

ADT-1HT & ADT-1HTB Operation Manual

HIGH TEMP DISHWASHER



INDEX

I. Manufacture Introduction.....	4
II. Installation	5
III. Operation	7
1. Filling the dishwasher	7
2. Racking the tableware	8
3. Operation	8
4. Clean the dishwasher	9
IV. Trouble Shooting	9
1. General	9
2. Tools	9
3. Check the proper Voltage	9
4. Index	10
5. Symptoms	11
V. Mechanical Service	13
1. Motor and Pump Shell	14
2. Wash and Rinse Arm	17
3. Line Strainer	18
4. Fill Solenoid Valve	19
5. Vacuum Breaker	19
6. Magnet and Interlock Switch	19
7. Floats Switch	20
8. Thermostat	20
9. Electric Heater	21
VI. Electric Circuit	23
1. Operating Controls	23
2. Line and Power Supply Circuit	23

MANUFACTURE INTRODUCTION

This dishwasher is made for the restaurants and washing various kinds of dishes, bowls or other dining wares. Specially designed rack is installed for moving dishes to washing systems.

ADT-1HT uses two different temperatures water for washing dishes. The temperature of the water for washing is 110°F ~140°F and electric heater is installed in the water tank to keep the temperature.

During the process of rinse, installed electric booster raise the temperature to 180°F and high temperature water makes the sanitizer unnecessary.

As there are two kinds of dishwashers; one uses 208 V single phase and the other 208 V three phase. Therefore please check and be sure to use correct power for dishwashers.

PERFORMANCE/CAPABILITIES		MACHINE AMPERAGE LOADS		
		VOLTS	PHASE	AMPS
CAPACITIES				
RACK PER HOUR (NSF RATED)	60(46)	208	1	50
WASH TANK(GALLONS)	8	208	3	30
WATER CONSUMPTION		230	1	46
GALLONS PER HOUR	54.7	230	3	28
GALLONS PER RACK	1.2			
TEMPERATURES (°F)				
WASH	150			
RINSE	180			
WASH PUMP MOTOR (HP)	1			
HEAT (kW)				
TANK - ELECTRIC				
*THREE PHASE	4			
*SINGLE PHASE	4			
BOOSTER - ELECTRIC				
* THREE PHASE	9			
* SINGLE PHASE	9			
TIME CYCLE (SEC.)				
WASH (NSF RATED)	40(53)			
DWELL	1			
RINSE	10			

INSTALLATION

Before installing the manufactures, check the unit for damage.

The dish machine has been inspected and packed at the factory and is expected to arrive to you in new, undamaged condition. However, rough handing by carriers or others may result in there being damage to the machine while in transit.

If such a situation occurs, do not return the unit to ADAMATION;

Instead, contact the carrier and ask them to send a representative to the site to inspect the damage to the unit and to complete an inspection report.

You must contact the carrier within 48 hours of receiving the machine.

Also, contact the dealer through which you purchased the unit

Once the machine has been removed from the packing, ensure that there are no missing parts from the machine. This may not be obvious at first. If it is discovered that an item is missing, Contact ADAMATION immediately to have the missing item sent to you.

This machine is designed to operate while being level. This is important to prevent any damage to the machine during operation and to ensure the best results when washing ware. The unit comes with adjustable four legs, which can be turned by hand if the unit can be raised safely. Ensure that the unit is level from side to side and from front to back before making any connections.

All plumbing connections must comply with all applicable local, state, and national plumbing codes. The plumber is responsible for ensuring that the incoming water line is thoroughly flushed prior to connecting it to any component of the machine. It is necessary to remove all foreign debris from the water line that may potentially get trapped in the valves or cause an obstruction. Any valves that are fouled as a result of foreign matter left in the water line, and any expenses resulting from this fouling, are not the responsibility of the manufacturer.

Ensure that you have read the plumbing information above before proceeding. Install the

water supply line (3/4" pipe size minimum) to the dish machine line strainer using copper pipe. It is recommended that a water shut-off valve be installed in the water line between the main supply and the machine to allow access for service. The water supply line is to be capable of 22 PSI "flow" pressure at the recommended temperature indicated on the manufacture explanation.

In areas where the water pressure fluctuates or is greater than the recommended pressure, it is suggested that a water pressure regulator be installed.

Do not confuse static pressure with flow pressure. Static pressure is the line pressure in a "no flow" condition (all valves and services are closed). Flow pressure is the pressure in the fill line when the fill valve is opened during the cycle.

Slowly turn on the water supply to the machine after the incoming fill line and the drain line have been installed. Check for any leaks and repair as required. All leaks must be repaired prior to placing the machine in operation.

Disconnect electrical power supply and place a tag at the disconnect switch to indicate that you are working on the circuit.

The dish machine data plate is located on the right side and to the front of the machine. Refer to the data plate for machine operating requirements, machine voltage, total amperage load and serial number.

