

Customer
Service

MAYTAG

Service Manual

Jenn-Air Dishwasher

DW710

DW730

DW760

DW860

DW960

DW980

16006946

Issued 2/95

SAFETY PRECAUTIONS

THIS MANUAL, AS WELL AS THE INFORMATION CONTAINED IN IT, IS TO BE USED ONLY BY A MAYTAG AUTHORIZED SERVICE TECHNICIAN FAMILIAR WITH AND KNOWLEGABLE OF PROPER SAFETY AND SERVICING PROCEDURES AND POSSESSING HIGH QUALITY TESTING EQUIPMENT ASSOCIATED WITH MICROWAVE, GAS, AND ELECTRICAL APPLIANCE REPAIR.

ALL INDIVIDUALS WHO ATTEMPT REPAIRS BY IMPROPER MEANS OR ADJUSTMENT SUBJECT THEMSELVES AND OTHERS TO THE RISK OF SERIOUS OR FATAL INJURY.

USE ONLY GENUINE MAYTAG APPROVED FACTORY REPLACEMENT COMPONENTS.

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INTRODUCTION

JENN-AIR Models covered in this manual:

DW710

DW730

DW760

DW860

DW960

DW980

For additional information on issues encompassed in this manual, including safety issues, contact:

**Maytag Customer Service
240 Edwards Street S.E.
Cleveland, TN 37311**

**Phone: 615-472-3333
Fax: 615-478-0649**

The first and most important step of any service call is to accurately determine what the complaint is. This is best accomplished by questioning the customer, finding out what the product is or isn't doing and why they feel a problem exists.

SECTION 1 covers **Electrical Test Equipment** for use on the dishwasher. This section also covers general use of the equipment, in addition to providing specific information on amperage, wattage and resistance readings which should be seen.

SECTION 2 covers **Electrical-Mechanical Troubleshooting** and provides a list of possible complaints. Find the complaint which you feel best matches that provided by the customer and turn to the appropriate page(s). You will find a list of possible electrical and mechanical problems for the complaint, which have been listed in order of:

1. Ease in checking.
2. Probability.

Systematically eliminating these possibilities will allow you to find and correct the problem.

SECTION 3 covers **Service Procedures**. This section will provide information on location of components, disassembly and/or reassembly procedures, the purpose and/or function of the part and in some instances specific checks to be made.

SECTION 4 covers **General Information** such as brief specifications, cycle descriptions and schematics.

GENERAL SAFETY PRECAUTIONS

Information contained in this manual is intended for use by a qualified technician familiar with proper and safe procedures to be followed when repairing an electrical appliance. All tests and repairs should be performed by a qualified service technician equipped with proper tools and measuring devices. All component replacements should be made by a qualified service technician using only factory approved replacement parts.

Improper assembly or adjustment may occur if service or repair is attempted by persons other than qualified service technicians or if parts other than approved replacement parts are used. Improper assembly or adjustment can create hazardous conditions.

There can be risks of injury or electrical shock while performing services or repairs. Injury or electrical shock can be serious or even fatal. Consequently, extreme caution should be taken when performing voltage checks on individual components of a product. Expect as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

Further, this appliance **must** be properly grounded. Never plug the appliance into a receptacle that is not properly grounded and in accordance with all local and national codes. See installation instructions for grounding this appliance.

IMPORTANT SAFETY NOTICE AND WARNING

The California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) Requires the Governor of California to publish a list of substances known to the State of California to cause cancer or reproductive harm, and requires business to warn customers of potential exposures to such substances.

SECTION 1. ELECTRICAL EQUIPMENT & TESTING

ELECTRICAL TEST EQUIPMENT

The equipment required to service these products depends largely upon the condition encountered. Locating a malfunction will often require the use of electrical testing equipment such as:

- Appliance Test Meter
- Clamp-On Ammeter
- Motor Test Cord

Appliance Test Meter

CAUTION

Always disconnect power supply before making continuity checks or taking resistance readings.

An Appliance Test Meter is a multi-purpose tester combining an AC-DC voltage tester with a multi-range ohmmeter.

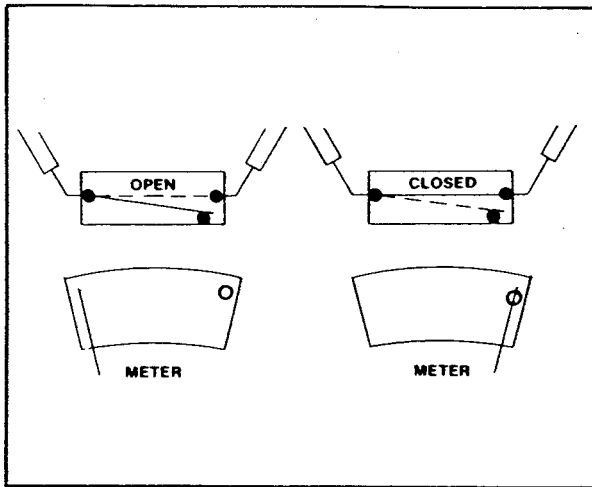


Probably the easiest means of testing electrical components is "continuity testing" with an appliance test meter. Continuity is a complete or continuous path from one point in an electrical circuit to another.

The obvious advantages of being able to check electrical components and circuits without power applied is one of the features of the ohmmeter. Multiple ranges allow accurate determination of resistances of both single components and entire circuit paths. Resistance is measured in "ohms".

SET METER FOR USE AS FOLLOWS:

1. Calibrate meter by touching test probes together and turning adjusting dial until meter reads "0" on the ohm scale. Recheck calibration whenever adjusting dial for ohms settings is changed. (Replace battery if adjustment will not bring meter reading to "0".)
2. Select the scale most easily read and place test probes on respective terminals. When checking a switch, the reading would normally be either open or closed. A reading of 70 on the R x 10 scale would for example be 700 ohms resistance.



CAUTION

Always be sure the power has been disconnected before making resistance measurements. Failure to do so will result in damage to your meter! Internal batteries provide all the power needed to make resistance checks. They should be checked at least once a year and replaced as needed.

For the most part, we will only be concerned with continuity. Is there a path or not? References made between a "closed" (continuity) reading and an "open" (no continuity) reading. One note, when you get an "open" reading, try a higher resistance range (setting). A very high resistance appears as an "open" on the lower ranges. For best accuracy always "re-zero" meter when changing ranges and/or the physical position of the meter.

Electrical components fall into two general categories:

1. **LOADS-** Devices that use or consume electricity. Examples

would include drive motor, heating elements, lamps, timer and solenoid coils.

Continuity tests of "load" devices will show varying levels of resistance from very low for some transformer and motor windings to very high for some timer motors and components on electronic control boards. Usually it is more important to know if there is a path for current flow through a device (continuity) than to know the exact resistance (ohms) of the device.

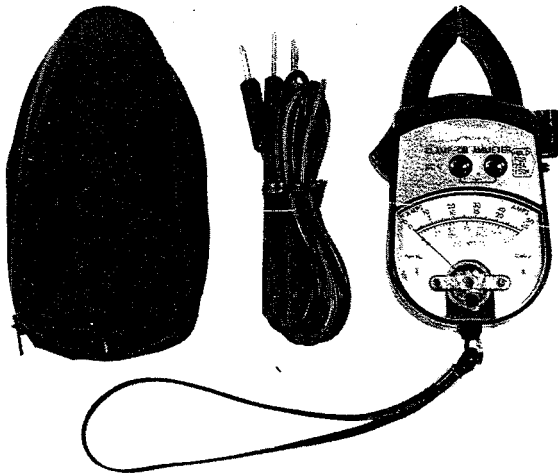
2. **SWITCHES-** Devices that control the supply of electricity to the load or loads in a circuit. Examples include door switches, timer contacts, selector switch and relay contacts.

Continuity tests of switches will show virtually no resistance across closed contacts. Resistance, even low values, indicate burned or dirty contacts in a switch.

Continuity testing is a process of eliminating electrical components involved in a given function of the appliance, until the inoperative part is found. By reviewing the list of possible electrical problems under a given condition, and then performing appropriate continuity checks of the parts involved, you should be able to locate the electrical component which is inoperative.

Note: When checking components or circuit paths for continuity, external wiring should be disconnected to eliminate false readings through external paths. Isolate what you want to test.

Clamp-On Ammeter



Each circuit in an appliance has a "normal" current draw which is an indication of the performance of that circuit. Current draw levels, less than or more than normal, give clues to malfunctions. The clamp-on ammeter measures these currents without breaking the circuit by measuring the strength of the magnetic field developed around each conductor. Current is read by separating the conductors and clamping the jaws of the ammeter around each conductor on which current is to be read. Low amperage readings indicate problems such as damaged heating elements, etc. High amperage readings indicate the unit being tested is operating under an increased mechanical or electrical load.

Note: Overloads on a circuit breaker or fuse can be traced to the product being tested or the circuit breaker (or fuse) by checking the product's current draw. If the amperage reading is less than the breaker reading, the breaker or fuse box is at fault.

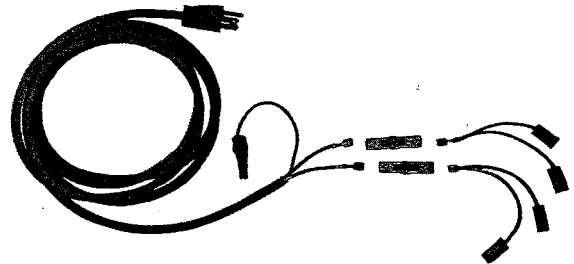
USE OF AMMETER ON DISHWASHER

1. **Motor Current-** The reading can be taken at the leads on the motor start relay or at the molex connector.
2. **Heating Element Current-** The reading can be taken using either lead to the element.

AMPERAGE CHART

CYCLE	AMPS
Wash	2.6
Drain(Start)	6.5
Circulate Heat	11.0
Heat Only	5 - 5.4
Heater and Blower (For Models with Blowers)	5.5

Motor Test Cord



NOTE

Always plug test cord into a grounded receptacle.

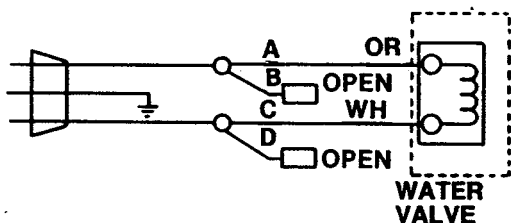
A motor test cord may be used to electrically check operation of the various electrical components without removing them from the unit. Testing in this manner merely determines whether or not the part will function independently of other electrical components. In order to make accurate tests, proper connection of the motor test cord is important. With the aid of the drawings under Drive Motor Test, installation of the motor test cord may be done quickly and accurately.

ELECTRICAL TESTS

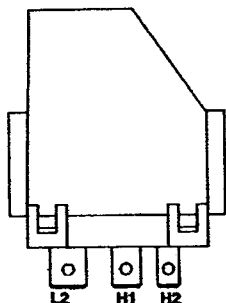
Water Valve Test

The water valve may be checked without removing it from the dishwasher.

To check the water valve for operation hook up the test cord as follows:



Cycle Extender

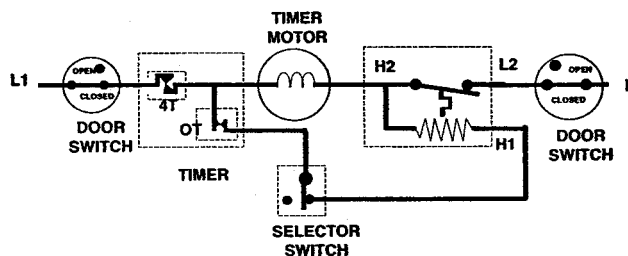


The extender switch is used to open and close the voltage circuit to the timer motor. This interruption of the timer motor will cause the dishwasher to continue running and lengthen the cycle.

The extender is used on mechanical timer dishwashers to extend the Wash and Dry cycles.

Approximately 10 minutes are added to the Wash cycle when Normal is selected; another 10 minutes are added if Heavy is selected. This will result in raising the water temperature about 1° F per minute during the extended wash. If Accu Temp is selected, the Water Temp Thermostat is used in the Wash cycle.

Approximately 10 minutes are added to the Dry cycle when Normal or Heavy are selected with Heat Dry.



SWITCH OPERATION: Note the electrical schematic. The bi-metal switch is normally a closed switch.

- When 120 VAC is applied to the internal resistor (5400 ohm) across terminals H1 and H2, the resistor will heat up.
- In 15 seconds, the heat will cause the internal bi-metal switch to warp and open the switch across terminals H2 and L2. Terminals H2 and L2 provide the neutral circuit to the timer motor and the internal resistor, thus momentarily stopping the timer motor and shutting down the extender's internal heater.
- After approximately 45 seconds, the bi-metal will have cooled and the switch will close again across terminals H2 and L2. Neutral circuit is restored to the timer motor and the extender's internal heater.
- This sequence is then repeated over and over again till the timer motor advances the timer through the designated cam increments.

RESISTANCE CHECKS

H1 to H2	5400 ohms	Approx.
L2 to H2	0 ohms	Power Off
L2 to H2	OPEN	Power On - 15 sec.

CAUTION

Always disconnect power supply before making any electrical checks.

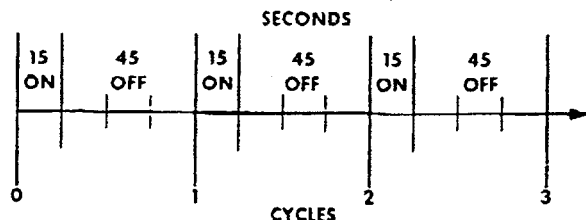
COMPONENT

APPROX. OHMS

Cycle Extender	5400
Heating Element	22
Timer Motor	2700-3000
Solenoid - Pull (Pump)	34
Solenoid - Water Valve	900
Wax Motors - (Dispenser Assembly)	1900

These values are provided so that you may have an idea of the resistance that you can see in testing. These resistances are not meant to be used as the exact values to determine whether a component should be replaced.

CYCLE EXTENDER
Approximate Cycle Times



0-15 SEC. - EXTENDER HEATER ON
- H2 - L2 CLOSED
- TIMER MOTOR RUNNING

AT 15 SEC. - H2 - L2 OPEN

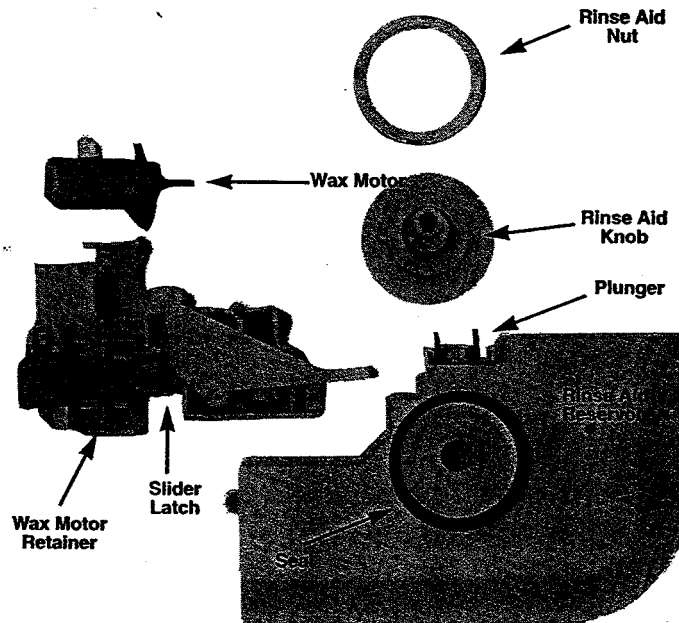
15-60 SEC. - EXTENDER HEATER COOLS
- H2 - L2 OPEN
- TIMER MOTOR OFF

AT 60 SEC. - H2 - L2 CLOSE

Wax Motors Check - Detergent and Rinse Aid Dispensers

Both "Wax Motors" used to operate dispensers may be checked without removing them from mounting bracket and dishwasher.

Connect power cord as shown, to the two terminals on wax motor. Plug power cord into 120 VAC receptacle. Plunger in center of wax motor should "push out" and actuate dispenser in approximately 45 - 60 seconds.



Drive Motor Test

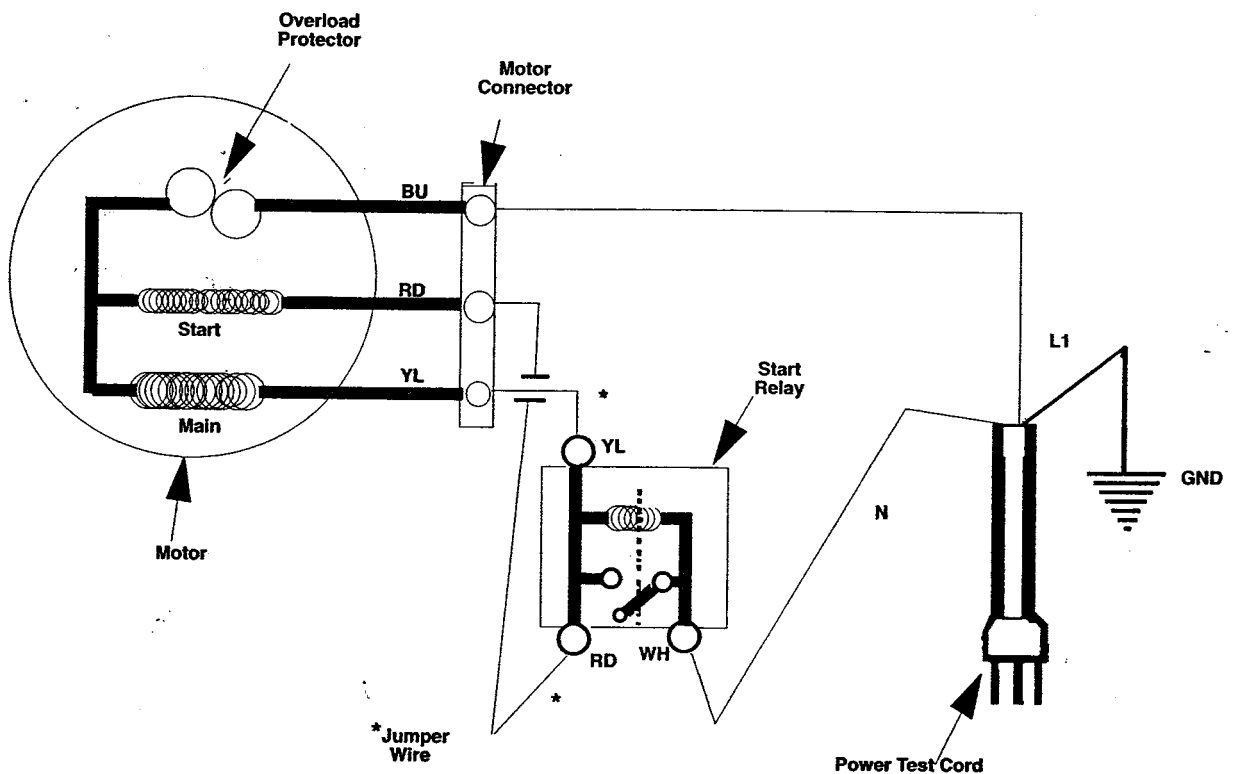
An external start relay and a connector is used to couple the wire harness to the motor wires.

The start relay is mounted on the ceiling of the tub support and consists of a coil and a switch. The coil is in series with the main winding in the motor. When the motor is first energized, the current draw in this series circuit is enough to close the switch in the start relay. This closed switch provides a path for neutral for the start winding and the motor starts. Once the motor is up to speed, the current draw decreases and the coil can no longer hold the switch closed. When the switch opens, the start winding drops out of the circuit.

Note: The relay has to be in an upright position to work properly.

To test the motor we need to separate the connector. This can be done by pushing out the latches on each end and pulling at the same time. The following drawings will help in making the proper connections for testing.

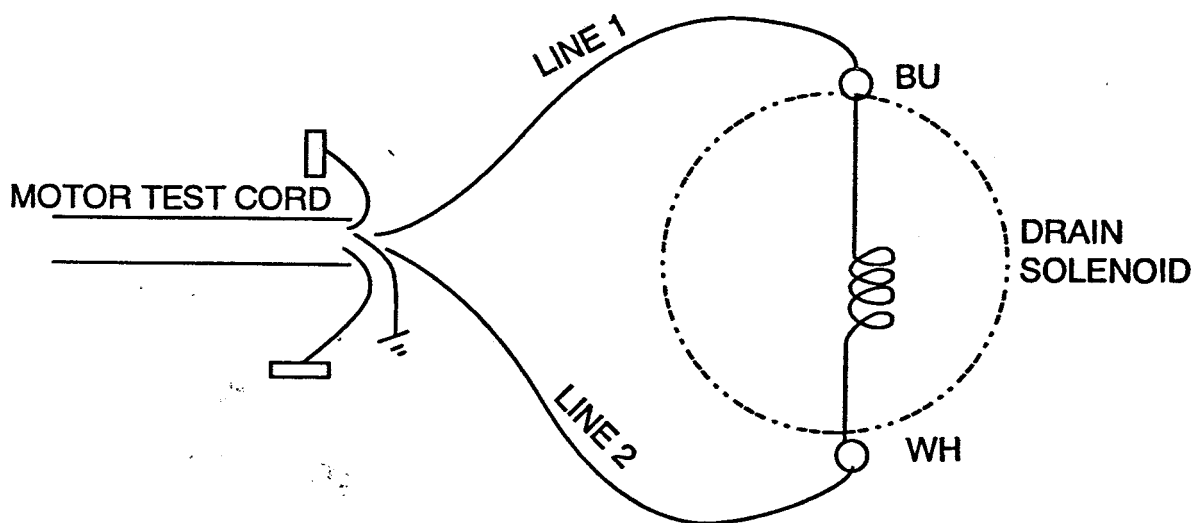
Plug test cord into properly polarized and ground receptacle.



Note: DAMAGE TO THE MOTOR WILL RESULT IF THE START RELAY IS BYPASSED AND THE TEST CORD IS CONNECTED DIRECTLY TO THE MOTOR CONNECTOR.

Drain Solenoid Test Cord Hook Up

To test, connect power cord as shown, plug power cord into 120 VAC receptacle. If solenoid does not operate, replace solenoid. If solenoid operates, check internal pump components.



Extreme caution should be taken when performing voltage checks due to danger of possible electrical shock. Except as necessary to perform a particular step in servicing a product, the electrical power supply should ALWAYS be disconnected when servicing a product.

Voltage Checks

For the most part these checks will consist of taking readings at the wall receptacle in order to determine the availability of voltage to the product. Voltage checks on individual components of a product are not recommended due to the possibility of electrical shock. Component part testing is best accomplished through continuity checks with an **Appliance Test Meter**. (See page 1-1.)

Note: Use of the meter on voltage higher than the indicated range may cause permanent damage to the meter. To prevent damage, first select highest range and then lower the range for readings which fall within the lower scale.

SET UP METER FOR USE AS FOLLOWS:

1. Turn selector knob to desired meter function and appropriate range.
2. Plug black lead into socket marked - (black).

3. Plug red lead into socket marked + (red).
4. Place test leads into receptacle in order to determine voltage available.

WATTAGES

CYCLE	WATTAGE
Circulate (Wash)	500-560
Drain	700 dropping to 200
Dry	620-680
Heavy (Wash)	1100-1250

Grounding and Polarity

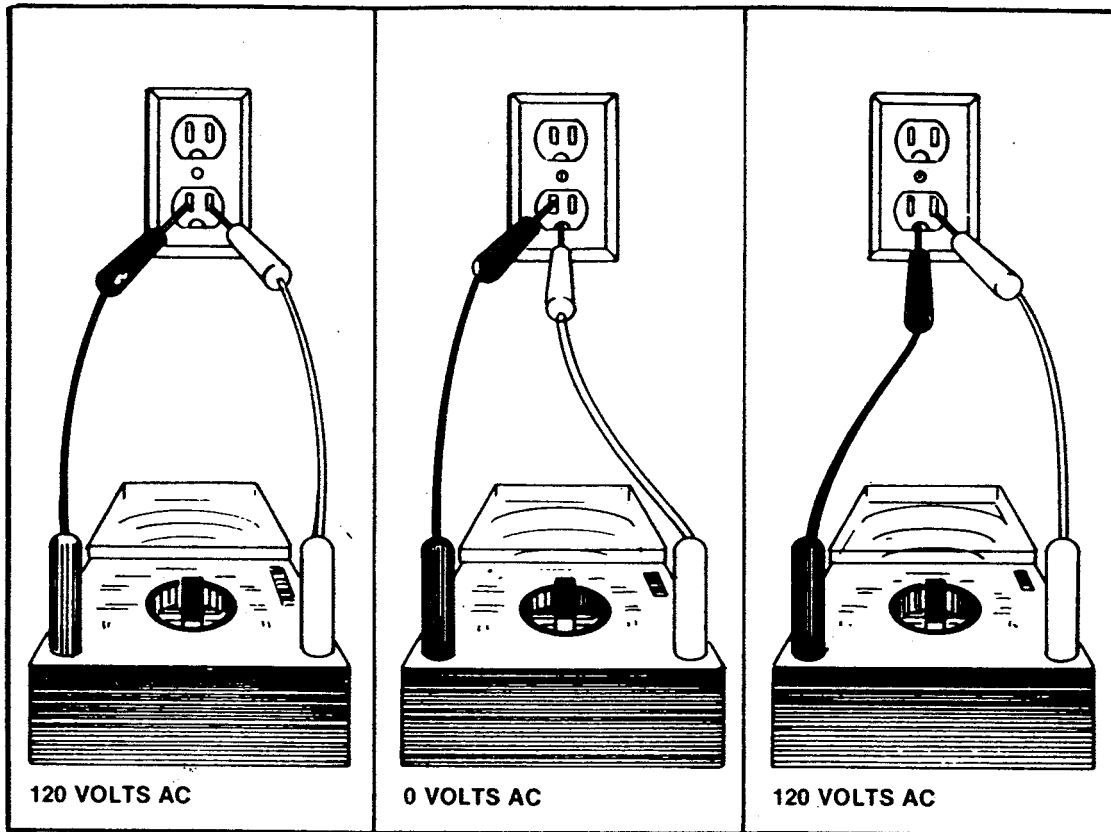
The receptacle used for all Jenn-Air products operating on 120 VAC must be properly grounded and polarized.

The power cord used on the appliances should be equipped with a three (3) prong polarized grounding plug for protection against shock hazard and

should be plugged directly into a properly grounded and polarized receptacle.

Do not cut or remove the grounding prong from this plug.

It is the responsibility of the person installing the appliance to assure it is adequately grounded and polarized at the point of installation taking into consideration local conditions and requirements. In cases where only a two (2) prong receptacle is available, it is the personal responsibility of the customer to have it replaced with a properly ground and polarized 3 prong receptacle. All grounding and wiring should be done in accordance with national and local codes. **USE OF ADAPTERS IS NOT RECOMMENDED.**



CAUTION

Use extreme care when checking voltage.

SECTION 2. ELECTRICAL-MECHANICAL TROUBLESHOOTING

ELECTRICAL-MECHANICAL CHECKS: ALL MODELS

The following are electrical and mechanical checks for all dishwashers, except for the unique microprocessor controlled systems. For electrical checks on microprocessor models see respective section titled TROUBLESHOOTING - MICRO-PROCESSOR MODELS.

CAUTION

Always disconnect power supply before making any electrical checks.

WILL NOT FILL

Water Access Valve Check to determine if valve is turned on and water is available to dishwasher. Check water pressure. Normal pressure is 18-120 psi.

Circuit Breaker/Fuse Check if tripped or blown, reset or replace.

Float Check whether stuck in the UP position or disengaged from the arm of the switch below.

Water Valve Check solenoid for continuity. No continuity, replace water valve. Check inlet screen for restrictions. Clean screen by flushing or replace valve if necessary.

Door Latch Check latch adjustment and door switches for continuity. With door switches engaged, check for continuity. No continuity, replace door switch.

Float Switch Check switch for continuity. No continuity with float in DOWN position, replace float switch.

Selector Switch Check per electrical schematic. Replace if necessary.

Timer Check for continuity per electrical schematic. Replace if necessary.

OVERFLOWS

Float Check whether stuck in down position. Check for sediment build up. Clean and/or replace float.

Float Switch Check continuity of float switch with float in UP position. If continuity present and float not sticking, replace float switch.

Float Switch Actuator Lever Check and determine if actuator on bracket is sticking. Clean or replace if necessary.

Water Valve Check whether water continues to flow when electrical power is turned off. If water continues to flow without electrical power, replace water valve. **Note:** Low water pressure can

also result in failure of the valve to close properly.

SLOW FILL

Water Valve Inlet Screen Check screen for sediment build up. Flush screen or replace valve.

Fill Hose Check to determine if hose is kinked or pinched. Straighten hose or remove obstruction in dishwasher enclosure area.

Low Water Pressure Check water pressure. Normal pressure should be 18-120 psi.

SIPHONING

Drain Hose Check proper elevation of drain hose. Must be 32 inches high. Reposition hose to correct elevation. Check if air gap was installed

POOR CIRCULATION

Water Level - Too Low Water level should be near bottom of heater.

Drive Motor Check motor. If motor does not run when timer is between "start" and "dry", replace motor.

Pump Assembly Check assembly for obstructions or restricted parts. Repair assembly.

Timer Check for continuity between the timer terminals per electrical schematic. No continuity, replace timer.

Wiring And Electrical Connections

Check for loose or frayed wires and terminal connections. Replace and/or repair all electrical connections.

Seal Ring Check seal between lower spray arm support and pump assembly. If out of position or damaged, reposition or replace.

POOR WASHABILITY

Spray Arms Check upper and lower arms for blockage of water ports. Check proper rack loading to avoid spray arm interference during wash action and to make sure the center spray tower is not blocked.

Filter Screen (Select Models) Check for blocked or clogged pump filter or strainer. (e.g. jar labels)

Detergent Cup Cover Check spring hinge operation of detergent cup cover.

Drain Flapper Check to see that flapper fully returns to its initial position sealing the drain opening after drain. Replace flapper if necessary.

Wax Motors Check linkage of actuator brackets and spring positioned correctly. Use motor test cord to check wax motors. (Full extension in 45-60 seconds.) Check wire harness to wax motors. Perform continuity checks of harness leading from timer to wax motors.

Rinse Dispenser Check level of rinse aid in reservoir. Check plunger for proper alignment and mating to the top of the reservoir. Check the rinse dispenser cap for residue build up on end of stem. Clean or replace required parts if necessary.

Timer Check for closure of dispenser contact per schematic.

WILL NOT DRAIN

Wiring And Electrical Connections Check for loose or frayed wires and terminal connections. Replace and/or repair all electrical connections.

Drain Hose Kinked or restricted. Reroute drain hose and remove any restrictions.

Drain Solenoid Check for continuity of the solenoid. No continuity, replace solenoid.

Flapper Check engagement of flapper metal arm with lifter of solenoid assembly. Readjust or replace necessary parts. Check for sticking of flapper across drain outlet of pump housing.

Drive Motor Check motor. If motor runs when energized, but stops when drain is initiated, check for voltage drop. If voltage is below 105 VAC, have house wiring checked.

Pump Assembly Check assembly for obstructions or restricted parts. Repair assembly.

Selector Switches Check continuity between switch terminals per electrical schematic. No continuity, replace switch.

Timer Check the timer for activation of the drain solenoid for 1-6 seconds at beginning of drain cycle. Check for continuity between the timer terminals per electrical schematic. No continuity, replace timer.

Inadequate Drainage Check the drain pipe the drain hose connects to and have repairs done as recommended. If draining to disposer, check for unprocessed food waste. Run disposer if necessary.

CONTINUES TO DRAIN

Siphoning Check for proper elevation of drain hose. Must have a loop 32 inches above the floor. Reposition hose to correct elevation if needed. Check if air gap was installed.

Timer Check for timer advancement. Timer motor running and timer not advancing, replace timer. Timer motor not running, replace timer motor. Check closure of drain contact per schematic.

Drain Flapper Check to see that flapper fully returns to initial position after drain is complete. Replace flapper if necessary.

POOR DRYING

Wiring And Electrical Connections

Check for loose or frayed wires and terminal connections. Replace and/or repair all electrical connections.

Water Temperature Check for low water temperature. Temperature should be between 120° and 150° F. If not, advise customer to adjust water heater and to purge water lines to the dishwasher area prior to starting dishwasher.

Water Level - Too High Water level should be half way up the heating element. See section on "WILL NOT DRAIN".

Detergent Cup Cover Check spring hinge operation of detergent cup cover. Check for proper amount of detergent usage. Check for water hardness. Use one teaspoon of detergent per one grain of water hardness.

Rinse Dispenser Check level of rinse aid in reservoir. Check plunger for proper alignment and mating to the top of the reservoir. Check the rinse dispenser cap for residue build up on end of stem. Clean or replace required parts if necessary.

