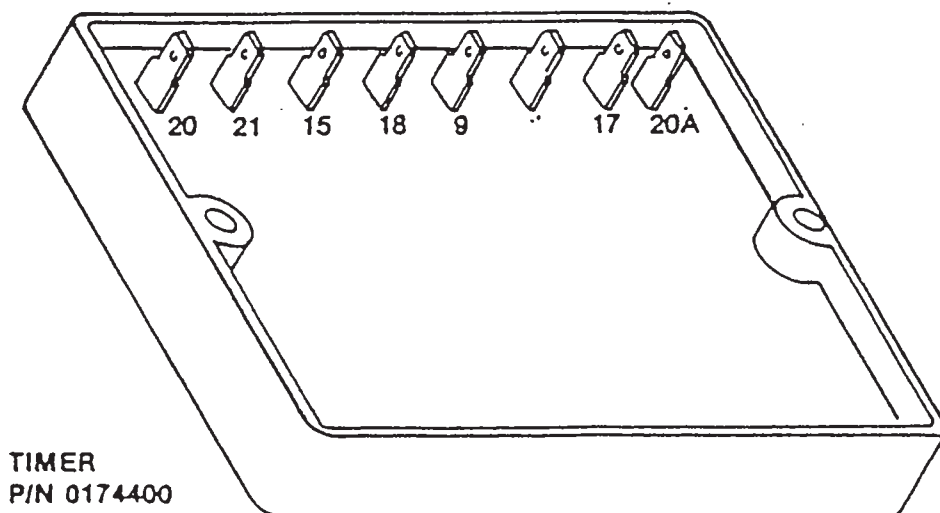
General Description:

The timer is a solid state, 4 channel CMOS device with a 120V, 50 or 60 cycle, 1 amp rating. All components are environmentally encapsulated and quick connect terminals are marked for corresponding wires.

Principle of Operation:

Wash cycle function: (Machine must fill before cycle will start.) Upon closure of door switch, cycle light will come on and remain on for the 150-second cycle. At the same time, a 2-second rinse preheat interval will begin. After the preheat, the wash cycle will start and last 130 seconds. Between wash and rinse, there is a 4-second dwell followed by a 15-second rinse. Cycle by opening and closing door switch at the end of cycle or at any point in the cycle.

Drain cycle function: (Power switch must be in off position and door switch closed.) When power switch is pushed to the drain position and released, a holding circuit is established between R4 drain relay and the timer. The machine will drain for 60 seconds and then break the holding circuit. Cycle is reset by opening and closing door switch and pushing power switch to drain and releasing.



WATER LEVEL CONTROL

AS USED ON 24

P/N 0204400 (110V, 60 cycle)

Function:

The water level control device is utilized on this machine to automatically control the filling of the wash tank and the activation of the wash tank heater.

Note: All electrical checks should be made by qualified service personnel.

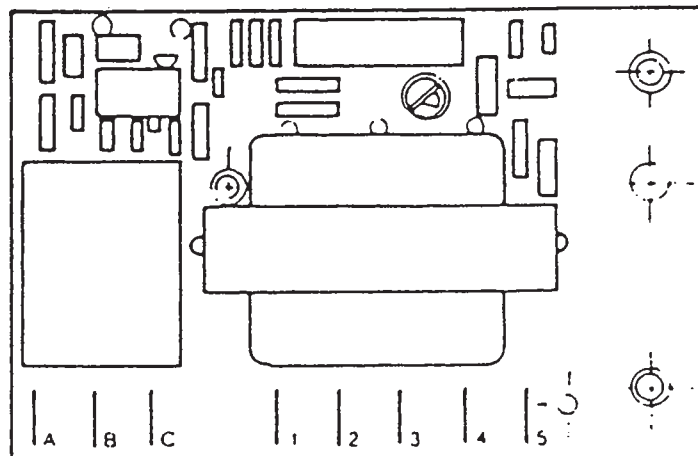
The control is a single probe resistance sensing device designed to maintain water level. When water level reaches the probe and covers it, a fixed time delay of 25 seconds is initiated. When the delay times out, the electromechanical relay energizes, opening the 'Auto/Fill' circuit and closing the wash heater circuit. If the water level drops below the probe, the relay will de-energize, opening the wash heater circuit and closing the 'Auto/Fill' circuit.

Symptoms of Level Control Failure:

1. 'Auto/Fill' will not shut off when water reaches the proper level.
2. Machine will partially fill.

Proceed with Checkouts:

1. Remove power source to machine by moving circuit breaker to 'OFF' position.
2. Remove screws holding lower kick plate to the front of machine and locate water level control. (See sketch below.)
3. Remove, mark and insulate (for easy replacement), wires going to pin numbers 4 and 5.
4. Re-apply power. Turn on 'ON/FILL' switch. With an insulated wire, connect jumper wire between pins 4 and 5. (12 volt system)
5. Wait for 25 seconds. The electromechanical relay will energize. If this occurs, control can be deemed operational; then other causes should be explored.
6. If relay doesn't operate, replace control.
7. Remove power source once again and replace wires that were removed in step three to original pins. (See trouble shooting section for other possible causes.)



FUNCTION of SWITCHES, CIRCUIT BREAKER and INDICATING LIGHTS

**On/Fill
Off/Drain
Switch:
P/N 0155600**

This switch serves as the main control for the unit. When pressed into the 'on' position, it activates the heater controls, the automatic fill and readies the unit for the wash cycle. When turned off, all power is off. When pushed to drain position and released, the unit will drain and turn itself off.

**Power Light:
P/N 0083518**

This light comes on when the unit is turned on and goes off when the unit is turned off.

**Door Switch:
P/N 0164000**

Located on top of the unit, behind the latch bracket, this switch serves three functions. When the door is opened, it will reset the timer to the cycle starting position. When door is closed, it will start the automatic cycle. If door should be opened during a cycle, it would act as a safety switch by turning the unit off.

**Cycle Light:
P/N 0083507**

This green light comes on only when the automatic cycle is in progress and goes off when the cycle is complete.

**Manual Wash
Switch:
P/N 0159700**

This switch is used to bypass the timer and operate the wash pump manually. The wash pump will run as long as this switch is 'on'. Its prime purpose is to extend the wash period for heavily soiled dishes, but it may be used for deliming.

**Heater Reset
Button:
P/N 0169601**

This is the reset button on a thermostatic overload. Its purpose is to provide a secondary protection for the wash tank heater element. If the heater element should come on while the wash tank is empty, this button would pop out, turning off the element and signaling a problem with the automatic fill.

**Reset Light:
P/N 0083518**

This light comes on only when the heater reset trips off. Its purpose is to signal that there is a problem.

THERMOSTAT ADJUSTMENT

The thermostat can be adjusted by turning screw #1 (see picture) on the thermostat control box cover. (Remember the present setting, in case the problems are elsewhere in the control circuit.) A CW rotation is used to obtain a lower temperature setting and a CCW rotation is used to obtain a higher temperature setting. A $\frac{1}{4}$ turn of screw #1 changes the temperature approximately 15°F. If screw #1 is turned all the way to its stop in either direction, adjust screw #2 as follows.

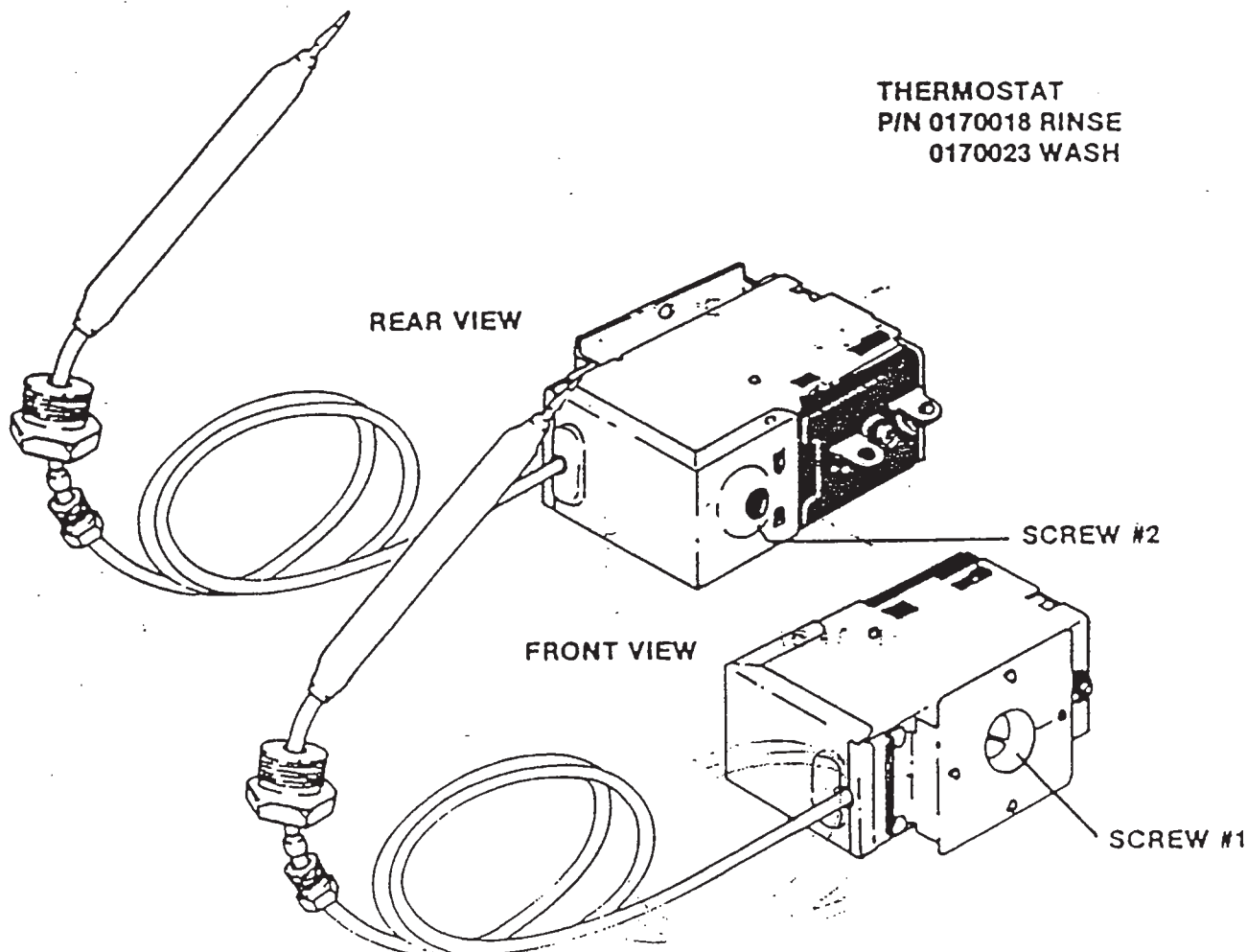
Note: Do not touch the screw sealed with red paint. When adjusting screw #2, power should be disconnected during adjustment.

Set screw #1 so that it can be turned equal distances in either direction, then:

- If screw #1 stopped while turning in CW direction, turn screw #2 in CW direction, slowly and only $\frac{1}{4}$ of a turn or less per complete cycle of the unit.
- If screw #1 stopped while turning in CCW direction, turn screw #2 in CCW direction, slowly and only $\frac{1}{4}$ of a turn or less per complete cycle of the unit.

Three-fourths of a turn will bring the thermostat to approximately the same setting obtained where screw #1 stopped. Check the present temperature setting before attempting any further adjustments. Use screw #1 for any further adjustments.

Making large moves in adjusting may cause misalignment, thus increasing chances that further adjustment cannot be made and thermostat will have to be replaced.



SERVICE INSTRUCTIONS

(INCOMING WATER SOLENOID VALVE)

SOLENOID VALVE

P/N 1420 (110V, used on 60 cycle machine)

P/N 1425 (220V, used on 50 cycle machine)

To take the valve apart:

Disassembly — These valves may be taken apart by unscrewing the bonnet and the enclosing tube assembly from the valve body assembly. See Fig. 3. After unscrewing, carefully lift off the bonnet and enclosing tube assembly. Don't drop the plunger. The "O" ring seal and diaphragm cartridge can now be lifted out.

Be careful not to damage the machined faces while the valve is apart.

To Reassemble — Place the diaphragm cartridge in the body with the pilot port extension UP. Hold the plunger with the synthetic seat against the pilot port. Make sure the "O" ring is in place, then lower the bonnet and enclosing tube assembly over the plunger. Screw bonnet assembly snugly down on the body assembly.