To install the incoming power lines, open the control box. This will require taking a plus headed screwdriver and removing the four (4) screws on the front cover of the control box. Install 3/4" conduit into the pre-punched holes in the back of the control box. Route power wires and connect to power block and grounding lug. Install the service wires (L1, L2, and L3(3 phase only)) to the appropriate terminals as they are marked on the terminal block. Install the grounding wire into the lug provided. Tighten the connections and perform the "pull test". The tightened wires should remain in place after giving the wires a moderate pull

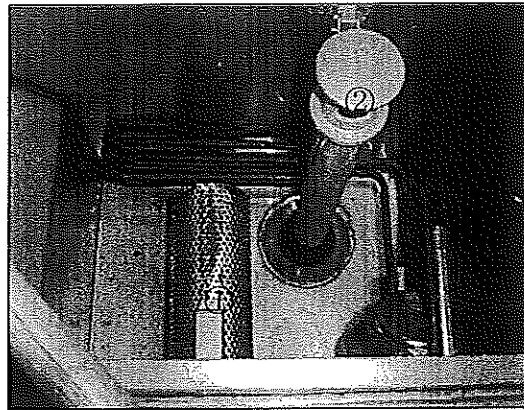
to see if they will come loose.

Ensure that the power switch is in the OFF position and apply power to the dish machine. Check the incoming power at the terminal block and ensure it corresponds to the voltage listed on the data plate. If not, contact a qualified service agency to examine the problem. Do not run the dish machine if the voltage is too high or too low. Shut off the service breaker and mark it as being for the dish machine. Advise all proper personnel of any problems and of the location of the service breaker. Replace the control box cover and tighten down the screws.

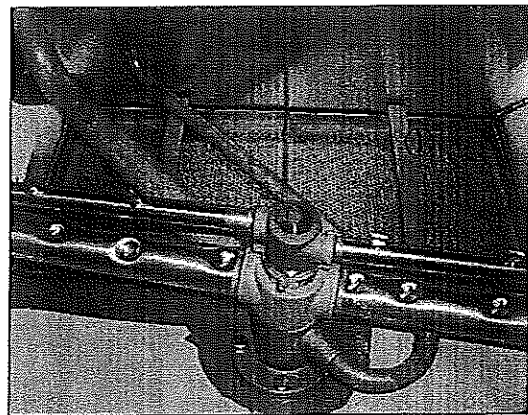
OPERATION

1. Filling the Dishwasher.

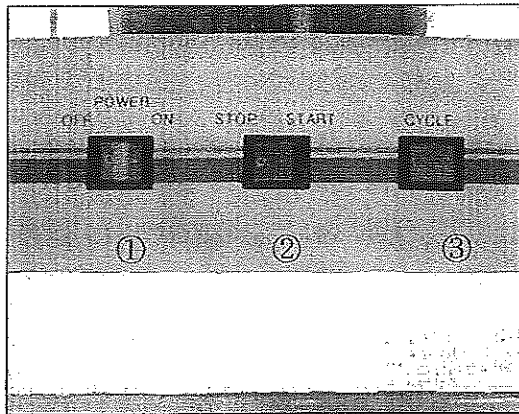
- (1) Plugged in the main power.
- (2) Place the pump strainer <①, Fig.1> and the drain lever <②, Fig.1> and the 1st strainer <①, Fig.2> in position
- (3) Scatter initial charge of detergent on 1st strainer. (unless automatic detergent dispenser is used)
- (4) Turn the power switch on to start tank fill. <①, Fig.3>
- (5) When the water reaches the low level sensor, booster heater and tank heater starts work by turns.
- (6) Before operating the dishwasher, check the thermometers. <①, ②, Fig.4>
 - A. Wash Thermometer should read between 140°~150°F.
 - B. Rinse Thermometer should read 180°~190°F. when filling or during the rinse cycle.



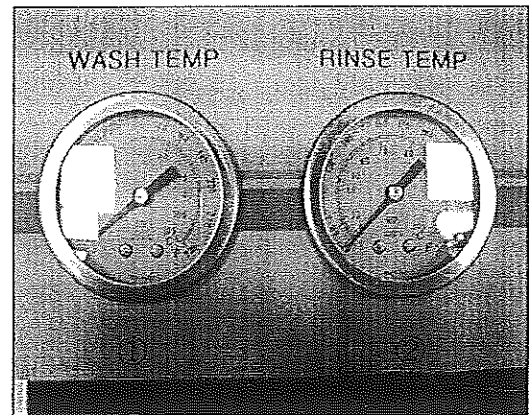
<Fig. 1>



<Fig.2>



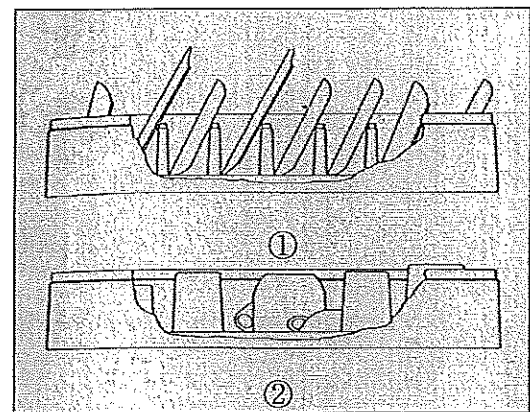
<Fig.3>



<Fig.4>

2. Racking the Tableware

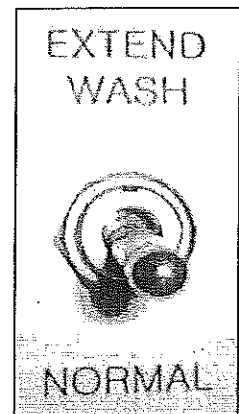
- (1) Stand plates and flat dishes on edge in peg rack.
<①, Fig.5>
- (2) Place cups, glasses and bowls, bottom up, in the combination rack. Do not stack or tier.
<②, Fig.5>
- (3) Scatter silverware loosely over bottom of combination rack. (Be sure spoons are not nested together.)