Wax Motors Check actuator linkage brackets and spring positioned correctly. Use motor test cord to check wax motors. (Full extension in 45-60 seconds.) Resistance reading of approximately 1900 ohms. Check wire harness to wax motors. Perform continuity checks of harness leading from timer to wax motors.

Heating Element Check for continuity of element. Check terminal to terminal for continuity. No continuity, replace element. Check terminal to element sheath, continuity found, replace element.

Thermostat Check proper placement of thermostats. Check mating surface of thermostat face to surface of tub enclosure, must be flat. Adjust thermostat if necessary. Check continuity of thermostats. Accu Temp thermostat is normal OPEN and the Hi-Limit thermostat is normal CLOSED at normal room temperature.

Blower Assembly Check for blower motor operation using motor test cord. Look for blower obstructions. Check for unsnapped blower cover. Check for bent blower motor mounting bracket.

Low Ambient Temperature Check for undercounter drafts due to house insulation voids, cold air returns and air conditioning ducts. Blower will draw this air into the tub in Dry cycle. If necessary, add insulation along back of dishwasher. Maintain clearance of wiring, hoses and blower assembly.

Improper Rack Loading Check how customer loads dishes into rack. Improper loading can hinder air circulation inside of dishwasher.

Selector Switches Check continuity between switch terminals per electrical schematic. No continuity, replace switch. (Heater and blower circuit.)

Timer Check for closure of heater, blower and rinse aid dispenser per schematic.

WATER LEAKS

Installation Check unit for proper leveling and squareness of door opening.

Door Alignment Check proper alignment of door liner to door gasket. Use chalk rubbed onto rib of liner, close then open door. Observe chalk markings on door gasket. Adjust door hinges or leveling legs to align door into center of gasket. Screws should be tightened to 75 in. lbs.

Door Gasket Check door latch adjustment. If correct, check for torn or damaged gasket. Replace gasket if torn or damaged.

Hoses Check for loose hose clamps or hoses that leak. Tighten clamps and replace leaking hoses.

Spray Arm - Upper & Lower Check for cracks and replace if necessary.

Lid Latch Grommet Detergent cup cover area. Check for positioning or cracking. Replace if necessary.

O-Ring Seal Check positioning of rinse dispenser seal to inner door liner. Reposition or replace if necessary.

Pump Gasket Check for leak between pump assembly and tub. If gasket is leaking, adjust locking ring to increase tension of pump assembly to tub. Replace gasket if necessary.

Pump Housing Check for holes or cracks in housing. Replace if necessary.

Water Seal Assembly Check seal and seat assembly in lower pump assembly.

Check tightness of motor fan to impeller assembly. Replace pump impeller assembly with seal if necessary.

Water Valve Check valve body for damage and leaks. Replace if necessary. Also check plumbing connections.

NOISE PROBLEMS

Before servicing unit, check to be sure noise is not normal operating sound. (See User's Guide.)

Banging Check loose spray arms or nozzle. Check fastener holding upper spray arm to support. Check load for interference with wash arm.

Buzzing Check and tighten timer mounting screws. Check timer motor for noise, if severe replace timer or timer motor. Check drain solenoid and water valve mounting screws.

Chattering Check water valve for noise. Replace if necessary.

Grinding Check for obstructions in pump assembly. Check for tight fit of motor fan to pump impeller assembly. Re-tighten if necessary.

Hammering Check water valve and drain solenoids. Check for low voltage or high resistance readings. **Note:** Some noise is normal. Replace solenoid or water valve if necessary.

Snap Detergent cup cover noise is normal when door is first opened after a cycle.

Thumping Check for object in path of spray arms. Remove objects in path. Check for obstructions in pump assembly and remove. Check for damage to pump assembly and repair if necessary.

Vibration Check for loose screws and tighten. Insert panels may need adjusting and additional pads can be added.

Popping & Clicking Normal timer noise.

TROUBLESHOOTING: MICROPROCESSOR MODELS

Following are Electrical checks unique to Microprocessor dishwashers. For Mechanical checks refer to Electrical-Mechanical section for all dishwashers.

A microprocessor board performs the same functions as a mechanical timer. However, a microprocessor board can check all circuits in the dishwasher and provide a digital display.

In a mechanical timer unit, the timer controls the individual components by opening and closing cam switches in the timer.

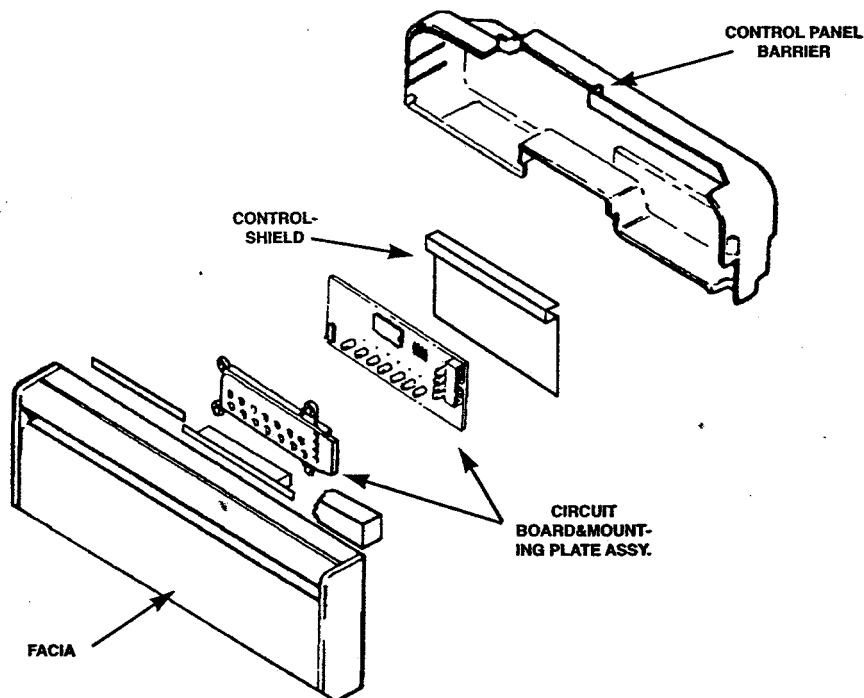
In a microprocessor unit, this is accomplished by using control relays on the board. The control relays are specifically assigned to individual components: motor, heater, water valve,

detergent and rinse dispenser wax motors.

NOTE: All individual components on the dishwasher outside of the microprocessor board except for the Accu Temp Thermostat operate on 120 VAC.

The microprocessor board receives the necessary voltage to operate through a transformer on the board.

The user selects a dishwasher cycle and options by pressing the indicated pads on the fascia of the control panel.



Refer to section titled "TROUBLESHOOTING: ALL MODELS" to identify specific problem. **IMPORTANT:** When referencing to this section, check for proper voltage of 120 VAC at the individual component being specifically checked.

WILL NOT PROGRAM

Door Touch pads will not program with the door unlatched.

Circuit Breaker/Fuse Check if tripped or blown, reset or replace. Must have 120 VAC present to the microprocessor board. (Check electrical schematic.)

Wire Harness Connections Determine if wiring harness is properly attached to terminals of microprocessor board.

Microprocessor Board With 120 VAC available to the board and board not functioning, replace board.

Board - Voltage Check (Input and Output Voltages)

Input Voltage: When running a specific function and the component part will not work, check for voltage leading to the board. (WHT & BLK wires at the board.)

Output Voltage: Review the electrical schematic for the wire designation of the component part you wish to check. Perform a voltage check from the designated board terminal you identified and the White wire (Neutral). If no voltage is present, replace the microprocessor board.

TEST CYCLES

All of the following test modes are started by pressing the following initial sequence of keys followed by a specific key that starts the selected test:

ORIGINAL

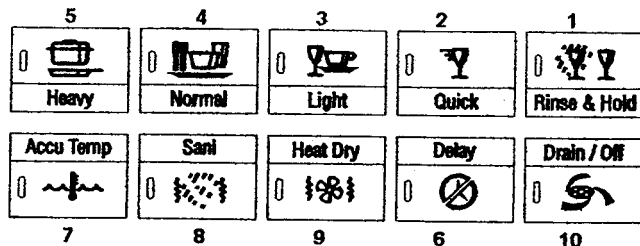
Rinse and Hold
Quick
Light
Normal
Heavy
Delay
Accu Temp
Sani
Heat Dry
Drain/Off

SERIES 'A5' & later

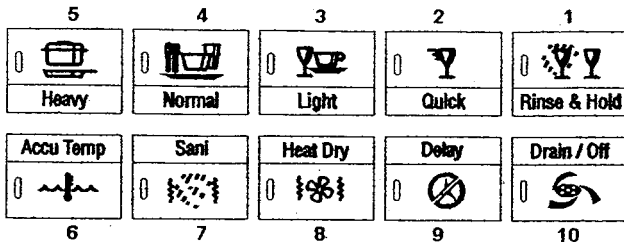
Rinse and Hold
Quick
Light
Normal
Heavy
Accu Temp
Sani
Heat Dry
Delay
Drain/Off

(Next key determines selected test mode.)

ORIGINAL



SERIES "A5" & later

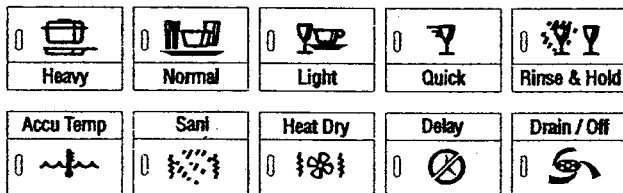


Note: To end any of the following Test Modes, press the **Cancel** key.

CIRCUIT BOARD TEST

This is a Quick Test Program which will turn on the relays and LED lights for 1/2 second, one at a time. This will repeat indefinitely until the **Cancel** key is pressed.

To start press the initial sequence of keys, then press **Heat Dry**.



11

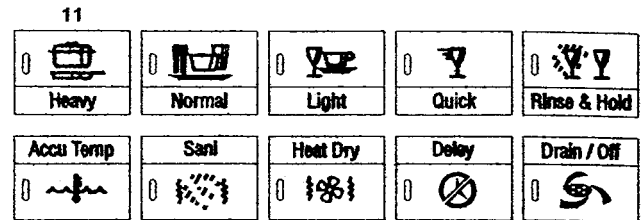
(See section titled ELECTRICAL SCHEMATICS for specific model functions.)

DISHWASHER FUNCTION TEST

(Available on select models only.)

This is a longer test mode. After the first 50 seconds the display will count down from 12 minutes and then begin sequencing through the cycles. The test sequence will not repeat.

To start press the initial sequence of keys, then press **Heavy**.

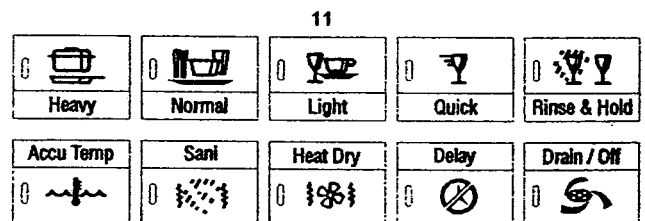


(See section titled ELECTRICAL SCHEMATICS for specific model functions and LED displays.)

MANUAL FUNCTION TEST

Optional test available on dishwasher with serial prefix "A5" and later. This will enable the servicer to manually turn on individual functions. Such as the blower, heater, motor, water valve and dispensers.

To start press the initial sequence of keys, then press **Light**.



The display will show "1" minute. The keys will toggle individual functions and LEDs on/off depending which keys are pressed.

KEY PRESSED:

Heavy
Normal
Quick
Rinse & Hold
Sani
Heat Dry

FUNCTION:

Motor
Fill
Detergent Dispenser
Rinse Aid Dispenser
Blower
Heater

A key must be pressed within 75 seconds in order to remain in the Manual Test mode, once the display has counted down to zero (0).

RAPID TIME DOWN TEST

This test may be performed without pressing the initial sequence of keys. To start test, select a cycle function and press the key. Within one minute, press the same key again and hold down the Accu Temp key. The control will advance through the selected cycle at a rate of "One Minute Per Second". This will do so as long as the Delay key is continuously depressed. For some cycles, you'll have to release the cycle key while holding down the Accu Temp key.

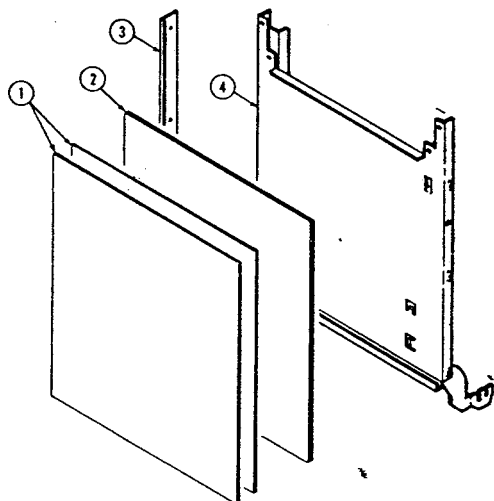
SECTION 3. SERVICE PROCEDURES



Always shut off electrical power to the dishwasher before beginning any service procedure.

Extreme caution should be taken when performing voltage checks due to danger or possible electrical shock. Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

OUTER DOOR PANEL



NO.	DESCRIPTION
1	Front Insert
2	Front Filler
3	Door Trim
4	Door Panel

To Change Panels

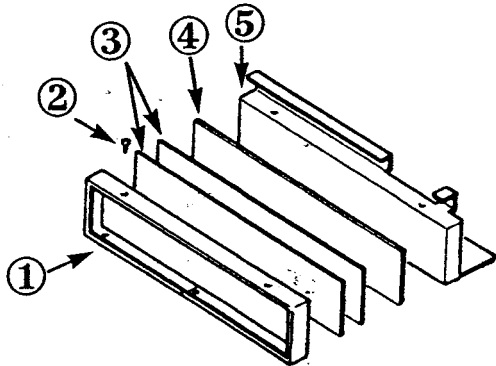
1. Disconnect the power supply to the dishwasher.
2. Remove three screws holding the trim strip on one side of the door. Take note of how the trim comes off.
3. Grasping the lower part of the door panels, bow panels out carefully at the bottom while sliding panels far enough to clear the flange on the trim strip which was not removed and remove panels.
4. Arrange panels so the desired color is facing out.
5. Place door panels (notched side up) behind the metal trim at the bottom of the door. Bow the panels so they fit behind the control panel at the top.
6. Slide the panels under the side metal trim which was not removed. To do this, it may be necessary to compress the backing behind the colored panels.
7. Reinstall the trim which was removed earlier. Align the holes and replace the three screws.

ACCESS AND TOE PANELS

Removal of access and toe panel will allow access to water valve, blower assembly, start relay, door spring, adjustment screws, float switch assembly, hoses, electrical junction box and pump assembly.

To Remove

1. Disconnect the power supply to the dishwasher.
2. The lower access panel is held by four screws (two above the panel and two below). Remove all 4 screws.
3. Toe panel can now be removed by sliding out from between tub support legs.



NO.	DESCRIPTION
1	Access Trim
2	Trim Screw (Cross Recess)
3	Access Insert
4	Access Filler
5	Access Panel

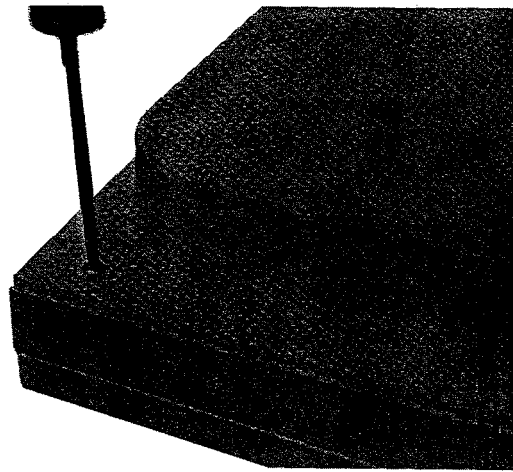
To Change Panels

1. With the lower access panel removed, remove the four screws along the bottom of panel and the two on the top. Remove the trim which holds the panels. Once the desired panel is facing out, replace the trim and reinstall the panel to the dishwasher.

Note: When replacing top access panel mounting screws, be sure to use the original screws. Using the wrong screw can result in a damaged tub.

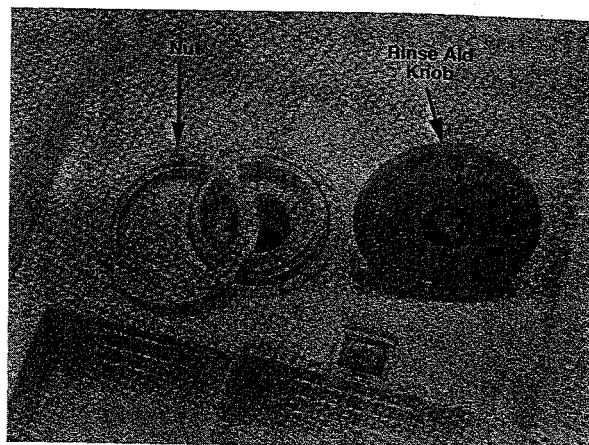
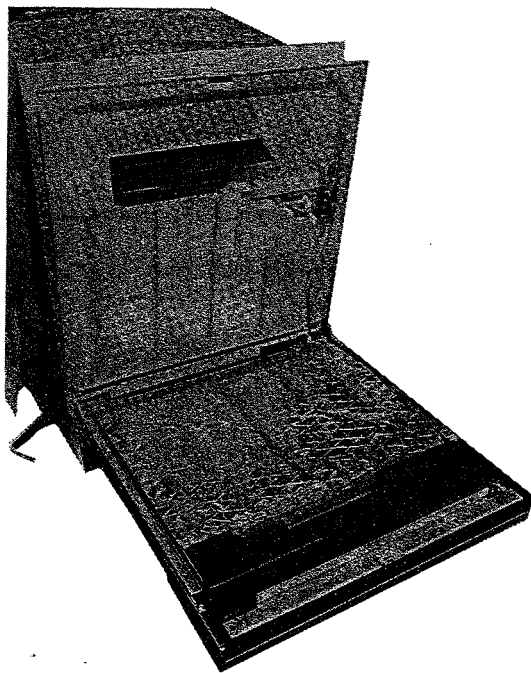
INNER DOOR PANEL

For access to dispensers, switches, timer or microprocessor board and wiring, removal of the inner door panel is necessary.



To Remove

1. Disconnect the power supply to the dishwasher.
2. Open the dishwasher door.
3. Remove the seven Torx screws along the lip of the inner door.
4. Separate inner door panel from the door assembly.
5. Disconnect wires from dispenser wax motors before pulling inner door away from dishwasher.



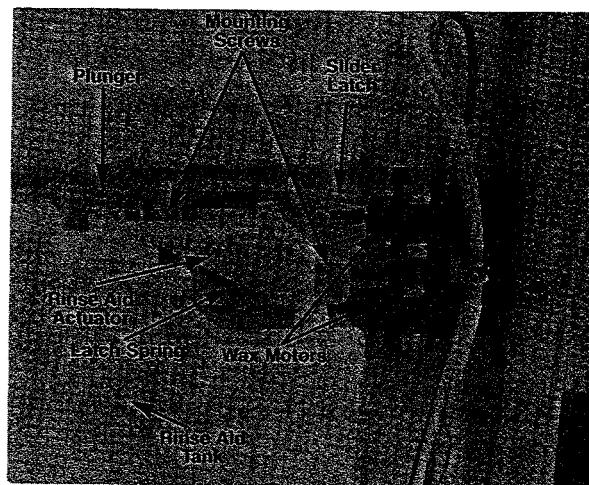
4. Remove two screws to release retainer assembly from inner door liner. This will expose the latch spring and hook assembly.

DISPENSER ASSEMBLY AND WAX MOTORS

For access to plunger assembly, wax motors, latch spring and reservoir assembly.

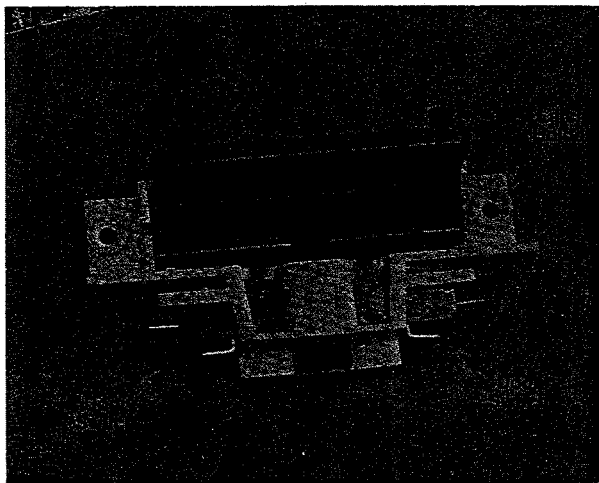
To Remove

1. Disconnect the power supply to the dishwasher.
2. Unscrew rinse aid knob and rinse aid nut holding rinse aid reservoir assembly to inner door liner.
3. Remove wiring from wax motors noting wire routing for reconnection.



5. The plunger assembly is located on top of the reservoir. To remove, twist the plunger so the exposed tabs are clear of the retaining tabs on the reservoir. Pull the plunger from the reservoir.
6. Wax motor replacement is made by expanding the retainer tabs and sliding the motors from the tabs. When replacing the wax motors, insure the piston is securely clipped onto the dispenser actuator arms.

DOOR LATCH SWITCH HOLDER ASSEMBLY



Two door switches are used in the latch assembly. Both switches are normally OPEN and will CLOSE only when engaged by the door latch hook mechanism. Each switch is in series with respective Hot or Neutral line operations. Failure of either or both switches will result in dishwasher non-operation.

Door switches require no field adjustment.



To Remove

1. Disconnect the power supply to the dishwasher.
2. Remove inner door liner. (See section titled INNER DOOR PANEL.)
3. Remove or set aside metal reinforcement strip.
4. Remove plastic barrier covering the control panel components.
5. To remove door latch switch assembly, remove mounting screw holding assembly to back of control panel. (Note screw replacement for door reassembling.)

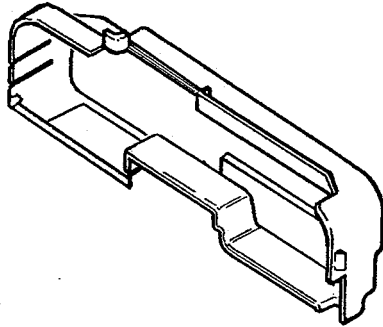
To Disassemble

1. Disconnect the power supply to the dishwasher.
2. To remove switch, lift retainer tab behind the switch and depress the actuator button on switch. While lifting the tab, pull switch from holder. To reassemble, lift retainer tab and insert switch into holder.
3. To remove latch handle, depress two retainer tabs on switch holder then lift handle.



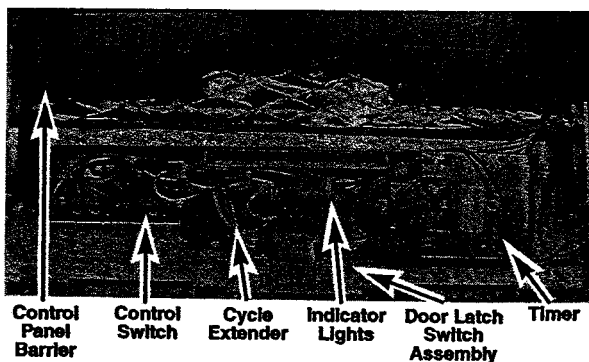
CONTROL PANEL BARRIER

Shields the control components within the control console.



To Remove

1. Disconnect the power supply to the dishwasher.
2. Depress retainer tab on left side of barrier.
3. Then lift barrier up, left side first and disengage solid tab on right side of barrier from control panel.



CONTROL SWITCH

To Remove

Disconnect the power supply to the dishwasher.

Disconnect wire leads. (Refer to electrical schematic for proper ohm checks.) Remove hex head screw on each end of the switch.

CYCLE EXTENDER

Cycle extender is a bimetal switch used to add approximately twenty minutes of wash in the HEAVY cycle and ten minutes in a NORMAL cycle. It is used again in the DRY cycle on select models. (For more information see ELECTRICAL-MECHANICAL TROUBLESHOOTING, section 2.)

To Remove

Disconnect the power supply to the dishwasher.

Spread retaining clips on control panel and lift cycle extender.

TIMER

The timer circuits are illustrated in the electrical schematics included in this manual. (Refer to schematic for Electrical Testing Procedures before attempting to replace timer.) **Timer must be replaced as a complete assembly.**

The **dishwasher schematic** is located behind the access panel. (See Access and Toe Panel Removal section.) The schematic diagram is unique to each model and contains the following:

- Timer Sequence Chart
- Harness Connector Identification
- Electrical Connection Diagram

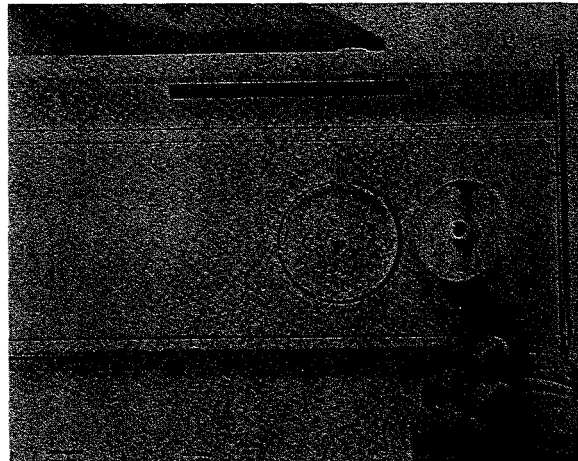
Using the Timer Sequence Chart

The sequence chart used in conjunction with an ohmmeter can be quite effective when attempting to verify or diagnose problems in the timer, wiring or other electrical components.

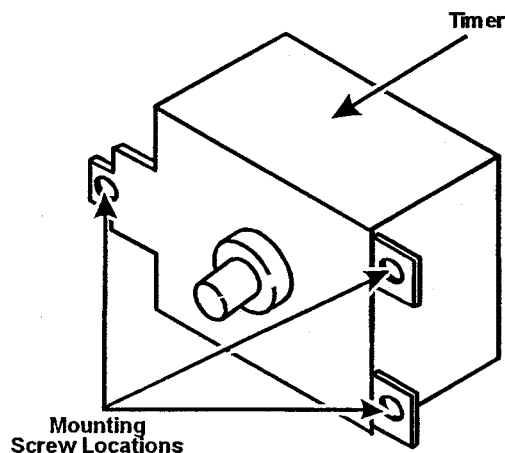
1. Identify cycle on chart where problem occurs.
2. Trace down on the chart the timer contacts indicated **CLOSED** to identify the electrical circuits involved.
3. Perform a "point to point" continuity check of the timer terminals to verify whether corresponding contacts are **CLOSED** or **OPEN** when advanced to this cycle position. If contacts do not correspond to Sequence Chart, replace timer.
4. If timer checks out good, perform a "point to point" continuity check of the timer's electrical connector. This will isolate the trouble in the wiring or the components.

To Remove Timer

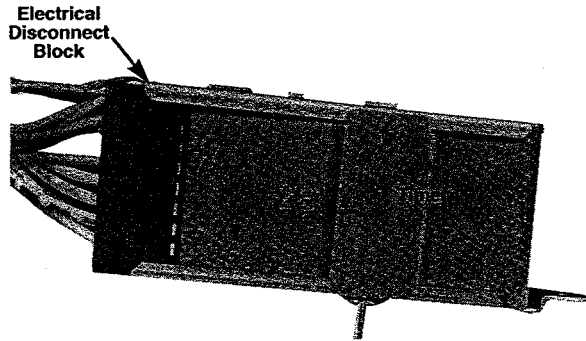
1. Disconnect the power supply to the dishwasher.
2. Remove timer knob by grasping knob and sliding off "D" shaft of timer.



3. Remove three hex head screws holding timer to control panel fascia.

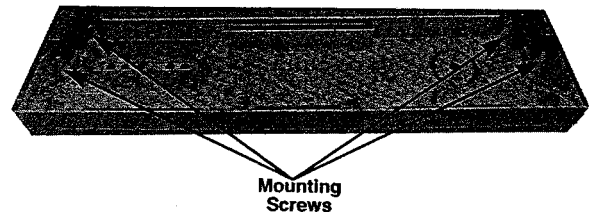


4. Remove the electrical disconnect block from the timer. Retainer tabs are located on each end. Squeeze the tabs while pulling to disengage from timer. Check wiring terminals in disconnect block to insure they are positioned securely.



CONTROL PANEL FACIA

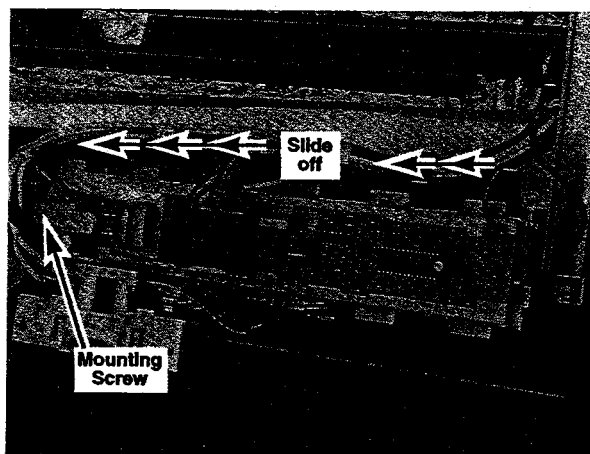
The inner door panel must be removed to obtain access to screws securing control panel to door panel. (See previous sections on removal of console components to gain access.)



MICROPROCESSOR BOARD (On Select Models)

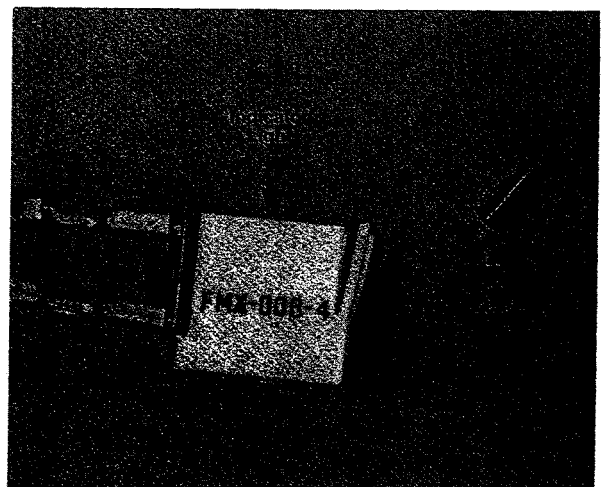
To Remove

1. Disconnect the power supply to the dishwasher.
2. Disconnect wire harness connector from board.
3. Remove hex head screw securing board retainer assembly to control panel
4. Slide assembly toward screw just removed. Lift off of control panel.



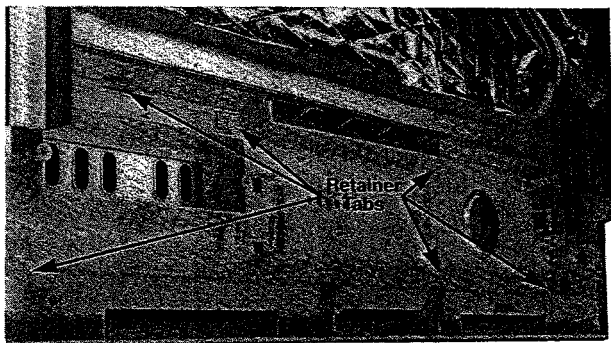
To Remove

1. Remove four hex head screws securing the control panel to the outer door.
2. Disconnect wiring to electrical components in the control panel area.
3. Remove electrical components. (i.e. Control Switch, Cycle Extender, Microprocessor and etc.)



4. Remove indicator lights from their lenses by sliding the body of the light assembly away until it disen-

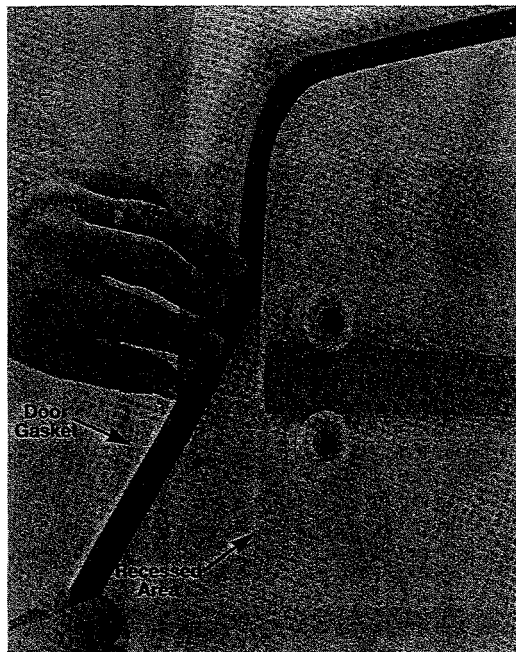
gages from the lens. Remove lens from front of facia.