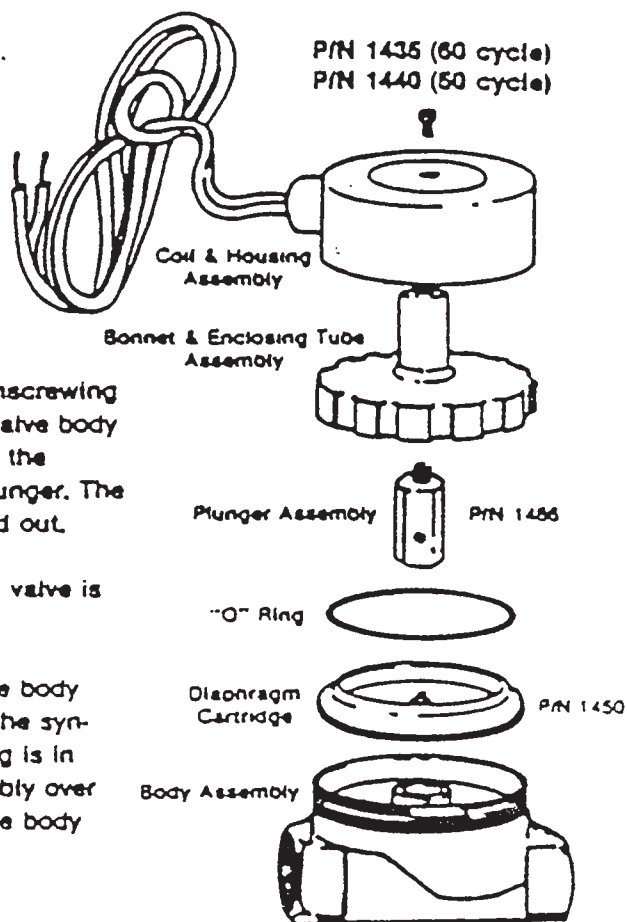
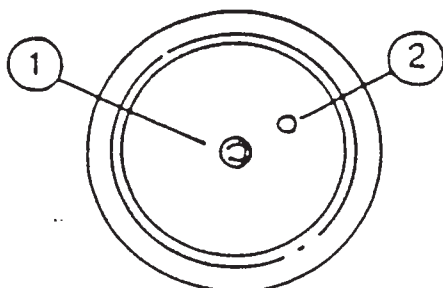


FIG. 3

DIAPHRAGM CARTRIDGE



Possible Problems

Pilot Port extension #1 clogged
Hole #2 clogged

Remedy

Pass heated straight pin through hole #2
or clean hole #1

TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
Water overflow out bottom of front door when wash pump is operating.	Machine not level. Overflow drain clogged.	Level machine. Slight tilt to rear Remove obstruction, checking inside of machine first.
Wash motor doesn't operate on manual wash.	Water level in machine's wash reservoir too high. Detergent foaming. Wires broken or loose. Defective manual wash switch. Bad bearing, noticeable by noisy bearings or locked drive shaft. Defective motor starting relay. (Typical - motor hums.)	Solenoid valve not closing at end of fill or rinse cycle causing excessive water problem. Reduce quantity of detergent. Check all wires in the motor and reconnect as necessary. Replace. Replace. Replace.
Note: The motor starting relay is utilized to insert a starting field in the wash pump motor, once the motor has gained speed, the running winding will then take over and the starting winding will be removed when the relay kicks out. This relay is the amperage sensing type.		
Motor runs on manual wash but doesn't operate on automatic (rinse operates okay on both manual and automatic cycles.)	Defective center micro switch of timer. Defective circuit in manual wash switch.	Replace switch. Replace switch.
No water comes through the rinse arms when the rinse fill switch is depressed.	Hand water valve to machine not turned on. Defective coil on solenoid valve. Broken or loose wires. Defective manual rinse fill switch.	Turn on water valve. Replace coil. Repair or reconnect. Replace.
Little or no water coming through rinse assemblies.	Limed up rinse heads or piping. Water pressure low.	Begin by cleaning rinse heads using instructions for de-liming. If this isn't satisfactory, then clean the rinse feed pipes. Increase pipe size to machine.

TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
Rinse doesn't operate on automatic during timed cycle (but does operate on manual rinse/fill operation).	Micro switch defective (this is the micro switch furthest from the timer motor on the timer assembly).	Replace.
	Rinse fill switch defective on N.C. contacts.	Replace.
Rinse water runs continuously with circuit breaker controlling machine turned off.	Defective plunger in solenoid valve.	Replace plunger.
	Defective diaphragm in solenoid valve.	Check both holes in diaphragm cartridge to insure that they are open. The one on the outside perimeter should be the size of an ordinary straight pin. If it's not, heat a straight pin and put it through this hole to enlarge. If this fails to correct situation, replace diaphragm.

Note: In disassembling solenoid valve, use instructions shown on separate page.

Rinse water runs continuously with power applied to machine, but when circuit breaker to machine is turned off, water stops.	Defective rinse/fill switch.	Replace.
	Defective timer that has stopped in a position keeping the rinse on.	Replace timer motor or timer as necessary
	Defective micro switch on timer assembly.	Replace.

Note: Excessive water line pressure can cause water to continually run even though the power to the machine is turned off. Check specifications for required pressure.

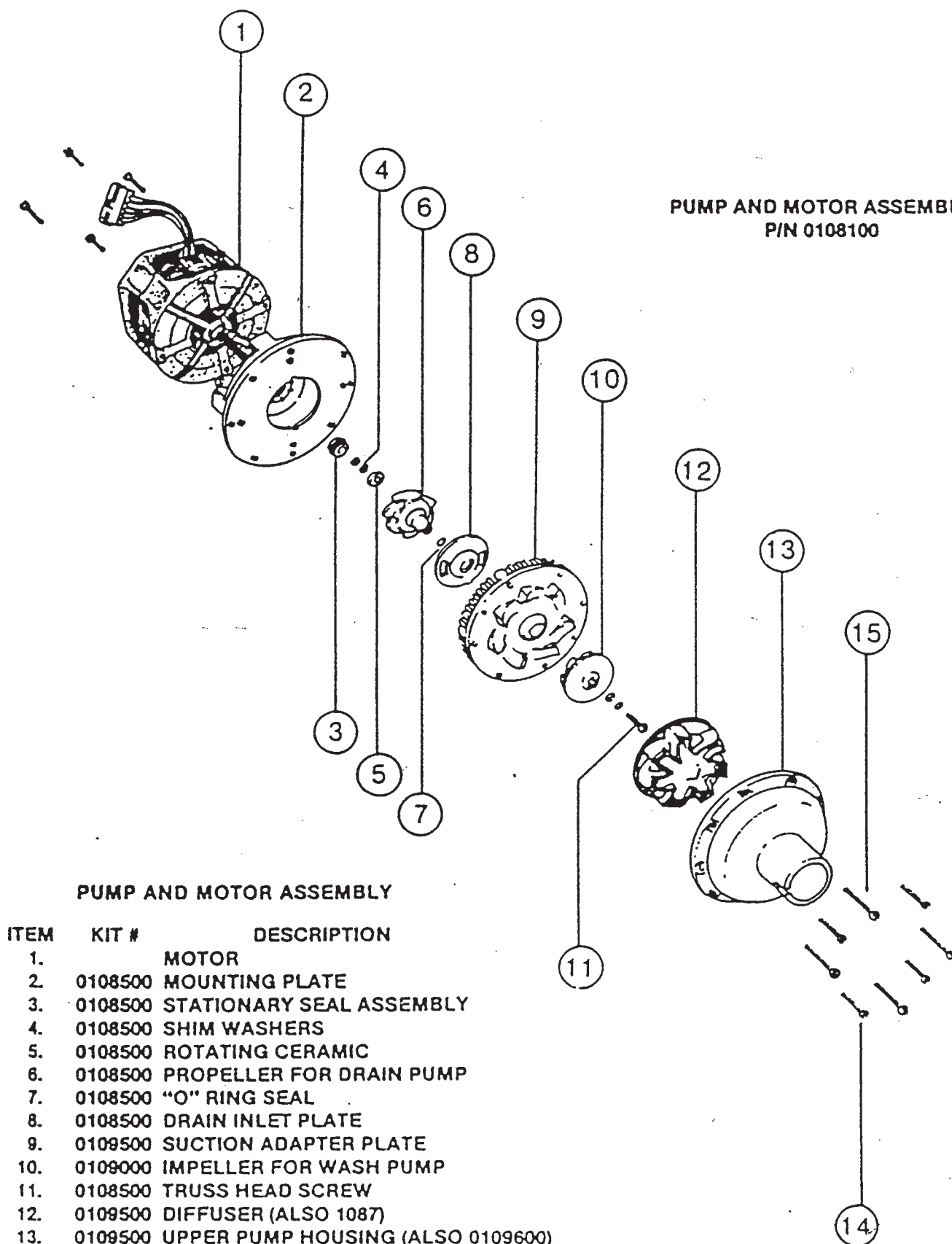
Wash temperature not at required reading on thermometer.	Defective thermometer.	Using a thermometer (fast reading type that's known to be correct), insert in wash reservoir and check reading against wash thermometer on machine. If machine thermometer isn't correct within three or four degrees, replace.
	Rinse temperature not at required temperature, causing wash temperature to be lowered during rinse cycle.	Check out rinse heat using heater checkout system page in manual.

Note: Any switches, water level controls, heater elements, relays or contactor that have to be checked out, can be done using the heater checkout system page.

TROUBLE SHOOTING GUIDE

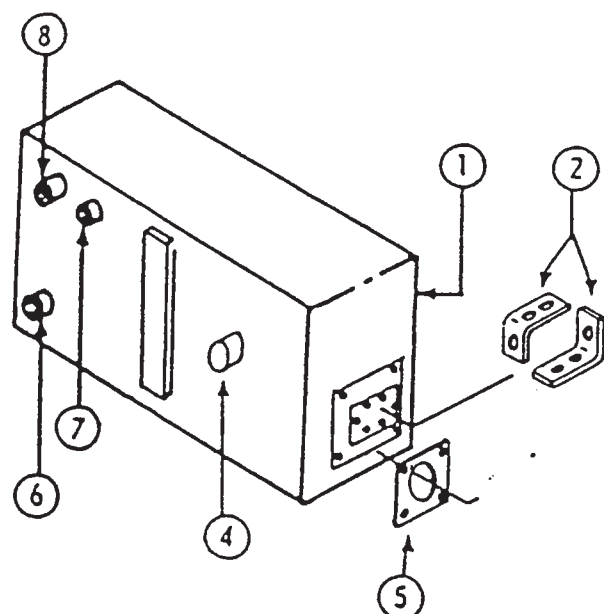
PROBLEM	CAUSE	SOLUTION
Rinse water not at required temperature range.	Heater switch defective.	Replace.
	Water level protection control defective.	Replace.
	Heater element defective.	Replace.
	Wires loose or burned off.	Retighten or Replace.
	Thermometer's defective.	Replace.
	Heater switch defective.	See page on heater system checkout.
After filling machine with water, leakage began at lower front panel without machine operating or at end of rinse cycle.	Thermostat defective.	Adjust using instructions on thermostat page and heater system's checkout page. Replace if necessary.
	Defective heater relay on contactor.	If defective, replace. See note on heater system above.
Machine doesn't drain when drain switch is depressed.	Overflow drain clogged.	Clean away obstruction.
	Drain solenoid clogged.	Remove obstruction.
	Defective switch.	Replace.
	Defective motor or motor start relay.	Replace.
	Defective drain solenoid.	Replace.
Note: The drain pump of this machine is part of wash motor, so if wash motor operates properly drain system should work.		

PUMP AND MOTOR ASSEMBLY
P/N 0108100



PUMP AND MOTOR ASSEMBLY

ITEM	KIT #	DESCRIPTION
1.		MOTOR
2.	0108500	MOUNTING PLATE
3.	0108500	STATIONARY SEAL ASSEMBLY
4.	0108500	SHIM WASHERS
5.	0108500	ROTATING CERAMIC
6.	0108500	PROPELLER FOR DRAIN PUMP
7.	0108500	"O" RING SEAL
8.	0108500	DRAIN INLET PLATE
9.	0109500	SUCTION ADAPTER PLATE
10.	0109000	IMPELLER FOR WASH PUMP
11.	0108500	TRUSS HEAD SCREW
12.	0109500	DIFFUSER (ALSO 1087)
13.	0109500	UPPER PUMP HOUSING (ALSO 0109600)
14.	0109700	FILL HEAD MACHINE SCREW (SHORT)
15.	0109800	FILL HEAD MACHINE SCREW (LONG)

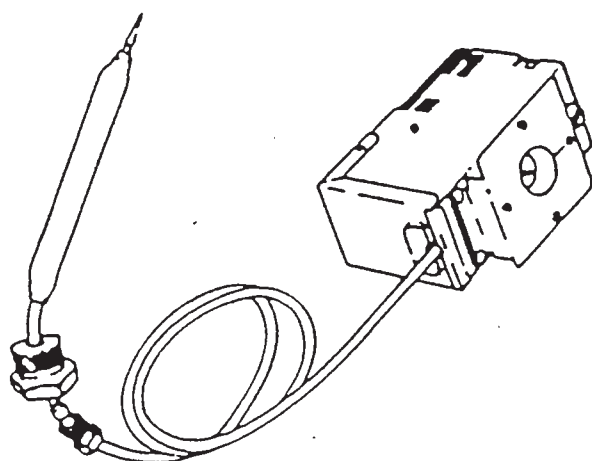
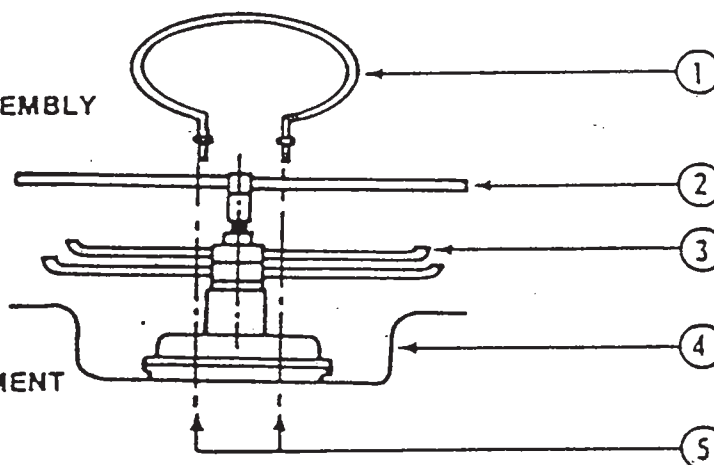