<Fig.5>

3. Operating Dishwasher (Automatic)

- (1) Set the Toggle switch to Normal located at the back of control panel.<Fig.6>
- (2) Raise the doors and slide the filled rack into the dishwasher.
- (3) Close the doors and Start on.
The dishwasher will wash and rinse automatically.
The Cycle lamp light will go out at the end the cycle<③, Fig.3>.
- (4) Raise the doors and slide out the clean rack of dishes.



<Fig.6>

<Note> Extend the wash time cycle

During the wash cycle, if you set the Toggle to Extend, it's cycle will be exceeded.

4. Cleaning the Dishwasher

- (1) Turn off the start switch and the power switch in order. <②, ①, Fig.3>
- (2) Open the doors and Lift the drain lever <②, Fig.1> to drain the tank.
- (3) Clean off the soiled and clean dish tables into the dishwasher before removing the strainers. (1st strainer, pump strainer)
- (4) Take out the strainers and empty them into a garbage can or disposer and wash them.
- (5) With the drain open, thoroughly cleanse and flush the interior of the dishwasher.
- (6) Replace the drain lever and strainers and Leave the doors open to allow the interior to dry and air.

TROUBLESHOOTING

1. General

The following procedures, when applied exactly, are designed to enable the service technician to service the dishwasher as quickly and effectively as possible.

Failure to carefully follow these procedures may lengthen the repair time and result into replacing more parts than necessary.

Never substitute new circuit boards without first analyzing the problem as this could result in damage to the new boards or only temporarily correcting the problem.

2. Tools

A. Standard Hand Tool Set.

B. VOM – Any quality VOM with the scales required in this procedure and with a sensitivity of at least 20,000 ohms per volt can be used.

3. Check For Proper Voltage

Several of the symptoms listed can be caused by an incorrect power supply voltage output. Intermittent and/or unusual symptoms are often caused by incorrect power supply

voltages. It is a good practice to always check these voltages before trouble shooting other components.

If either of the following checks fail, see " Testing The Power Supply"
("ELECTRICAL SERVICE" section)for further instructions.

Check for 115 volts AC between terminals X0-1 and L11-X2 on the master board.
Voltage should be between 105 volts and 125 volts.

NOTE: Refer to schematic diagrams for test point locations.

4. Index.

The following is an index of the trouble symptoms.

Identify the symptoms in the index then turn to the corresponding number in section 5, "Symptoms" for instructions. Listed under each symptom is the probable cause of the malfunction and in some cases, specific mechanical or electrical checks to be made.

- (1) Dishwasher do not Operate.
- (2) Wash or Rinse does not work (Normal or Extend) Tank Heat Normal.
- (3) Wash or Rinse does not work automatically.
- (4) Pump motor do not run.
- (5) Pump motor runs continuously.
- (6) Rinse does not operate.
- (7) No Tank fill.
- (8) Excessive tank heat.
- (9) Noisy or Chattering rinse valve.
- (10) Motor noisy.
- (11) Motor leaking water.
- (12) Tableware not clean.
- (13) Drain seal leaking.
- (14) Pump leaking.
- (15) Vacuum breaker leaking.

(16) Doors won't stay open.

(17) Doors hard to open.

5. Symptoms

(1) Dishwasher do not Operate. (No tank heat, no wash, no rinse, no cycle light.)

A. No power to the machine. Circuit fuse became short.

B. Check the power supply voltage (115 volts AC) per instructions in section 3.

C. Power switch<①, Fig3>.

(2) Wash or Rinse does not work (Normal or Extend) Tank Heat Normal.

A. Check power supply voltage (115 volts AC) per instructions in section 3.

B. Open door switch (DS1).

C. Control relay (Refer to "Electric Circuit Diagram" CR1, CR2).

D. Pump motor contactor (open coil or open contacts).

(3) Wash or Rinse does not work automatically.

A. Check power supply voltage (115 volts AC) per instructions in section 3.

B. NORMAL/EXTEND WASH switch toggle (TS1) set in the extend wash position.

C. Door switch (DS1).

D. Timer cam.

E. Pump motor contactor (open coil or open contacts).

(4) Pump motor do not run.

A. Check power supply voltage (115 volts AC) per instructions in section 3.

B. Obstruction in pump.

C. 3 phase motor running backwards, or the loss of one leg from power source.

D. Motor fan loose or vents plugged with dust or lint.

E. Motor bearings.

F. Motor windings became short.

G. Door switch (DS1).

(5) Pump motor runs continuously.

A. Check power supply voltage (115 volts AC) per instructions in section 3.

B. NORMAL/EXTEND WASH switch toggle (TS1) set in the extend wash position.

C. Place the NORMAL/EXTEND WASH switch toggle (TS1) to the normal position.

If the pump motor keeps running, the magnet contactor contacts are shorted (welded contacts).

(6) Rinse does not operate.

- A. Check power supply voltage (115 volts AC) per instructions in section 3.
- B. Check the rinse solenoid valve.
- C. Obstructions in the timer cam.

(7) No Tank fill.

- A. Check power supply voltage (115 volts AC) per instructions in section 3.
- B. Check the control relay contacts (Refer to "Electric Circuit Diagram" CR1, CR2).
- C. Check the rinse solenoid valve.
- D. Check the Low and High float switches.

(8) Excessive tank heat.