5. Bend up retainer tabs which hold the facia to the control panel.
6. Carefully separate facia from panel by pushing tabs through slots in control panel. **CAUTION: Panel is susceptible to being scratched or bent easily during disassembly or reassembly.**

DOOR GASKET

The door gasket provides a seal between the door and tub.



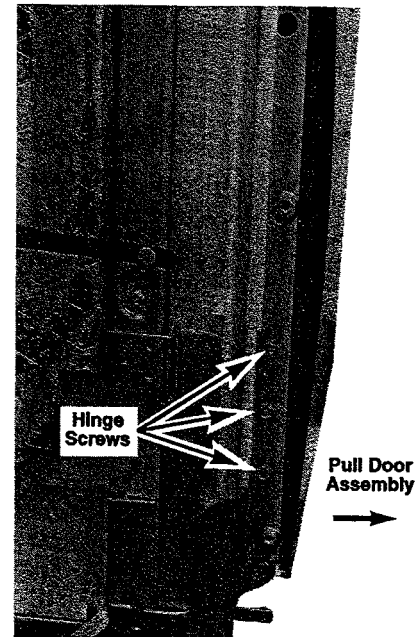
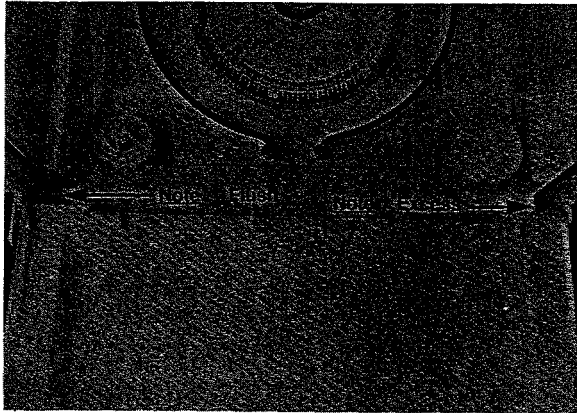
To Remove

1. Open door.
2. From lower corner, pull gasket up and out of tub recess. Note bend in gasket in right hand lower corner.

To Replace

Note: Wetting the gasket will make installation easier.

1. Start at lower right hand corner. Form a bend 1" from the end of the gasket as shown.
2. Gently work the gasket into the recess part way up the right side.
3. Begin inserting the gasket in the recess on the lower left with the end flush.
4. Work the gasket into the recess on both sides, in the corners and across the top, finishing in the center.
5. Check for proper door and latch adjustment to insure good seal of gasket.



DOOR HINGES

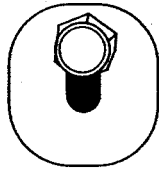
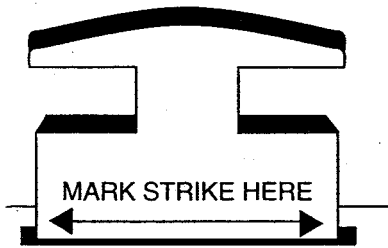
The door hinge screws are used to adjust complete door assembly to dishwasher tub front. Insures good seal of door gasket to inner door liner.

To Adjust

1. Remove side trim strips from door assembly and loosen hinge screws.
2. Latch the door with the hinge screws loose.
3. Pull the bottom of the door away from the tub as far as it will go.
4. Tighten the screws very tight (75 in. lb. minimum) to insure they will not loosen.
5. Adjust door latch strike for low door closure force. Check door liner placement by chalking the liner with chalk or talcum powder, then close. Upon opening, the chalk line will indicate door liner placement onto the gasket. Make necessary adjustments to door strike and door assembly for center placement on gasket.

DOOR LATCH STRIKE

The door latch serves as a "TENSION" lever for proper door seal. It also provides the mechanical actuator for door switch operation.



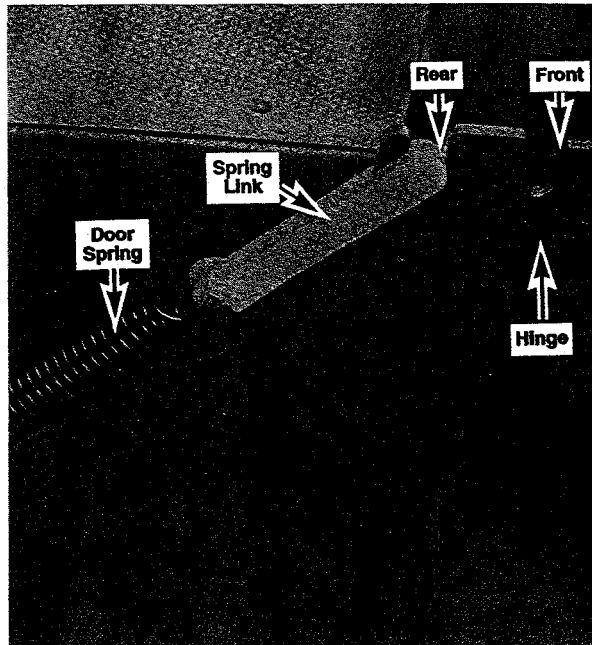
To Adjust Door Strike

1. Mark "underside" of the door strike prior to adjustment. This will provide a guide to make accurate "in" or "out" adjustment.
2. Loosen hex screw securing strike assembly to tub. Slide strike "in" to INCREASE tension on door and door seal. Moving "out" will DECREASE tension.

HINGE SPRINGS

The hinge springs provide a counter balance to the weight of the door.

The door spring is inserted through the offset portion of the link, with the offset of the link positioned toward the dishwasher. The other end of the link is mounted into the appropriate slot of the hinge.



Timer Models The left spring link is mounted in the rear notch and the right link is mounted into the front notch of the hinge.

Microprocessor Models Both links are mounted in the front notch of the door hinge.

The bottom end of the spring is hooked in the hole of the adjustment bracket. (Always point the spring hooks toward the dishwasher.)



Door spring adjustment brackets are located behind the toe panel, on the

right and left side. They stretch the springs by sliding forward and back along the dishwasher tub support. To change door spring tension, use a 1/4" hex-nut driver.

To Adjust

1. **Increase Spring Tension:** Turn the adjustment screw in a clockwise direction.
2. **Decrease Spring Tension:** Turn the adjustment screw in a counter-clockwise direction.
3. Adjust the springs equally. Failure to do so may lead to a "twisted" condition of the door.

Proper Door Spring Tension

The proper setting is when the door will remain open to a minimum of 6" (measured from tub flange to top of door). When opened slightly farther, the door will fall at a slow rate and come to rest horizontally or up to 3" above horizontal. The door should not fall so fast as to "bounce" when fully open.

Heavy Decorator Panels may make it necessary to relocate the door spring link to the rear notch on both springs. This will enhance the spring tension. Check door again for proper tension.

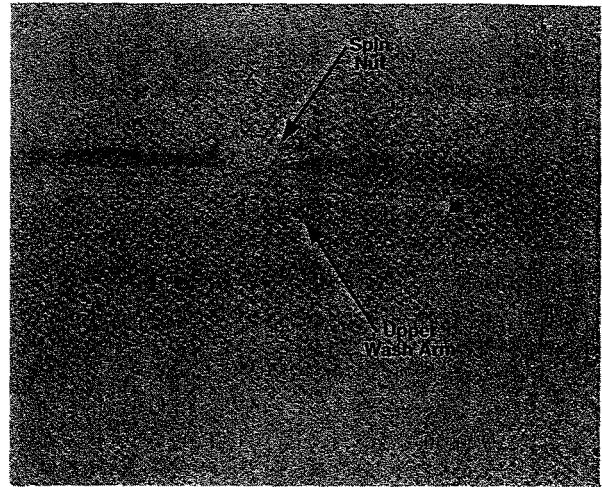
UPPER WASH ARM

To Remove

Unscrew spin nut above the wash arm.

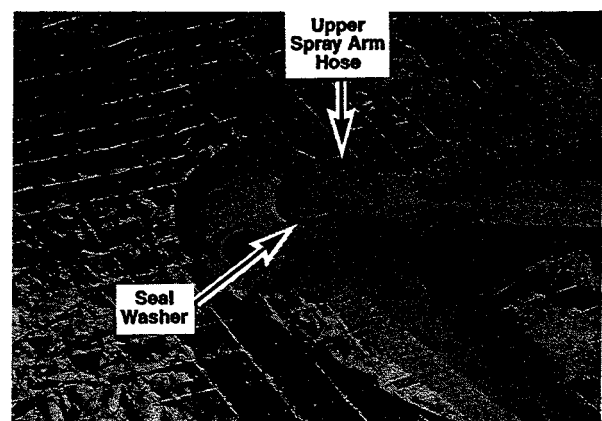
To Replace

Screw spin nut onto the upper spray hose.



UPPER WASH ARM HOSE

Water is supplied to the upper wash arm through this hose via the pump assembly. The hose runs away from the pump then vertically up the right side of the dishwasher tub and enters above the upper wash arm. The outlet of the hose is sealed to the tub with a sealing washer between the hose and the tub. The seal is compressed to the tub via the spin nut of the upper wash arm.



To Remove

1. Disconnect the power supply to the dishwasher.
2. Undercounter models: Remove the unit from under the counter.
Convertible models: Remove the cabinet and wood top. (See section devoted to convertible models.)
3. Remove access and toe panels.
4. Loosen hose clamp securing upper wash arm hose to pump and remove hose. Use a bowl or towel to catch the water that comes out.
5. Remove upper wash arm assembly.
6. Remove upper wash arm hose from unit.
7. Reinstall hose assembly with seal washer to top of tub. Insure seal washer is properly positioned between hose assembly and top opening in tub.
8. Reconnect hose assembly to pump. Insure rubber coupler of outlet assembly is fully inserted onto the outlet of pump and retighten hose clamp.

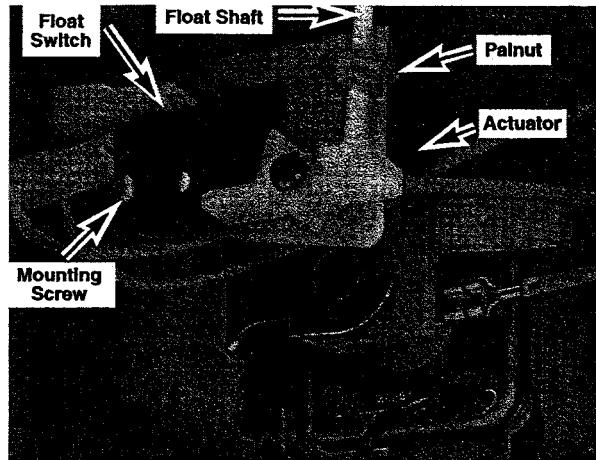
FLOAT ASSEMBLY

The float assembly is a protection device against an overflow situation. Water fill is normally controlled by the timer or microprocessor.

The float switch is wired in series with the water valve. When the float switch OPENS, the electrical circuit to the water valve is OPENED and the valve shuts off.

Normal Fill is just below the heating element in the basin of the tub assembly.

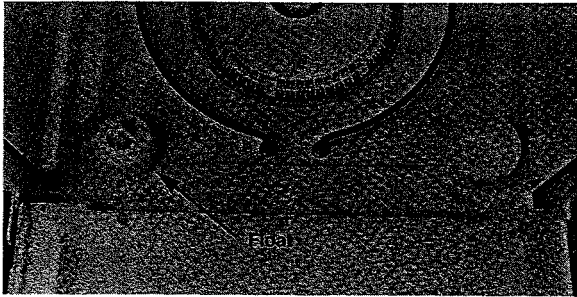
The float assembly consists of a float, float switch, actuator lever and a float switch bracket.



To Remove

1. Disconnect the power supply to the dishwasher.
2. Remove access and toe panels. (See section on removal of ACCESS AND TOE PANELS.)
3. Within the access panel area, reach inside and remove the palnut from the float shaft. Do this by grasping palnut in one hand and turn the float counter-clockwise with the other. CAUTION: Replace float if end of shaft twists off.
4. Lift the float up and out of the float guide.
5. To remove actuator, remove mounting screw from bracket.
6. To remove float switch, remove one screw mounting switch to bracket. Then remove wire leads to switch.

- To remove bracket, remove two screws mounting switch assembly to tub support base.



To Check Float Switch

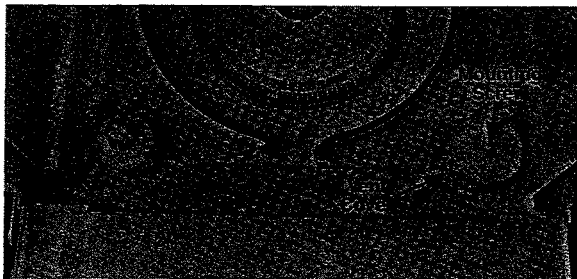
Perform continuity check of switch across wire terminals.

CLOSED - Switch actuator depressed

OPEN - Switch actuator released

VENT COVER

The vent cover is located in the front lower right corner of the dishwasher tub.



To Remove

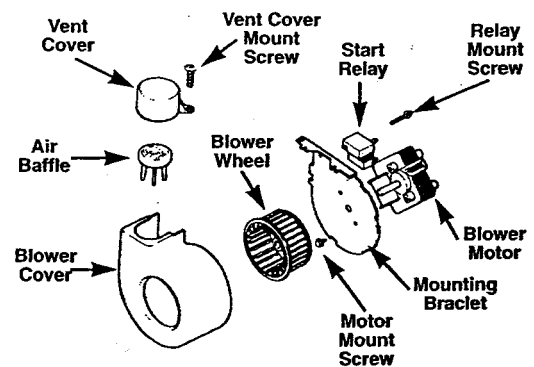
- Remove lower dishrack from dishwasher.
- Remove one Torx screw. Then lift cover from tub basin.

BLOWER ASSEMBLY

The blower assembly is located below the vent cover and housed below the tub within the access panel area. The purpose of this component is to circulate air through the dishwasher during the drying cycle.

To Remove

- Disconnect the power supply to the dishwasher.
- Disconnect wires from blower motor.
- Remove access and toe panels. (See section on ACCESS AND TOE PANEL removal.)

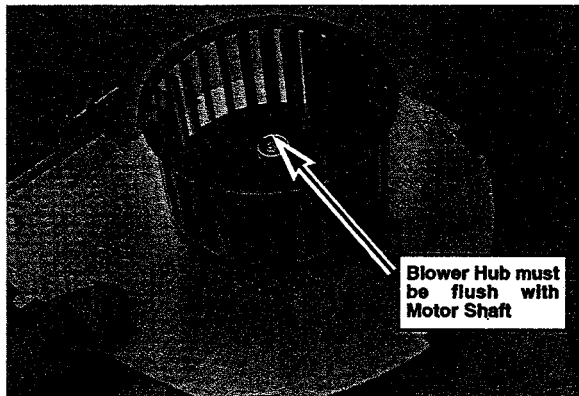


- Remove mounting screw in tub base at front of blower assembly.
- Lower front of blower assembly and pull forward. A retaining tab on the blower mounting bracket fits into a

slot in the tub base behind the blower assembly.

To Remove Blower Wheel & Motor

1. Disengage polypropylene blower cover from mounting bracket, by pushing outward on retaining tabs.
2. Slide blower wheel off the motor shaft.
3. Remove two screws holding motor assembly to mounting bracket.
4. To reinstall blower wheel, slide the wheel on until the end of the motor shaft is flush with the blower wheel center hub.

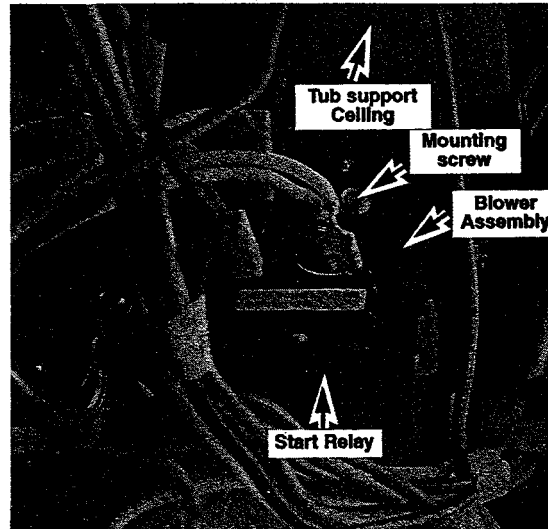


START RELAY

Location of the start relay is in the access panel area on the front right side. The relay is mounted to the blower mounting plate with one screw.

The start relay is a mechanism used to provide a direct electrical (Neutral) path to the START winding in the motor. This allows the motor to start. Once the motor gets up to operating speed,

the current draw of the motor reduces. This reduction in current causes a drop in the magnetic field of the relay coil and the mechanism drops down and the switch then OPENS, thus taking the START windings out of the circuit.



Note: The relay must be mounted in an up right vertical position. Positioning of the relay is very important. (See illustration.)

Start Relay Checks

1. Disconnect the power supply to the dishwasher.
2. Remove relay wiring and mounting screw.
3. Hold relay in upright position and check continuity across Yellow and White terminals. You should see continuity, if not replace relay switch.
4. Rotate relay switch upside down and check continuity across Red and Yellow, then Red and White. You should see continuity across both sets of terminals, if not replace relay switch.

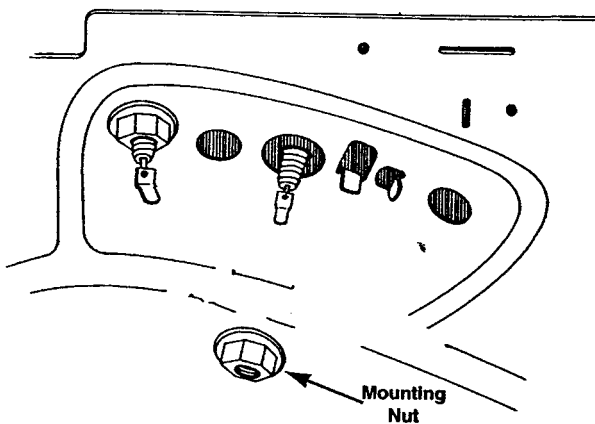
HEATING ELEMENT

The purpose of the element is to provide heat during the dry cycle if heated dry is selected and increase the water temperature during the wash cycle.

The heating element is rated at 650 Watts.

To Check Heating Element

1. Disconnect the power supply to the dishwasher.
2. Access the element wiring terminals through the access panel area. (See section on removal of ACCESS AND TOE PANEL.)
3. Perform continuity check across the element terminals. The element should be approximately 22 ohms. If OPEN, replace the element.
4. Perform continuity check from each terminal to element sheath. Should show no continuity present. If continuity present, replace element.

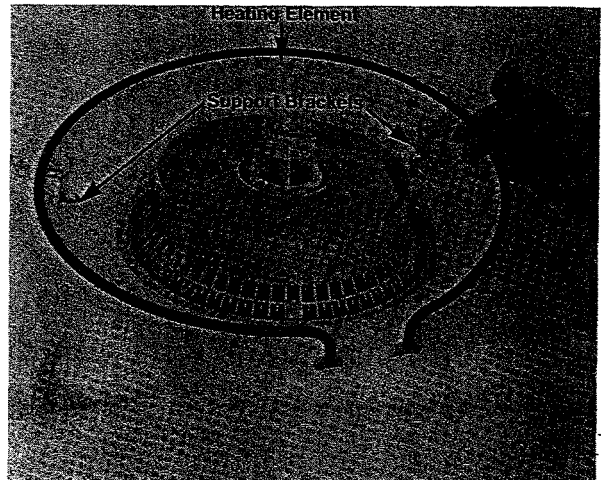


To Remove

1. Disconnect the power supply to the dishwasher.

2. Remove wires from element terminals.
3. Remove mounting nuts securing heating element to tub.

Note: With new heater brackets (started production in mid-August 1994) top end of bracket must be pried loose from the tub.



4. Release the element from the two rear heater supports. To release, pull the ends through the tub and push element back.
5. Then lift the element out of the tub.
6. Examine condition of the sealing "O" rings sandwiched between the element leads and tub basin. Replace "O" rings if damaged or stressed.

Wattage Checks

If specific wattage reading is needed, take an amperage reading at YL-BK wire of heating element. Multiply the reading by available voltage. (Amps x Voltage = Wattage)

Normal element amperage during the dry cycle is 5.0 to 5.5 amps.

THERMOSTATS

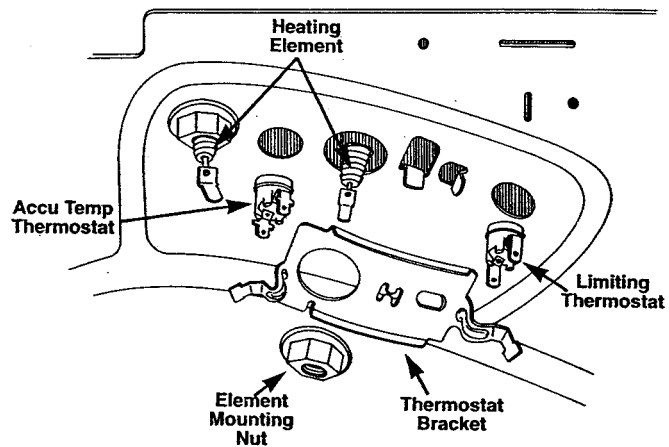
Two types of thermostats are used in the dishwashers.

One thermostat is used to sense water temperature toward the end of the wash cycle. If the water temperature is too cool, the "Heating Delay" lamp will inhibit current flow to the timer motor. This will suspend the unit in the wash cycle till the heating element brings the water temperature up to 130°-140° F. The water temp thermostat is a normally OPEN thermostat below 125° F and has 3/16" terminals. It is located in the access panel area, mounted to the tub support between the heating element terminals.

The other thermostat is used as a protective device to sense overheating by the heating element. This thermostat is located in the access panel area mounted to the tub support ceiling, on the right front area. The thermostat is a normally CLOSED switch up to 145° F and has 1/4" terminals. It's designed to OPEN if the water temperature exceeds 160° F.

To Remove (One Piece Bracket)

1. Disconnect the power supply to the dishwasher.
2. Pull down on tab and slide thermostat from recessed area in tub support ceiling.

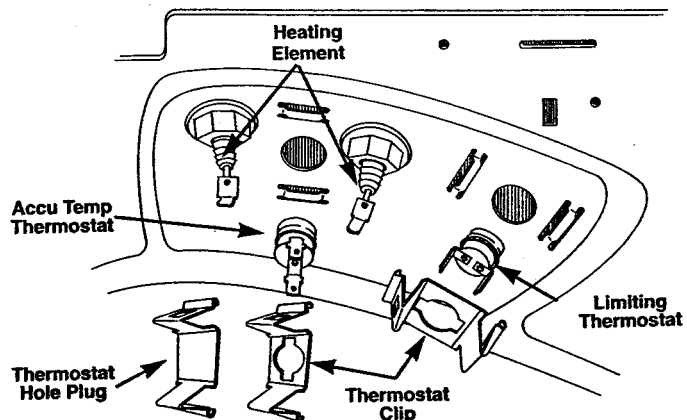


3. Remove wires from terminals.

Water Temp	3/16" terminals
Hi-Limit	1/4" terminals

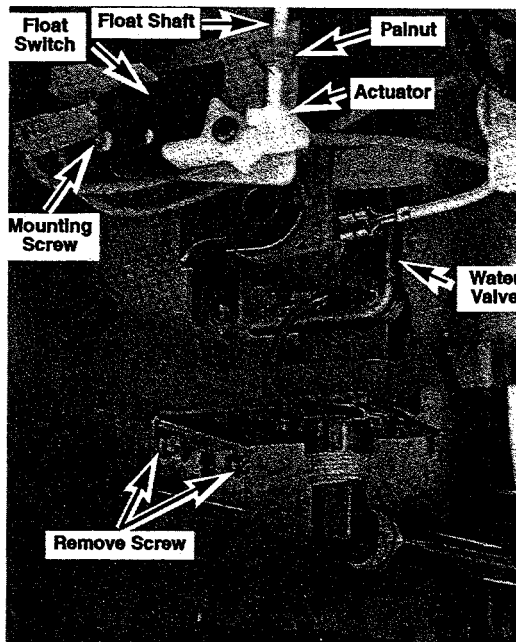
To Remove (Two Brackets)

1. Pull out on spring tab to release thermostat and bracket from slots in tub ceiling.
2. Remove wires from thermostat.
NOTE: Terminal sizes of thermostat and location of thermostats.



WATER VALVE

The valve is located in the access panel area and mounted to the left side of the tub support. Inlet water supply to valve is directly below the valve. (Turn off water to the dishwasher when servicing this area.)



All models covered in this manual use a TIMED FILL system. The timed fill will supply approximately 1 1/2 gallons of water. Proper water level is 1/2" below the heating element.

The valve is designed to operate at water pressures of 18 - 120 psi. **NOTE:** Low water pressure will affect the ability of water valve to fill the tub within the required length of time.

The water temperature should be a minimum of 120° F. However, higher

water temperatures may provide enhanced washing and drying results.

The "overflow" protection device for a timed fill system is the Float Switch. (See section on FLOAT SWITCH for more information.)

To Remove

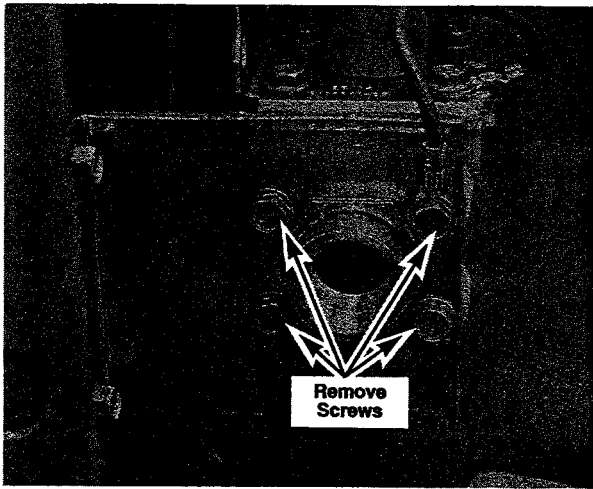
1. Disconnect the power supply to the dishwasher.
2. Remove access and toe panels. (See section on removal of ACCESS AND TOE PANELS.)
3. Shut off water supply to dishwasher.
4. Remove wires from water valve solenoid.
5. Remove two mounting screws securing water valve to the tub support.
6. Disconnect injector hose at valve outlet.

Note: This is a **non-repairable water valve**. The only servicing required is to clean the inlet screen.

To Clean Inlet Screen

Sediment on the inlet screen can hinder water flow through the valve within the required length of time for fill.

1. Disconnect the power supply to the dishwasher.
2. Remove water valve from dishwasher.
3. Remove four screws securing valve body to water inlet mounting bracket.



4. Clean screen.
5. Reassemble valve body to mounting plate and reattach ground wire to mounting bracket.

Check Valve Operation

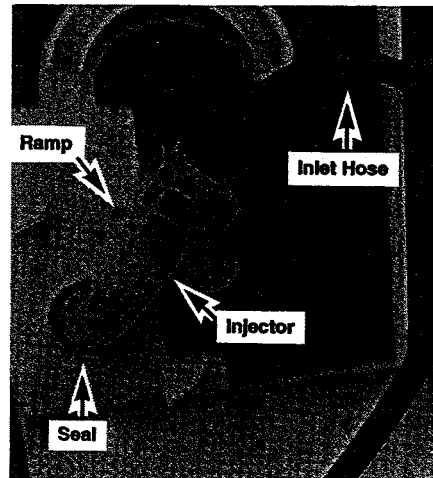
1. **NO FILL:** Perform continuity check across the valve solenoid. (Proper resistance reading will be approximately 900 ohms.) If OPEN, replace valve. Alternate Test: Use motor test cord hooked directly to the water valve. Turn on Water supply and plug-in test cord. Still no water - replace valve.
2. **OVERFILL:** If valve allows flow without power to solenoid, replace valve.

WATER INJECTOR

The injector is located in left rear corner of the tub and mounted to the exterior of the tub. Removal requires removal of the dishwasher from installation or cabinet removal on portable units.

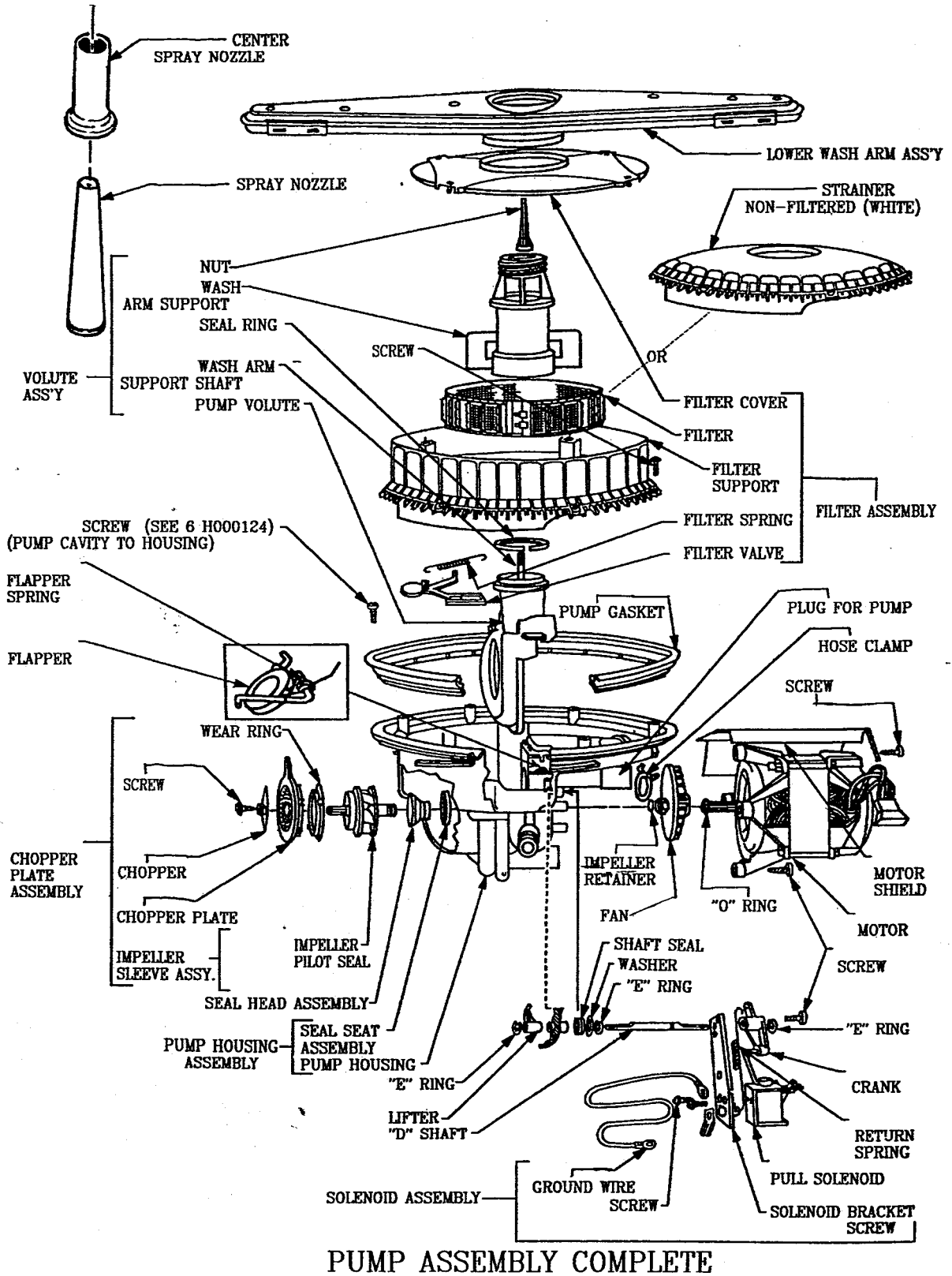
To Remove

1. On select models carefully peel insulation from the left exterior rear corner area of tub. Then gently lift insulation to expose the injector.
2. Untuck the injector hoses from the recess on side of tub assembly.
3. Grasp the upper portion of injector and pull away from tub, while rotating the injector in a clockwise direction to the two-o'clock position. (This will allow passage over the "ramp" protruding from the tub wall.) Note: Examine seal washer between injector and tub wall.



To Reinstall

1. Position injector at two-o'clock and rotate counter-clockwise while pressing inward. Injector will slide "up the ramp" then snap into position.
2. Return injector hose to recess in tub wall.
3. Return insulation wrap over area and tape down.