RINSE TANK

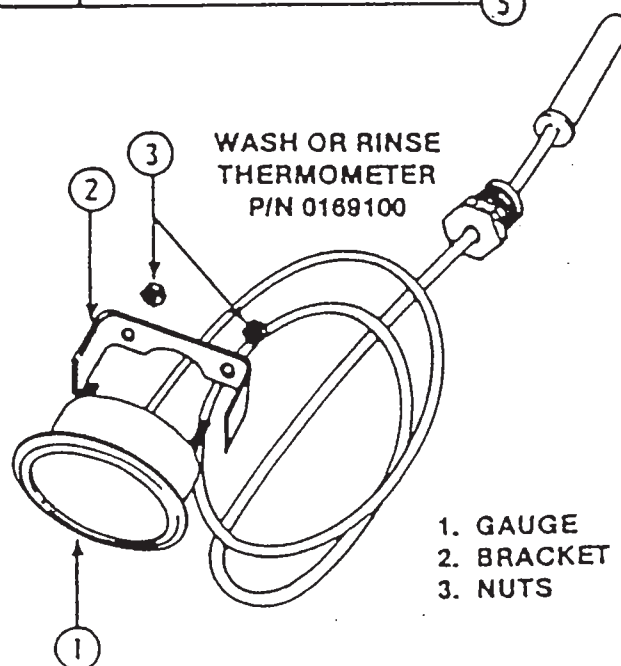
ITEM	P/N	DESCRIPTION
1.	0005700	BOOSTER TANK
2.	0060001	BUS BAR
3.		BOOSTER HEATER ELEMENT
4.		THERMOSTAT COUPLING
5.	0060002	HEATER ELEMENT GASKET
6.		WATER INLET
7.		THERMOMETER COUPLING
8.		WATER OUTLET

WASH ASSEMBLY

ITEM	P/N	DESCRIPTION
1.	566	WASH TANK RING ELEMENT
2.	0125200	RINSE ASSEMBLY, LOWER
3.	0188900	WASH ASSEMBLY
4.		WASH RESERVOIR
5.		HOLES FOR WASH TANK ELEMENT

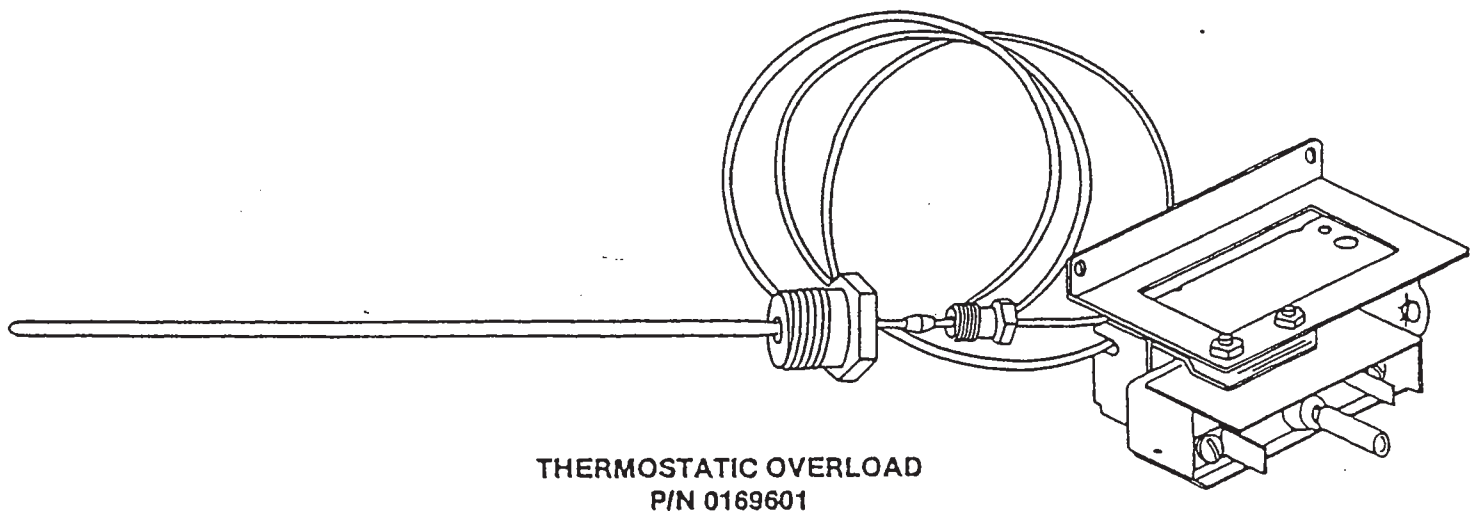
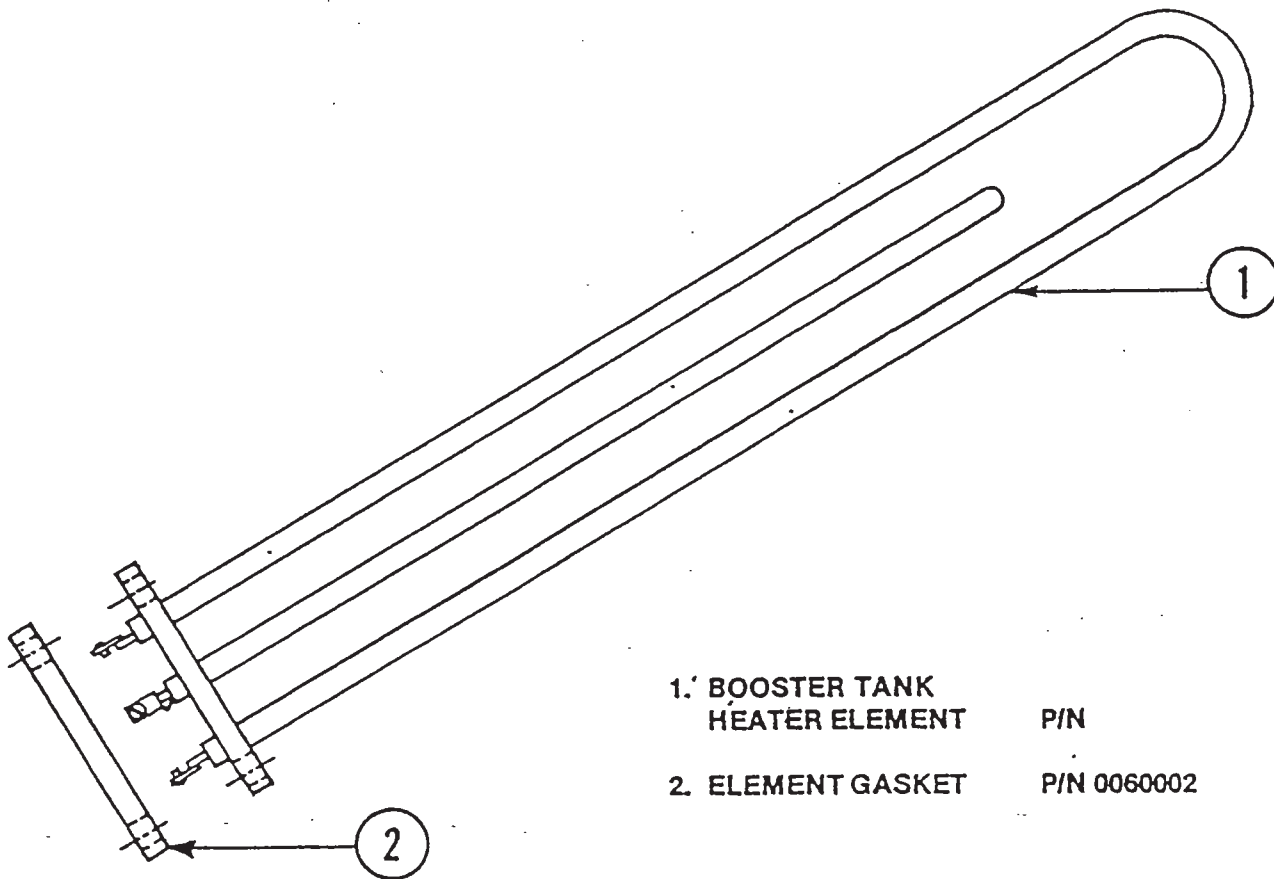


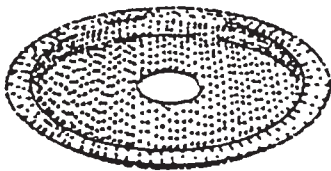
WASH OR RINSE THERMOSTAT
P/N 0170018 - Rinse
P/N 0170023 - Wash