- A. Check temperature adjustment (TH2: Tank Heat Thermostat).
- B. Check power supply voltage (115 volts AC) per instructions in section 3.
- C. Check the Thermostats (TH1, TH2).

(9) Noisy or Chattering rinse valve.

- A. Rinse water flow pressure too high or too low. Flow pressure should be between 20 and 25 psi.
- B. Check the power supply voltage (115 volts AC).
- C. Rinse valve. Install new valve kit.
- D. Rinse valve. Installed backwards.

(10) Motor noisy.

- A. Check for obstruction in pump.
- B. Motor bearings.
- C. Loose impeller.
- D. Running backwards (three phase).

(11) Motor leaking water.

Replace seal.

(12) Tableware not clean.

- A. Check wash and rinse temperatures.
- B. Detergent dispenser contactor (If automatic detergent dispenser is used).

- C. Timer cam switch.
 - D. Detergent dispensing equipment. (Notify detergent company.)
 - E. Low wash water pressure:
 - a. Obstruction in pump or wash piping.
 - b. Impacted soil or lime buildup in wash arms.
 - c. Impeller eroded.
 - d. Incorrect impeller clearance.
 - F. Low rinse water pressure
 - G. Wash arms rotating too slowly. Check wash arm bearings.
 - H. Rinse arm rotating too slowly. Check rinse arm bearing.
- (13) Drain seal leaking.
"O" ring on drain assembly. Replace.
- (14) Pump leaking.
"O" ring on drain assembly. Replace.
- (15) Vacuum breaker leaking.
 - A. Vacuum breaker cap loose.
 - B. Vacuum breaker "O" ring damaged.
 - C. Lime buildup.
 - D. Low water pressure.
- (16) Doors won't stay open.
Door counterbalance spring broken, unhooked or not adjusted properly.
- (17) Doors hard to Open.
 - A. Door counterbalance spring.
 - B. Loose door hinge bracket bolt.

MECHANICAL SERVICE

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE MACHINE IS BEING WORKED ON.

1. The wash pump which pumps the wash water solution from the wash tank to the wash arms at the proper volume and pressure to remove soil from the dishware and rinsing use the water supply “flow pressure” (22 psi).

(1) Motors.

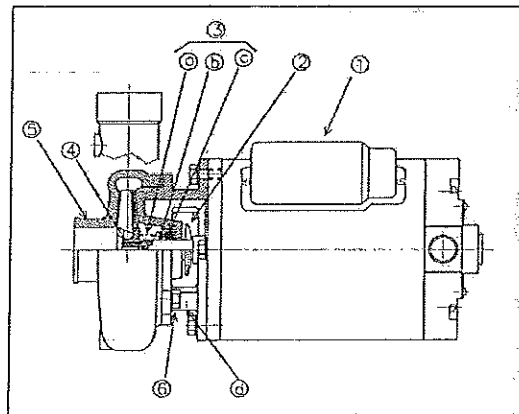
The 1 H.P single phase motor 3450 RPM motor is equipped with thermistor for electronic overload protection<①, Fig.7> and use mechanical seal<③, Fig.7> and require no periodic lubrication.

The three phase motor have not the “Thermal Protector” but the same RPM and mechanical seal.

Mechanical seal consists of a stationary part (©, Fig.7: ceramic) seated in the pump base<⑥, Fig.7> and a rotating part (ⓑ, Fig.7: carbon) pressed on motor shaft and a spring <ⓐ, Fig.7> which maintains pressure between the stationary and rotating parts of the seal.

An “O” ring <②, Fig.7> located on the motor shaft between the front bearing and the mechanical seal serves as a finger to throw off any water on the shaft before it travels to the bearing.

Notice that the “O” ring is centered over the weep hole<ⓓ, Fig.7>.



<Fig.7>

(2) Pump.

The pressure of the wash pump is affected by the clearance between the impeller <④, Fig.7> and the face of the pump shell <⑤, Fig.7>

This clearance should be not less than 0.079" nor greater than 0.14".

The wash pump shell has a self-draining hole provided so that when the dishwasher is drained the pump will also drain.

(3) Operating.

An improperly operating pump will reduce the amount of water solution being sprayed on the soiled dishware and the result will be "dirty dishes".

The following is a list of things to check on the motor and pump when the dishware is not cleaned properly.

A. Check the power supplied to the machine.

It must be the same as that stamped on the motor data plate <Fig.8>.

B. Check that the motor connector block is set in the proper position (HIGH or LOW).

C. Check that all three legs are "hot" (three phase machine).

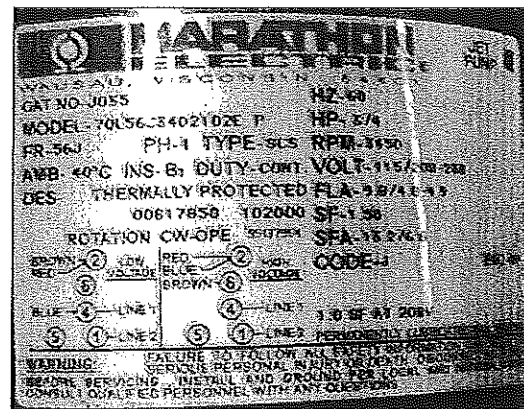
D. The motors must be rotate clockwise looking from the back of the motors.