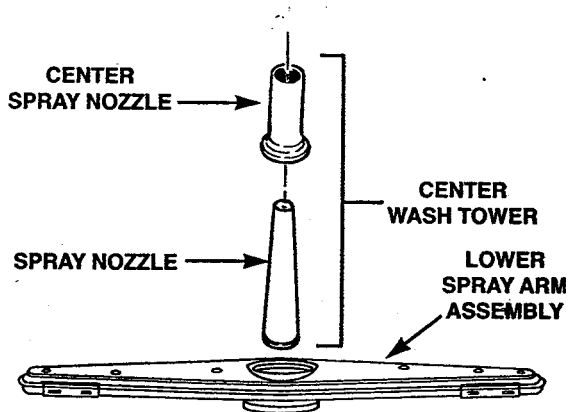
PUMP ASSEMBLY

The pump assembly consists of a drain solenoid, pump and electric motor combined to provide drain and recirculating functions for the dishwasher cycles. If a failure is detected inside the pump assembly, individual parts in the pump assembly should be replaced.

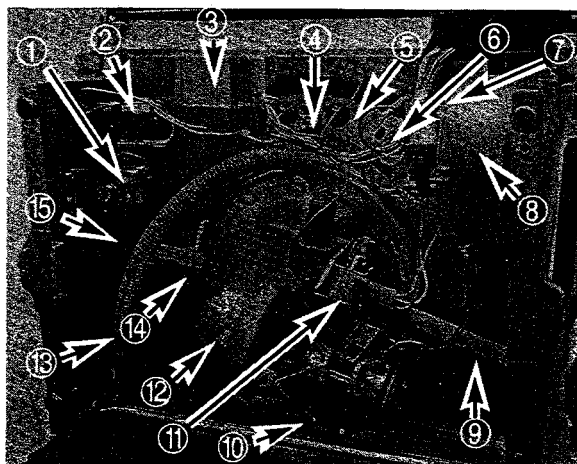
Some repairs may be made to the assembly while still in the dishwasher. However, for ease of service, removal of the pump and motor assembly has been simplified.

To Remove

1. Disconnect the power supply to the dishwasher.
2. Remove lower rack assembly.
3. While holding the lower spray arm, unscrew center wash tower. The remove tower and spray arm.



4. Remove access and toe panels. (See section on ACCESS AND TOE PANELS.)
5. Loosen drain hose clamp (from side of pump) and disconnect drain hose from pump housing. Use a bowl or towel to catch about 1 pint of water that will come out.
6. Loosen upper wash arm hose clamp (right side of pump housing) and disconnect hose from pump. NOTE: Models without the upper wash arm hose, a hose plug and clamp is installed on the pump assembly outlet. The hose plug does not need to be removed to lift pump assembly from dishwashers.
7. Disconnect wire harness connector from drive motor.
8. Remove Green ground wire leading from drain solenoid bracket to tub support. This is done by removing the front screw on the tub support.
9. Disconnect wire harness from drain solenoid.

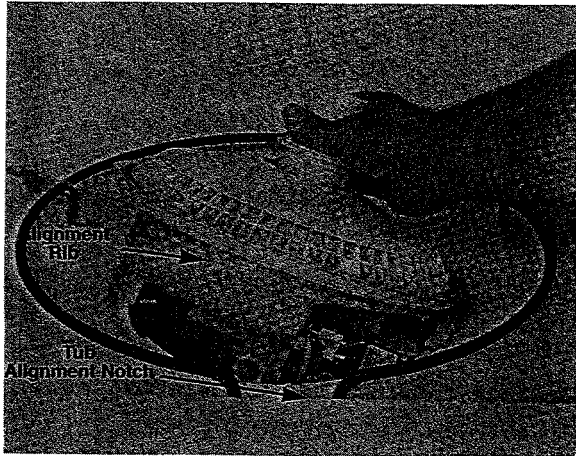


- | | | |
|-------------------------|------------------------|-------------------------|
| 1. Water Valve | 6. HI-Limit Thermostat | 11. Drain Solenoid |
| 2. Float Assembly | 7. Start Relay | 12. Pump Housing |
| 3. Junction Box | 8. Blower Assembly | 13. Drain Hose |
| 4. Accu-Temp Thermostat | 9. Upper Spray Arm | 14. Clamp Ring Handle |
| 5. Heating Element | 10. Motor | 15. Water Injector Hose |

10. Gently pull the clamping ring handle (left side of pump) downward and push toward the rear of the dishwasher. Clamping ring tab

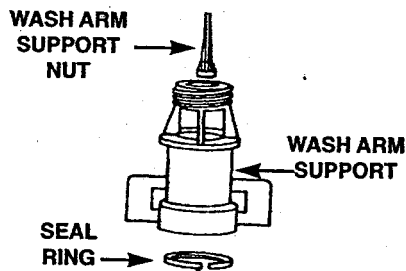
should align with detent in opening of tub support ceiling.

11. Lift assembly 3/4", then tilt right side down to allow motor assembly to clear tub opening. Continue to lift assembly clear of dishwasher tub and remove from dishwasher.

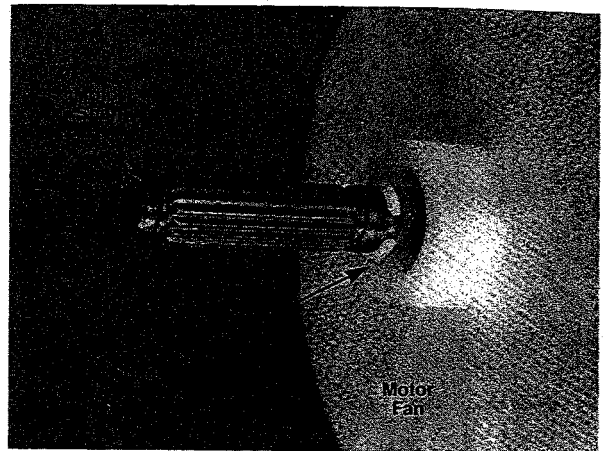


To Disassemble

1. Remove 3 Torx screws securing strainer to pump housing. Note: Orientation of cover requires the lower flange to sit into the deep reservoir of the pump housing.



2. Unscrew wash arm support nut from pump volute, then lift to remove. To reinstall, reposition seal ring into the lower hub of the wash arm support prior to remounting onto pump volute.



Chopper Plate Assembly

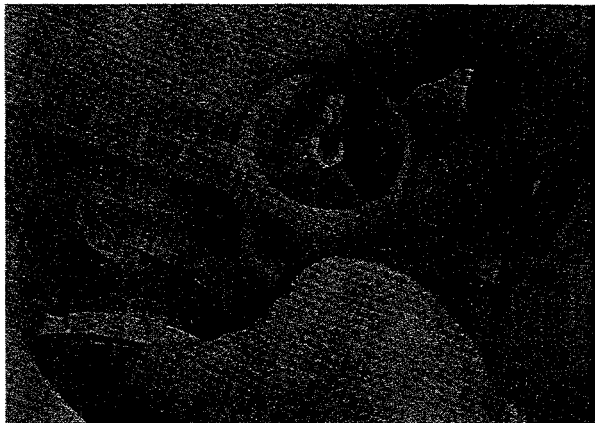
Remove **Chopper Plate Assembly** with pump impeller and seal. **Note:** Center shaft of the pump impeller is splined to fit onto the motor shaft and screwed into the motor fan.

1. With one hand, hold the chopper blade and with other hand rotate motor fan counter-clockwise (looking from shaft end). This is a left hand thread. Continue until fan is released from impeller hub.

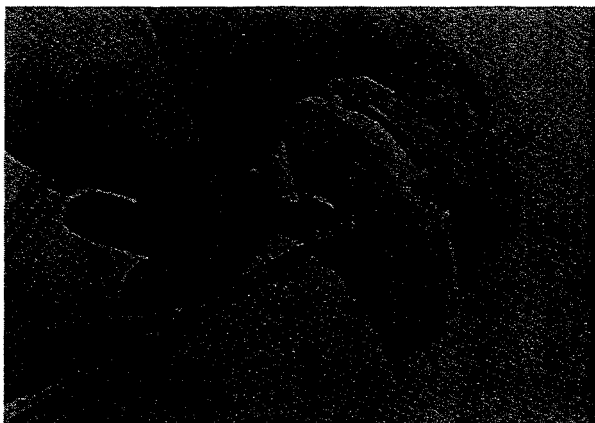


2. To remove assembly from housing, grasp tab on chopper plate pulling

outward while rotating clockwise. Once chopper plate is disengaged from pump housing, pull assembly outwardly, yet firmly to slide assembly off motor shaft. For reinstallation, reverse procedure.



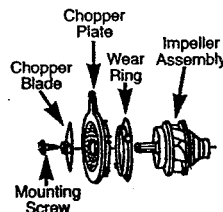
3. To disassemble Chopper Plate Assembly. Remove chopper blade mounting screw, then separate chopper plate, wear ring and impeller with seal. **Note:** Wear ring tabs to be located between vertical ribs on chopper plate.



4. When reinstalling impeller with seal, the seal must be seated squarely in

the impeller. This will prevent water leaks. Carbon ring should always be clean.

Do not lubricate carbon ring. (Replacement pump impeller includes new seal.)



Volute

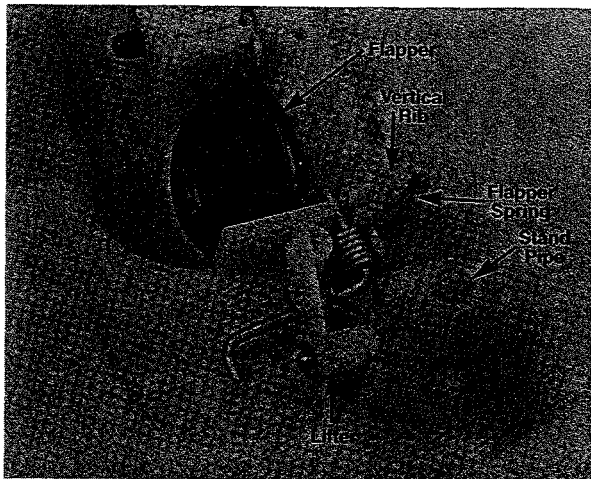
Volute removal. Remove 3 torx screws securing pump volute. Lift volute upward away from pump housing. Drain flapper and water seal seat in pump assembly are now accessible.



Drain Flapper

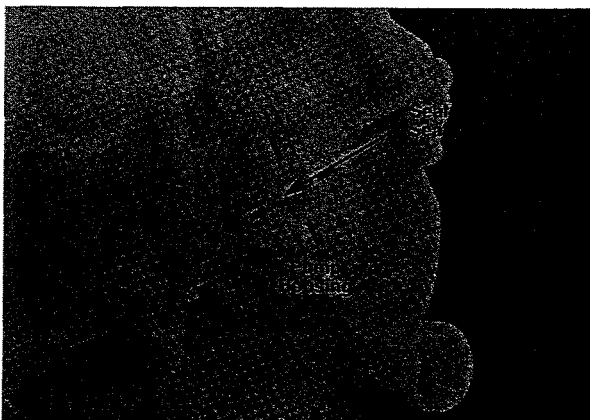
Drain Flapper assembly removal. Note: The hook end of the spring is over long arm of the drain flapper. The straight end of spring should be on the side of

the small vertical pump housing rib - side closest to standpipe.



Water Seal Seat

Water Seal Seat removal. For ease of service removal of the motor is necessary. (See MOTOR ASSEMBLY removal.)

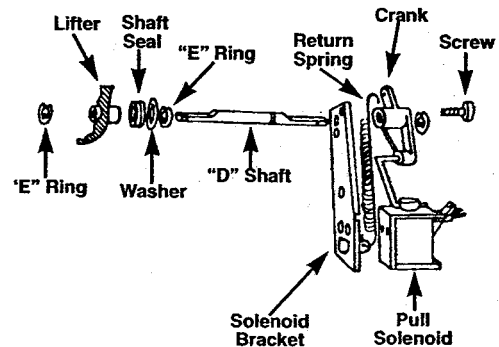


DO NOT USE OIL OR OTHER LUBRICANTS ON SEAL SEAT SURFACES. If lubricant is required, use water. Insure seal seat is all the way in

the recess, check visually for complete sealing through the slots behind the seal seat. Note: A water leak may occur if seal is not down all the way or is not resting squarely in the housing recess.

Drain Solenoid and Lifter Assembly

Drain Solenoid and Lifter Assembly removal.

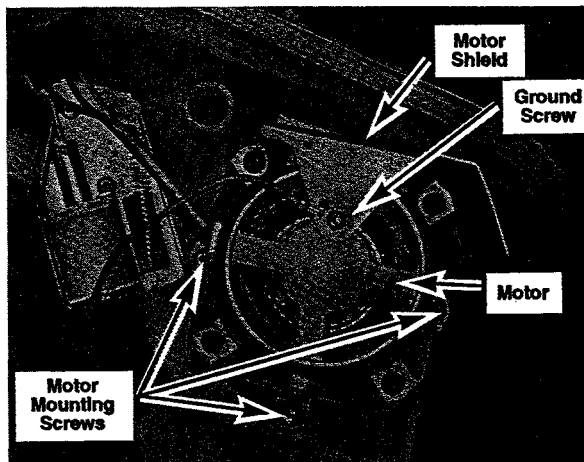


1. Disconnect Return Spring from Crank.
2. Remove stainless "E" clip securing Crank to "D" Shaft. Then remove Crank.
3. Remove 3 Torx screws securing Solenoid Bracket to Pump Housing.
4. Remove (Yellow) Chromate "E" Ring and Washer from "D" Shaft. **NOTE:** The other "E" rings are stainless steel. **IMPORTANT TO REPLACE IN CORRECT ORDER TO PREVENT CORROSION.**
5. Push "D" Shaft into pump housing and remove shaft. (Note orientation of Lifter.)

- Remove remaining "E" Ring from "D" Shaft to remove Lifter.

Motor

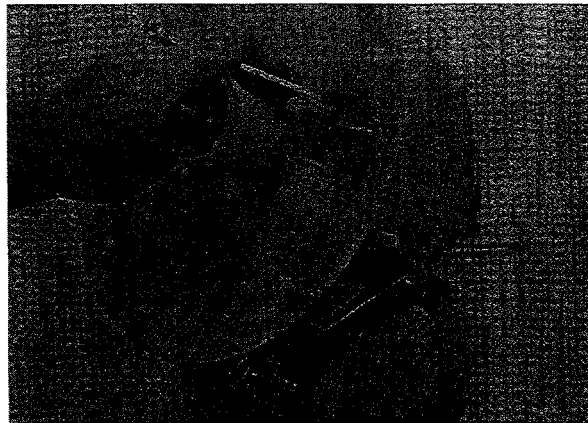
Motor removal. (See section on CHOPPER PLATE removal.)



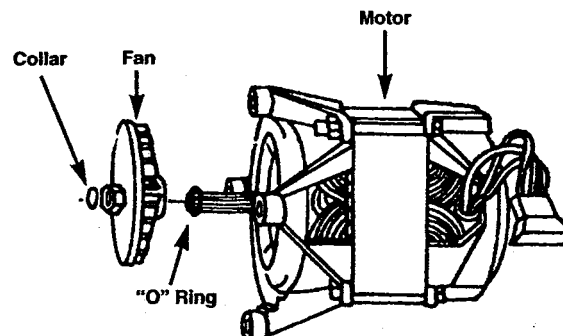
- Remove ground screw from motor shield and remove ground wire and shield.
- Remove 4 mounting screws securing motor to pump housing.
- Reinstallation of the motor requires proper centering of the motor shaft. **Note: To do this, the Chopper Plate assembly with impeller must be in position.**

A. Align motor screw mounting holes with holes in pump housing. They slide motor shaft into center of the drain impeller assembly. Then screw the 4 motor mounting screws into pump housing.

B. While keeping the Chopper Blade from turning, lightly push the motor fan toward the drain impeller and rotate the motor fan in a counter-clockwise direction.



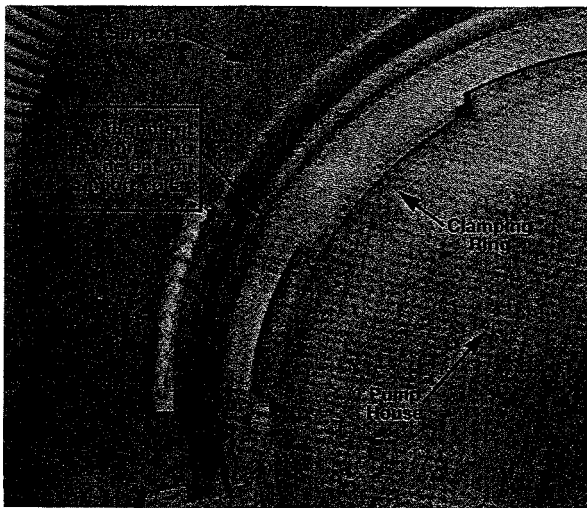
Replacement motors will be provided with new fan, collar and "O" ring already assembled to motor shaft.



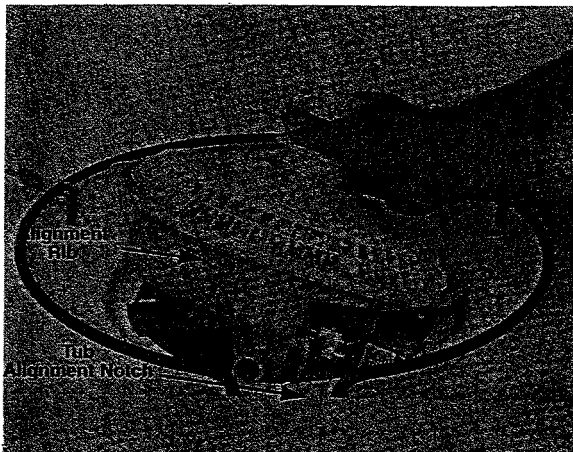
REPLACEMENT MOTOR ASSEMBLY

To Reinstall Pump Assembly

- Check proper engagement of gasket to pump housing prior to reinstallation of pump assembly to dishwasher.
- Check positioning of clamping ring. Move ring forward between the tub and tub support to allow alignment rib on housing to clear. Position tab on ring to align with the detent on the tub support ceiling.



3. Tilt motor assembly of pump into opening first.
4. Position the alignment rib on the front of the pump housing with the notch in the tub opening.



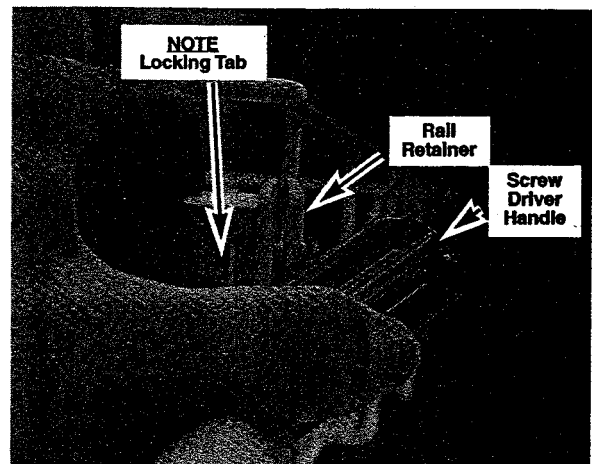
Then lower the pump assembly down into the opening.

5. Pull down on clamping ring handle and pull forward to lock handle on ribs protruding down from tub support ceiling. Pump assembly will be drawn down and compress pump gasket to dishwasher tub.
6. Grasp pump assembly inside dishwasher and check tightness of

pump to tub. If necessary loosen locking ring and reposition pump.

UPPER RACK REMOVAL

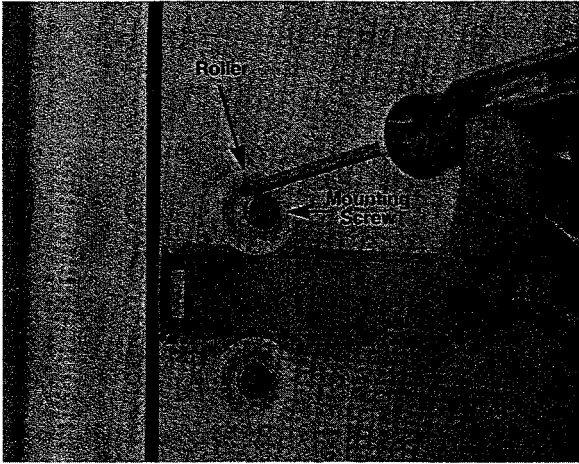
1. To remove the front rack rail retainer, use the handle of a screwdriver and press the handle on the outside edge of the retainer.



2. Then roll inward toward the rack while pressing on the retainer. This will disengage the locking tab from the rail. Slide the retainer from the rail. Do this for both rails.
3. Remove upper rack.

RACK ROLLERS - Tub Wall

1. To remove, partially unscrew roller mounting screw. Use end of torx driver against side wall of roller and press roller back against tub wall. This will disengage steel washer from shoulder on mounting screw behind roller.



2. Finish removing roller mounting screw. **Note:** Use caution when removing screw so as not to lose the steel washer behind the roller.

SECTION 4. GENERAL INFORMATION

Information covered in this section includes:

Specifications

Warranty

Models

Cycles and Options

Schematics

SPECIFICATIONS

BASIC DIMENSIONS

Height = 33-3/4" - 35-1/4"

Width = 24"

Depth = 22-3/4"

ELECTRICAL SUPPLY

120 Volts AC / 60 HZ All models require 15 amp fuse.

WATER SUPPLY

Water pressure should be 15-120 p.s.i. (1.06 - 8.44 kg/sq. cm.). Water temperature should be 120° F when it enters the dishwasher.

DRAIN

1/2" I.D. flexible drain hose furnished. High drain loop positioned on side of dishwasher. Must maintain minimum 32" height.

MOTOR AND PUMP

1/6 horsepower motor, non-reversing pump with solenoid actuated drain valve.

WEIGHT (CRATED/UNCRATED)

DW710, DW730, DW760 Approximately 100 lbs. / 85 lbs.

DW860, DW960, DW980 Approximately 115 lbs. / 100 lbs.

Added weight due to additional insulation.

CUSTOM PANEL DIMENSIONS

Door Panel Insert 1/4" x 18-3/16" x 23-9/16"

Access Panel Insert 1/4" x 4-5/8" x 23-11/16"

WARRANTY

DISHWASHER WARRANTY

Full One Year Warranty

Any part which fails in normal home use during the first year after the date of original retail purchase, will be repaired or replaced free of charge.

Limited Two Year Warranty

Any part which fails in normal home use during the second year from the date of original retail purchase, will be repaired or replaced free of charge for the part itself, with the owner paying all other costs, including labor.

Limited Five Year Warranty on Wash System and Solid State Controls

Any parts of the system including the complete power module assembly, center spray nozzle, spray arms, top wash arm hose, motor, AND—on Computer Touch Control Models only—any microprocessor and touch pad assemblies which fail in normal home use during the second through the fifth year from the date of original retail purchase, will be repaired or replaced free of charge for the part itself, with the owner paying all other costs, including labor.

Limited Five Year Rack Warranty (Available on Select Models)

Should the Duralon™ coated racks rust during the five year period starting from the date of original retail purchase, repair or replacement will be made free of charge for the part itself, with the owner paying all other costs, including labor.

FULL TWENTY Year Warranty Against Leaks on Dishwasher Tub and Door Liner

Should a water leak develop in the tub or door liner in normal home use during the TWENTY YEAR period starting from the date of original retail purchase, repair or replacement of the tub and/or door liner will be made FREE OF CHARGE. These full warranties and the limited warranties apply when the appliance is located in the United States or Canada. Appliances located elsewhere are covered by the limited warranties only, which include parts which fail during the first year.

Canadian Residents

This warranty covers only those appliances installed in Canada that have been listed with Canadian Standards Association unless the appliances are brought into Canada due to transfer of residence from the United States to Canada.

To Receive Warranty Service

First: Call or write the JENN-AIR dealer from whom your appliance was purchased or the authorized service firm designated by the dealer.

If you have moved from the selling dealer's service area call or write any authorized JENN-AIR dealer or authorized service firm at your new location. Check the telephone directory yellow pages to identify the dealer or service firm in your area.

Second: Should your contact with the dealer or the service firm fail to satisfactorily resolve the problem, contact the manager of the dealership or the manager of the service firm for assistance.

Third: Should you not receive satisfactory warranty service from one of the above or need help in identifying an authorized service firm write Jenn-Air Customer Assistance, c/o Maytag Customer Service, P.O. Box 2370, Cleveland, TN 37320-2370, and arrangements for warranty service will be made. If the problem is urgent, call Jenn-Air Customer Assistance, c/o Maytag Customer Service at (800) 688-1100.

When contacting Jenn-Air Customer Assistance, c/o Maytag Customer Service be sure to include the model and serial number of your appliance, the name and address of the dealer from whom you purchased the appliance and the date of purchase.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Should you still have a problem, write to: Major Appliance Consumer Action Panel, 20 North Wacker Drive, Chicago, Illinois 60606. MACAP is an industry sponsored but independent group of consumer experts who receive and act on complaints from appliance owners.

NOTE: When writing about an unsolved service problem, please include the following information:

- (a) Your name, address and telephone number;
- (b) Model number and serial number (found on the upper left corner of the tub opening) of your appliance;
- (c) Name and address of your dealer and date the appliance was bought;
- (d) A clear description of the problem you are having;
- (e) Water hardness, detergent brand and amount, water temperature, and cycle used.



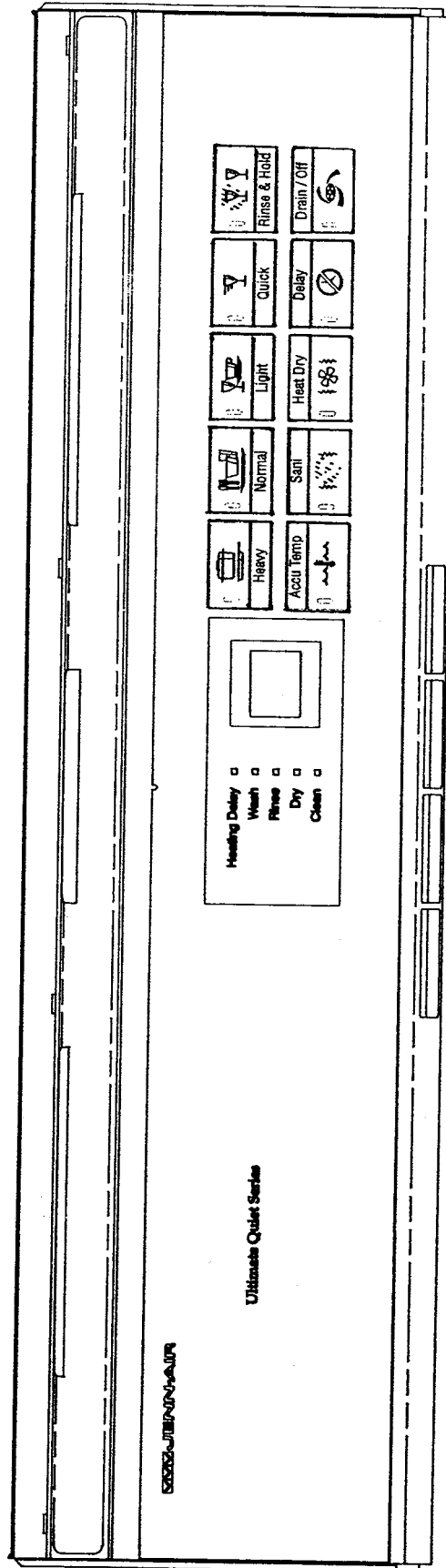
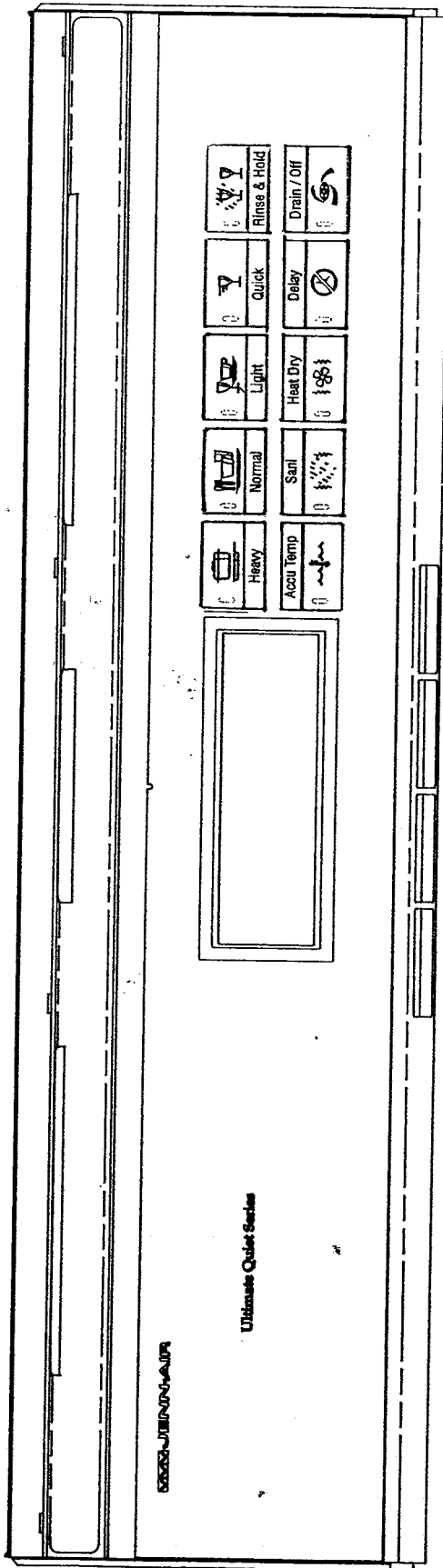
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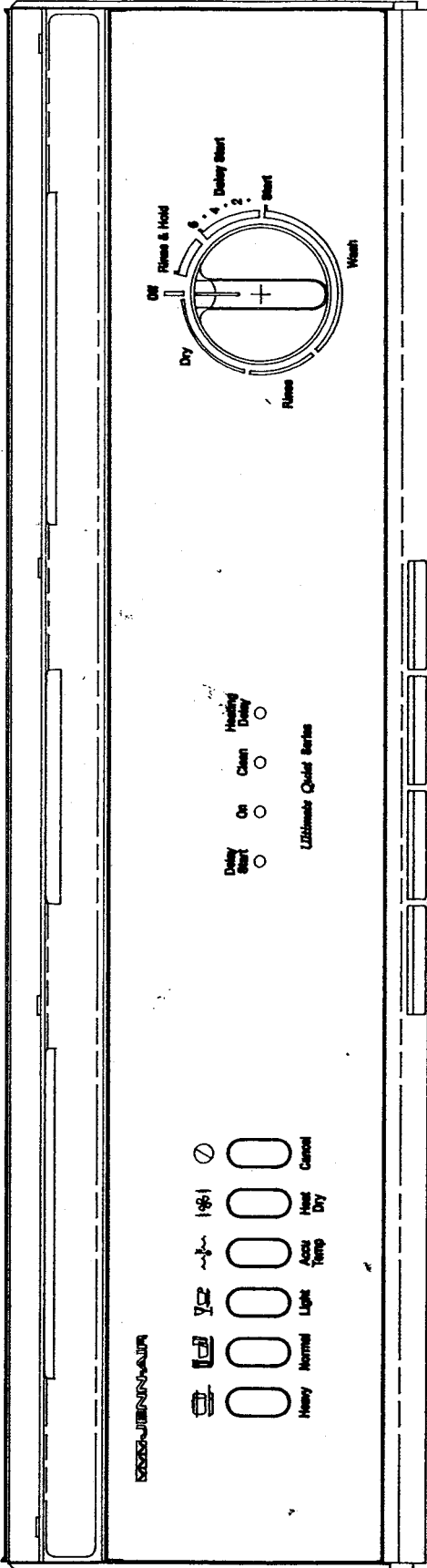
Part No. 6-913345

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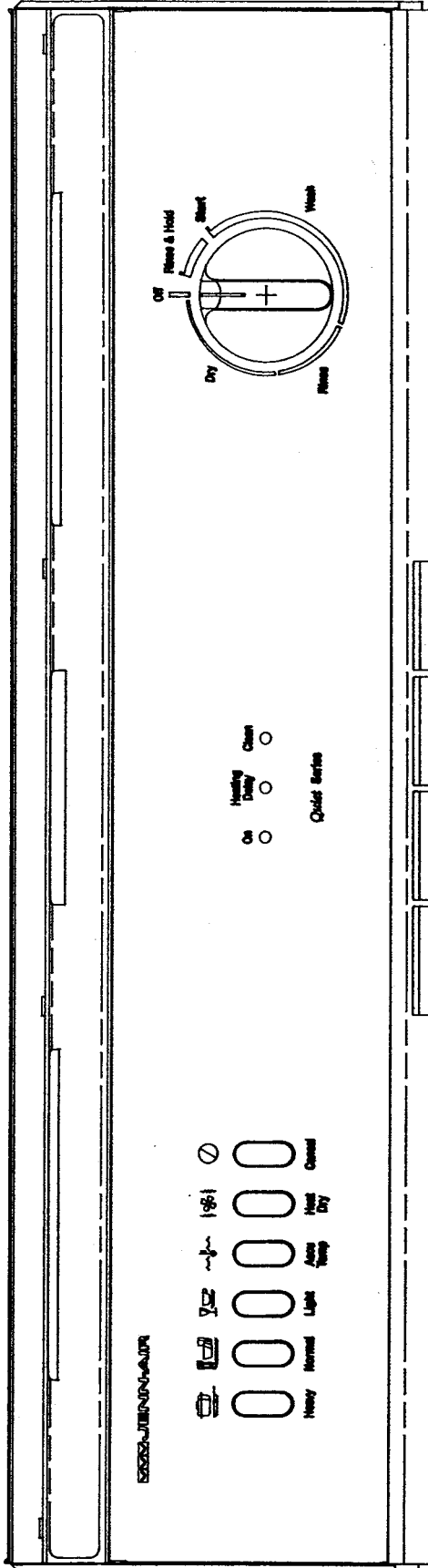
MP Litho U.S.A.