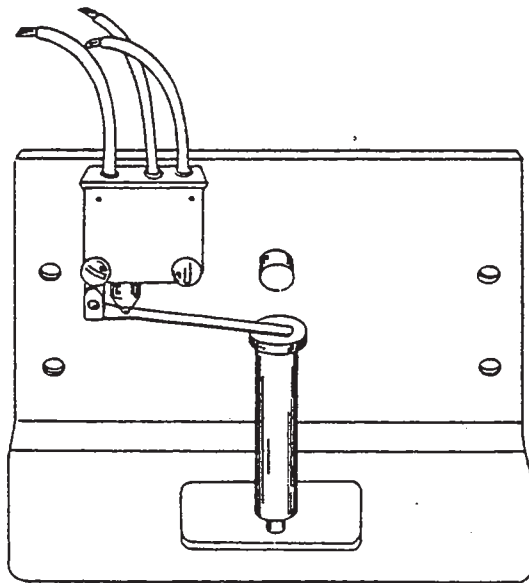
WASH OR RINSE
THERMOMETER
P/N 0169100

1. GAUGE
2. BRACKET
3. NUTS



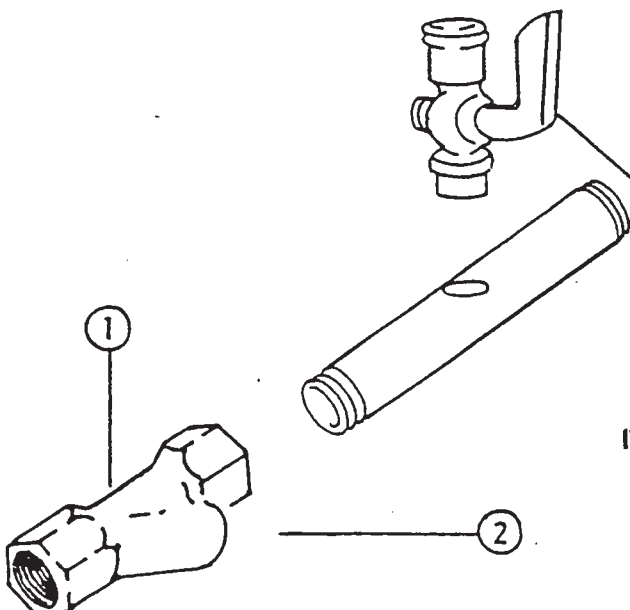


PAN STRAINER P/N 0153100



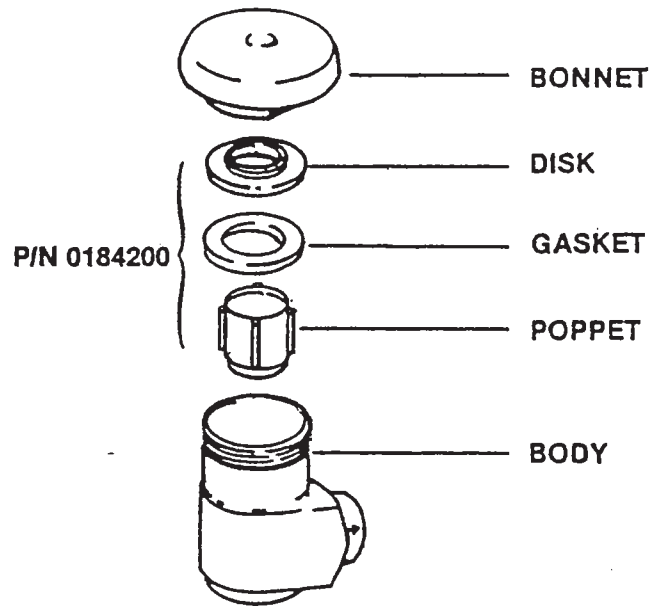
DOOR SWITCH and
LATCH ASSEMBLY

INCOMING PLUMBING

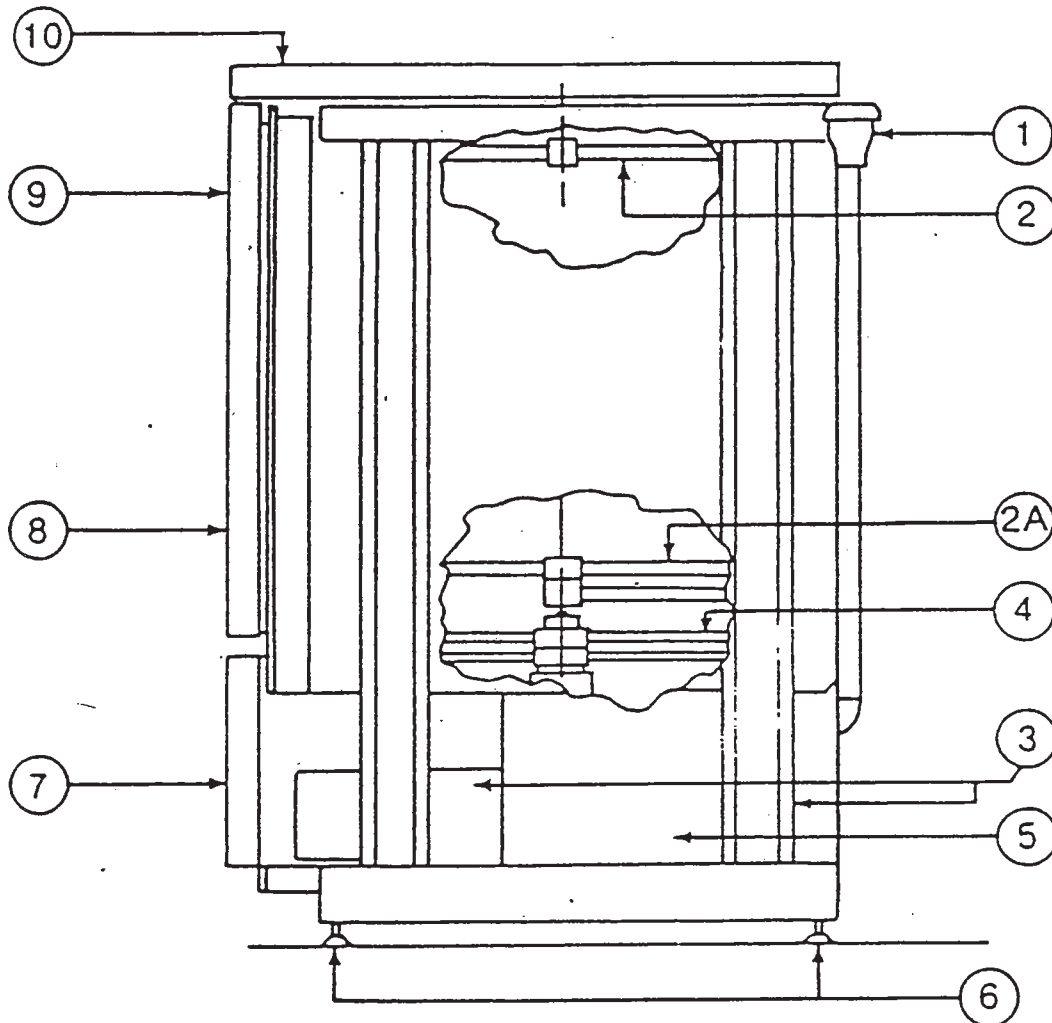


VACUUM BREAKER

P/N 0184101

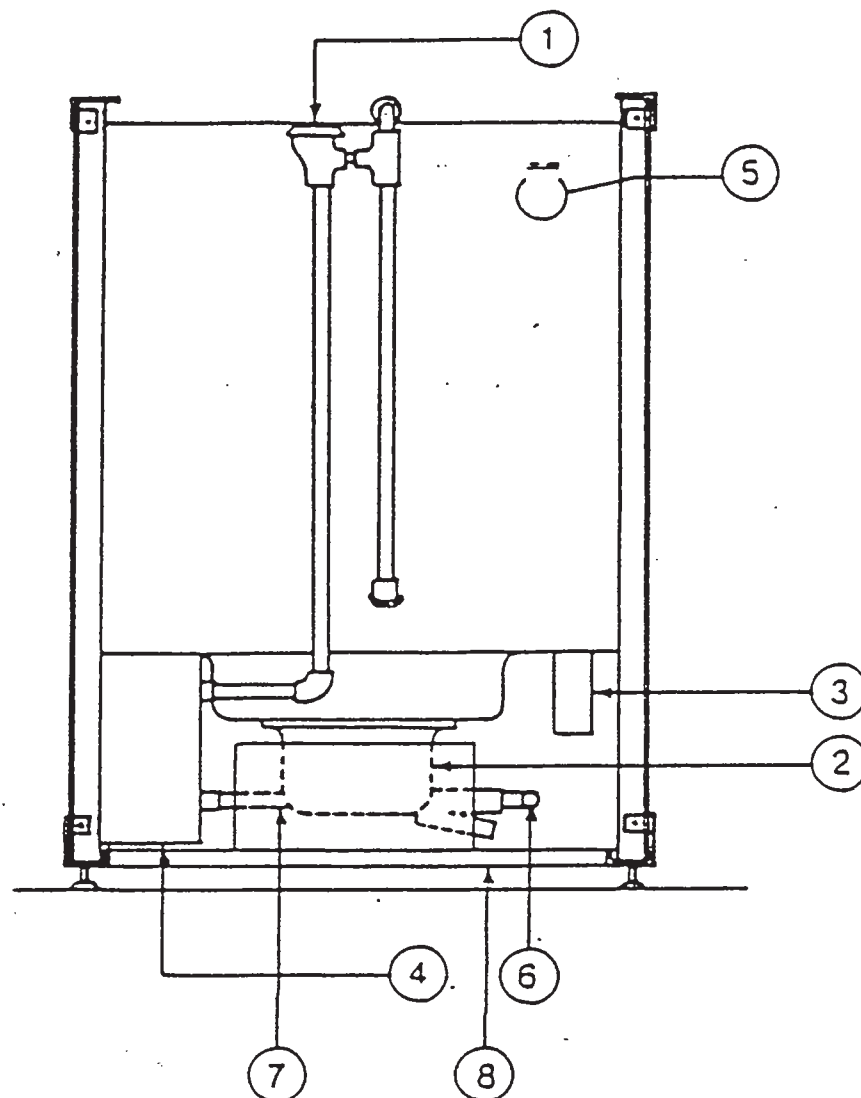


ITEM	P/N	DESCRIPTION
1.	0153600	"Y" STRAINER
2.		REMOVABLE FILTER
3.	0185000	VALVE FOR HEALTH INSPECTOR
4.	0142100	SOLENOID VALVE ½", (110V, used on 60 cycle machine)
5.		PIPE UNION



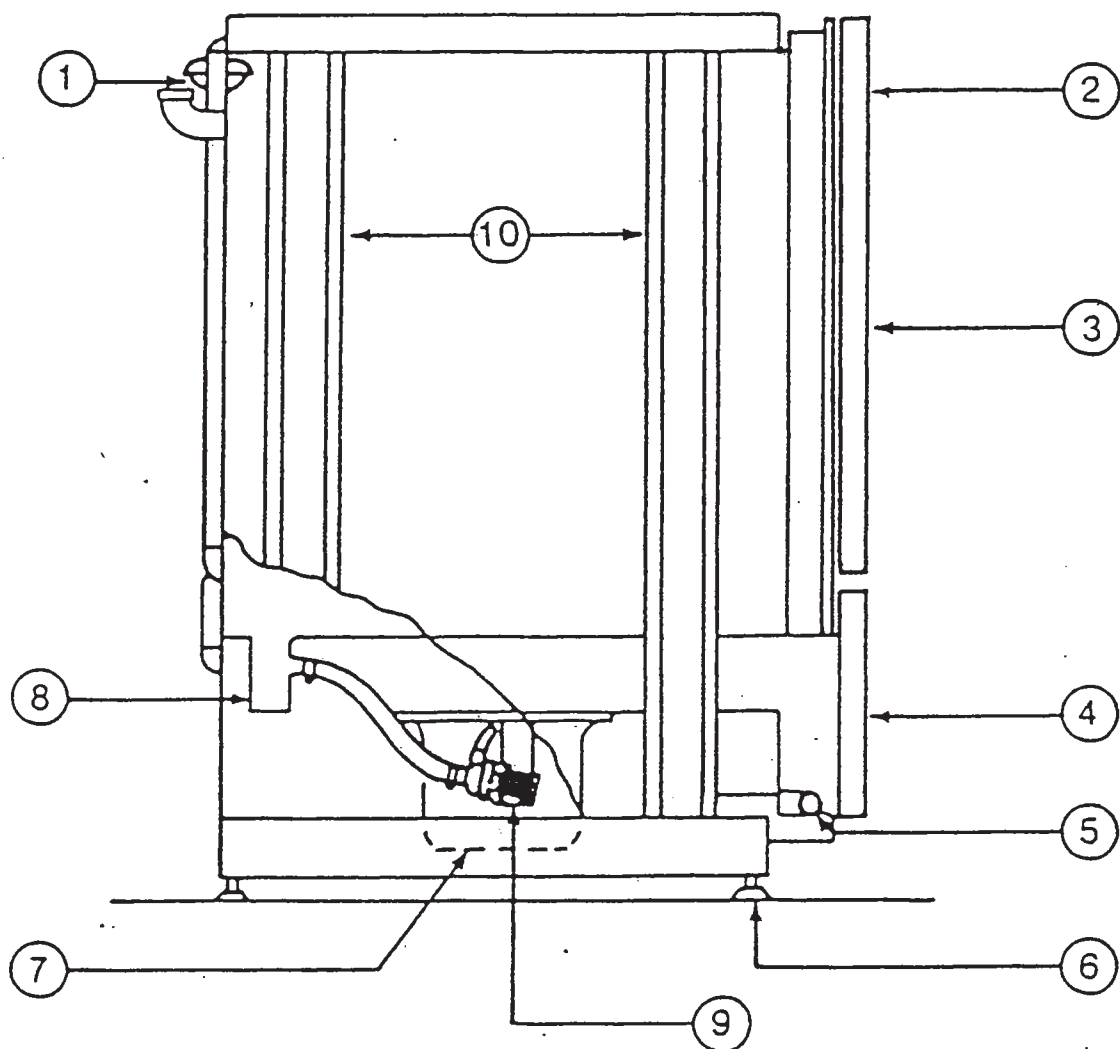
RIGHT SIDE VIEW

ITEM	P/N	DESCRIPTION
1.	0184101	VACUUM BREAKER ASSEMBLY
2.	0125100	RINSE ASSEMBLY, UPPER
2A.	0125200	RINSE ASSEMBLY, LOWER
3.	0004000	SIDE FRAME & BRACE, RIGHT HAND
4.	0188900	WASH ASSEMBLY
5.	0005700	BOOSTER TANK
6.	0083400	ADJUSTING FEET
7.	0054902	KICK PANEL
8.	0052800	FRONT DOOR
9.	0052700	DOOR HANDLE ASSEMBLY
10.	0054700	OPTIONAL TOP



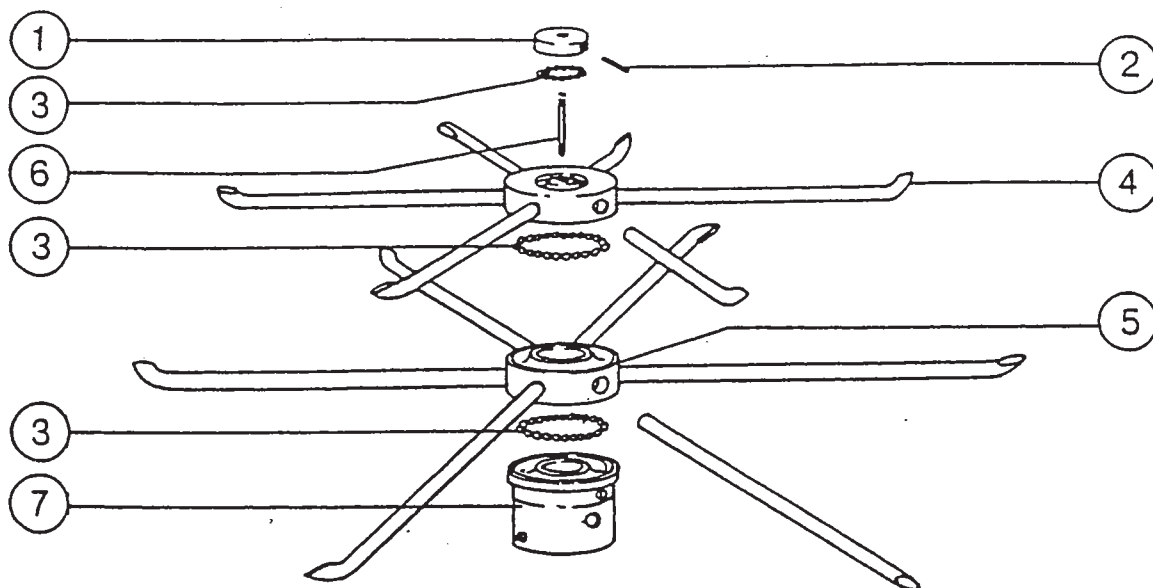
BACK VIEW

ITEM	P/N	DESCRIPTION
1.	1841	VACUUM BREAKER ASSEMBLY
2.	1081	PUMP & MOTOR ASSEMBLY
3.		DRAIN — GRAVITY FEED
4.	58	BOOSTER TANK
5.		EQUALIZING VENT
6.		INCOMING WATER CONNECTION
7.		TRANSFORMER BOX W/LID
8.		TRANSFORMER PLATFORM