E. Rotation can be reversed on three phase motors by reversing two leads on the terminal block.

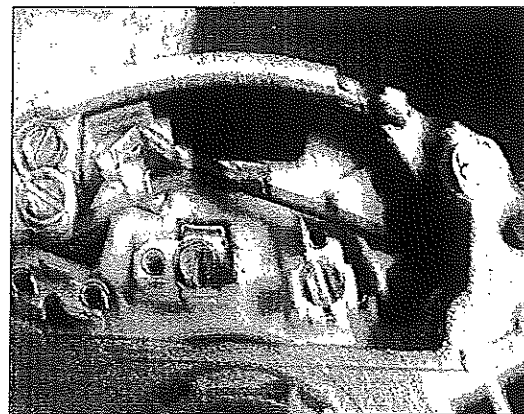
Otherwise, single phase motors rate only one direction to clockwise.

F. Remove four nuts at which the arrow <⑥, Fig.7>point.

Generally, obstruction in the wash pump will require that the pump motor be removed if obstruction cannot be reached through the wash pump intake hole.



<Fig.8>



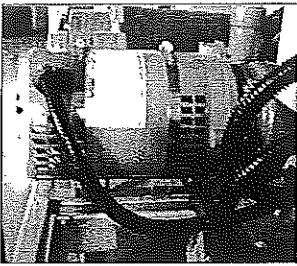
<Fig.9>

G. Check for broken or badly erode impeller vanes.

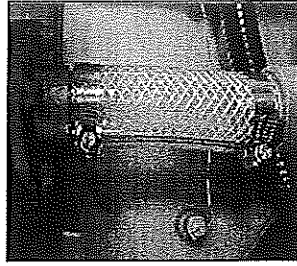
H. Improper clearance between the impeller and the face of the pump shell.

(4) Seal replacement.

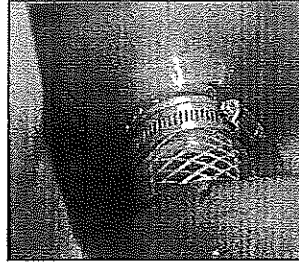
A. Remove the pump motor from the frame legs unscrewing several hose bands, and remove four nuts so as to take apart the pump shell from the assembly <Fig.10, 11, 12, 13>.



<Fig.10>



<Fig.11>

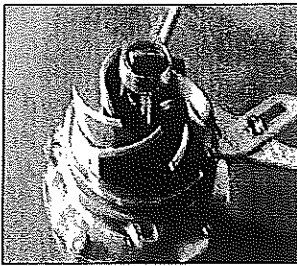


<Fig.12>

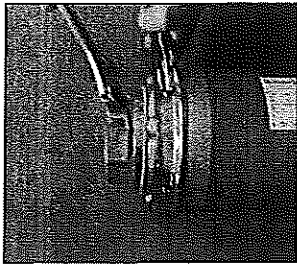


<Fig.13>

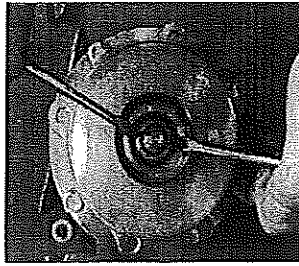
B. Hold the impeller with channel locks and remove the nut <Fig.14>



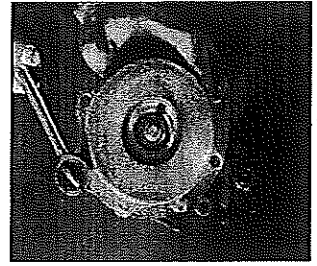
<Fig.14>



<Fig.15>



<Fig.16>



<Fig.17>

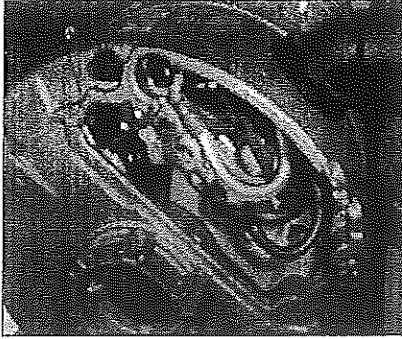
C. Remove the impeller <Fig.15>.

D. Pry out the old seal assembly with two screwdrivers <Fig.16>.

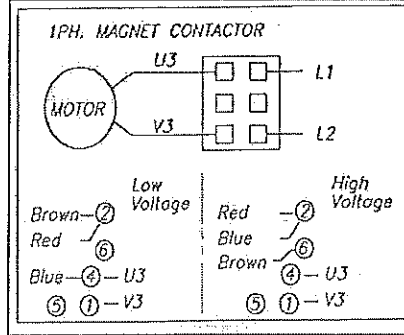
If it is not impossible to pry out the old seal assembly per instructions in par. D, Unscrew four bolts below the pump base <Fig.17>, and it is easy to pry out.

E. To reassemble the pump, replace in the reverse order 'A~D'.

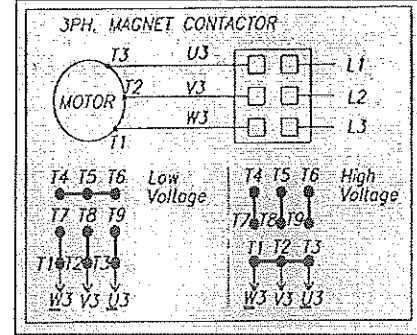
NOTICE: WHEN YOU ARE IN REASSEMBLING THE PUMP, CHECK THE PROPER MOTOR LEAD LOCATION AND MAGNET CONTACTOR CONNECTIONS (THREE PHASE) <Fig,18, 19, 20>.