MODELS

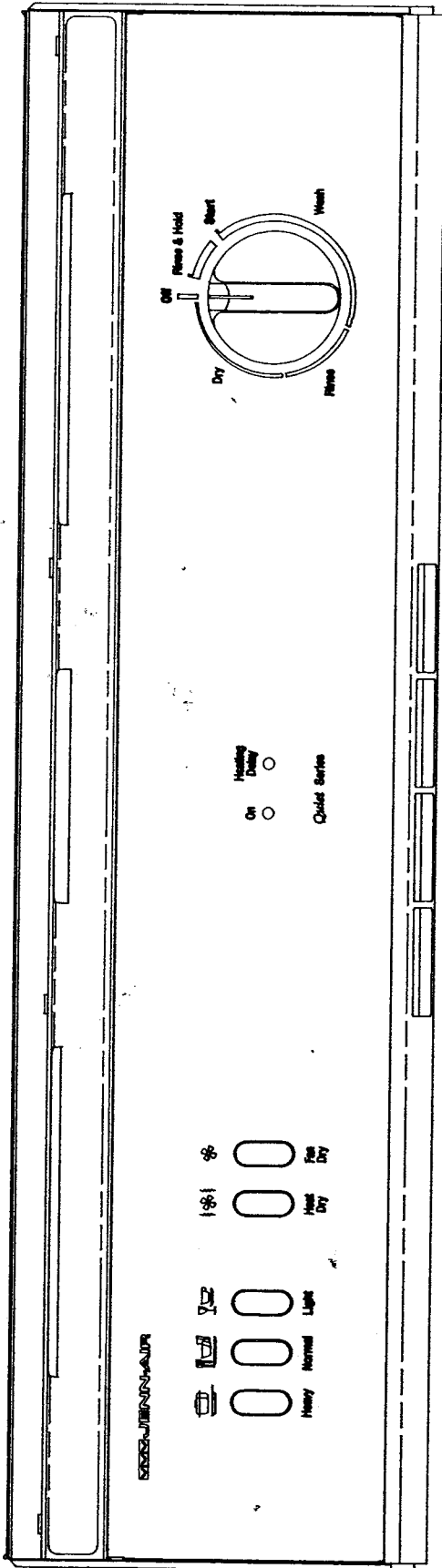




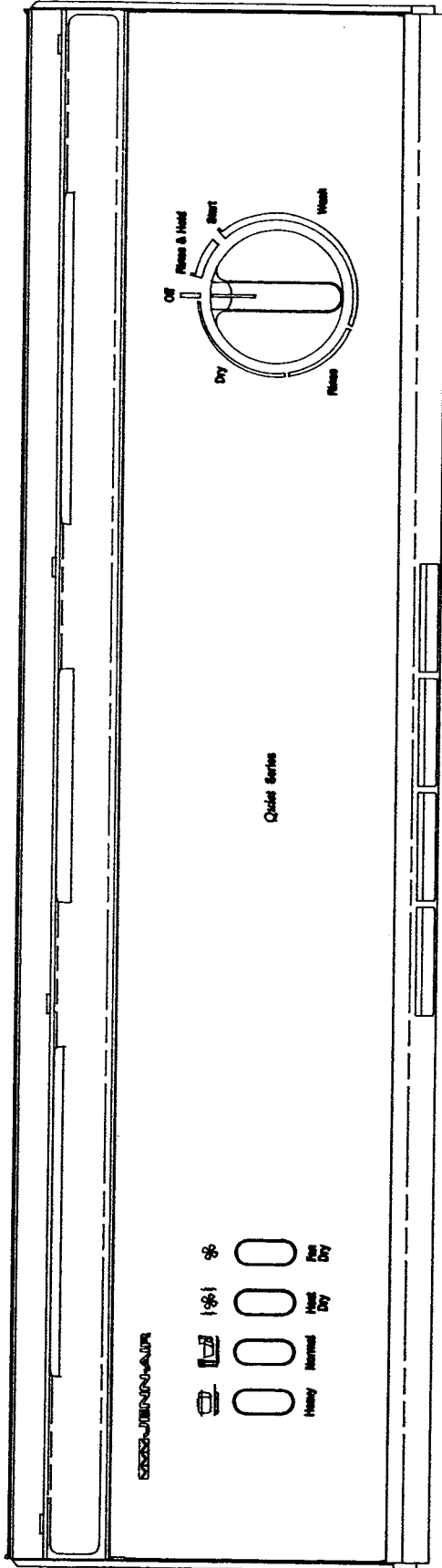
860 MODELS



760 MODELS



730 MODELS



710 MODELS

CYCLES and OPTIONS

CYCLE SETTING	AVAILABLE	CYCLE SEQUENCE	APPROX. CYCLE TIME	APPROX. WATER USAGE	
			MIN.		
Heavy	DW980, DW960	Pre-wash Rinse Rinse	Electronic	99	10.5 gal.
	DW860, DW760	Ext. Main Wash	Push Button	90	39.8 Liters
	DW730, DW710	Rinse Rinse Rinse Dry			
Normal	DW980, DW960	Pre-wash Rinse Rinse	Electronic	89	9 gal.
	DW860, DW760	Main Wash	Push Button	80	34 Liters
	DW730, DW710	Rinse Rinse Dry			
Light	DW980, DW960	Pre-wash Ext. Rinse	Electronic	69	7.5 gal.
	DW860, DW760	Ext. Wash	Push Button	70	28.4 Liters
	DW730, DW710	Rinse Rinse Dry			
Quick	DW980, DW960	Wash Rinse Rinse	Electronic	15	4.5 gal 17 Liters
Rinse & Hold	DW980, DW960 DW860, DW760 DW730, DW710	Rinse	Electronic Push Button	5 5	1.5 gal 6.7 Liters

OPTIONS

Accu Temp Water Heating

Selection of Accu Temp Water Heating option ensures that water is heated to the proper water temperature for best results.

Sani

Selection of Sani option turns the heating element on during all washers and rinses. The Sani option helps maintain water temperature and improve drying results.

Heat Fan Dry

This option provides heat during the Fan Dry cycle for faster drying. Heat Dry can be turned on or off any time during a cycle or delay (except after the first minute of a Quick cycle).

Fan Dry

This option provides energy-efficient drying. When Fan Dry is selected, the element is turned off and dishes are dried by room temperature air which is circulated throughout the tub by a fan.

Delay (Electronic Touch Models Only)

This option will delay or interrupt any cycle for a preset period. The dishwasher automatically starts as soon as the delay expires. This option can also be used to interrupt a cycle.

Drain/Off (Electronic Touch Models Only)

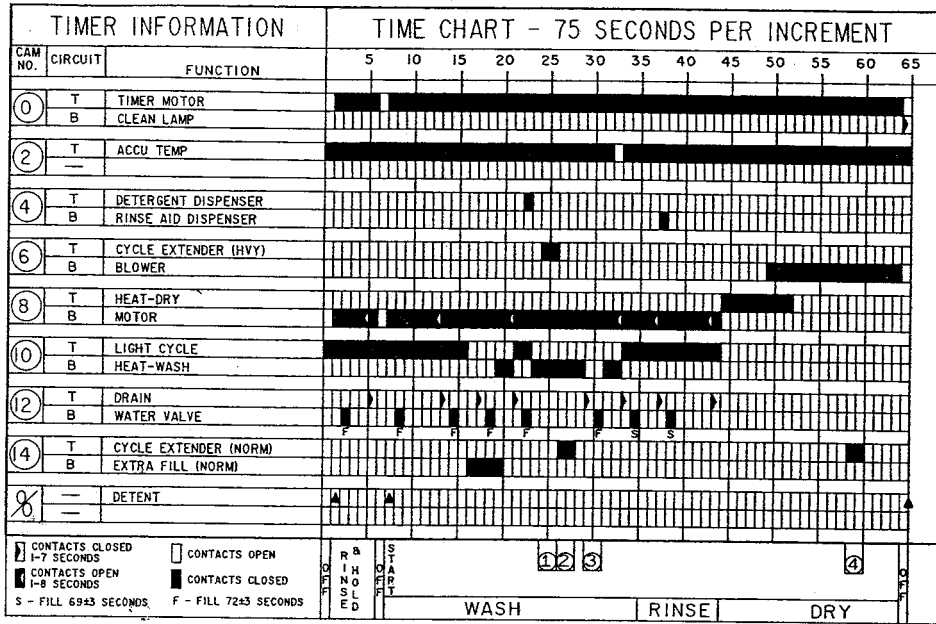
When the Drain/Off pad is pressed, the dishwasher will drain for approximately 1 minute. To cancel, press the pad again; the dishwasher will immediately shut off.

Clean Indicator

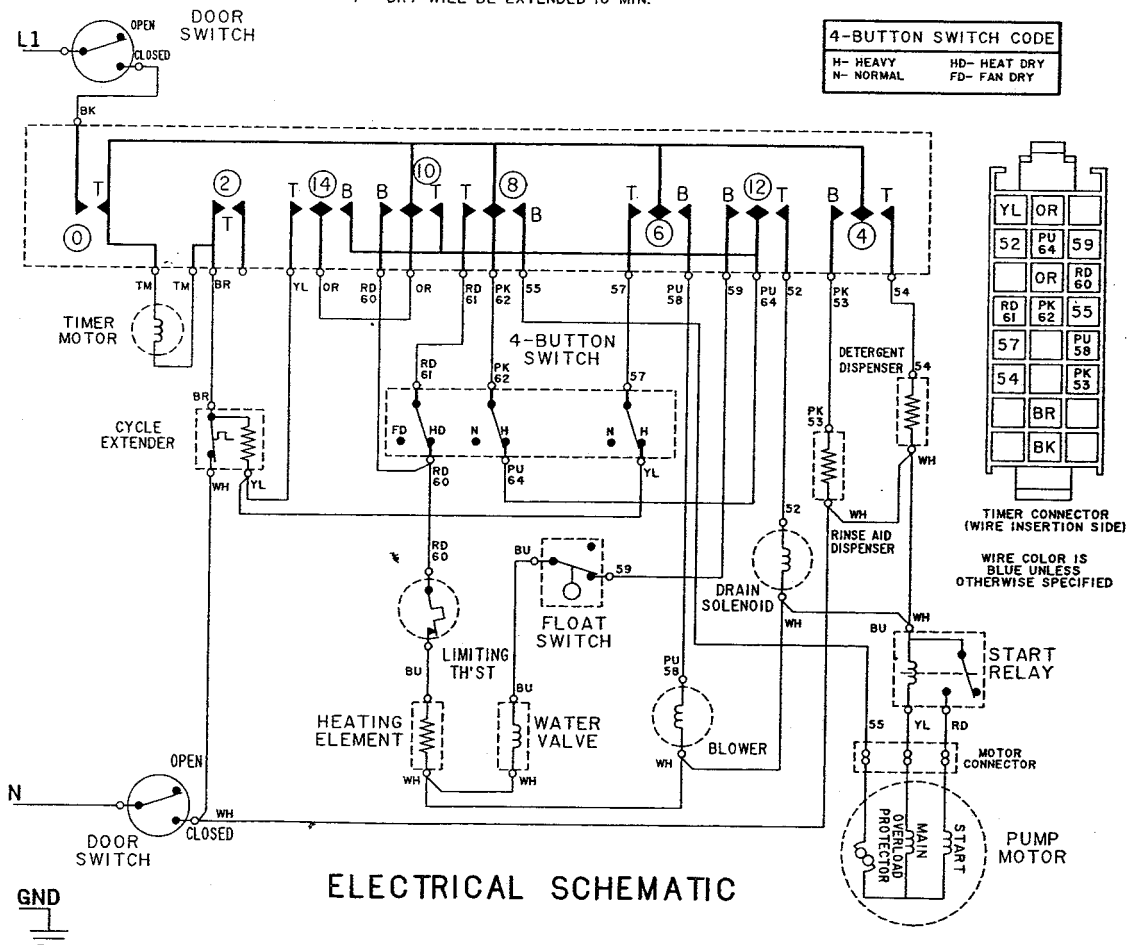
A Clean indicator light glows from the end of the dry phase until the knob is advanced to "Off" on push button models. On the electronic models a "Clean" indicator light will glow or the word "Clean" is displayed until the door is opened.

SCHEMATICS

DW710
Prior to Series "B1"



- 1 - WASH WILL BE EXTENDED 10 MIN IF HEAVY CYCLE IS SELECTED.
- 2 - WASH WILL BE EXTENDED 10 MIN.
- 3 - ADDITIONAL DRAIN AND FILL IF HEAVY CYCLE IS SELECTED.
- 4 - DRY WILL BE EXTENDED 10 MIN.

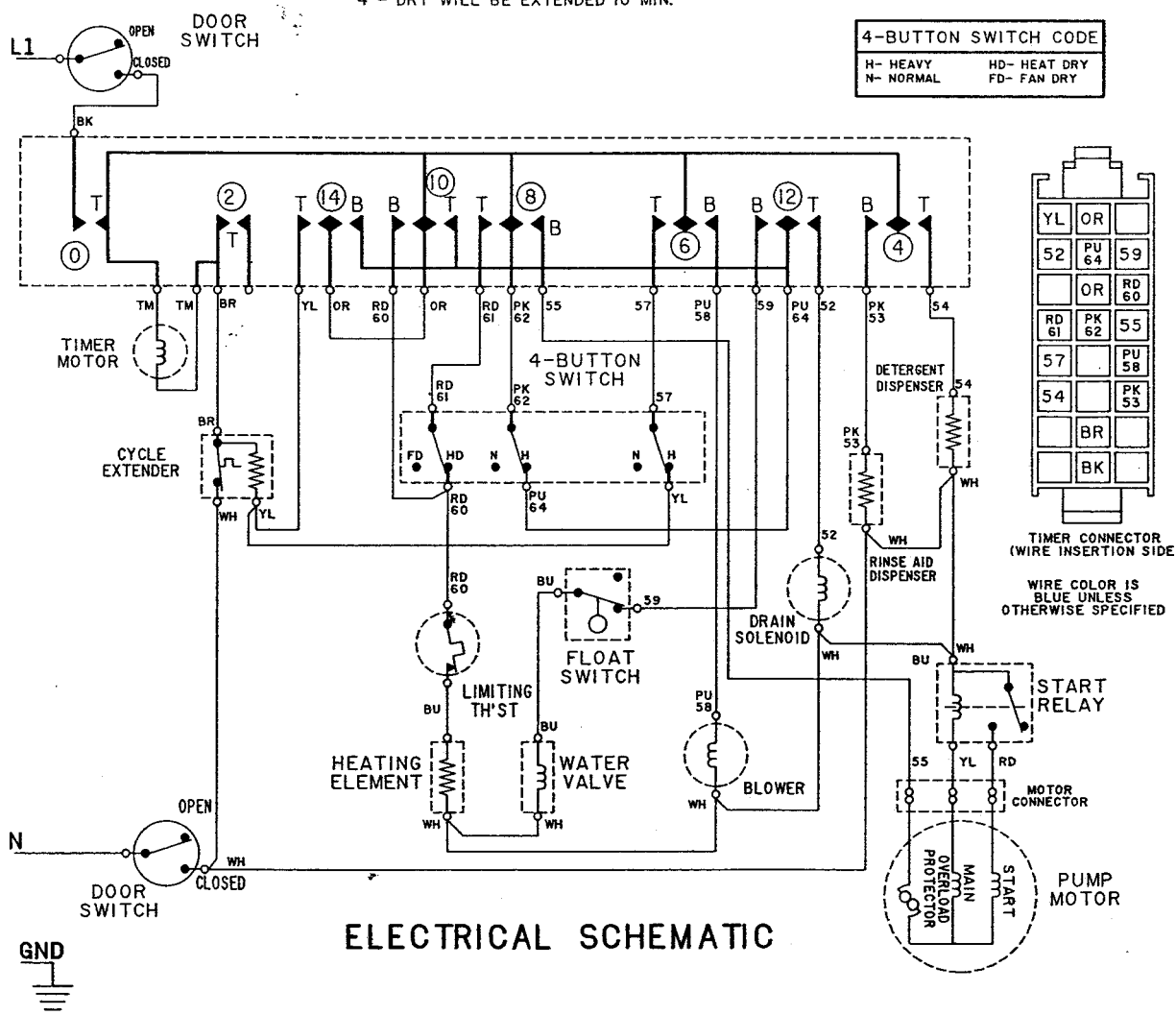


DW710
Series "B1"

TIMER INFORMATION			TIME CHART - 75 SECONDS PER INCREMENT												
CAM NO.	CIRCUIT	FUNCTION	5	10	15	20	25	30	35	40	45	50	55	60	65
0	T	TIMER MOTOR	[Solid bar from 0 to 65]												
	B	CLEAN LAMP	[Dashed bar from 0 to 65]												
2	T	ACCU TEMP	[Solid bar from 0 to 30]												
	B		[Dashed bar from 0 to 30]												
4	T	DETERGENT DISPENSER	[Solid bar from 15 to 20]												
	B	RINSE AID DISPENSER	[Solid bar from 35 to 40]												
6	T	CYCLE EXTENDER (Hvy)	[Solid bar from 25 to 30]												
	B	BLOWER	[Solid bar from 45 to 60]												
8	T	HEAT-DRY	[Solid bar from 0 to 65]												
	B	MOTOR	[Solid bar from 0 to 65]												
10	T	LIGHT CYCLE	[Dashed bar from 0 to 65]												
	B	HEAT-WASH	[Solid bar from 0 to 65]												
12	T	DRAIN	[Dashed bar from 0 to 65]												
	B	WATER VALVE	[Dashed bar from 0 to 65]												
14	T	CYCLE EXTENDER (NORM)	[Solid bar from 20 to 25]												
	B	EXTRA FILL (NORM)	[Solid bar from 30 to 35]												
∞		DETENT	[Solid bar from 0 to 65]												

CONTACTS CLOSED 1-7 SECONDS
 CONTACTS OPEN 1-8 SECONDS
 F - FILL 6943 SECONDS
 S - FILL 7243 SECONDS
 CONTACTS OPEN
 CONTACTS CLOSED

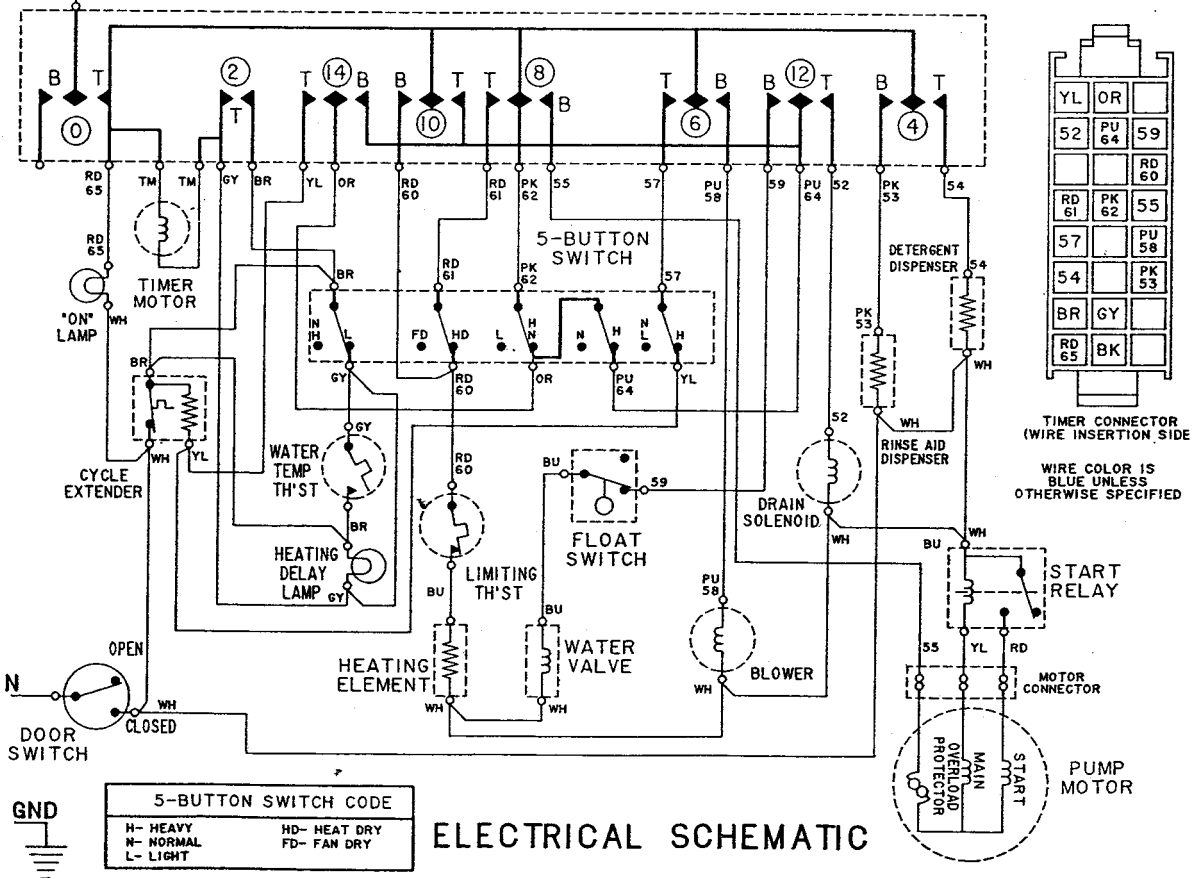
- 1 - WASH WILL BE EXTENDED 10 MIN IF HEAVY CYCLE IS SELECTED.
- 2 - WASH WILL BE EXTENDED 10 MIN.
- 3 - ADDITIONAL DRAIN AND FILL IF HEAVY CYCLE IS SELECTED.
- 4 - DRY WILL BE EXTENDED 10 MIN.



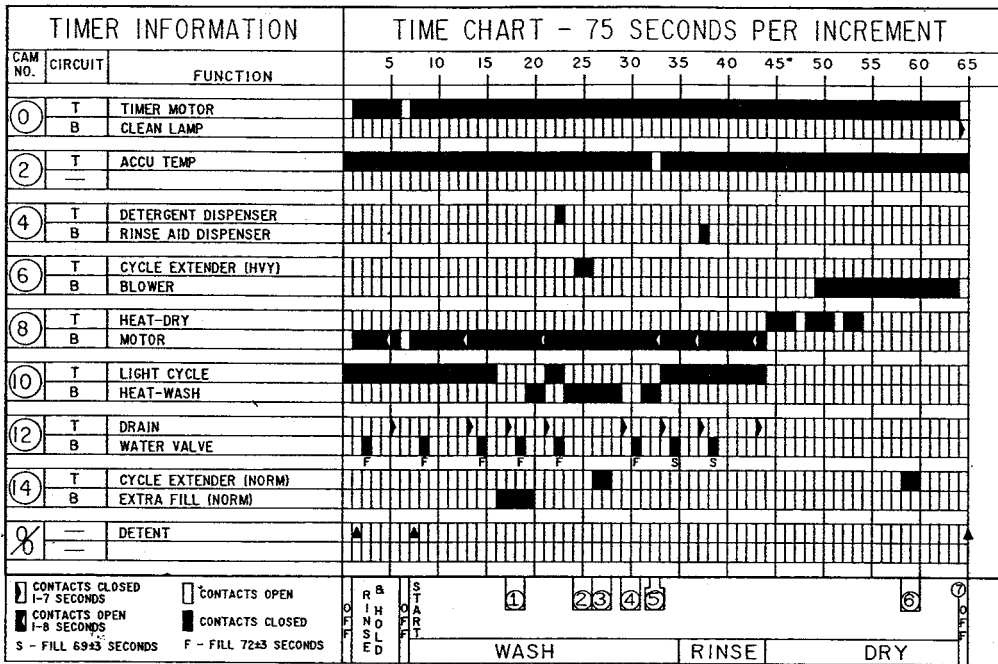
ELECTRICAL SCHEMATIC

TIMER INFORMATION			TIME CHART - 75 SECONDS PER INCREMENT												
CAM NO.	CIRCUIT	FUNCTION	5	10	15	20	25	30	35	40	45	50	55	60	65
0	T	TIMER MOTOR	[Active from 0 to 65]												
	B	CLEAN LAMP	[Active from 0 to 65]												
2	T	ACCU TEMP	[Active from 0 to 65]												
	B														
4	T	DETERGENT DISPENSER	[Active from 0 to 65]												
	B	RINSE AID DISPENSER	[Active from 0 to 65]												
6	T	CYCLE EXTENDER (HVY)	[Active from 0 to 65]												
	B	BLOWER	[Active from 0 to 65]												
8	T	HEAT-DRY	[Active from 0 to 65]												
	B	MOTOR	[Active from 0 to 65]												
10	T	LIGHT CYCLE	[Active from 0 to 65]												
	B	HEAT-WASH	[Active from 0 to 65]												
12	T	DRAIN	[Active from 0 to 65]												
	B	WATER VALVE	[Active from 0 to 65]												
14	T	CYCLE EXTENDER (NORM)	[Active from 0 to 65]												
	B	EXTRA FILL (NORM)	[Active from 0 to 65]												
8	-	DETENT	[Active from 0 to 65]												

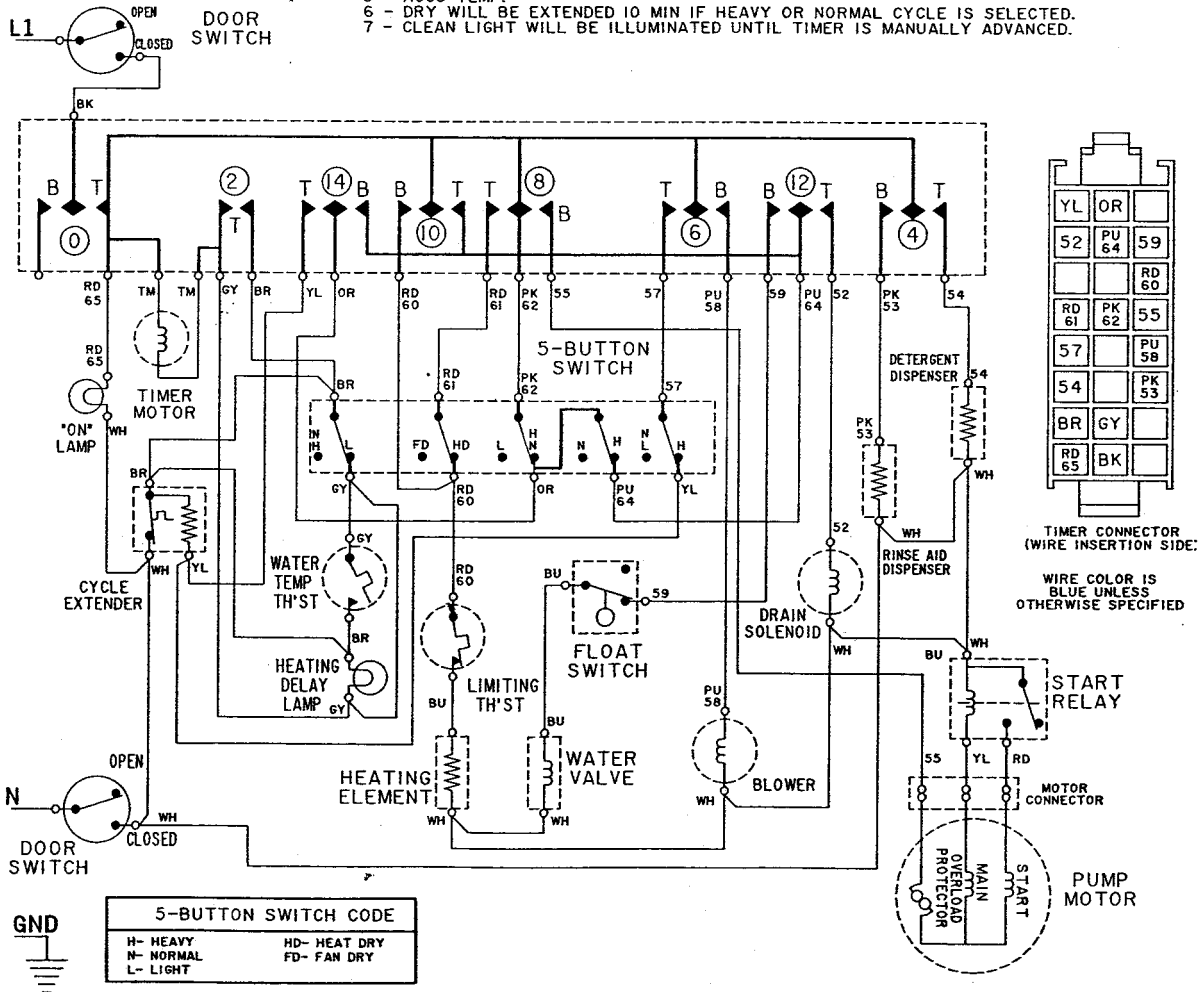
- 1 - THIS DRAIN AND FILL WILL NOT OCCUR IF LIGHT CYCLE IS SELECTED.
- 2 - WASH WILL BE EXTENDED 10 MIN IF HEAVY CYCLE IS SELECTED.
- 3 - WASH WILL BE EXTENDED 10 MIN IF HEAVY OR NORMAL CYCLE IS SELECTED.
- 4 - ADDITIONAL DRAIN AND FILL IF HEAVY CYCLE IS SELECTED.
- 5 - ACCU TEMP.
- 6 - DRY WILL BE EXTENDED 10 MIN IF HEAVY OR NORMAL CYCLE IS SELECTED.
- 7 - CLEAN LIGHT WILL BE ILLUMINATED UNTIL TIMER IS MANUALLY ADVANCED.