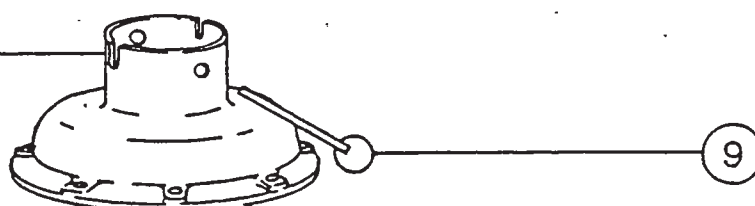


LEFT SIDE VIEW

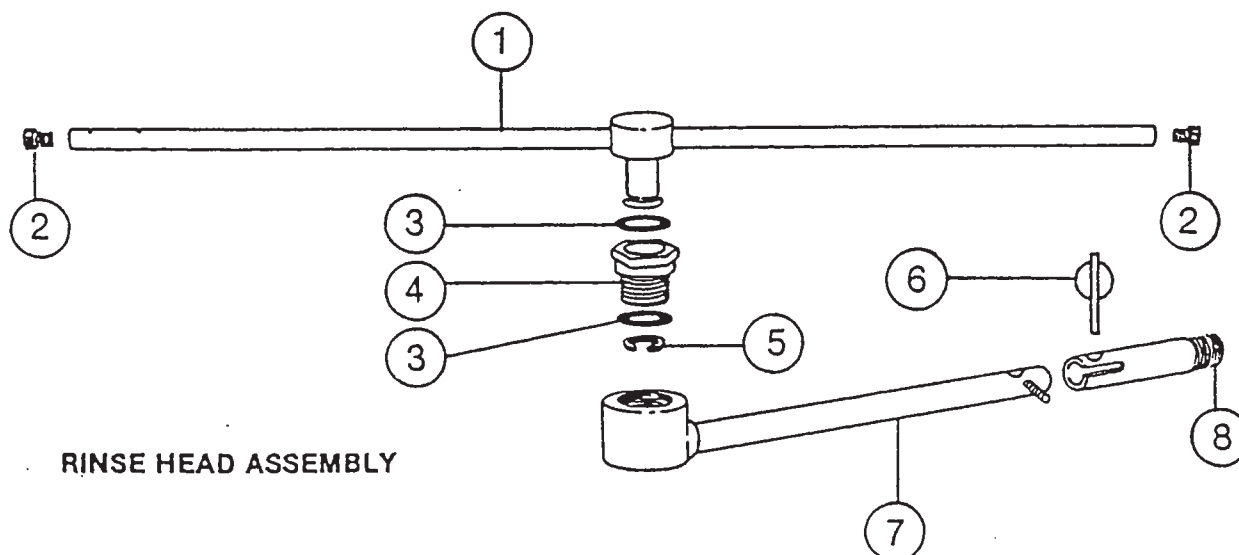
ITEM	P/N	DESCRIPTION
1.	0184101	VACUUM BREAKER ASSEMBLY
2.	0052700	DOOR HANDLE ASSEMBLY
3.	0052800	FRONT DOOR, OUTER
4.	0054902	KICK PANEL
5.		INCOMING WATER CONNECTION
6.	0083400	ADJUSTING FEET
7.	0108100	PUMP & MOTOR ASSEMBLY, (110V, 60 cycle)
8.		DRAIN — GRAVITY FEED
9.	0142400	DRAIN SOLENOID VALVE, (110V, used on 60 cycle machine)
10.	0004001	SIDE FRAME & BRACE, LEFT HAND



WASH HEAD ASSEMBLY P/N 0188900

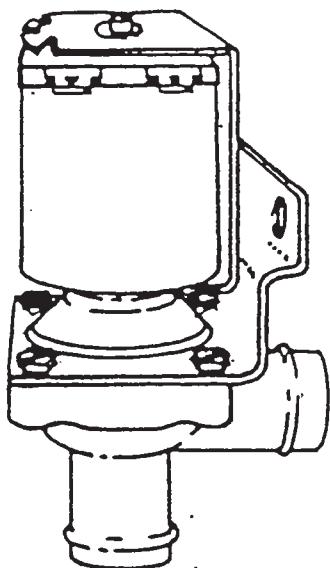


ITEM	P/N	DESCRIPTION	ITEM	P/N	DESCRIPTION
1.	0186500	WASH HEAD CAP WITH RACE	6.	0187500	WASH HEAD CENTER SHAFT
2.	0187000	WASH HEAD CAP SET SCREW	7.	0193601	WASH HEAD FIXED RACE
3.	0194000	WASH HEAD BEARING 1/4" S/S	8.	0109600	UPPER PUMP HOUSING
4.	0189000	WASH HEAD SMALL MANIFOLD w/TUBES	9.	0188601	WASH HEAD ASSEMBLY RETAINING PIN w/RING
5.	0189500	WASH HEAD LARGE MANIFOLD w/TUBES			



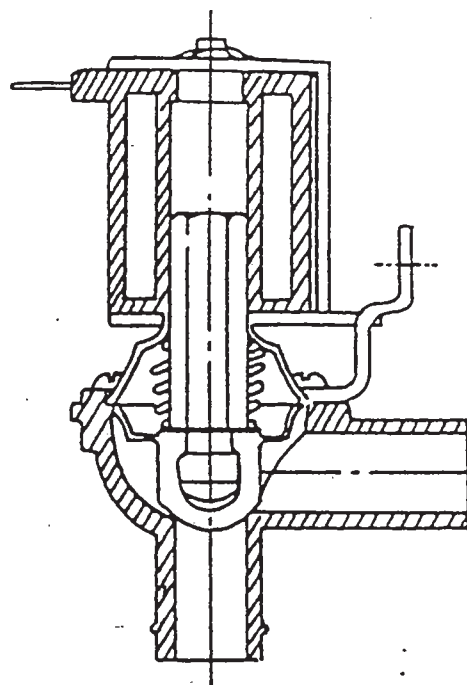
RINSE HEAD ASSEMBLY

ITEM	P/N	DESCRIPTION	ITEM	P/N	DESCRIPTION
1.	0125200	RINSE HEAD ARM	5.	0126500	RINSE HEAD SNAP RINGS S/S
2.	0126800	RINSE HEAD END PLUGS	6.	0137301	RINSE FEED PIPE LANYARD PIN
3.	0126000	RINSE HEAD NYLATRON WASHER	7.	0137200	RINSE FEED PIPE (LOWER)
4.	0125500	RINSE HEAD HEX BRUSHING S/S	8.	0137202	RINSE FEED PIPE NIPPLE

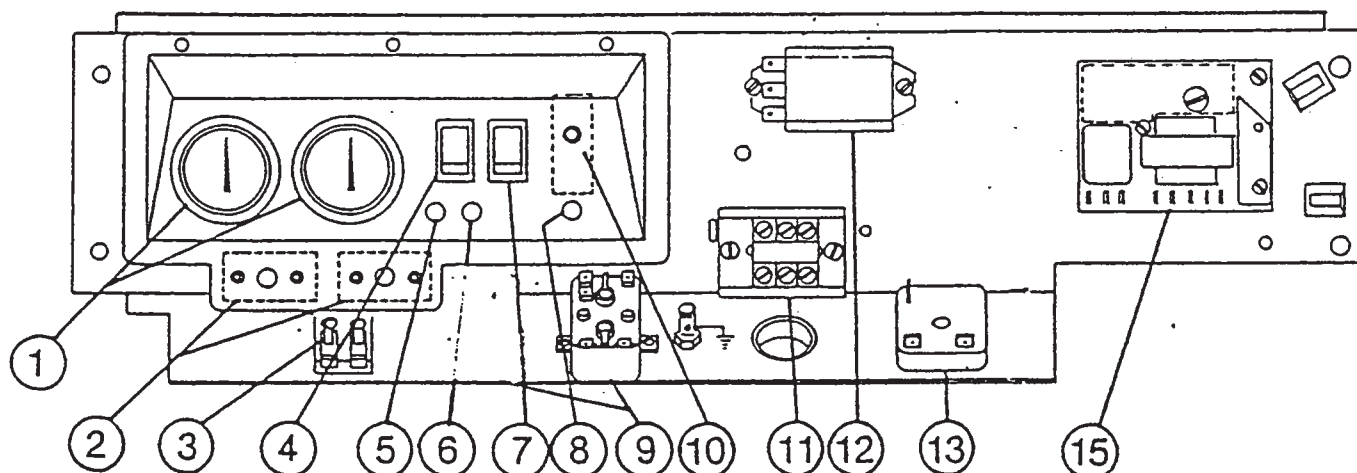


DRAIN VALVE

P/N 0142400 (110 V, used on 60 cycle machine)



CUTAWAY VIEW



PANEL

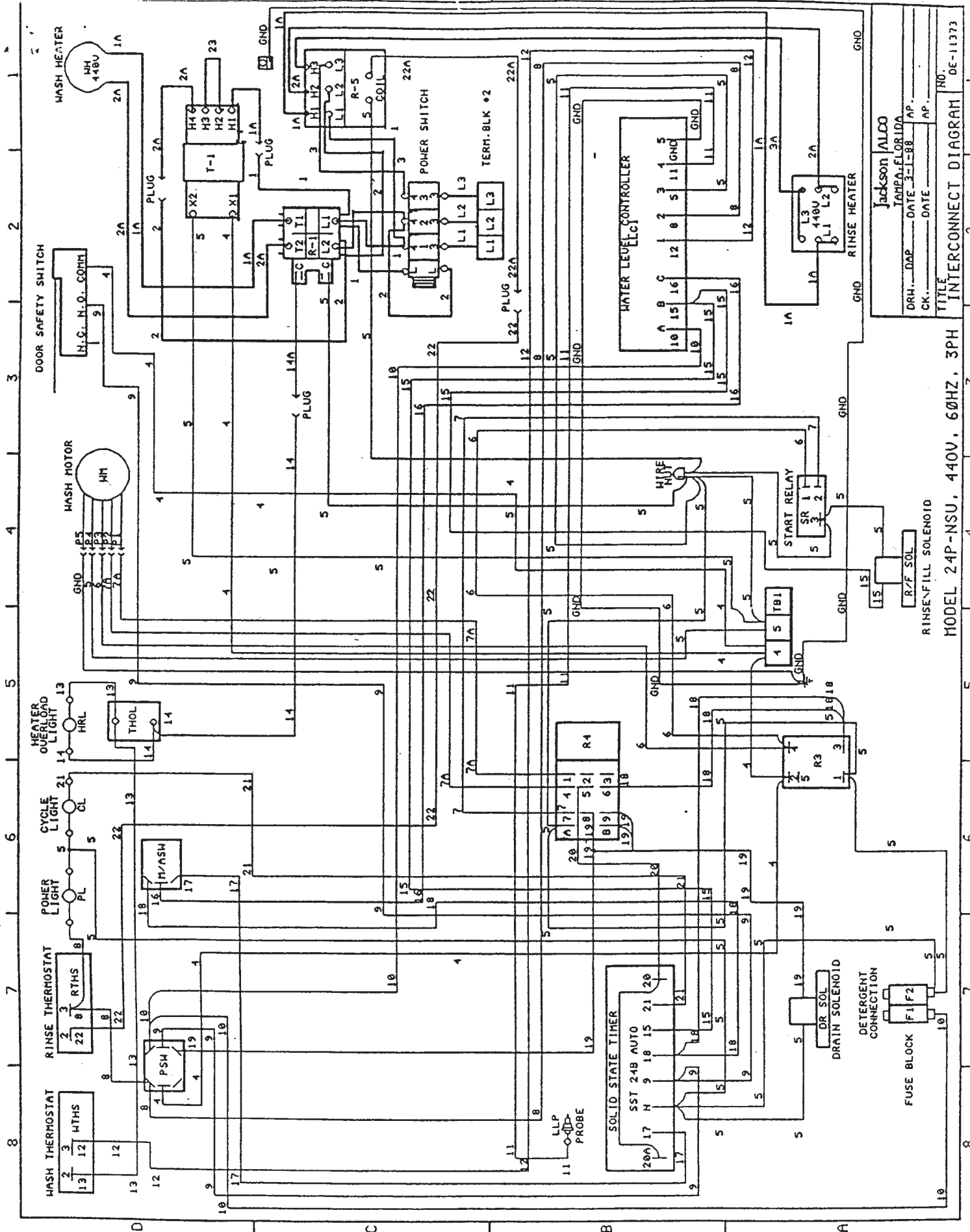
ITEM	P/N	DESCRIPTION
1.	0169100	THERMOMETERS, WASH AND RINSE
2.	0170018	THERMOSTAT, RINSE
2.	0170023	THERMOSTAT, WASH
3.		DETERGENT FUSE BLOCK
4.	0155600	POWER SWITCH
5.	0083518	POWER LIGHT
6.	0083507	CYCLE LIGHT
7.	0159700	MANUAL/AUTO SWITCH
8.	0083518	HEATER RESET LIGHT
9.	0121300	MOTOR RELAY (R-3)
10.	0169601	THERMOSTATIC OVERLOAD
11.	0165600	TERMINAL BOARD, INCOMING ELECTRICAL CONNECTION
12.	0124400	DRAIN RELAY (R-4)
13.	0120701	MOTOR STARTING RELAY
15.	0204400	WATER LEVEL CONTROL