<Fig.18>



<Fig.19>



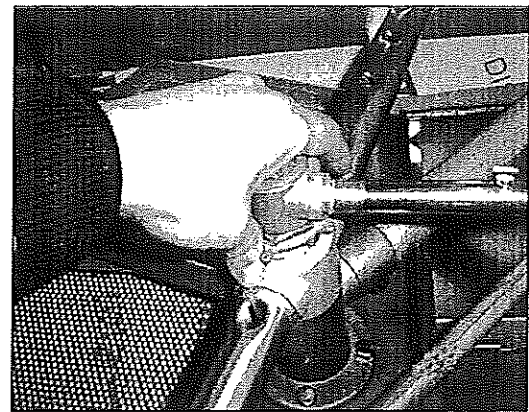
<Fig.20>

2. Wash and Rinse Arm.

(1) Wash Arms

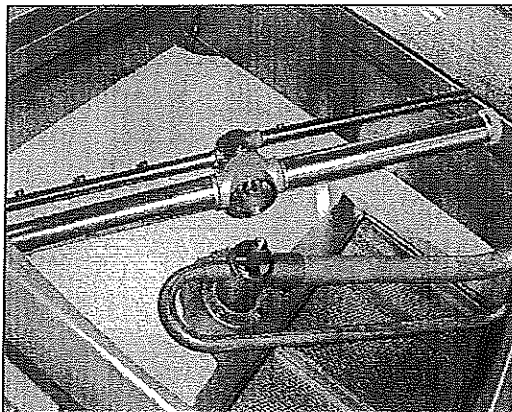
A. Both the upper and lower wash arms rotate by jets of water forced through the wash arm slots. The slots are set at precise angles so that the wash arms spray the wash water uniformly over the rack of dishware<Fig.21>.

B. The wash arms should turn freely and continue to rotate for a few seconds when whirled by hand.

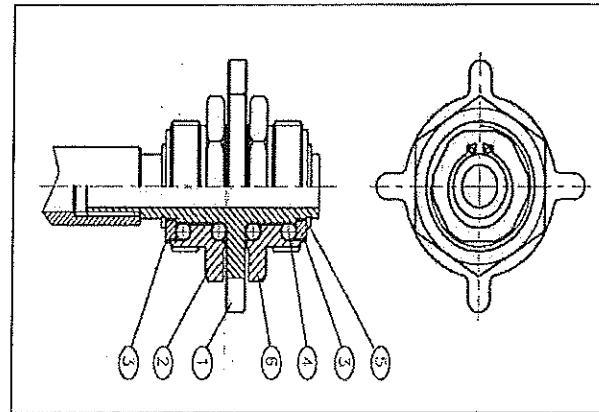


<Fig.21>

C. To remove wash arm from the machine, unscrew the rotor handle counterclockwise<①, Fig.23>.



<Fig.22>



<Fig.23>

- D. To take apart the wash arm and the rinse arm from the rotor assembly<Fig.3>, unscrew each bearing-housing<②,⑥,Fig.23>.
- E. If the wash arm and the rinse arm would not turn freely for a few seconds when whirled by hand, remove the snap-ring<⑤,Fig.23> and both the stoppers<③,Fig.23> and next clean these parts.
- F. Reassemble these parts in reverse order of removal.

(2) Rinse Arms

Both the upper and lower rinse arms rotate by jets of water forced through several rinse nozzles, and the source of jets power is a “flow pressure” of water.

The rinse arm has many declined tapping hole and at there several rinse nozzles set screwed so that the wash arms spray the wash water uniformly over the rack of dishware<Fig.21> and end caps.

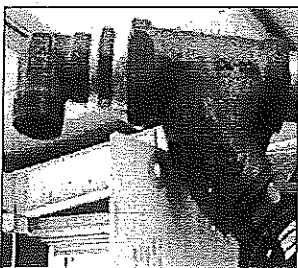
If the nozzles become clogged, they can be cleaned by pushing a small wire, such as a paper clip, through the hole in the nozzle.

If the rinse arms become clogged with lime buildup, they can be cleaned by soaking in the deliming solution.

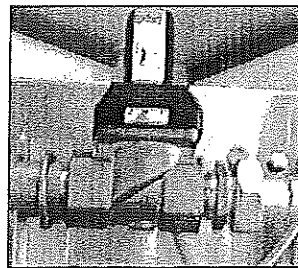
- A. Removal the rinse arm is corresponding to removal step of the wash arm
(Refer to instructions in par. Wash arms A~D).
- B. Reassemble these parts in reverse order of removal.

3. Line Strainer

- (1) The line strainer<Fig.24> prevents lime sediment or pipe scale from reaching the solenoid valve<Fig.25> and must be cleaned regularly in order to maintain an even flow of water



<Fig.24>



<Fig.25>

(2) Shut off the water supply to the dishwasher and disassemble the line strainer for cleaning by removing the hex-headed screw cap<①, Fig.24>.

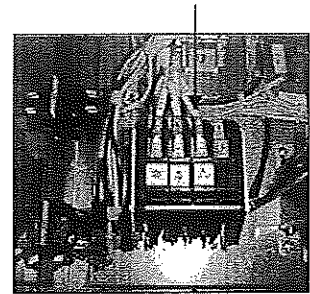
Lift off the screen and clean or replace it. Clean the inside of the body and flush out mineral deposits by turning on the water momentarily.