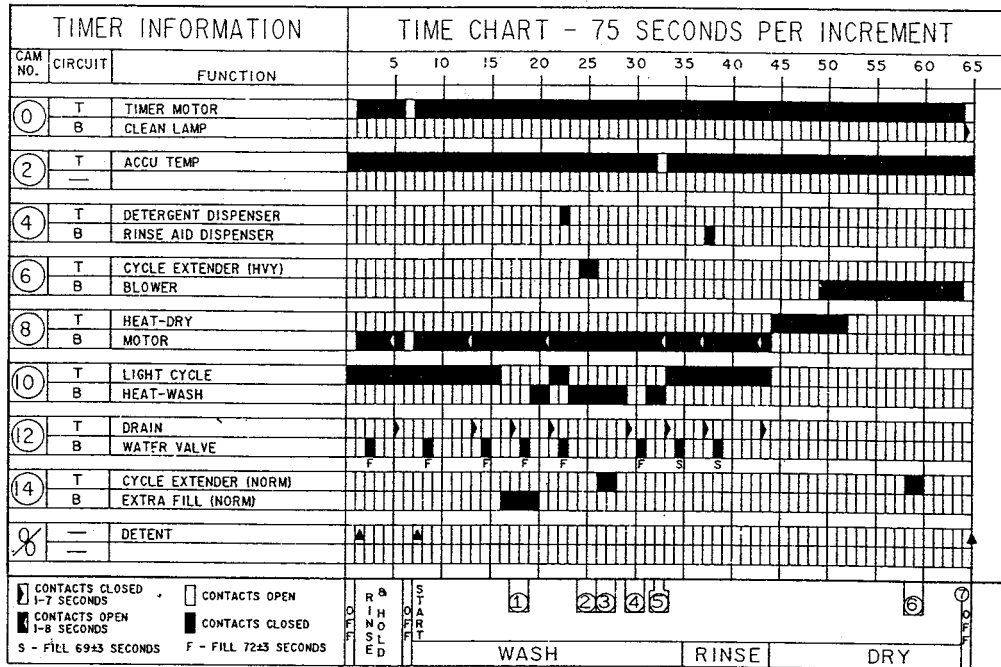


DW730
Series "B1"

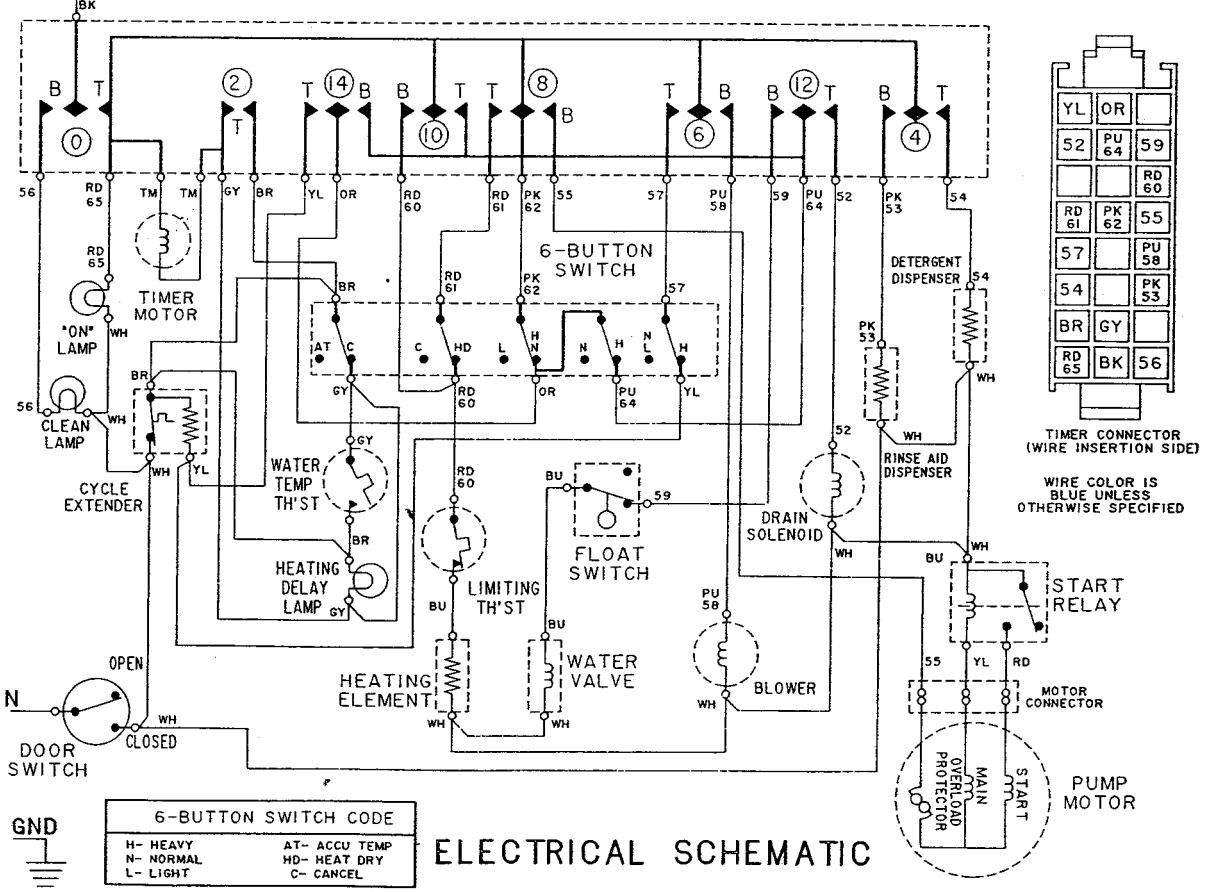
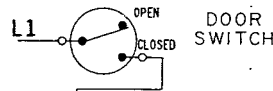


- 1 - THIS DRAIN AND FILL WILL NOT OCCUR IF LIGHT CYCLE IS SELECTED.
- 2 - WASH WILL BE EXTENDED 10 MIN IF HEAVY CYCLE IS SELECTED.
- 3 - WASH WILL BE EXTENDED 10 MIN IF HEAVY OR NORMAL CYCLE IS SELECTED.
- 4 - ADDITIONAL DRAIN AND FILL IF HEAVY CYCLE IS SELECTED.
- 5 - ACCU TEMP.
- 6 - DRY WILL BE EXTENDED 10 MIN IF HEAVY OR NORMAL CYCLE IS SELECTED.
- 7 - CLEAN LIGHT WILL BE ILLUMINATED UNTIL TIMER IS MANUALLY ADVANCED.

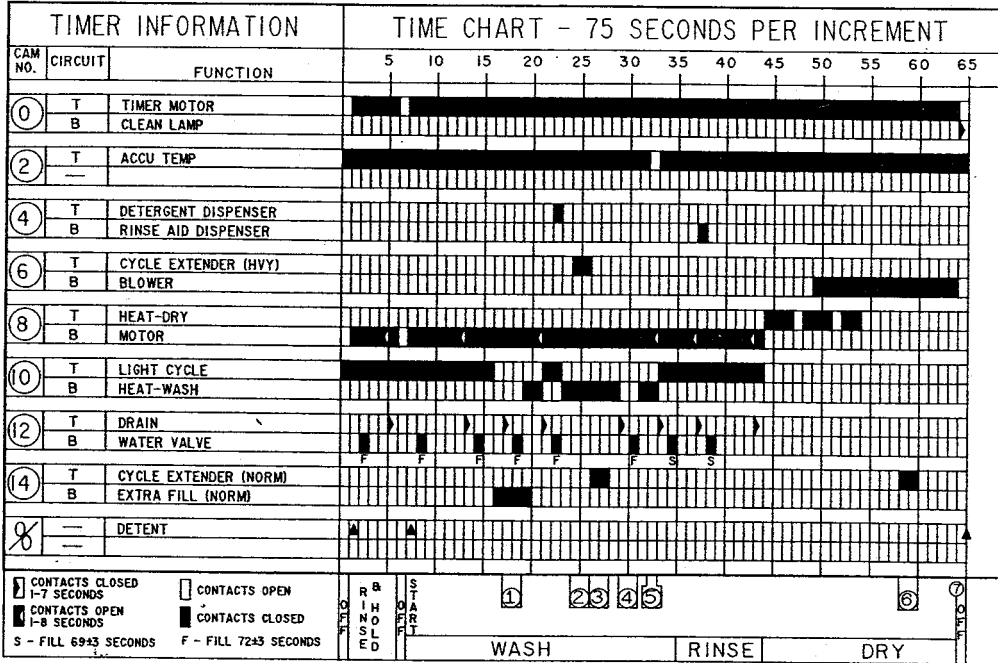




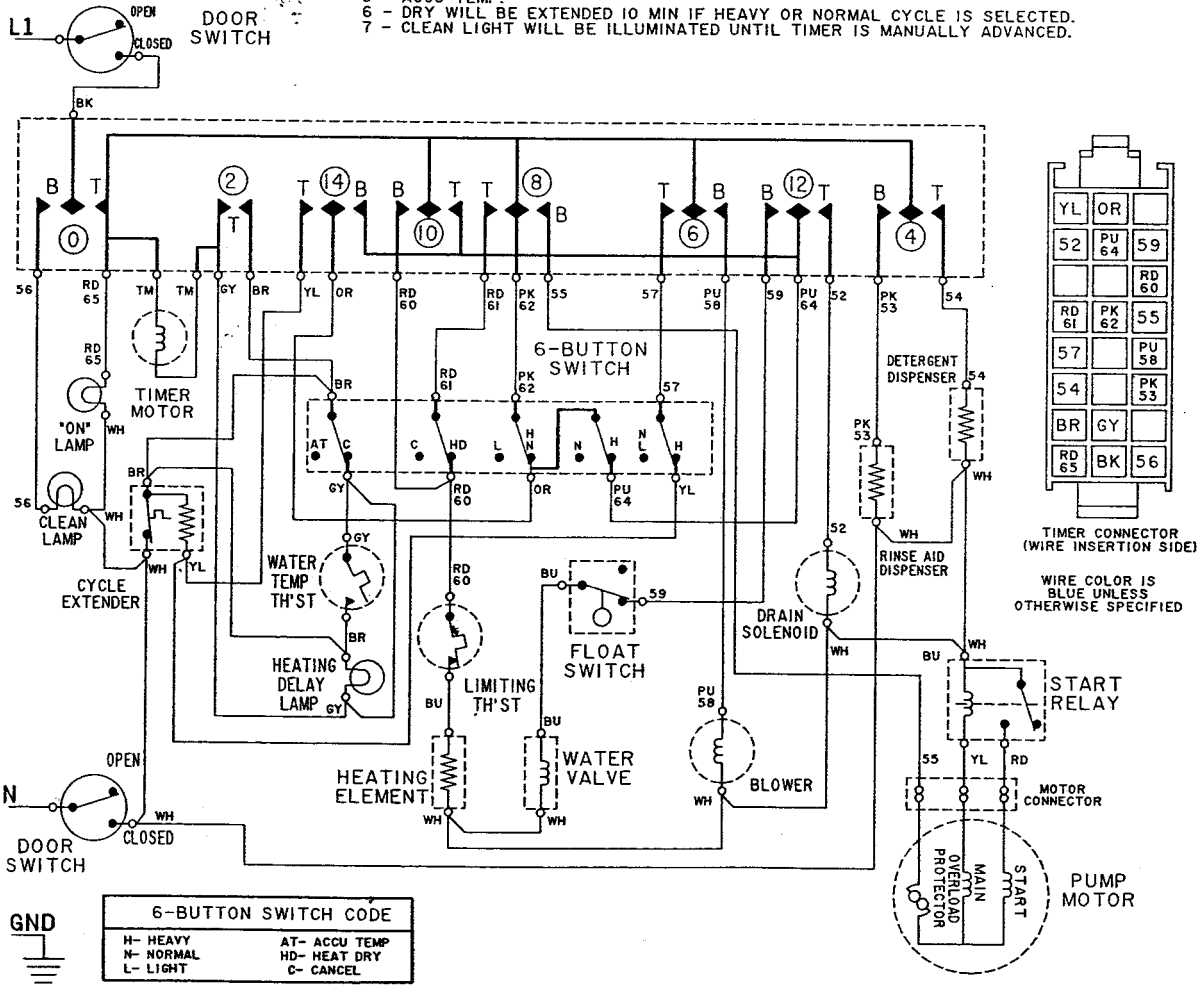
- 1 - THIS DRAIN AND FILL WILL NOT OCCUR IF LIGHT CYCLE IS SELECTED.
- 2 - WASH WILL BE EXTENDED 10 MIN IF HEAVY CYCLE IS SELECTED.
- 3 - WASH WILL BE EXTENDED 10 MIN IF HEAVY OR NORMAL CYCLE IS SELECTED.
- 4 - ADDITIONAL DRAIN AND FILL IF HEAVY CYCLE IS SELECTED.
- 5 - ACCU TEMP.
- 6 - DRY WILL BE EXTENDED 10 MIN IF HEAVY OR NORMAL CYCLE IS SELECTED.
- 7 - CLEAN LIGHT WILL BE ILLUMINATED UNTIL TIMER IS MANUALLY ADVANCED.

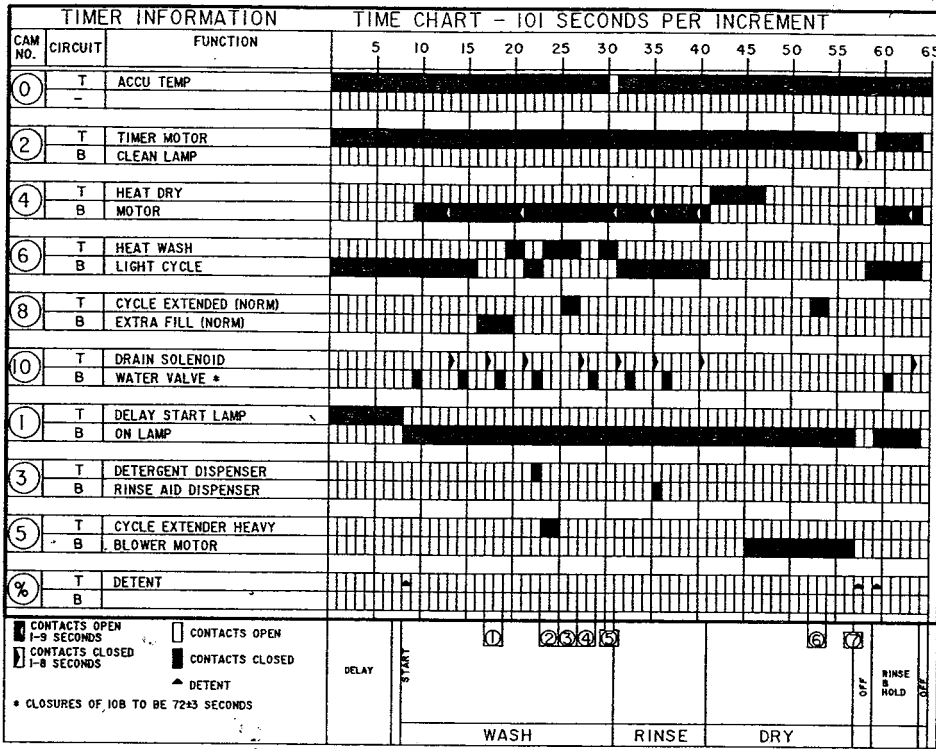


DW760
Series "B1"

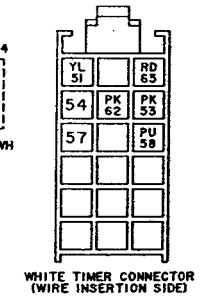
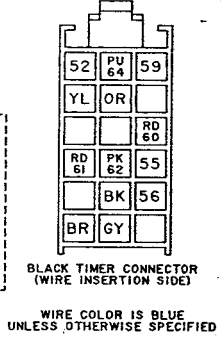
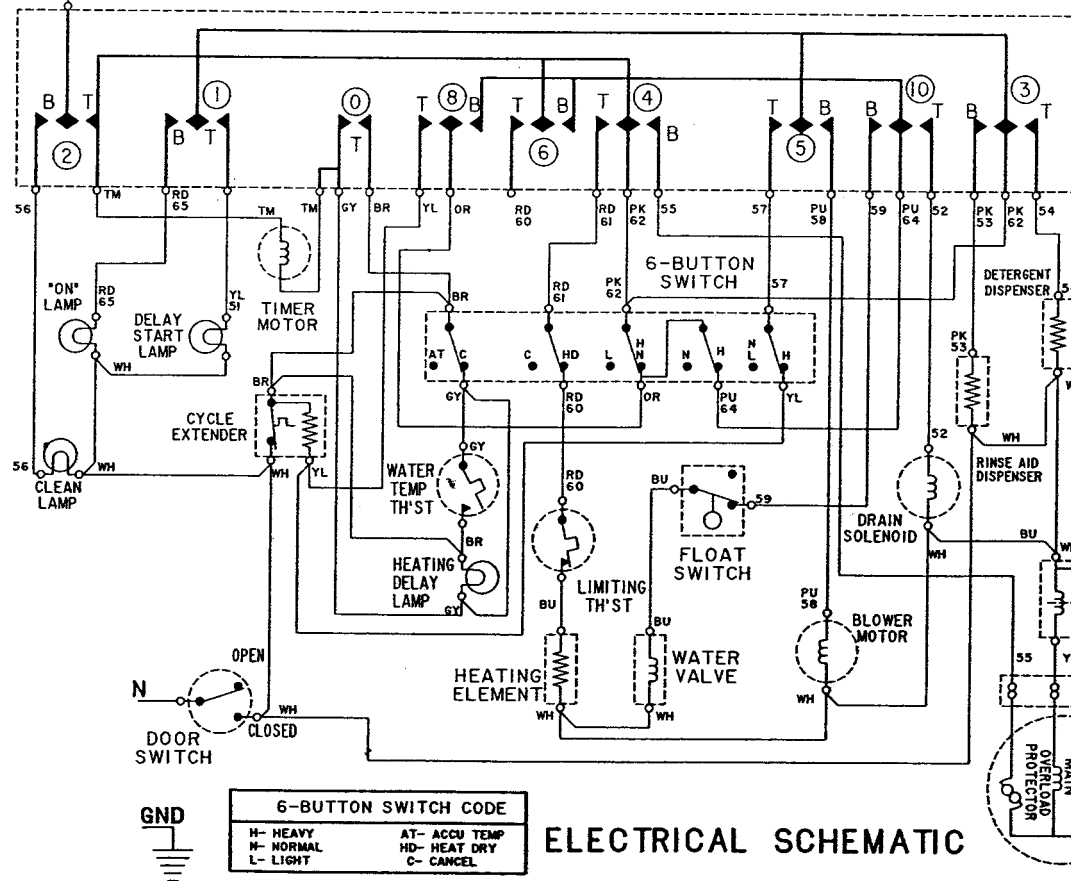
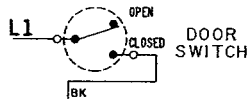


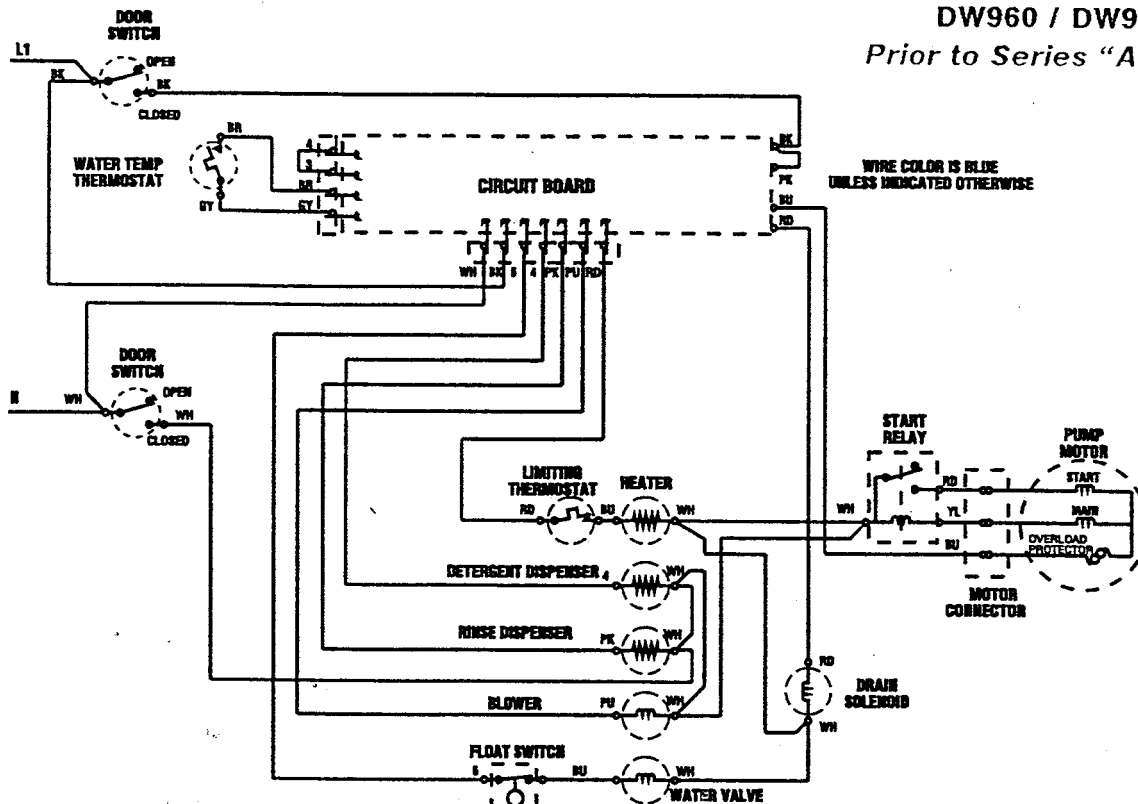
- 1 - THIS DRAIN AND FILL WILL NOT OCCUR IF LIGHT CYCLE IS SELECTED.
- 2 - WASH WILL BE EXTENDED 10 MIN IF HEAVY CYCLE IS SELECTED.
- 3 - WASH WILL BE EXTENDED 10 MIN IF HEAVY OR NORMAL CYCLE IS SELECTED.
- 4 - ADDITIONAL DRAIN AND FILL IF HEAVY CYCLE IS SELECTED.
- 5 - ACCU TEMP.
- 6 - DRY WILL BE EXTENDED 10 MIN IF HEAVY OR NORMAL CYCLE IS SELECTED.
- 7 - CLEAN LIGHT WILL BE ILLUMINATED UNTIL TIMER IS MANUALLY ADVANCED.





- 1 - THIS DRAIN AND FILL WILL NOT OCCUR IF LIGHT CYCLE IS SELECTED.
- 2 - WASH WILL BE EXTENDED 10 MIN IF HEAVY CYCLE IS SELECTED.
- 3 - WASH WILL BE EXTENDED 10 MIN IF HEAVY OR NORMAL CYCLE IS SELECTED.
- 4 - ADDITIONAL DRAIN AND FILL IF HEAVY OR NORMAL CYCLE IS SELECTED.
- 5 - ACCU TEMP.
- 6 - DRY WILL BE EXTENDED 10 MIN IF HEAVY OR NORMAL CYCLE IS SELECTED.
- 7 - CLEAN LIGHT WILL BE ILLUMINATED UNTIL TIMER IS MANUALLY ADVANCED.





CIRCUIT BOARD TEST

A quick test program may be started by pressing the following sequence of keys:

- Rinse & Hold
- Quick
- Light
- Normal
- Heavy
- Delay
- Accu Temp
- Sani
- Heat Dry
- Drain
- Heat Dry

The relays and lights turn on for 1/2 sec., one at a time, in the following sequence:

RELAY	LIGHT	NUMBER DISPLAY	*WORD DISPLAY
Water Valve	Light	90	Delay
Detergent Dispenser	+Rinse	81	Dry
Heater	Sani	72	
Blower	+Heating Delay	63	Rinse
Drain Solenoid	Accu Temp	54	Wash
Motor	+Dry	45	Pre
Conditioner Dispenser	Heavy	36	Min.
	Normal	27	
	Quick	18	Clean
	all off	9	bar 1
	Heat Dry		bar 2
	+Wash		bar 3
	Drain		bar 4
	+Clean		bar 6
	Delay		bar 5
	Rinse & Hold		Rinsed Only

* = DW980 only
+ = DW960 only

The sequence will then repeat indefinitely. To end test, press the Drain key.

A rapid time-down mode may be entered by selecting a cycle then, within one minute, pressing the cycle key again and Accu Temp key simultaneously. As long as they are held down, the control will advance through the cycle at a rate of one minute per second.

DISHWASHER FUNCTION TEST

A longer test may be started by pressing the keys in the following sequence:

- Rinse & Hold
- Quick
- Light
- Normal
- Heavy
- Delay
- Accu Temp
- Sani
- Heat Dry
- Drain
- Heavy

"13" will appear in the display (test length is 12:35) and the following sequence of events will occur:

TIME (sec)	FUNCTION	LIGHTS	*WORD DISPLAY
5	pause	all	all exc. Hour
50	heater	+Clean	6 bars
50	blower	+Dry	5 bars
72	fill	+Dry	5 bars
50	motor	Normal and	4 bars
		+Heating Delay	
63	drain & rinse cond.	Normal and	4 bars
		+Heating Delay	
72	fill	Normal and	4 bars
		+Heating Delay	
30	fill	+Wash and Light	3 bars
100	motor	Quick and +Wash	2 bars
100	motor & heater	Rinse & Hold	1 bar
		and +Wash	
100	motor & det. disp.	Delay and +Wash	1 bar
63	drain & motor	Delay and +Wash	1 bar

* = DW980 only
+ = DW960 only

The sequence will not repeat. To end test, press the Drain/Off key.

CYCLE INFORMATION

HEAVY CYCLE

99 min.

FILL	PRE-WASH 5 min.	DRAIN	FILL	PRE-WASH 2 1/2 min.	DRAIN	FILL	PRE-WASH 2 1/2 min.	DRAIN	DETECT FILL DISP.	MAIN WASH 27 1/2 min.	DRAIN	FILL	RINSE 2 1/2 min.	DRAIN	FILL	RINSE 2 1/2 min.	DRAIN	RA AND DISP.	FILL	RINSE 5 min.	DRAIN	DRY			
																						HEATER ON			
																						Pause 6 min.		Blower 30 min.	

NORMAL CYCLE

89 min.

FILL	PRE-WASH 5 min.	DRAIN	FILL	PRE-WASH 2 1/2 min.	DRAIN	FILL	PRE-WASH 2 1/2 min.	DRAIN	DETECT FILL DISP.	MAIN WASH 22 1/2 min.	DRAIN	FILL	RINSE 2 1/2 min.	DRAIN	RA AND DISP.	FILL	RINSE 5 min.	DRAIN	DRY						
																						HEATER ON			
																						Pause 6 min.		Blower 30 min.	

LIGHT CYCLE

69 min.

FILL	PRE-WASH 5 min.	DRAIN	FILL	PRE-WASH 7 min.	DRAIN	DETECT FILL DISP.	MAIN WASH 12 1/2 min.	DRAIN	FILL	RINSE 2 1/2 min.	DRAIN	RA AND DISP.	FILL	RINSE 5 min.	DRAIN	DRY									
																						HEATER ON			
																						Pause 6 min.		Blower 20 min.	

QUICK CYCLE

15 or *50 min.

DETECT FILL DISP.	WASH 5 min.	DRAIN	FILL	RINSE 2 min.	DRAIN	RA AND DISP.	FILL	RINSE 2 min.	DRAIN	DRY	
										Pause 6 min.	Blower 30 min.
										HEATER 10 min.	

RINSE & HOLD

FILL	RINSE 2 1/2 min.	DRAIN
------	---------------------	-------

Notes:

* Only if Heat Dry is selected.

- The control pauses 5 seconds before starting a cycle to give the user time to select a delay.
- Fills are 68-72 seconds.
- The 63-second drain periods consist of:
1 second pause
1 second drain solenoid
1 second solenoid + motor
60 second motor (42 sec in Quick cycle)
- Accu Temp will extend the main wash until the thermostat closes (135 F ± 5 F), up to 12 1/2 additional minutes, and turn the heater on in the final two rinses. "Heating" will be lit in the display (DW980 only) throughout the main wash.
- If Dry Heat is selected, the heater will be on for the first 10 minutes of the dry period.
- Sani will add heat to all washes and rinses. "Heating" will be lit in the display (DW980 only) if the wash or rinse is not normally heated.
- The cycle selection can be changed within the first minute of the cycle.
- Heat Dry may be turned on or off any time during a cycle or delay, except after the first minute of a Quick cycle. Other options can be changed at any time if they are available for the chosen cycle.

**JENN-AIR DISHWASHER
SERVICE MANUAL
PART NUMBER 16006946
SUPPLEMENT ONE**

Attached you will find Supplement One for service manual **16006946**. Listed below are instructions for incorporating this supplement into service manual **16006946**.

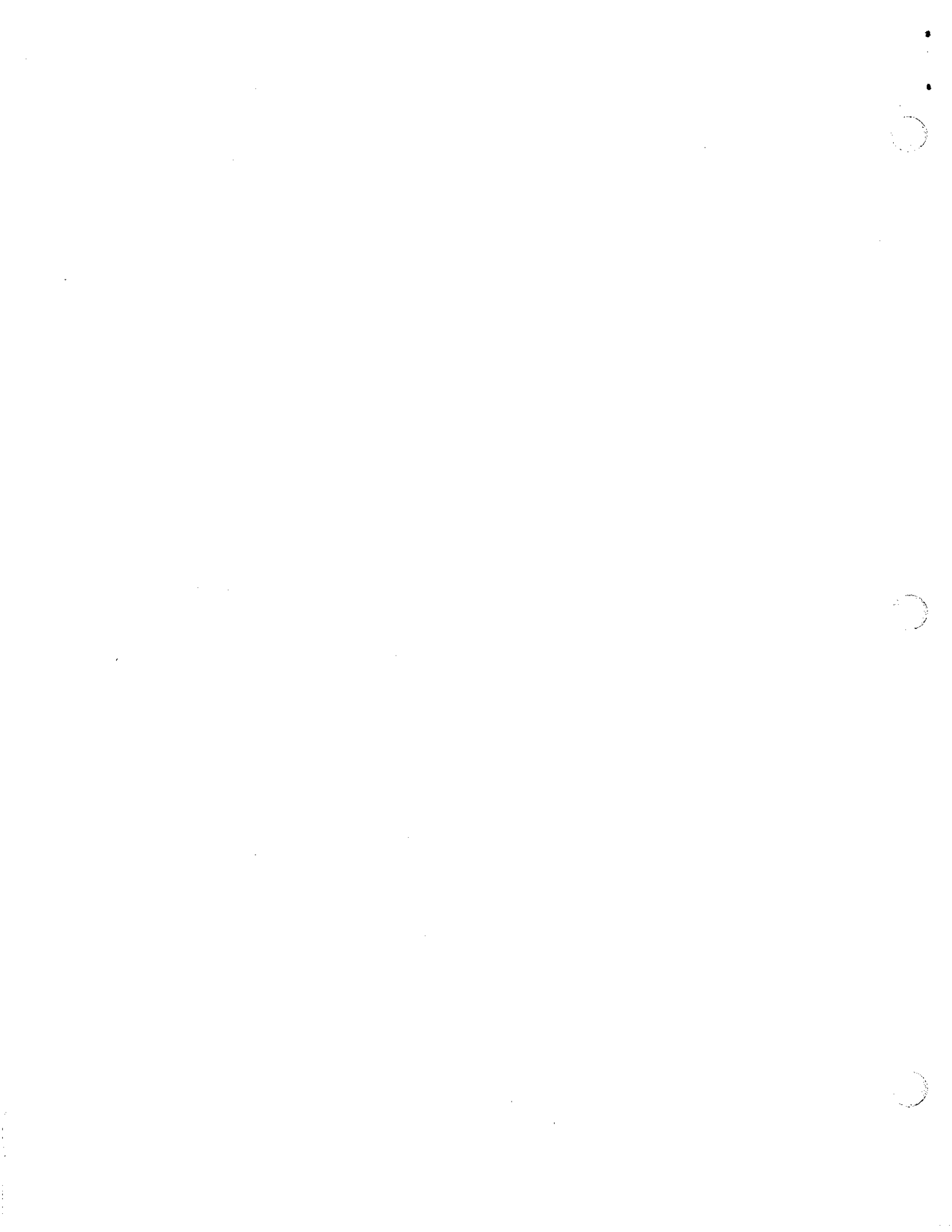
This Jenn-Air Dishwasher Service Manual covers models **DW701, DW711, DW731, DW761, DW761UQ, DW871UQ, DW861UQ, and DW961UQ**. We suggest that you file this supplement instruction page in the back of your service manual for future reference.

Remove and Discard Old Pages

Introduction pages **iii - vi**
Contents pages **i - ii**
Section 2, pages **2-1** thru **2-12**
Section 3, pages **3-1** thru **3-10**
Section 4, pages **4-1** thru **4-2**

Insert New Pages

General Safety Precautions Page
Inside Front Cover Page
Introduction pages **i - ii**
Contents pages **iii - iv**
Section 2, pages **2-1** thru **2-12**
Section 3, pages **3-1** thru **3-10**
Section 4, pages **4-1** thru **4-2**
Add new pages **4-21** thru **4-34**



GENERAL SAFETY PRECAUTIONS

Information contained in this manual is intended for use by a qualified service technician familiar with proper and safe procedures to be followed when repairing an electrical appliance. All tests and repairs should be performed by a qualified service technician equip-ped with proper tools and measuring devices. All component replacements should be made by a qualified service technician using only factory approved replacement parts.

Improper assembly or adjustment may occur if service or repair is attempted by persons other than qualified service technicians or if parts other than approved replacement parts are used. Improper assembly or adjustment can create hazardous conditions.

There can be risk of injury or electrical shock while performing services or repairs. Injury or electrical shock can be serious or even fatal. Consequently, extreme caution should be taken when performing voltage checks on individual components of a product.

PLEASE NOTE: Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

Further, this appliance **MUST** be properly grounded. Never plug in or direct wire an appliance unless it is properly grounded and in accordance with all local and national codes. See installation instructions that accompany the product for grounding this appliance.

USE ONLY GENUINE MAYTAG APPROVED FACTORY REPLACEMENT COMPONENTS.

IMPORTANT SAFETY NOTICE AND WARNING

The California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) requires the Governor of California to publish a list of substances known to the State of California to cause cancer or reproductive harm, and requires business to warn customers of potential exposures to such substances.