COMPLETE PARTS LIST for MODEL 24

0005700	Booster Tank (stripped)	1
0051700	Door Latch and Switch Bracket	1
0052300	Door Gasket	1
0052400	Door Gasket, Clamp Assembly	1
0052600	Door, Front, Outer only (stripped)	1
0052700	Door Handle	1
0053400	Drain Hose-Pump to Solenoid Valve, short	1
0053500	Drain Hose Clamps	4
0053600	Drain Hose-Solenoid Valve to Drain, long	1
0054400	Door Spring	2
0054500	Enclosure Panel, righthand side	1
0054600	Enclosure Panel, lefthand side	1
0054700	Enclosure Panel, top	1
0054902	Enclosure Panel, Lower Kickplate	1
566	Heater Element, ring-style, 1000W, 440V	1
	Heater Element, Flange Type, 6.7 KW, 460V	1
0060001	Heater Element, Flange Type, Bus Bars	2
0060002	Heater Element, Flange Type, Gasket	1
0083507	Light, Indicator, Green	1
0083518	Light, Indicator, Red	2
0084300	Probe, Lundy, small	1
0108100	Pump Assembly, complete with motor, 115V, 60 cycle	1
0108400	Pump Gasket	1
0108500	Pump Propeller Mounting Plate and Seal Assembly, kit	1
0108700	Pump Diffuser (only)	1
0109000	Pump Impeller, kit	1
0109500	Pump, Upper Housing, kit	1
0109600	Pump, Upper Housing, (only)	1
0109700	Pump Fill Head Machine Screws, short	4
0109800	Pump Fill Head Machine Screws, long	4
0117500	Rack, square, 19 3/4" x 19 3/4" (cup, bowl, glass)	1
0117800	Rack, square, 19 3/4" x 19 3/4" (dish-molded)	2
1236	Relay, 110V, 3-pole, RMS Heat Circuit FVRNAS	1
0120701	Relay, 110V, Motor Starting	1
0121300	Relay, Motor	2
0124400	Relay, Drain, 3PDT	1
0125100	Rinse Head Assembly, upper	1
0125200	Rinse Head Assembly, lower	1
0125300	Rinse Head End Plug, knurled	2
0125500	Rinse Head, Hex Bushing	2
0126000	Rinse Head, Nylatron Washer	2
0126500	Rinse Head, Snap Ring, s/s	2
0131000	Rinse Head Brush, Tube Cleaning	1
0137301	Rinse Feed Pipe Lanyard Pin	1
0142100	Solenoid Valve 1/2", JE, 110V	1
0142400	Drain Valve, Dole 1/2", 110V, (Valve only)	1
0143600	Solenoid Valve Coll, 110V, JE	1
0145000	Solenoid Valve Diaphragm Cartridge and "O" Ring, JE	1
0147500	Solenoid Valve "O" Ring, JE	1
0148600	Solenoid Valve, Plunger Assembly, JE	1
0149500	Solenoid Valve, Strainer Screen, JE	1
0153100	Strainer, Pan-Type	1
0155600	Switch, On/Fill, Off, Drain	1
0164000	Switch, Door, SPDT	1
0159700	Switch, Manual Wash	1

COMPLETE PARTS LIST for MODEL 24

0165600	Terminal Board, 3-pole	1
0169100	Thermometer, 36" Cap., Rinse	1
0169601	Thermostatic Overload, Heater	1
0170018	Thermostat, Rinse, 180°, fixed	1
0170023	Thermostat, Wash, 150°, fixed	1
0174400	Timer, Solid State	1
0177500	Timer Micro Switches, Plastic Module-Type	3
0184101	Vacuum Breaker, 1/2" Conbraco	1
0184200	Vacuum Breaker Repair Kit, 1/2" Conbraco	1
0186500	Wash Head Cap w/Race	1
0187000	Wash Head Cap Set Screw	1
0187500	Wash Head Center Shaft	1
0188600	Wash Head Holding Pin	1
0188601	Wash Head, Disconnect Pin	1
0188900	Wash Head Assembly, complete	1
0189000	Wash Head, Small Manifold w/Tubes	1
0189500	Wash Head, Large Manifold w/Tubes	1
0193601	Wash Head Fixed Race	2
0194000	Wash Head Bearings, 1/4" s/s	57
0204400	Water Level Control, 110V, w/25 Second Time Delay	1
1809	<u>TRANSFORMER, 1KVA, 440/110</u>	1
1595	<u>SWITCH, POWER ILLUMINATED</u>	1



Jackson ALCO
TAMPA, FLORIDA
DRH. DATE 3-1-88 AP.
CK. DATE AP.
TITLE INTERCONNECT DIAGRAM NO. DE-11373

MODEL 24P-NSU, 440V, 60HZ, 3PH

RINSE/FILL SOLENOID

DR SOL
DRAIN SOLENOID

DETERGENT
CONNECTION

FUSE BLOCK

START RELAY

SOLID STATE TIMER

WATER LEVEL CONTROLLER

POWER SWITCH

WASH MOTOR

DOOR SAFETY SWITCH

WASH HEATER

RINSE HEATER

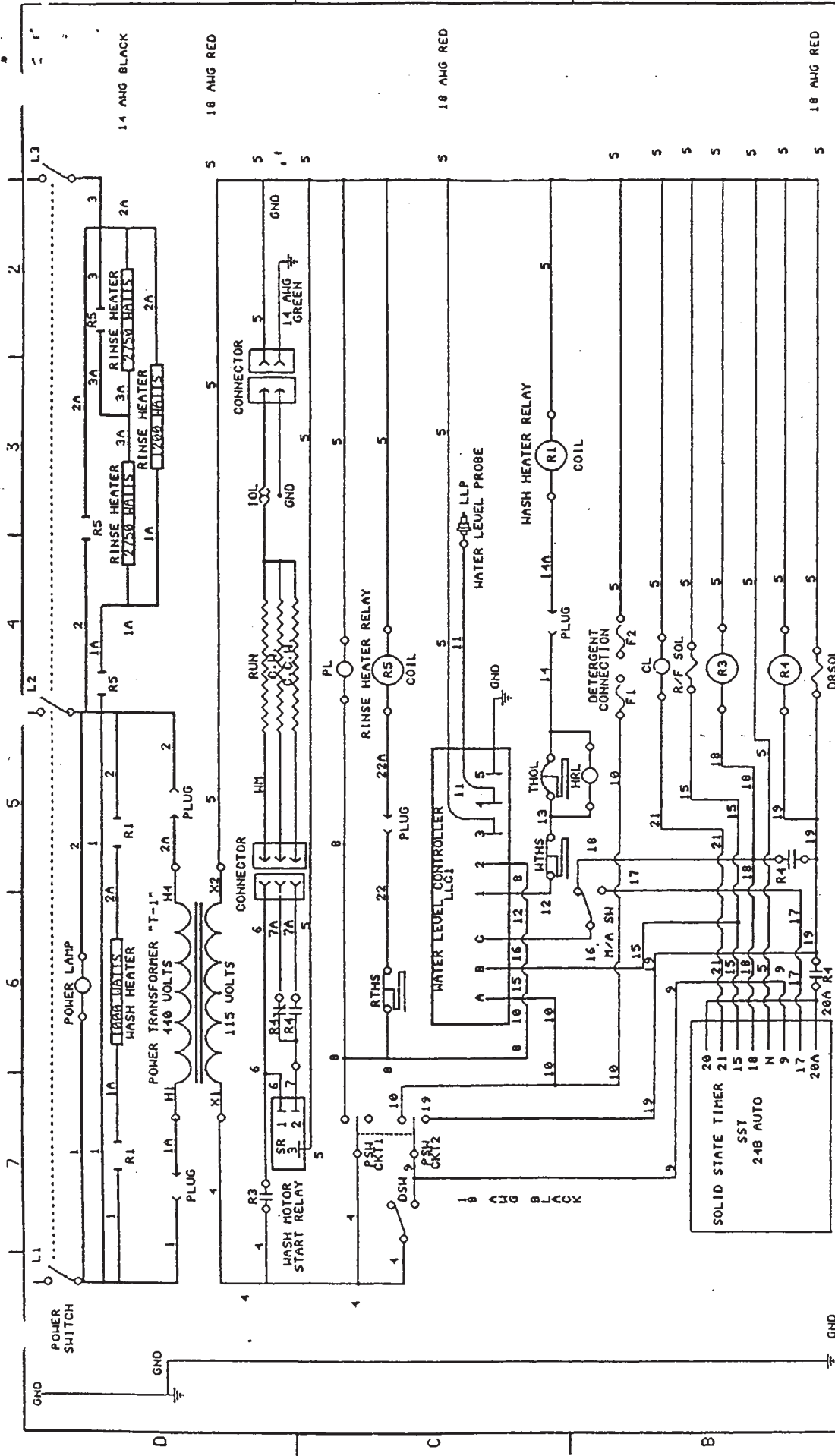
HEATER OVERLOAD LIGHT

CYCLE LIGHT

POWER LIGHT

RINSE THERMOSTAT

WASH THERMOSTAT



NOTE: ALL WIRES MTH 2/64 INSULATION
TEMP RATED 90 C/194 F DEGREES

Jackson JALCO	
TAMPA, FLORIDA	
DRN...	DATE 3-1-88
CK...	DATE
TITLE	

- R1 RINSE HEATER RELAY
- R2 WASH HEATER RELAY
- R3 WASH MOTOR RELAY
- R4 DRAIN RELAY
- R5 RINSE HEATER
- R6 WASH HEATER
- R7 WASH MOTOR
- R8 DRAIN PUMP
- R9 WASH MOTOR
- R10 WASH MOTOR
- R11 WASH MOTOR
- R12 WASH MOTOR
- R13 WASH MOTOR
- R14 WASH MOTOR
- R15 WASH MOTOR
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- R41 WASH MOTOR
- R42 WASH MOTOR
- R43 WASH MOTOR
- R44 WASH MOTOR
- R45 WASH MOTOR
- R46 WASH MOTOR
- R47 WASH MOTOR
- R48 WASH MOTOR
- R49 WASH MOTOR
- R50 WASH MOTOR

SECTION 5: JACKSON MAINTENANCE & REPAIR CENTERS

ALABAMA TO HAWAII

ALABAMA:

**JONES-McLEOD
APPLIANCE SVC**
1616 7TH AVE. NORTH
BIRMINGHAM, AL 35203
(205) 251-0159
800-821-1150
FAX: (205) 322-1440
service@jones-mcleod.com

**JONES-McLEOD
APPLIANCE SVC**
854 LAKESIDE DRIVE
MOBILE, AL 36693
(334) 666-7278
800-237-9859
FAX: (334) 661-0223

ALASKA:

**RESTAURANT
APPLIANCE SVC**
7219 ROOSEVELT WAY NE
SEATTLE, WA 98115
(206) 524-8200
800-433-9390
FAX: (206) 525-2890
info@restappl.com

ARIZONA:

**AUTHORIZED COMMERCIAL
FOOD EQMT. SVC**
4832 SOUTH 35TH STREET
PHOENIX, AZ 85040
(602) 234-2443
800-824-8875
FAX: (602) 232-5862
acsboss@aol.com

GCS SERVICE INC.
PHOENIX, AZ
800-822-2303

ARKANSAS:

BROMLEY PARTS & SVC
10TH AND RINGO
P.O. BOX 1688
LITTLE ROCK, AR 72202
(501) 374-0281
800-482-9269
FAX: (501) 374-8352
service@bromleyparts.com
parts@bromleyparts.com

COMMERCIAL PARTS & SVC.
3717 CHERRY ROAD
MEMPHIS, TN 38118
(901) 366-4587
800-262-9155
FAX: (901) 366-4588

CALIFORNIA:

**BARKERS FOOD
MACHINERY SERVICES**
5367 SECOND STREET
IRVINDALE, CA 91706
(626) 960-9390
800-258-6999
FAX: (626) 337-4541
service@barkers.com