Reassemble and turn on the water and check for leaks.

4. Fill Solenoid Valve(S/V).

(1) The fill solenoid valve(Fig.25) is electrically operated by the cam timer<Fig.26> in the control box during timed fill and during the wash operation.

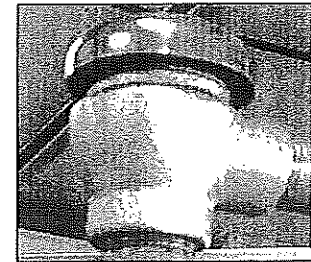
(2) Most S/V malfunctions can be corrected by cleaning and/or coil replacement.



<Fig.26>

5. Vacuum Breaker.

Back flow protection is provided by the vacuum breaker<Fig.27> between the rinse hot water supply inlet and the inside rinse arm.

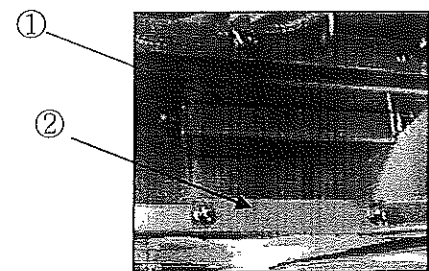


<Fig.27>

6. Magnet and Interlock Switch.

A magnet<②, Fig.28> located on the left side door operates the door interlock switch<①, Fig.28>.

If the doors are not fully closed, the dishwasher will not operate.



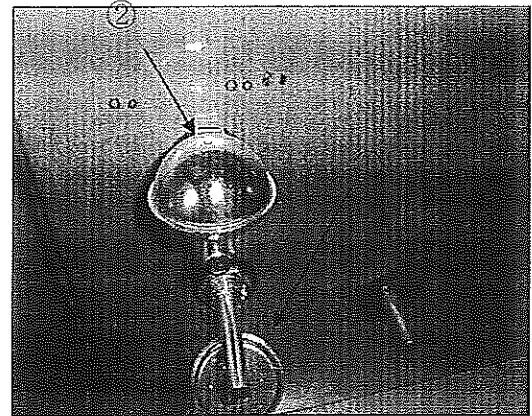
<Fig.28>

7. Floats.

- (1) Two the probe and switch assemblies<Fig.29> are mounted in the dishwasher tank and one will be approximately 7.8" above the bottom of tank and the other 11.55" above the bottom of tank.

Inside the low probe is a reed switch operated by a magnet attached to the float, preventing pump motor operation if there should be an insufficient amount of water in the tank<①, Fig.29>

and high probe is a reed switch operated by just as the low assembly, signaling solenoid valve to fill the tank to above the high probe<②, Fig.29>.

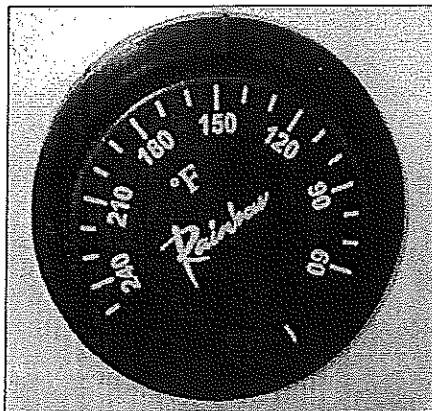


<Fig.29>

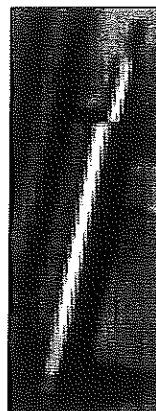
At the first the low float<①, Fig.29> is open from the low probe, during filling the tank , gradually closing to the probe. But the high float<②, Fig.29> moves contrary from the probe to the low float.

- (2) Drain the tank and lift out strainers. Remove the retaining ring and slide the float retainer off the end of the probe.
 (3) Replace in the reverse order of removal.

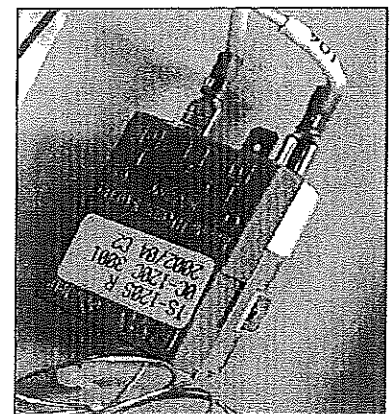
8. Thermostat.



<Fig.30>



<Fig.31>



<Fig.32>

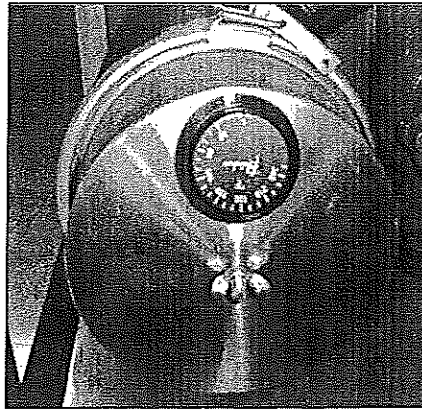
ADT-1HT uses two thermostats. The one controls the wash water temperature and the other controls rinse water temperature.

In case of the wash temperature, it should be set up to 150°F<Fig.35> and case of rinse water to 180°F<Fig.34> as so turning the potentiometer adjustment screw mounted on the wire kit box<Fig.35>clockwise<Fig.30>.