INTRODUCTION

Jenn-Air dishwasher models covered in this manual:

Built-in Models

DW710 DW730 DW760 DW860 DW960 DW980

DW701 DW711 DW731 DW761

DW761UQ DW861UQ DW871UQ DW961UQ*

(* = LED Microprocessor Model)

(UQ = New Sound Package - Ultra Quiet)

Portable Models:

CDC5J

For additional information on issues encompassed in this manual, including safety issues, contact:

Maytag Customer Service
240 Edwards Street, SE
Cleveland, TN 37311
Phone: 423 - 472-3333
Fax: 423 - 478-0649

The first and most important step of any service call is to accurately determine what the complaint is. This is best accomplished by questioning the customer, finding out what the product is or isn't doing and why they feel a problem exists.

SECTION 1 covers **Electrical Test Equipment** for use on the dishwasher. This section also covers general use of the equipment, in addition to providing specific information on amperage, wattage, and resistance readings:

SECTION 2 covers **Electrical-Mechanical Troubleshooting** and provides a list of possible complaints. Find the complaint which you feel best matches that provided by the customer and turn to the appropriate page(s). You will find a list of possible electrical and mechanical problems for the complaint, which have been listed in order of:

1. Ease in checking.
2. Probability.

Systematically eliminating these possibilities will allow you to find and correct the problem.

SECTION 3 covers **Service Procedures**. This section will provide information on location of components, disassembly and/or reassembly procedures, the purpose and/or function of the part and in some instances specific checks to be made.

SECTION 4 covers **General Information** such as brief specifications, cycle descriptions and schematics.

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SECTION 2. ELECTRICAL-MECHANICAL TROUBLESHOOTING

GENERAL INFORMATION

The malfunction of an electrical circuit cannot be easily diagnosed unless you first understand how it functions when operating normally.

An electrical load uses electricity to perform some function. Motors convert electricity to magnetic fields and then to mechanical motion. (Example: Lamps convert electricity to light.)

COMPONENTS

There are two basic categories for electrical components, switches and loads.

A switch controls the current path to a load component. Door switches, temperature controls and push-to-start are examples of switching components.

The schematic wiring diagram is followed much like a road map. The lines represent the wiring connections between components. When possible, switches are shown in their normal position electrically without actuation.

For the electrical and mechanical checks of various components, please refer to the section titled ***ELECTRICAL-MECHANICAL TROUBLESHOOTING***, pages 2-1 through 2-6.

ELECTRICAL - MECHANICAL CHECKS: ALL MODELS

The following are electrical and mechanical checks for all dishwashers, except for the unique microprocessor controlled systems. For electrical checks on microprocessor models *see respective section titled TROUBLESHOOTING-MICROPROCESSOR MODELS*.

Circuit Breaker/Fuse Check if tripped or blown, reset or replace.

Float Check whether stuck in the "UP" position or disengaged from the arm of the switch below.

Water Valve Check solenoid for continuity. No continuity, replace water valve. Check inlet screen for restrictions. Clean screen by flushing or replacing valve if necessary.

CAUTION

ALWAYS disconnect power supply before making any electrical checks.

Door Latch Check latch adjustment and door switches for continuity. With door switches engaged, check for continuity. No continuity, replace door switch.

WILL NOT FILL

Water Access Valve Check to determine if valve is turned on and water is available to the dishwasher. Check water pressure. Normal pressure is 18-120 p.s.i.

CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

Float Switch Check switch for continuity. No continuity with float in "DOWN" position, replace float switch.

Selector Switch Check for continuity per electrical schematic. Replace if necessary.

Timer Check for continuity per electrical schematic. Replace if necessary.

OVERFLOWS

Float Check whether stuck in "DOWN" position. Check for sediment buildup. Clean and/or replace float.

Float Switch Check continuity of float switch with float in "UP" position. If continuity is present and float is not sticking, replace float switch.

Float Switch Actuator Lever Check to determine if actuator on bracket is sticking. Clean and/or replace if necessary.

Water Valve Check whether water continues to flow when electrical power is turned off. If water continues to flow without electrical power, replace water valve. **NOTE: *Low water pressure can also result in failure of the valve to close properly.***

SLOW FILL

Water Valve Inlet Screen Check screen for sediment buildup. Flush screen and/or replace valve.

Water Supply Line Check to determine if hose is kinked or pinched. Straighten hose or remove obstruction in dishwasher enclosure area.

Low Water Pressure Check water pressure. Normal pressure should be 18-120 p.s.i.

SIPHONING

Drain Hose Check proper elevation of drain hose. Must have drain hose loop of 32 inches high. Reposition hose to correct elevation. Check if air gap was installed with food waste disposal unit or if drain pipe is too small.

POOR CIRCULATION

Water Level - Too Low Water level should be 1/2 - 3/4 inch below the heating element.

Drive Motor Check motor, (*see page 1-7*). If motor does not run when timer is between "START" and "DRY," replace motor.

Pump Assembly Check assembly for obstruction or restricted parts. Repair assembly.

Timer Check for continuity between the timer terminals per electrical schematic. No continuity, replace timer.

Wiring And Electrical Connections Check for loose or frayed wires and terminal connections. Replace and/or repair all electrical connections.

Seal Ring Check seal rings between lower spray arm support and pump assembly. If out of position or damaged, reposition or replace.

CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

POOR WASHABILITY

Spray Arms Check upper and lower arms for blockage of water ports. Check proper rack loading to avoid spray arm interference during wash action and to make sure the center spray tower is not blocked.

Filter Screen (Select Models) - Check for blocked or clogged pump filter or strainer (e.g. jar labels).

Detergent Cup Cover Check spring hinge operation of detergent cup cover.

Drain Flapper Check that the flapper fully returns to its initial position, sealing the drain opening after drain. Replace flapper if necessary.

Wax Motor(s) Check linkage of actuator brackets and that spring is positioned correctly. Use motor test cord to check the wax motor(s). (Full extension reached in 45 - 60 seconds.) Check wire harness to wax motor(s). Perform continuity checks of harness leading from timer to wax motor(s).

Rinse Dispenser Check level of rinse aid in reservoir. Check plunger for proper alignment to the top of the reservoir. Check the rinse dispenser cap for residue buildup on end of stem. Clean and/or replace required parts if necessary.

Timer Check for closure of dispenser contact per schematic.

WILL NOT DRAIN

Wiring And Electrical Connections Check for loose or frayed wires and terminal connections. Replace and/or repair all electrical connections.

Drain Hose Kinked or restricted. Reroute the drain hose and remove any restrictions.

Drain Solenoid Check for continuity of the solenoid. No continuity, replace solenoid.

Flapper Check engagement of flapper metal arm with lifter of solenoid assembly. Readjust or replace necessary parts. Check for sticking of flapper across drain outlet of pump housing.

Drive Motor Check motor. If motor runs when energized, but stops when drain is initiated, check for voltage drop. If voltage is below 105 VAC, have house wiring checked.

Pump Assembly Check assembly for obstructions or restricted parts. Repair assembly.

Selector Switches Check continuity between switch terminals per electrical schematic. No continuity, replace switch.

Timer Check the timer for activation of drain solenoid for 1-7 seconds at beginning of drain cycle. Check for continuity between the timer terminals per electrical schematic. No continuity, replace timer.

Inadequate Drainage Check the drain pipe which connects to the drain hose and have repairs done as recommended. If draining to disposer, check for unprocessed food waste. Run disposer if necessary.

CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

CONTINUES TO DRAIN

Siphoning Check proper elevation of drain hose. Must have drain hose loop of 32 inches above the floor. Reposition hose to correct elevation. Check if air gap was installed.

Timer Check for timer advancement. Timer motor running and timer not advancing, replace timer. Timer motor not running, replace timer motor. Check closure of drain contact per schematic.

Drain Flapper Check that the flapper fully returns to initial position after drain is complete. Replace flapper if necessary.

POOR DRYING

Wiring And Electrical Connections

Check for loose or frayed wires and terminal connections. Replace and/or repair all electrical connections.

Water Temperature Check for low water temperature. Temperature should be between 120° and 140° F. If not, advise customer to adjust water heater and to purge water lines to the dishwasher area prior to starting dishwasher.

Detergent Cup Cover Check spring hinge operation of detergent cup cover. Check for proper amount of detergent usage. Check for water hardness. Use one teaspoon of detergent per one grain of water hardness.

Rinse Dispenser Check level of rinse aid in reservoir. Check plunger for proper alignment and mating to the top of the

reservoir. Check the rinse dispenser cap for residue build up on end of stem. Clean and/or replace required parts if necessary.

Wax Motors Check actuator linkage brackets and spring position. Use motor test cord to check wax motors. (Full extension reached in 45-60 seconds.) Resistance readings of approximately 1900 ohms. Check wire harness to wax motors. Perform continuity checks of harness leading from timer to wax motors.

Heating Element Check for continuity of element. Check terminal to terminal for continuity. No continuity, replace element. Check terminal to element sheath, continuity found, replace element.

Thermostat Check for proper placement of thermostats. Check mating surface of thermostat face to surface of tub enclosure, must be flat. Adjust thermostat if necessary. Check continuity of thermostats. Accu Temp™ thermostat is normal OPEN and the Hi-Limit thermostat is normally CLOSED at room temperature.

Blower Assembly Check for blower motor operation using motor test cord. Look for blower obstructions. Check for unsnapped blower cover. Check for bent blower motor mounting bracket.

Low Ambient Temperature Check for under counter drafts due to house insulation voids, cold air returns and air conditioning ducts. Blower will draw this air into the tub in "DRY" cycle. If necessary, add insulation along back of dishwasher. Maintain clearance of wiring, hose and blower assembly.

CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

Improper Rack Loading Check how customer loads dishes in rack. Improper loading can hinder air circulation inside of dishwasher.

Selector Switches Check continuity between switch terminals per electrical schematic. No continuity, replace switch. (Heater and blower circuit.)

Timer Check for closure of heater, blower and rinse aid dispenser per schematic.

WATER LEAKS

Installation Check unit for proper leveling and squareness of door opening.

Door Alignment Check proper alignment of door liner to door gasket. Use chalk rubbed onto rib of liner, then close the open door. Observe chalk markings on door gasket. Adjust door hinges or leveling legs to align door into center of gasket. Screws should be tightened to 75 in. lbs.

Door Gasket Check door latch adjustment. If correct, check for torn or damaged gasket. Replace gasket if torn or damaged.

Hoses Check for loose hose clamps or hoses that leak. Tighten clamps and replace leaking hoses.

Spray Arm - Upper & Lower Check for cracks and replace if necessary.

Lid Latch Grommet Detergent cup cover area. Check for positioning or cracking. Replace if necessary.

O-Ring Seal Check positioning of rinse dispenser seal to inner door liner. Reposition or replace if necessary.

Pump Gasket Check for leak between pump assembly and tub. If gasket is leaking, adjust locking ring to increase tension of pump assembly to tub. Replace gasket if necessary.

Pump Housing Check for holes or cracks in housing. Replace if necessary.

Water Seal Assembly Check seal and seat assembly in lower pump assembly. Check tightness of motor fan to impeller assembly. Replace pump impeller assembly with seal if necessary.

Water Valve Check valve body for damage and leaks. Replace if necessary. Also, check plumbing connections.

NOISE PROBLEMS

Before servicing unit, check to be sure noise is not normal operating sound, (*see User's Guide*).

Banging Check loose spray arms or nozzle. Check fastener holding upper spray arm to support. Check load for interference with wash arm.

Buzzing Check and tighten timer mounting screws. Check timer motor for noise, if severe, replace timer or timer motor. Check drain solenoid and water valve mounting screws.

Chattering Check water valve for noise. Replace if necessary.

CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

Grinding Check for obstructions in pump assembly. Check for tight fit of motor fan to pump impeller assembly. Tighten if necessary.

Hammering Check water valve and drain solenoids. Check for low voltage or high resistance readings. **NOTE: *Some noise is normal. Replace solenoid or water valve if necessary.***

Snap Detergent cup cover noise is normal when door is first opened after a cycle.

Thumping Check for object in path of spray arms. Remove objects in path. Check for obstructions in pump assembly and remove. Check for damage to pump assembly and repair if necessary.

Vibration Check for loose screws and tighten. Insert panels may need adjusting and additional pads can be added.

Popping And Clicking Normal timer noise.

CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

TROUBLESHOOTING: MICROPROCESSOR MODELS (DW960, DW980)

Following are electrical checks unique to microprocessor dishwashers. For mechanical checks refer to Electrical-Mechanical section for all dishwashers.

A microprocessor board performs the same functions as a mechanical timer. However, a microprocessor board can check all circuits in the dishwasher and provide a digital display.

In a mechanical timer unit, the timer controls the individual components by opening and closing cam switches in the timer.

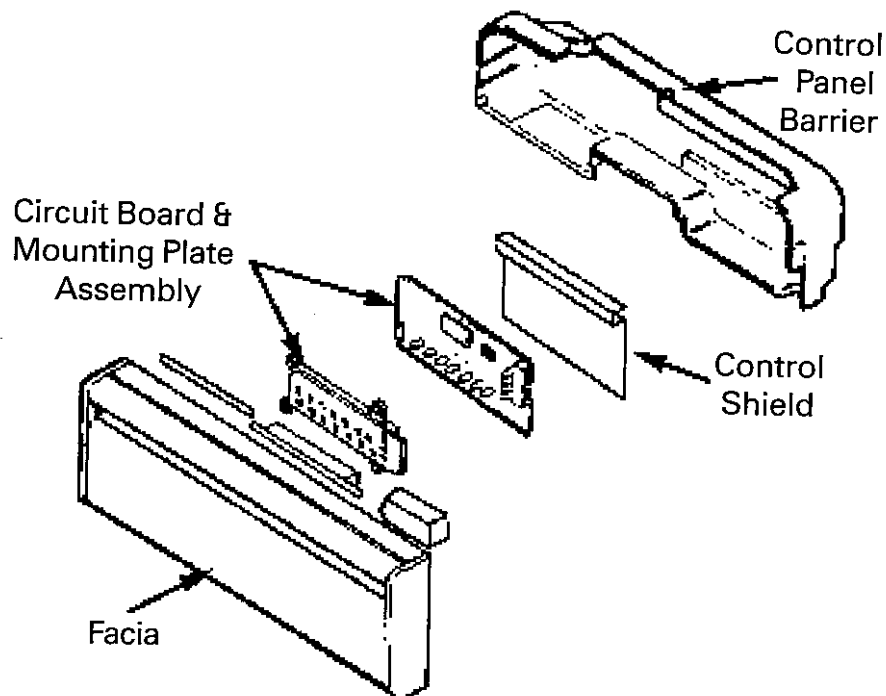
In a microprocessor unit, this is accomplished by using control relays on the

board. The control relays are specifically assigned to individual components: motor, heater, water valve, detergent and rinse dispenser wax motors.

NOTE: All individual components on the dishwasher outside of the microprocessor board except for the AccuTemp™ Thermostat operate on 120 VAC.

The microprocessor board receives the necessary voltage to operate through a transformer on the board.

The user selects a dishwasher cycle and options by pressing the indicated pads on the fascia of the control panel.



CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

Refer to section titled "**TROUBLESHOOTING: ALL MODELS**" to identify a specific problem.

When referring to this section, check for proper voltage of 120 VAC at the individual component being specifically checked.

WILL NOT PROGRAM

Door Touch pads will not program with the door unlatched.

Circuit Breaker/Fuse Check if tripped or blown, reset or replace. Must have 120 VAC present to the microprocessor board. (Check electrical schematic.)

Wire Hanes Connections Determine if wiring harness is properly attached to terminals of microprocessor board.

Microprocessor Board With 120 VAC available to the board and board not functioning, replace board.

Board - Voltage Check (Input and Output voltages.)

Input Voltage: When running a specific function and the component part will not work, check for voltage leading to the board. (WHT & BLK wires at the board.)

Output Voltage: Review the electrical schematic for the wire designation of the component part you wish to check. Perform a voltage check from the designated board terminal you identified and the White wire (Neutral). If no voltage is present, replace the microprocessor board.

TEST CYCLES

All of the following test modes are started by pressing the following initial sequence of keys followed by a specific key that starts the selected test:











ORIGINAL

Rinse/Hold
Quick
Light
Normal
Heavy
Delay
AccuTemp™
Sani
Heat Dry
Drain/Off

SERIES 'A5' & later

Rinse/Hold
Quick
Light
Normal
Heavy
AccuTemp™
Sani
Heat Dry
Delay
Drain/Off

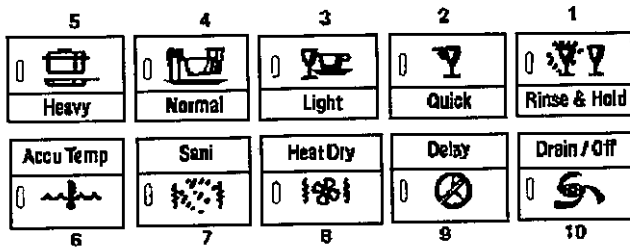
(Next key determines selected test mode.)

5  Heavy	4  Normal	3  Light	2  Quick	1  Rinse & Hold
6  Accu Temp	7  Sani	8  Heat Dry	9  Delay	10  Drain / Off

CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

SERIES "A5" and later

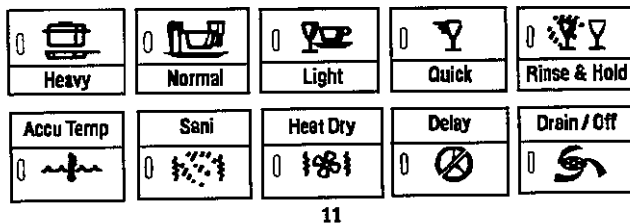


NOTE: *To end any of the following Test Modes, press the Cancel key.*

CIRCUIT BOARD TEST

This is a Quick Test Program which will turn on the relays and LED lights for 1/2 second, one at a time. This will repeat indefinitely until the **Cancel** key is pressed.

To start, press the initial sequence of keys, then press **Heat Dry**.



11

(See section titled **ELECTRICAL SCHEMATICS** for specific model functions.)

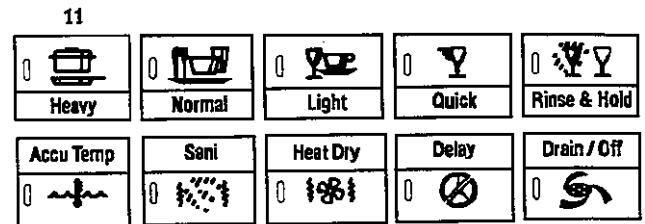
DISHWASHER FUNCTION TEST (Available on select models only.)

This is a longer test mode. After the first 50 seconds the display will count down from 12 minutes and then begin sequencing through the cycles. The test sequence will not repeat.

CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

To start, press the initial sequence of keys, then press **Heavy**.

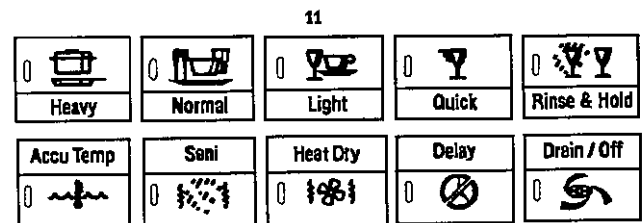


(See section titled **ELECTRICAL SCHEMATICS** for specific model functions and **LED** displays.)

MANUAL FUNCTION TEST

Optional test available on dishwashers with serial prefix "A5" and later. This will enable the servicer to manually turn on individual functions, such as the blower, heater, motor, water valve and dispensers.

To start, press the initial sequence of keys, then press **Light**.



The display will show one (1) minute. The keys will toggle individual functions and LEDs on/off depending which keys are pressed.

KEY PRESSED	FUNCTION
Heavy	Motor
Normal	Fill
Quick	Detergent Dispenser
Quick	Rinse Aid Dispenser
Sani-Heat	Blower
Heat Dry	Heater

A key must be pressed within 75 seconds in order to remain in the Manual Test mode, once the display has counted down to zero (0).

TROUBLESHOOTING: MICROPROCESSOR MODEL (DW961)

The following are test modes unique to the **DW961** model microprocessor controlled dishwasher. For all other electrical troubleshooting of components, refer to the section titled **ELECTRICAL-MECHANICAL TROUBLESHOOTING, pages 2-1 thru 2-8.**

TEST CYCLES

All of the following test modes are started by pressing the following initial sequence of keys followed by a specific key that starts the selected test.

Press the following keys for Initial Sequence:

Rinse/Hold	AccuTemp™
Quick	Sani-Heat
Light	Heat Dry
Normal	Delay
Pots/Pans	Drain/Off

RAPID TIME DOWN TEST

This test may be performed without pressing the initial sequence of keys. To start test, select a cycle function and press the key. Within one minute, press the same key again and hold down the AccuTemp™ key. **The control will advance through the selected cycle at a rate of "One Minute Per Second."** This will do so as long as the Delay key is continuously depressed. For some cycles, you will have to release the cycle key while holding down the AccuTemp™ key.

NOTE: To end any of the following test modes, press the Drain/Off key.

5	4	3	2	1
• Pots • Pans	• Normal	• Light	• Quick	• Rinse • Hold
• Accu • Temp™	• Sani- • Heat	• Heat • Dry	• Delay	• Drain • Off
6	7	8	9	10

CIRCUIT BOARD TEST

This is a test program which will turn on the relays and LED lights for 1/2 second, one at a time. This will repeat indefinitely until the Drain/Off key is pressed.

To start press the initial sequence of keys, then press **Heat Dry**.

• Pots • Pans	• Normal	• Light	• Quick	• Rinse • Hold
• Accu • Temp™	• Sani- • Heat	• Heat • Dry	• Delay	• Drain • Off
11				

CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

COMPONENT ACTIVATED	LED ON	DISPLAY
Water Valve	Light	90 - DELAY
Wax Motor	Rinse	81 - DRY
Heating Element	Sani-Heat	72
Blower Motor	Heating Delay	63 - RINSE
Drain Solenoid	AccuTemp™	54 - WASH
Motor	Dry	45 - PRE
	Pots Pans	36 - MIN
	Normal	27
	Quick	- CLEAN
	(All Off)	9 - bar 1
	Heat Dry	bar 2
	Wash	bar 3
	Drain/Off	bar 4
	Clean	bar 6
	Delay	bar 5
	Rinse/Hold	- RINSED ONLY

NOTE: To end the test mode, press the Drain/Off key.

MANUAL TEST

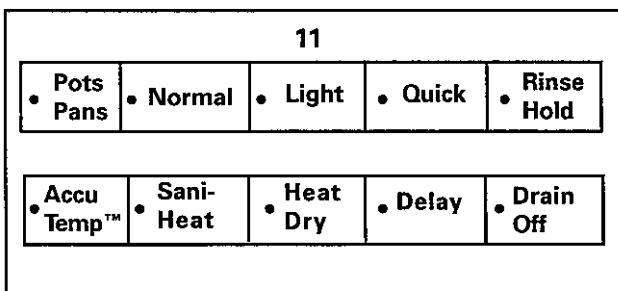
This test will allow the servicer to toggle the individual relays and LEDs On and Off depending on which keys are pressed, according to the following table.

To start, press the initial sequence of keys, then press **Light**.

The display will show one (1) minute. The keys will toggle individual functions and LEDs On and Off as follows:

Key Pressed	Relay Activated
Pots Pans	Motor
Normal	Water Valve
Quick	Wax Motor Detergent/Rinse (Aid Dispenser)
Sani-Heat	Blower Motor
Heat Dry	Heating Element

NOTE: A key must be pressed every 75 seconds or the dishwasher will discontinue running.



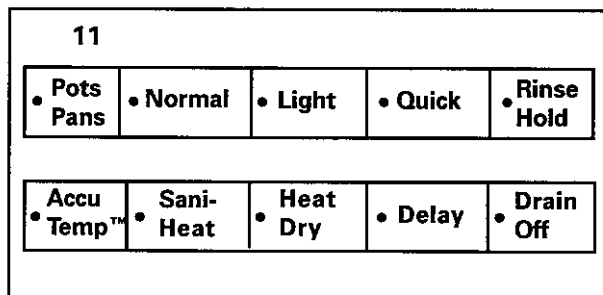
CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

AUTOMATIC FUNCTION TEST

This is a longer test lasting 12 minutes and 20 seconds. The dishwasher will run through all sequences of fill, wash, drain and blower motor functions. (Not necessarily in this order. See the table to the right for actual sequences and time periods.)

To start, press the initial sequence of keys, then press **Pots Pans**.



The display will show **13** and the following sequence of events will occur:

Time (Sec.)	Function	LEDs & Display
5	(Pause)	All LEDs On and Displays except HOUR
5	Blower Motor	Pots Pans & Dry - 6 bars - PRE-WASH
72	Water Valve & Motor	Pots Pans & Dry - 6 bars - PRE-WASH
200	Motor	Normal & Heat Delay - 5 bars - WASH
63	Drain & Dispenser Wax Motor	Normal & Heat Delay - 5 bars - WASH
72	Water Valve & Motor	Normal & Heat Delay - 5 bars - WASH
30	Water Valve	Light & Wash - 4 bars - RINSE
180	Motor, Dispenser Wax Motor & Heating Element	Delay & Rinse - 2 bars - DRY
63	Drain Solenoid & Motor	Delay & Rinse - 2 bars - DRY
50	Heating Element	Heat Dry, Sani-Heat - 1 bar - DELAY & Clean

NOTE: To end the test mode, press the Drain/Off key.

RAPID TIME-DOWN MODE

This may be entered by selecting a cycle then, within one minute, pressing the selected cycle key again and the

AccuTemp™ key simultaneously. As long as the two keys are held down, the control will advance through the cycle at a rate of one minute per second.

CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

SECTION 3. SERVICE PROCEDURES

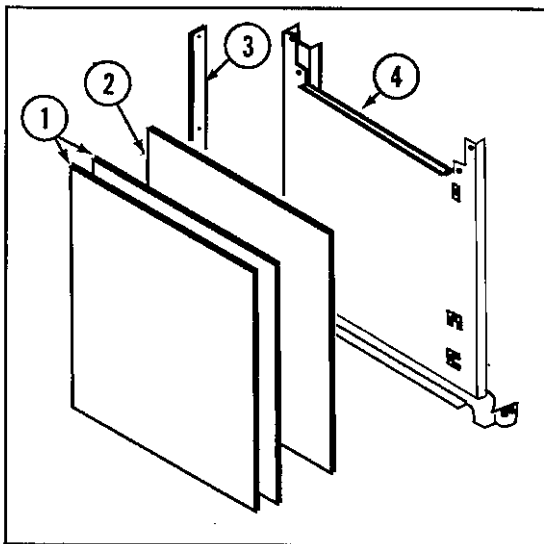


ALWAYS shut off electrical power to the dishwasher before beginning any service procedure.

EXTREME CAUTION! Should be taken when performing voltage checks due to danger or possible electrical shock. Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

CAUTION! There can be risk of injury or electrical shock while performing services or repairs. Injury or electrical shock can be serious or even fatal.

OUTER DOOR PANEL - MODELS DW710, DW730, DW760, DW860, DW960, DW980



No.	Description
1	Front Insert
2	Front Filler
3	Door Trim
4	Door Panel

To Change Panels

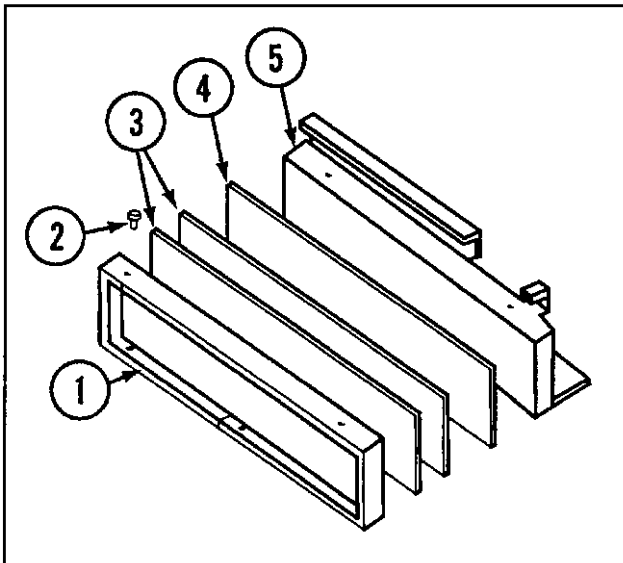
1. Disconnect the power supply to the dishwasher.
2. Remove three screws holding the trim strip on one side of the door. Take note of how the trim comes off.
3. Grasping the lower part of the door panels, bow panel out carefully at the bottom while sliding panels far enough to clear the flange on the trim strip, which was not removed, and remove panels.
4. Arrange panels so the desired color is facing out.
5. Place door panels (notched side up) behind the metal trim at the bottom of the door. Bow the panels so they fit behind the control panel at the top.
6. Slide the panels under the side metal trim. It may be necessary to compress the backing behind the colored panels.
7. Reinstall the trim that was removed earlier. Align the holes and replace three screws.

ACCESS AND TOE PANEL - MODELS DW710, DW730, DW760, DW860, DW960, DW980

Removal of access and toe panels will allow access to water valve, blower assembly, start relay, door spring adjustment screws, float switch assembly, hoses, electrical junction box and pump assembly.

To Remove

1. Disconnect the power supply to the dishwasher.
2. The lower access panel is held by four screws, (two above the panel and two below). Remove all four screws.
3. Toe panel can now be removed by sliding out from between tub support legs.



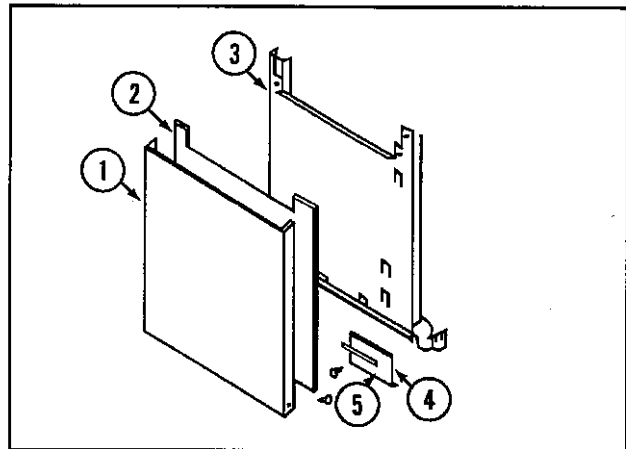
<u>No.</u>	<u>Description</u>
1	Access Trim
2	Trim Screw (Cross Recess)
3	Access Insert
4	Access Filler
5	Access Panel

To Change Panels

1. With the lower access panel removed, remove the four screws along the bottom of panel and the two on the top. Remove the trim which holds the panels. Once the desired panel is facing out, replace the trim and reinstall the panel to the dishwasher.

NOTE: *When replacing top access panel mounting screws, be sure to use the original screws. Using the wrong screw can result in a damaged tub.*

OUTER DOOR PANEL - MODELS DW701, DW711, DW731, DW761, DW761UQ, DW871UQ, DW861UQ, DW961UQ



<u>No.</u>	<u>Description</u>
1	Front Insert
2	Front Filler
3	Outer Door Panel
4	Tub Shield
5	Harness Strap

To Change Panels

1. Disconnect the power supply to the dishwasher.
2. Remove the lower access panel and toe plate by removing four screws above and below the panel.
3. Remove the door panel by removing two crosshead screws on sides of front panel.
4. Grasp the lower two sides of the of door panel then pull down and out from behind the control panel to remove.
5. To reinstall the front panel, place the panel against the outer door 1/4 inch below the control panel. Slide the left side of the front panel up behind the control panel, then the right side, ensuring that the top edge slides under the control panel.

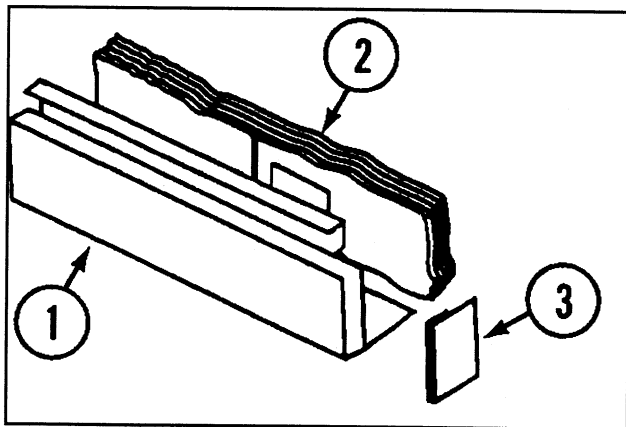
6. Align the front panel side mounting holes with the outer door panel. Then, secure the front panel with the color matched screws.
7. Replace the toe and access panels.

ACCESS AND TOE PANELS - MODELS DW701, DW711, DW731, DW761, DW761UQ, DW861UQ, DW871UQ, DW961UQ

Removal of access and toe panel will allow access to water valve, blower assembly, start relay, door spring adjustment screws, float switch assembly, hoses, electrical junction box and pump assembly.