GCS SERVICE INC.
LOS ANGELES, CA
800-822-2303

P & D APPLIANCE
4220-C ROSEVILLE ROAD
NORTH HIGHLANDS, CA 95660
(916) 974-2772
800-824-7219
FAX: (916) 974-2774

INDUSTRIAL ELECTRIC SVC
5662 ENGINEER DRIVE
HUNTINGON BEACH, CA 92649
(714) 379-7100
800-4573783
FAX: (714) 379-7109

GCS SERVICE INC.
360 LITTLEFIELD AVE
S. SAN FRANCISCO, CA 94080
(650) 635-0720
800-969-4427
FAX: (650) 871-4019

**BARKERS FOOD
MACHINERY SERVICES**
9373 ACTIVITY ROAD #G
SAN DIEGO, CA 92126
(858) 695-1091
800-995-7955
FAX: (858) 995-7955

GCS SERVICE INC.
9030 KENMAR DR. SUITE 313
SAN DIEGO, CA 92121
(858) 549-8411
800-422-7278
FAX: (858) 549-2323

P & D APPLIANCE SVC
100 SOUTH LINDEN AVE.
S. SAN FRANCISCO, CA 94080
(650) 635-1900
800-424-1414
FAX: (650) 635-1919
pndappl@aol.com

COLORADO:

**HAWKINS COMMERCIAL
APPLIANCE SERVICE**
3000 S. WYANDOT ST.
ENGLEWOOD, CO 80110
(303) 781-5548
(800) 624-2117
FAX: (303) 761-8861

COLORADO (cont.):

METRO APPLIANCE SERVICE
1640 S BROADWAY
DENVER, CO 80210
(303) 778-1126
800-525-3532
FAX: (303) 778-0268
metroappls@aol.com

CONNECTICUT:

GCS SERVICE INC.
302 MURPHY ROAD
HARTFORD, CT 06114
(860) 549-5575
800-423-1562
FAX: (860) 527-6355

DELAWARE:

**AMERICAN KITCHEN MACHIN-
ERY & REPAIR**
204 QUARRY STREET
PHILADELPHIA, PA 19106
(215) 627-7760
800-848-7760
FAX: (215) 627-1604

GCS SERVICE INC.
817 N. THIRD STREET
PHILADELPHIA, PA
(215) 925-6217
800-441-9115
FAX: (215) 925-6208

ELMER SCHULTZ SERVICE
36 BELMONT AVE.
WILLMINGTON, DE 19804
(302) 655-8900
800-225-0599
FAX: (302) 656-3673
elmer2@erols.com

EMR SERVICE DIVISION
106 WILLIAMSPORT CIRCLE
SALISBURY, MD 21804
(410) 543-8197
FAX: (410) 548-4038

FLORIDA:

COMMERCIAL APPLIANCE SVC
8416 LAUREL FAIR CIRCLE
BLDG 6, SUITE 114
TAMPA, FL 33610
(813) 663-0313
800-282-4718
FAX: (813) 663-0212
commercialappliance@worldnet.at
t.net

FLORIDA (cont.):

GCS SERVICE INC
3373 N. W. 168TH STREET
MIAMI, FL 33056
(305) 621-6666
800-766-8966
FAX: (305) 621-6656

GCS SERVICE INC
3902 CORPORES PARK DR.
SUITE 350
TAMPA, FL 33619
(813) 626-6044
800-282-3008
FAX: (813) 621-1174

**JONES-McLEOD
APPLIANCE SVC**
854 LAKESIDE DRIVE
MOBILE, AL 36693
(334) 666-7278
800-237-9859
FAX: (334) 661-0223
service@jones-mcleod.com

GEORGIA:

GCS SERVICE INC
3127 PRESIDENTIAL DRIVE
ATLANTA, GA 30340
(770) 452-7322
800-334-3599
FAX: (770) 452-7473

**SOUTHEASTERN
RESTAURANT SVC.**
2200 NORCROSS PKWY.
SUITE 210
NORCROSS, GA 30071
(770) 446-6177
800-235-6516
FAX: (770) 446-3157
info@srs-atl.com

**WHALEY FOODSERVICE
REPAIRS**
109-A OWENS INDUSTRIAL
DRIVE
SAVANNAH, GA 31405
(912) 447-0827
888-765-0036
FAX: (912) 447-0826

HAWAII:

**FOOD EQMT. PARTS & SER-
VICE CO.**
300 PUUHALE RD.
HONOLULU, HI 96819
(808) 847-4871
FAX: (808) 842-1560
fepsco@hula.net

SECTION 5: JACKSON MAINTENANCE & REPAIR CENTERS

IDAHO TO MISSISSIPPI

IDAHO:

RON'S SERVICE

703 E 44TH STREET STE 10
GARDEN CITY, ID 83714
(208) 375-4073
FAX: (208) 375-4402

RESTAURANT APPLIANCE SVC.

7219 ROOSEVELT WAY NE
SEATTLE, WA 98115
(206) 524-8200
800-433-9390
FAX: (206) 525-2890
info@restappl.com

ILLINOIS:

CONES REPAIR SVC.

2408 40TH AVE.
MOLINE, IL 61265
(309) 797-5323
800-716-7070
FAX: (309) 797-3631
jackb@cones.com

EICHENAUER SERVICES INC.

130 S OAKLAND ST.
DECATUR, IL 62522
(217) 429-4229
800-252-5892
FAX: (217) 429-0226
esi@esiequality.com

GCS SERVICE INC.

696 LARCH AVENUE
ELMHURST, IL 60126
(630) 941-7800
800-942-9689
FAX: (630) 941-6048

GCS SERVICE INC.

9722 REAVIS PARK DRIVE
ST. LOUIS, MO 63123
(314) 683-7444
800-284-4427
FAX: (314) 638-0135

INDIANA:

GCS SERVICE INC.

5310 E. 25TH STREET
INDIANAPOLIS, IN 46218
(317) 545-9655
800-727-8710
FAX: (317) 549-6286

IOWA:

GOODWIN-TUCKER GROUP

3509 DELAWARE AVENUE
DES MOINES, IA 50313
(515) 262-9308
800-372-6066
FAX: (515) 262-2936
goodwintuc@aol.com

IOWA (cont.):

CONES REPAIR SVC.

1056 27TH AVENUE SW
CEDAR RAPIDS, IA 52404
(319) 365-3325
800-747-3326
FAX: (319) 365-0885

KANSAS:

GCS SERVICE INC.

6107 CONNECTICUT
KANSAS CITY, MO 64210
(816) 920-5999
800-229-6477
FAX: (816) 920-7387

KENTUCKY:

CERTIFIED SERVICE CENTER

127 DISHMAN LANE
BOWLING GREEN, KY 42101
(270) 783-0012
(877) 907-0012
FAX: (270) 783-0058

CERTIFIED SERVICE CENTER

1051 GOODWIN DRIVE
LEXINGTON, KY 40505
(606) 254-8854
800-432-9269
FAX: (606) 231-7781
jatkings@certifiedsc.com

GCS SERVICE INC.

1002 NANDINO BLVD.
LEXINGTON, KY 40511
(606) 255-0746
800-432-9260
FAX: (606) 255-0748

CERTIFIED SERVICE CENTER

RAMCO BUSINESS PARK
4283 PRODUCE ROAD
LOUISVILLE, KY 40218
(502) 964-7007
800-637-6350
FAX: (502) 964-7202
cwalker@certifiedsc.com
droenigk@certifiedsc.com

GCS SERVICE INC.

4204 SOUTH BROOK STREET
LOUISVILLE, KY 40214
(502) 367-1788
800-752-6160
FAX: (502) 367-0400

LOUISIANA:

BANA PARTS INC.

1501 KUEBLE STREET
HARAHAN, LA 70123
(504) 734-0076
800-325-7543
FAX: (504) 734-8456

LOUISIANA (cont.):

BANA PARTS INC.

4028 GREENWOOD ROAD
SHREVEPORT, LA 71109
(318) 631-6550
800-832-6550
FAX: (318) 636-5675

MAINE:

MRE, INC.

170 JOHN ROBERTS RD UNIT #3
PROTLAND, ME 04106
(207) 772-1152
800-823-9700
FAX: (207) 772-1445

NORTHERN CROWN SERVICES, INC.

225 INDUSTRIAL WAY
PORTLAND, ME 04103
(207) 797-7333
(800) 696-7560
FAX: (207) 696-1128
steve@northerncrownservices.com
richard@northerncrownservices.com

MARYLAND:

EMR SERVICE DIVISION

700 EAST 25TH STREET
BALTIMORE, MD 21218
(410) 467-8080
800-879-4994
FAX: (410) 467-4191
baltparts@emrco.com

EMR SERVICE DIVISION

106 WILLIAMSPORT CIRCLE
SALISBURY, MD 21804
(410) 543-8197
888-687-8080
FAX: (410) 548-4038
baltparts@emrco.com

EMR SERVICE DIVISION

2626 PITTMAN DRIVE
SILVER SPRING, MD 20910
(301) 588-8080
800-348-2365
FAX: (301) 588-6985
baltparts@emrco.com

GCS SERVICE INC.

2660 PITTMAN DRIVE
SILVER SPRING, MD 20910
(301) 585-7550 (DC)
(410) 792-0338 (BALT)
(800) 638-7278
FAX: (301) 495-4410

MASSACHUSETTS:

ACE SERVICE CO.

95 HAMPTON AVE.
NEEDHAM, MA 02494
(781) 449-4220
800-225-4510 MA & NH
FAX: (781) 444-4789
taceservice@aol.com

MASSACHUSETTS RESTAURANT SUPPLY

34 SOUTH STREET
SOMERVILLE, MA 02143
(617) 868-1930
800-338-6737
FAX: (617) 868-5331

GCS SERVICE INC.

180 SECOND STREET
CHELSEA, MA 02150
(617) 889-9393
800-225-1155
FAX: (617) 889-1222

GCS SERVICE INC.

302 MURPHY ROAD
HARTFORD, CT 06114
(860) 549-5575
800-723-1562
FAX: (860) 527-6355

MICHIGAN:

GCS SERVICE INC.

31829 WEST EIGHT MILE ROAD
LIVONIA, MI 48152
(248) 426-9500
800-772-2936
FAX: (248) 426-7555

JACKSON SERVICE COMPANY

3980 BENSTEIN RD.
COMMERCE TOWNSHIP, MI 48382
(248) 363-4159
800-332-4053
FAX: (248) 363-5448

MINNESOTA:

GCS SERVICE INC.

2857 LOUISIANA AVENUE N.
MINNEAPOLIS, MN 55427
(612) 546-4221
800-345-4221
FAX: (612) 546-4286

MISSISSIPPI:

GCS SERVICE INC.

2815 19TH ANENUE, UNIT A
GULFPORT, MS 39501
(228) 864-2722
877-964-2722
FAX: (228) 822-9412

SECTION 5: JACKSON MAINTENANCE & REPAIR CENTERS

MISSISSIPPI TO NORTH CAROLINA

MISSISSIPPI (cont.):

GCS SERVICE INC.
5755 GALLANT DRIVE.
JACKSON, MS 39206
(601) 956-7800
800-274-5954
FAX: (601) 956-1200

GCS SERVICE INC.
3717 CHERRY ROAD
MEMPHIS, TN 38118
(901) 366-4587
800-262-9155
FAX: (901) 366-4588

MISSOURI:

GCS SERVICE INC.
6107 CONNECTICUT
KANSAS CITY, MO 64120
(816) 920-5999
800-229-6477
FAX: (816) 920-7387

GCS SERVICE INC.
9722 REAVIS PARK DRIVE
ST. LOUIS, MO 63123
(314) 638-7444
800-284-4427
FAX: (314) 638-0135

KAMMERLIN PARTS & SVC.
1359 SOUTH KINGSHIGHWAY
ST. LOUIS, MO 63110
(314) 535-2222
FAX: (314) 535-6205
petek@kps.stl.com

MONTANA:

**RESTAURANT
APPLIANCE SVC.**
7219 ROOSEVELT WAY NE
SEATTLE, WA 98115
(206) 524-8200
800-433-9390
FAX: (206) 525-2890
info@restappl.com

NEBRASKA:

GOODWIN - TUCKER GROUP
7535 D STREET
OMAHA, NE 68124
(402) 397-2880
800-228-0372
FAX: (402) 397-2881
goodwintuc@aol.com

NEVADA:

HI TECH COMMERCIAL SVC
400 E. MEAD BLVD.
LAS VEGAS, NV 89030
(702) 649-4616
(877) 924-4832
FAX: (702) 649-4607

GCS SERVICE INC.
LAS VEGAS, NV
800-822-2303

NEW HAMPSHIRE:

GCS SERVICE INC.
180 SECOND STREET
CHELSEA, MA 02150
(617) 889-9393
800-225-1155
FAX: (617) 889-1222

ACE SERVICE CO.
500 HARVEY RD.
MANCHESTER, NH 03103
(603) 668-5070
800-225-4510
FAX: (603) 626-6067
taceservice@aol.com

**MASSACHUSETTS
RESTAURANT SUPPLY**
34 SOUTH STREET
SOMERVILLE, MA 02143
(617) 868-1930
800-338-6737
FAX: (617) 868-5331

NEW JERSEY:

JACKSON FASPRAY SVC.
155 SARGEANT AVE.
CLIFTON, NJ 07013
(973) 471-8000
800-356-6740
FAX: (973) 471-1289
jfs155@aol.com

**AMERICAN KITCHEN
MACHINERY & REPAIR**
204 QUARRY STREET
PHILADELPHIA, PA 19106
(215) 627-7760
800-848-7760
FAX: (215) 627-1604

GCS SERVICE INC.
817 N. THIRD STREET
PHILADELPHIA, PA 19123
(215) 925-6217
800-441-9115
FAX: (215) 925-6208

NEW JERSEY (cont.):

ELMER SCHULTZ SERVICES
201 WASHINGTON AVE.
PLEASANTVILLE, NJ 08232
(609) 641-0317
800-378-1641
FAX: (609) 641-8703
elmer2@erols.com

NEW MEXICO:

STOVE PARTS SUPPLY CO.
2120 SOLANA STREET
FORT WORTH, TX 76117
(817) 831-0381
800-433-1804
FAX: (817) 834-7754
bud@stoveparts.com

**HAWKINS COMMERCIAL APPLI-
ANCE SERVICE**
300 S. WYANDOT STREET
ENGLEWOOD, CA 80110
(303) 781-5548
800-624-2117
FAX: (303) 761-8861

NEW YORK:

GCS SERVICE INC.
BROOKLYN, NY 11211
800-822-2303

**APPLIANCE INSTALLATION
AND SERVICE CORP.**
1336 MAIN STREET
BUFFALO, NY 14209
(716) 884-7425
800-722-1252
FAX: (716) 884-0410
ais@worldnet.att.net

B.E.S.T. INC.
3003 GENESEE STREET
BUFFALO, NY 14225
(716) 893-6464
800-338-5011
FAX: (716) 893-6466
bestserv@aol.com

DUFFY'S EQUIPMENT SVC.
3138 ONEIDA STREET
SAUQUOIT, NY 13456
(315) 737-9401
800-443-8339
FAX: (315) 737-7132
duffyequip@aol.com

NORTHERN PARTS & SVC.
21 NORTHERN AVENUE
PLATTSBURGH, NY 12903
(518) 563-3200
800-634-5005
FAX: (800) 782-5424
info@northernparts.com

NEW YORK (cont.):

JACKSON FASPRAY SVC.
155 SARGEANT AVE.
CLIFTON, NJ 07013
(973) 471-8000
800-356-6740
FAX: (973) 471-1289
jfs155@aol.com

ALL ISLAND REPAIR
40-9 BURT DRIVE
DEER PARK, NY 11729
(631) 242-5588
800-323-9411
FAX: (631) 242-6102

**A. I. S. COMMERCIAL
PARTS & SVC**
1900 COLLEGE AVENUE
ELMIRA HEIGHTS, NY 14901
(607) 734-6072
888-724-7377
FAX: (607) 734-9294

**A. I. S. COMMERCIAL
PARTS & SVC**
13 WESTR MAIN STREET
FALCONER, NY 14733
(716) 665-6556
800-552-6556
FAX: (716) 665-4227

**A. I. S. COMMERCIAL
PARTS & SVC**
200 SALINA ST. SUITE 114
LIVERPOOL, NY 13088
(315) 435-0709
800-371-5921
FAX: (315) 453-1412

**A. I. S. COMMERCIAL
PARTS & SVC**
7387 PITTSFORD VICTOR RD.
ROCHESTER, NY 14610
(716) 461-2370
800-458-4198
FAX: (716) 461-5545

NORTH CAROLINA:

**AUTHORIZED APPLIANCE
SERVICE CENTER**
1020 TUCKASEEGEE RD.
CHARLOTTE, NC 28208
(704) 377-4501
(800) 532-6127
FAX: (704) 377-4504

WHALEY FOODSERVICE
203-D CREEK RIDGE RD.
GREENSBORO, NC 27604
(336) 333-2333
FAX: (336) 333-2533

SECTION 5: JACKSON MAINTENANCE & REPAIR CENTERS

NORTH CAROLINA TO TEXAS

NORTH CAROLINA (cont.):

AUTHORIZED APPLIANCE SERVICE CENTER

109 HINTON AVE.
WILMINGTON, NC 28403
(910) 313-1250
FAX: (910) 313-6130

**WHALEY FOODSERVICE
REPAIRS**
8334-K ARROWRIDGE BLVD
CHARLOTTE, NC 28273
(704) 529-6242
FAX: (704) 529-1558
info@whaleyfoodservice.com

**WHALEY FOODSERVICE
REPAIRS**
335-105 SHERWEE DRIVE
RALEIGH, NC 27603
(919) 779-2266
FAX: (919) 779-2224
info@whaleyfoodservice.com

**WHALEY FOODSERVICE
REPAIRS**
6418-101 AMSTERDAM WAY
WILMINGTON, NC 28405
(910) 791-0000
FAX: (910) 791-6662
info@whaleyfoodservice.com

NORTH DAKOTA:

GCS SERVICE INC.
2857 LOUISIANA AVENUE N.
MINNEAPOLIS, MN 55427
(612) 546-4221
800-345-4221
FAX: (612) 546-4286

OHIO:

CERTIFIED SERVICE CENTER
890 REDNA TERRACE
CINCINNATI, OH 45215
(513) 772-6600
800-543-2060
FAX: (513) 612-6600
sbarasch@certifiedsc.com

CERTIFIED SERVICE CENTER
6025 N. DIXIE DRIVE
DAYTON, OH 45414
(937) 898-4040
(800) 257-2611
FAX: (937) 898-4177
dharvey@certifiedsc.com

**COMMERCIAL PARTS & SVC.
OF COLUMBUS**
1150 WEST MOUND STREET
COLUMBUS, OH 43223
(614) 221-0057
800-837-8327
FAX: (614) 221-3622

OHIO (cont.):

GCS SERVICE INC.
2830 JOHNSTON RD.
COLUMBUS, OH 43219
(614) 476-3225
800-282-5406
FAX: (614) 476-1196

**ELECTRICAL APPLIANCE
REPAIR SVC.**
5805 VALLEY BELT ROAD
CLEVELAND, OH 44131
(216) 459-8700
800-621-8259
FAX: (216) 459-8707
tomr@electappliance.com

OKLAHOMA:

HAGAR RESTAURANT EQMT.
1229 W MAIN STREET
OKLAHOMA CITY, OK 73106
(405) 235-2184
800-445-1791
FAX: (405) 236-5592

OREGON:

RON'S SERVICE
16364 SW 72ND AVE
PORTLAND, OR 97224
(503) 624-0890
800-851-4118
FAX: (503) 684-6107
lrobinson@ronsservice.com

PENNSYLVANIA:

**A.I.S. COMMERCIAL PARTS &
SERVICE**
1816 WEST 26TH STREET
ERIE, PA 16508
(814) 456-3732
800-332-3732
FAX: (814) 452-4843
aiserie@aol.com

ELMER SCHULTZ SVC.
540 NORTH 3RD STREET
PHILADELPHIA, PA 19123
(215) 627-5400
FAX: (215) 627-5408
elmer2@erols.com

K & D PARTS & SERVICE
1833-41 N. CAMERON STREET
HARRISBURG, PA 17103
(717) 236-9039
800-932-0503
FAX: (717) 238-4367

PENNSYLVANIA (cont.):

**AMERICAN KITCHEN MACHIN-
ERY & REPAIR**
204 QUARRY STREET
PHILADELPHIA, PA 19106
(215) 627-7760
800-848-7760
FAX: (215) 627-1604

GCS SERVICE INC.
817 N. THIRD STREET
P.O. BOX 3564
PHILADELPHIA, PA 19123
(215) 925-6217
800-441-9115
FAX: (215) 925-6208

GCS SERVICE INC.
210 VISTA PARK DRIVE
PITTSBURGH, PA 15205
(412) 787-1970
800-738-1221
FAX: (412) 787-5005

RHODE ISLAND:

GCS SERVICE INC.
180 SECOND STREET
CHELSEA, MA 02150
(617) 889-9393
800-225-1155
FAX: (617) 889-1222

SOUTH CAROLINA:

**AUTHORIZED APPLIANCE
SERVICE CENTER**
1811 TAYLOR ST.
COLUMBIA, SC 29202
(803) 254-8414
FAX: (803) 254-5146

**AUTHORIZED APPLIANCE
SERVICE CENTER**
2249 AUGUSTA RD.
GREENVILLE, SC 29605
(864) 235-9616
FAX: (864) 235-9623

**WHALEY FOODSERVICE
REPAIRS**
I 26 & US1
P.O. BOX 4023
WEST COLUMBIA, SC 29170
(803) 791-4420
800-877-2662
FAX: (803) 794-4630
info@whaleyfoodservice.com

**WHALEY FOODSERVICE
REPAIRS**
748 CONGAREE ROAD
GREENVILLE, SC 29607
(864) 234-7011
800-494-2539
FAX: (864) 234-6662
info@whaleyfoodservice.com

SOUTH CAROLINA (cont.):

**WHALEY FOODSERVICE
REPAIRS**
1406-C COMMERCE PL.
MYRTLE BEACH, SC 29577
(843) 626-1866
FAX: (843) 626-2632
info@whaleyfoodservice.com

**WHALEY FOODSERVICE
REPAIRS**
4740-A FRANCHISE STREET
N. CHARLESTON, SC 29418
(843) 760-2110
FAX: (843) 760-2255
info@whaleyfoodservice.com

SOUTH DAKOTA:

GCS SERVICE INC.
2857 LOUISIANA AVENUE N.
MINNEAPOLIS, MN 55247
(612) 546-4221
800-345-4221
FAX: (612) 546-4286

TENNESSEE:

GCS SERVICE INC.
3717 CHERRY ROAD
MEMPHIS, TN 38118
(901) 366-4587
800-262-9155
FAX: (901) 366-4588

GCS SERVICE INC.
748 FESSLEERS LANE
NASHVILLE, TN 37210
(615) 244-8050
800-831-7174
FAX: (615) 244-8885

TEXAS:

GCS SERVICE INC.
AUSTIN, TX
800-822-2303

**ARMSTRONG
REPAIR CENTER**
1700 S LAMAR BLVD #327
AUSTIN, TX 78704
(512) 416-1101
800-392-5322
FAX: (512) 416-6912

**ARMSTRONG
REPAIR CENTER**
5110 GLENMONT DRIVE
HOUSTON, TX 77081
(713) 666-7100
800-392-5325
FAX: (713) 661-0520
gm@armstrongrepair.com

SECTION 5: JACKSON MAINTENANCE & REPAIR CENTERS

TEXAS TO WYOMING/CANADA

TEXAS (cont.):

**COMMERCIAL KITCHEN
REPAIR CO.**
1377 N BRASOS
P.O BOX 831128
SAN ANTONIO, TX 78207
(210) 735-2811
800-292-2120
FAX: (210) 735-7421
brock@commercialkitchen.com

GCS SERVICE INC.
440 WRANGLER DRIVE #100
COPPELL, TX 75019
(972) 906-0307
800-442-5026
FAX: (972) 906-9886

GCS SERVICE INC.
HOUSTON, TX
800-822-2303

GCS/STOVE PARTS
2120 SOLANA STREET
FORT WORTH, TX 76117
(817) 831-0381
800-433-1804
FAX: (817) 834-7754
bud@stoveparts.com

UTAH:

**LA MONICA'S RESTAURANT
EQMT. SVC.**
6182 SOUTH STRATLER
AVENUE
MURRAY, UT 84107
(801) 263-3221
800-527-2561
FAX: (801) 263-3229
lamonica81@aol.com

GCS SERVICE INC.
1366 S. 400 WEST
SALT LAKE CITY, UT 84115
(801) 487-3653
800-955-9201
FAX: (801) 487-2253

VERMONT:

NORTHERN PARTS & SVC.
4874 S. CATHERINE STREET
PLATTSBURGH, NY 12901
(518) 563-3200
800-634-5005
FAX: (800) 782-5424
info@northernparts.com

GCS SERVICE INC.
180 SECOND STREET
CHELSEA, MA 02150
(617) 889-9393
800-225-1155
FAX: (617) 889-1222

VIRGINIA:

DAUBERS, INC.
7645 DYNATECH COURT
SPRINGFIELD, VA 22153
(703) 866-3600
800-554-7788
FAX: (703) 866-4071
daubers@aol.com

GCS SERVICE INC.
2660 PITTMAN DRIVE
SILVER SPRING, MD 20910
(301) 585-7550(DC)
(410) 792-0388(BALT)
800-638-7278
FAX: (301) 495-4410

GCS SERVICE INC.
RICHMOND, VA
800-822-2303

WASHINGTON:

RESTAURANT APPLIANCE SVC
7219 ROOSEVELT WAY, NE
SEATTLE, WA 98115
(206) 524-8200
800-433-9390
FAX: (206) 525-2890
info@restappl.com

WEST VIRGINIA:

STATEWIDE SERVICE, INC.
603 MAIN AVE.
NITRO, WV 25143
(304) 755-1811
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