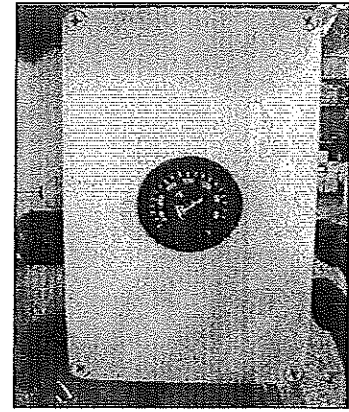
The probe<Fig.31>of a thermostat has a function feeling the temperature and signal to kit<Fig.32> and it is very reliable but should be checked periodically against a known accurate thermometer to insure that the proper rinse and wash temperatures are maintained.



<Fig.33>



<Fig.34>



<Fig.35>

9. Electric Heater

(1) 5kw heater is used on the TBH-60. <Fig.36,37,38> shows the wire connections to the heater element terminals, depending on the machine electrical specifications. For correct part numbers for electrical specifications required, refer to the current ADT-1HT "MANUFACTURE EXPLANATION" when ordering electric heaters.

(2) The heater can be tested to determine if all three elements are working properly by measuring the current passing through each of the leads connected to the heater.

NOTE: Before making a current check, be sure the correct voltage is being supplied to the heater. the pictu

(3) To check, use an Amprobe or similar AC amp testing equipment.

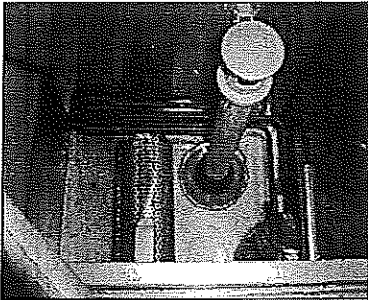
- A. Turn off the power switch.
- B. Remove the heater cap and clamp the amp tester around one of the electric heater contactor.
- C. Turn on the power switch and take a reading. If the thermometer is not calling for heat run the dishwasher through the wash cycle a few time to cool the water with the toggle switch mode is "EXTEND".
- D. Take a reading on all of the heater leads in the same manner.
- E. If not getting the proper current reading but the voltage to the heater terminals is correct, the heater is inoperative and must be replaced.

(4) Tank Heater Removal.

- A. Disconnect the electrical power to the dishwasher.
- B. Drain the tank and remove the 1st strainers.
- C. Remove the heater cap and unscrew four bolts fixing the flange portion. Next, disconnect the heater leads and the jumper straps.
- D. Remove the heater mounting nut and take the heater out from inside the tank.

(5) Tank Heater Replacement.

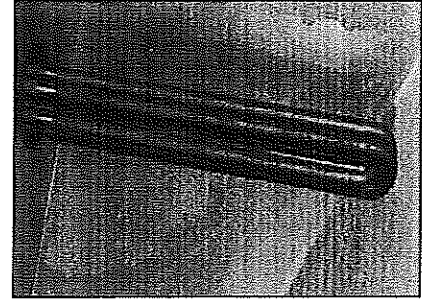
- A. Clean old O-ring material off the dishwasher tank.
- B. Be sure new gasket is in place on the new heater.
- C. Install in reverse order of removal. See for jumper and heater lead connections.



<Fig.36>



<Fig.37>



<Fig.38>

ELECTRICAL CIRCUIT

1. Operating Controls

(1) Power Switch.

The power switch is mounted on the out side of the control panel body.

When the power switch is on, switch lamp lights which applies 208 volts to the control circuit.

(2) Start On/Off Switch.

The start On/Off switch is mounted on the out side of the control panel body.

When the start On/Off switch is on, cycle lamp lights which indicates in working.

(3) Door Switch.

The door switch is mounted on the door frame of the upper wash chamber.

When the door is closed, a magnet is positioned over the door switch and the door switch closes.

A dishwashing cycle is started and

automatically sequences through a cycle and automatically turns off. It is necessary to open and then close the door in order to begin another dish washing cycle.

2. Line and Power Supply Circuit Explanations

(1) Terminal Block.

Three phase electrical service wires are connected to the terminal block at L1, L2 and L3 on the fuse board.

Single phase connections will be made at L1 and L2.

(2) Motor Contactor, Tank Heat contactor and Booster Heat contactor.

Leads L1, L2 and L3 connect directly from the terminal block to terminals L1, L2 and L3 on the motor contactor (Terminals L1 and L2 are used on single phase machines).

Leads L1, L2 and L3 also connect to

L1, L2 and L3 of the Tank heat contactor and Booster heat contactor if so equipped.

(3) Motor.

Leads from L1, L2 and L3 on the motor contactor connect to the motor terminal block at terminals T1, T2 and T3 (terminals T1 and T2 used on single phase machines).

(4) Control Circuit Transformer.

Power is supplied through the two (three) fuses on the fuse board to the primary of the transformer. The secondary windings provide 115 volts AC to power the contactor coils, cycle time, relays, valves and solenoids.

(5) Float Switch.

(a) The float switch FS1 and FS2 is located in the probe and switch assembly.

It is a magnetic reed switch which is operated by a magnet attached to the float.

(b) The float switch will be closed when the water in the tank reaches the probe of high float switch.

(c) Caused by waves and pump surge when the dishwasher is first started the water level is dropped and the float switch is open, and then rinse solenoid valve is open. rinse solenoid opening supplies the fresh water in the tank.