To Remove

1. **Disconnect the power supply to the dishwasher.**
2. The lower access panel is held by four screws, (two above the panel and two below). Remove all four screws.
3. Toe panel can now be removed by sliding out from between tub support legs.

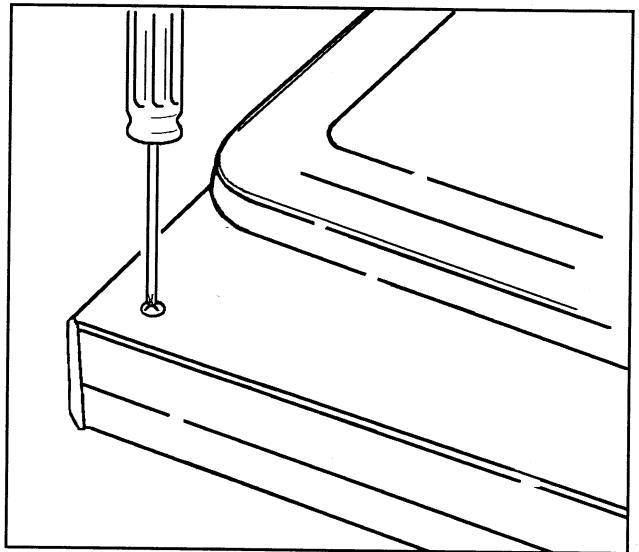


<u>No.</u>	<u>Description</u>
1	Access Panel
2	Insulation Barrier
3	Barrier

NOTE: When replacing top access panel mounting screws, be sure to use the original screws. Using the wrong screw can result in a damaged tub.

INNER DOOR PANEL

For access to dispensers, switches, timer or microprocessor board and wiring, removal of the inner door panel is necessary.

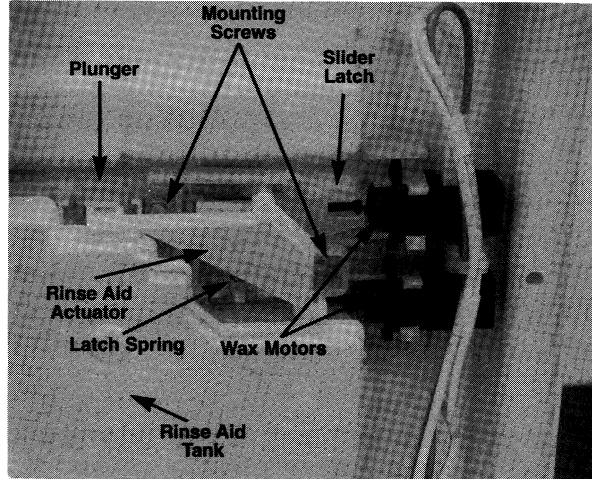


To Remove

1. **Disconnect the power supply to the dishwasher.**
2. Open the dishwasher door.
3. Remove the seven torx screws along the lip of the inner door.
4. Separate inner door panel from the door assembly.
5. Disconnect wires from dispenser wax motors before pulling inner door away from dishwasher.



This will expose the latch spring and hook assembly.

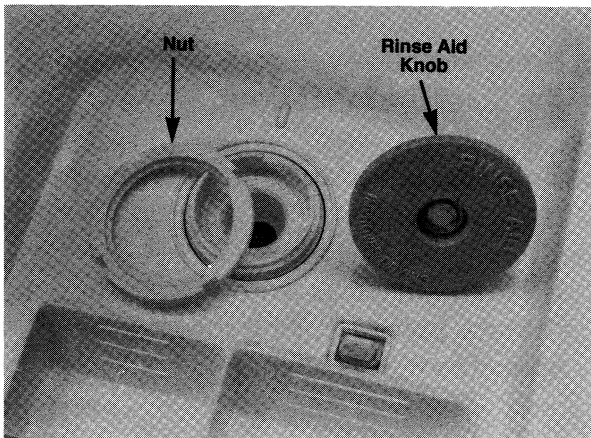


DISPENSER ASSEMBLY AND WAX MOTORS

For access to plunger assembly, wax motors, latch spring and reservoir assembly.

To Remove

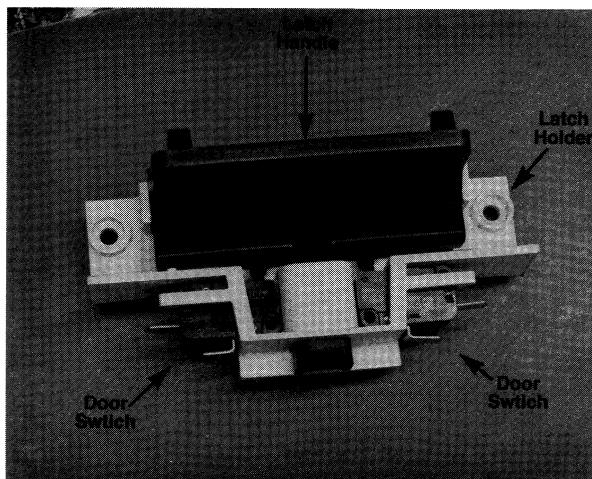
1. **Disconnect the power supply to the dishwasher.**
2. Unscrew rinse aid knob and rinse aid nut holding reservoir assembly to inner door liner.
3. Remove wiring from wax motors noting wire routing for reconnection.



4. Remove two screws to release re-
tainer assembly from inner door liner.

5. The plunger assembly is located on top of the reservoir. To remove, twist the plunger so the exposed tabs are clear of the retaining tabs on the reservoir. Pull the plunger from the reservoir.
6. Wax motor replacement is made by expanding the retainer tabs and sliding the motors from the tabs. When replacing the wax motors, ensure the piston is securely clipped onto the dispenser actuator arms.

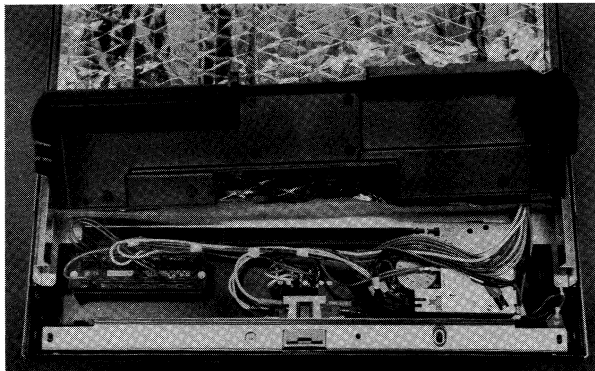
DOOR LATCH SWITCH HOLDER ASSEMBLY



Two door switches are used in the latch assembly. Both switches are normally

OPEN and will CLOSE only when engaged by the door latch hook mechanism. Each switch is in series with respective Hot or Neutral line operations. Failure of either or both switches will result in dishwasher non-operation.

Door switches require no field adjustment.



To Remove

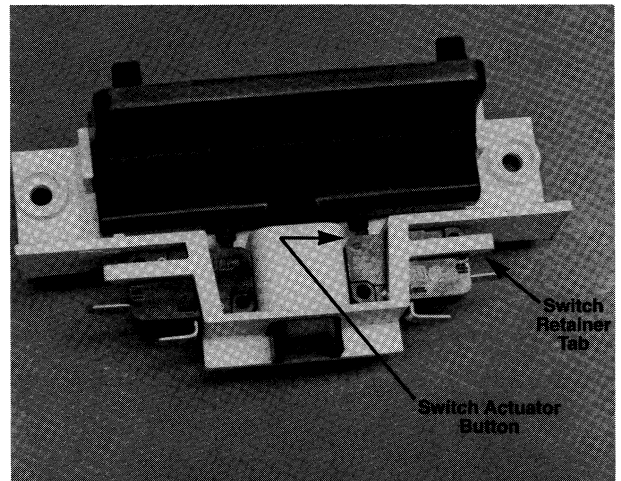
1. **Disconnect the power supply to the dishwasher.**
2. Remove inner door liner. (*See section titled INNER DOOR PANEL.*)
3. Remove or set aside metal reinforcement strip.
4. Remove plastic barrier covering the control panel components.
5. To remove door latch switch assembly, remove mounting screw holding assembly to back of control panel. (Note the screw replacement for the door reassembly.)

To Disassemble

1. **Disconnect the power supply to the dishwasher.**
2. To remove switch, lift retainer tab behind the switch and depress the actuator button on switch. While lifting

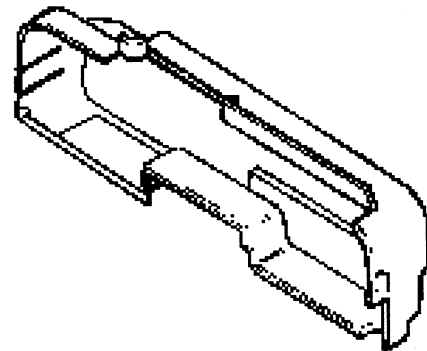
the tab, pull switch from holder. To reassemble, lift retainer tab and insert switch into holder.

3. To remove latch handle, depress two retainer tabs on switch holder then lift handle.



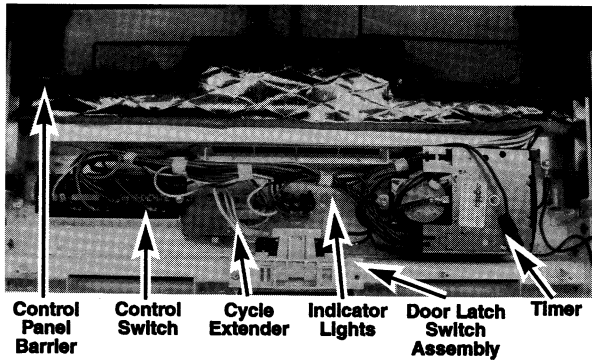
CONTROL PANEL BARRIER

Shields the control components within the control console.



To Remove

1. **Disconnect the power supply to the dishwasher.**
2. Depress retainer tab on left side of barrier.
3. Lift barrier up, left side first and disengage solid tab on right side of barrier from control panel.



CONTROL SWITCH

To Remove

1. Disconnect the power supply to the dishwasher.
2. Disconnect wire leads. (Refer to electrical schematic for proper ohm checks.) Remove hex head screw on each end of the switch.

CYCLE EXTENDER

Cycle extender is a bimetal switch used to add approximately twenty minutes of WASH in the HEAVY cycle and ten minutes in a NORMAL cycle. It is used again in the DRY cycle on select models. *(For more information see ELECTRICAL-MECHANICAL TROUBLESHOOTING, Section 2.)*

To Remove

Disconnect the power supply to the dishwasher.

Spread retaining clips on control panel and lift cycle extender.

TIMER

The timer circuits are illustrated in the electrical schematics included in this manual. (Refer to schematic for Electrical

Testing Procedures before attempting to replace timer.) **Timer must be replaced as a complete assembly.**

The **dishwasher schematic** is located behind the access panel. *(See Access and Toe Panel Removal section.)* The schematic diagram is unique to each model and contains the following:

- Timer Sequence Chart
- Harness Connector Identification
- Electrical Connection Diagram

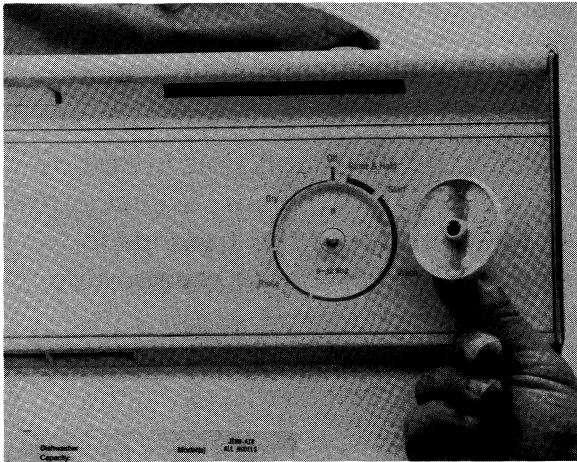
Using The Timer Sequence Chart

The sequence chart used in conjunction with an ohmmeter can be quite effective when attempting to verify or diagnose problems in the timer, wiring or other electrical components.

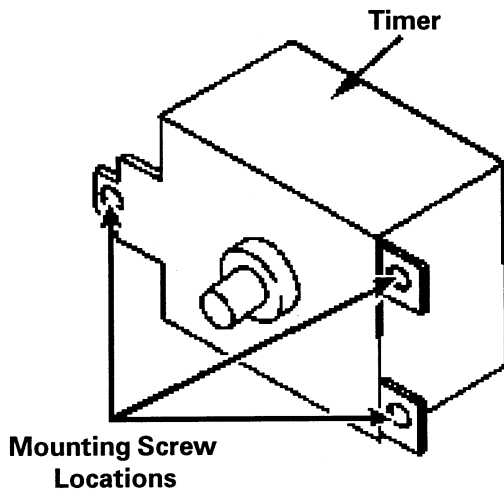
1. Identify cycle on chart where problem occurs.
2. On the chart, trace the timer contacts indicating CLOSED to identify the electrical circuits involved.
3. Perform a "point-to-point" continuity check of the timer terminals. This verifies whether corresponding contacts are CLOSED or OPEN when advanced to this cycle position. If contacts do not correspond to Sequence Chart, replace timer.
4. If timer checks out good, perform a "point-to-point" continuity check of the timer's electrical connector. This will isolate the trouble in the wiring or the components.

To Remove Timer

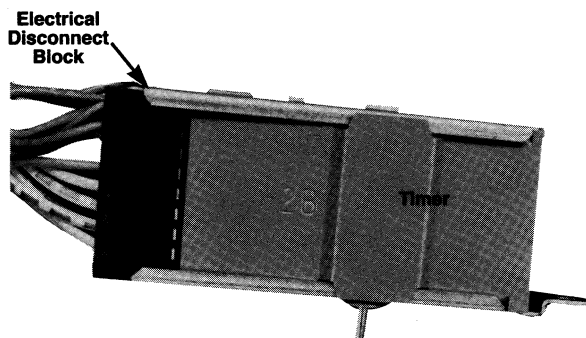
1. **Disconnect the power supply to the dishwasher.**
2. Remove timer knob by grasping knob and sliding off "D" shaft of the timer.



3. Remove three hex head screws holding the timer to the control panel facia.



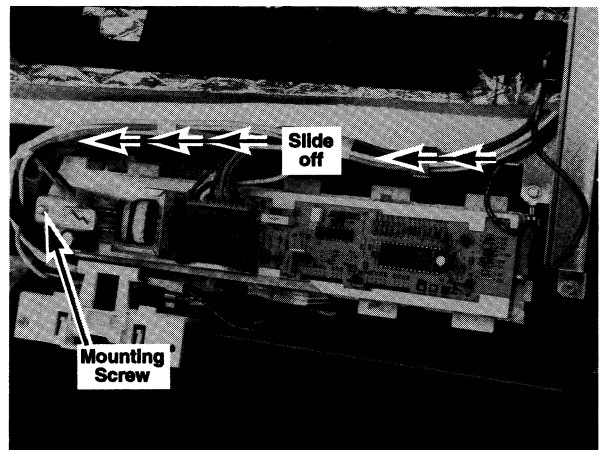
4. Remove the electrical disconnect block from the timer. Retainer tabs are located on each end. Squeeze the tabs, while pulling to disengage from timer. Check wiring terminals in disconnect block to ensure they are positioned securely.



MICROPROCESSOR BOARD (On Select Models)

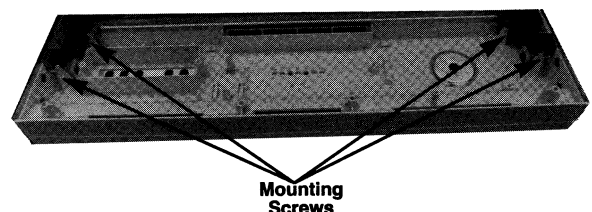
To Remove

1. Disconnect the power supply to the dishwasher.
2. Disconnect wire harness connector from board.
3. Remove hex head screws securing board retainer assembly to control panel.
4. Slide assembly toward screw just removed. Lift off of the control panel.



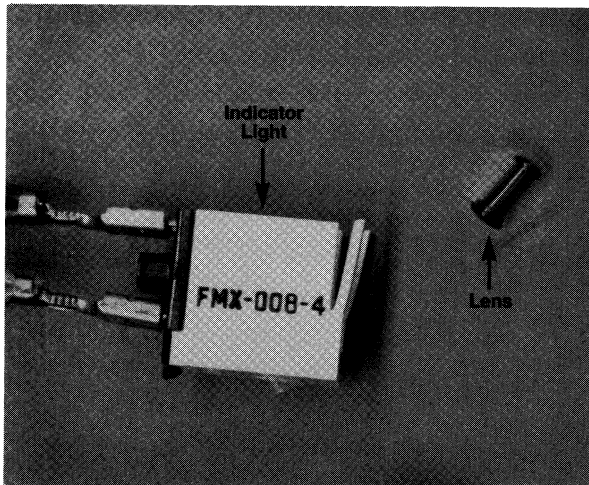
CONTROL PANEL FACIA

The inner door panel must be removed to obtain access to screws securing control panel to door panel. *(See previous sections on Removal of Console Components to gain access.)*

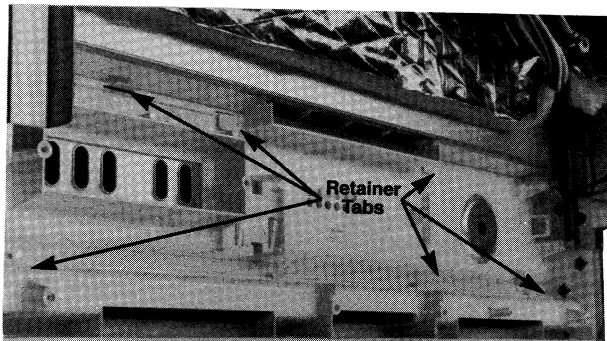


To Remove

1. Disconnect the power supply to the unit.
2. Remove four hex head screws securing the control panel to the outer door.
3. Disconnect wiring to electrical components in the control panel area.
4. Remove electrical components, (*i.e. Control Switch, Cycle Extender, Microprocessor and etc.*).



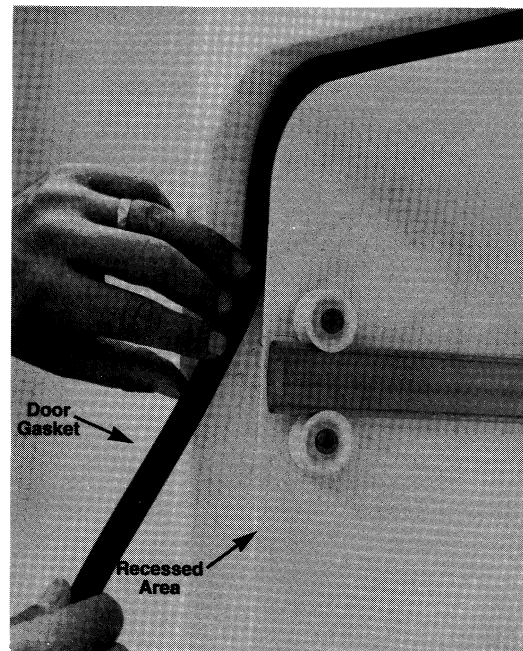
5. Remove indicator lights from their lenses by sliding the body of the light assembly away until it disengages from the lens. Remove lens from front of facia.



6. Bend up retainer tabs which hold the facia to the control panel.
7. Carefully separate facia from panel by pushing tabs through slots in control panel. **CAUTION: Panel is susceptible to being scratched or bent easily during disassembly or reassembly.**

DOOR GASKET

The door gasket provides a seal between the door and the tub.



To Remove

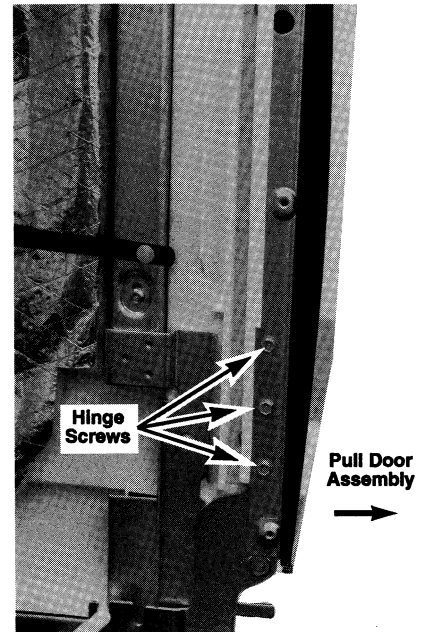
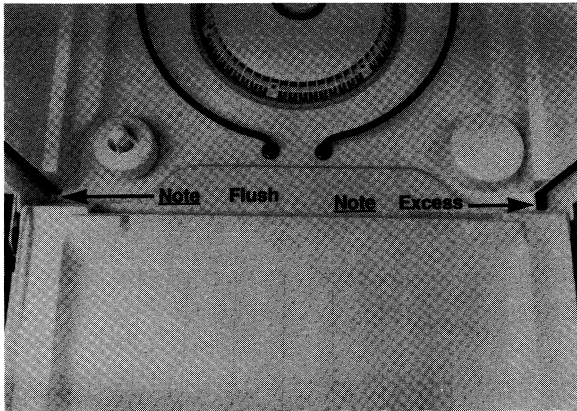
1. Open door.
2. From lower corner, pull gasket up and out of tub recess. Note the bend in the gasket in the right hand, lower corner.

To Replace

NOTE: Wetting the gasket will make installation easier.

1. Start at lower right hand corner. Form a bend 1" from the end of the gasket as shown.

2. Gently work the gasket into the recess part of the way up the right side.
3. Begin inserting the gasket in the recess on the lower left with the end flush.
4. Work the gasket into the recess on both sides, in the corners and across the top, finishing in the center.
5. Check for proper door and latch adjustment to ensure good seal of gasket.



4. Tighten the screws very tight (75 in. lb. minimum) to ensure that they will not loosen.
5. Adjust door latch strike for low door closure force. Check door liner placement by chalking the liner with chalk or talcum powder, then close. Upon opening, the chalk line will indicate door liner placement on the gasket. Make necessary adjustments to the door strike and door assembly for center placement on gasket.

DOOR HINGES

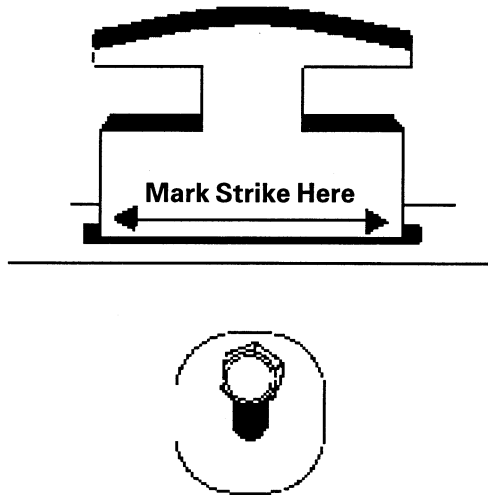
The door hinge screws are used to adjust complete door assembly to dishwasher tub front. This ensures a good seal of door gasket to the inner door liner.

To Adjust

1. Remove side trim strips from door assembly and loosen hinge screws.
2. Latch the door with the hinge screws loose.
3. Pull the bottom of the door away from the tub as far as it will go.

DOOR LATCH STRIKE

The door latch serves as a "TENSION" lever for proper door seal. It also provides the mechanical actuator for the door switch operation.



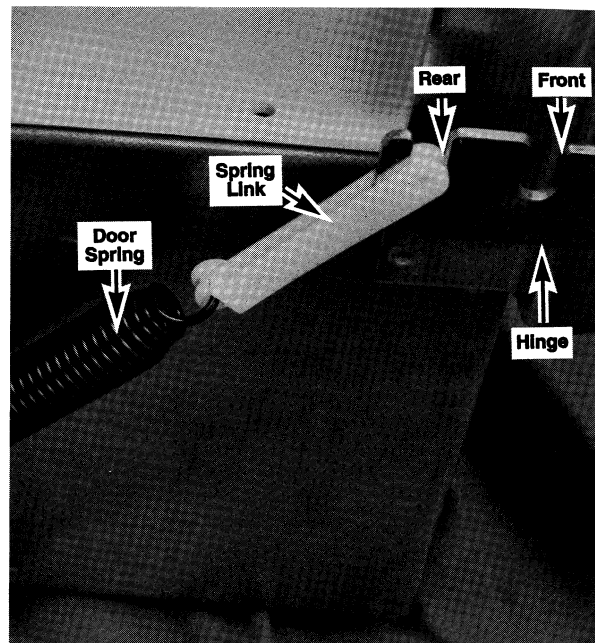
To Adjust Door Strike

1. Mark "underside" of the door strike prior to adjustment. This will provide a guide to make accurate "in" or "out" adjustment.
2. Loosen hex screw securing strike assembly to the tub. Slide strike "in" to INCREASE tension on door and door seal. Moving "out" will DECREASE tension.

HINGE SPRINGS

The hinge springs provide a counter balance to the weight of the door.

The door spring is inserted through the offset portion of the link, with the offset of the link positioned toward the dishwasher. The other end of the link is mounted into the appropriate slot of the hinge.



Timer Models The left spring link is mounted in the rear notch and the right link is mounted into the front notch of the hinge.

Microprocessor Models Both links are mounted in the front notch of the door hinge.

The bottom end of the spring is hooked in the hole of the adjustment bracket. (Always point the spring hooks toward the dishwasher.)



Door spring adjustment brackets are located behind the toe panel, on the

SECTION 4. GENERAL INFORMATION - (SECTION A AND B)

Information covered in this section includes:

SECTION A

Specifications

Warranty

Models - DW710, DW730, DW760, DW860, DW960, DW980

Cycles, Features and Options

Schematics

SPECIFICATIONS

BASIC DIMENSIONS	<u>Under Counter:</u> Height = 33-3/4" - 35-1/4" Width = 24" Depth = 22-3/4"
ELECTRICAL SUPPLY	120 Volts AC / 60 Hz All models require 15 amp fuse.
WATER SUPPLY	Water pressure should be 15-120 P.S.I. (1.06 - 8.44 kg/cm ²). Water temperature should be 120° F. when it enters the dishwasher.
DRAIN	1/2" I.D. flexible drain hose furnished. High drain loop positioned on side of dishwasher. Must maintain minimum 32" height.
MOTOR AND PUMP	1/6 horsepower motor, non-reversing pump with solenoid actuated drain valve.
WEIGHT (CRATED/UNCRATED)	DW710, DW370, DW760 - Approx. 100 lbs. (45 kg.)/ 85 lbs. (39 kg.) DW860, DW960, DW980 - Approx. 115 lbs. (53 kg.)/ 100 lbs. (45 kg.) <i>Added weight is due to additional insulation.</i>
CUSTOM PANEL DIMENSIONS	Decorative Door Panel Insert - 1/4" x 18-3/16" x 23-9/16" (.64 cm x 46.2 cm x 59.8 cm) Decorative Access Panel Insert - 1/4" x 4-5/8" x 23-11/16" (.64 cm x 11.7 cm x 60.2 cm)

WARRANTY

JENN-AIR DISHWASHER WARRANTY

FULL ONE-YEAR WARRANTY

For ONE (1) YEAR from the date of original retail purchase, any part which fails in normal home use will be repaired or replaced free of charge.

LIMITED WARRANTY

Second Year

After the first year from the date of original retail purchase, through the second year, parts which fail in normal home use will be repaired or replaced free of charge for the part itself, with the owner paying all other costs, including labor, mileage and transportation.

Third Through Fifth Year

After the second year from the date of original retail purchase, through the fifth year, all of the following components which fail in normal home use will be repaired or replaced free of charge for the part itself, with the owner paying all other costs, including labor, mileage and transportation. These components include:

Any parts of the complete power module assembly for all models, including the center spray nozzle, spray arms, top wash arm hose, and motor.

Computer Touch Control models only – any microprocessor and touch pad assemblies.

All models against rust, including exterior cabinet and front panels of convertible models, the exterior front panels and accessory side panels of built-in models, and DURALON coated racks (available on selected models).

FULL TWENTY-YEAR WARRANTY

First Through Twentieth Year

From the date of original retail purchase through the twentieth year, should the tub develop a water leak in normal home use, the dishwasher itself will be replaced FREE OF CHARGE.

First Through Twentieth Year

From the date of original retail purchase through the twentieth year, should the door liner develop a water leak in normal home use, repair or replacement of the door liner will be made FREE OF CHARGE.

PLEASE NOTE: These full warranties and the limited warranty apply when the dishwasher is located in the United States or Canada. Dishwashers located elsewhere are covered by the limited warranty only, including parts which fail during the first year.

CANADIAN RESIDENTS

This warranty covers only those dishwashers installed in Canada that have been listed with Canadian Standards Association unless the dishwashers are brought into Canada due to transfer of residence from the United States to Canada.

TO RECEIVE WARRANTY SERVICE

To locate an authorized service company in your area contact the Jenn-Air dealer from whom your appliance was purchased; or call Jenn-Air Customer Assistance at the number listed below. Should you not receive satisfactory warranty service, please call or write:

Jenn-Air Customer Assistance
c/o Maytag Customer Service
P.O. Box 2370
Cleveland, TN 37320-2370
US 1-800-688-1100

When contacting Jenn-Air Customer Assistance be sure to provide the model and serial number of your appliance, the name and address of the dealer from whom you purchased the appliance and the date of purchase.

The specific warranties expressed above are the only warranties provided by the manufacturer. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

Should you still have a problem, write to **Major Appliance Consumer Action Program**, 20 North Wacker Drive, Chicago, Illinois 60606. MACAP is an industry sponsored but independent group of consumer experts who receive and act on complaints from appliance owners.

NOTE: When writing about an unsolved service problem, please include the following information:

- (a) Your name, address and telephone number;
- (b) Model number and serial number (found on the upper left corner of the tub opening) of your appliance;
- (c) Name and address of your dealer and the date the appliance was purchased;
- (d) A clear description of the problem you are having.
- (e) Water hardness, detergent brand and amount, water temperature, and cycle used.

SPECIFICATIONS - Section B

Information covered in this section includes:

SECTION B

Specifications

*Warranty - (For Warranty information refer to Section A, page 4-2.)

Models - DW701, DW711, DW731, DW761, DW761UQ,
DW861UQ, DW871UQ, DW961UQ*

Cycles, Features and Options

Schematics

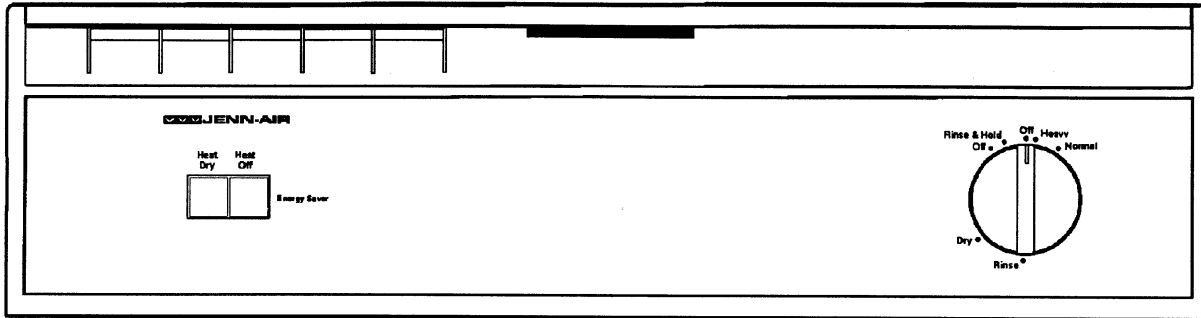
NOTE: UQ - New Sound Package

* - LED Microprocessor Models

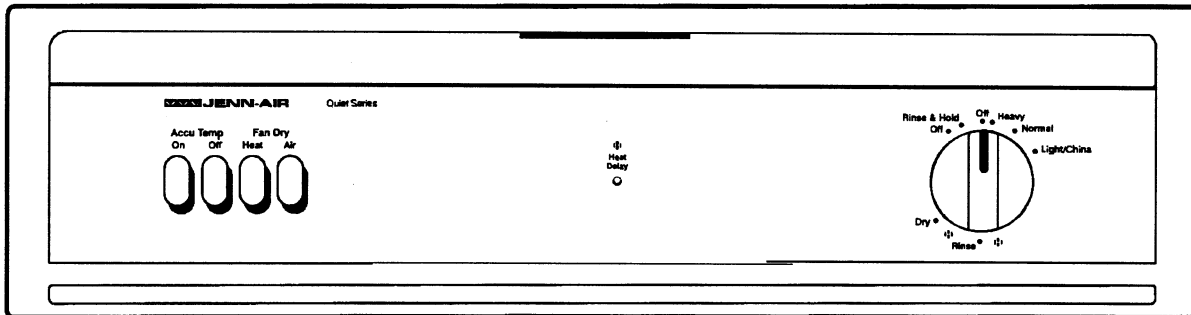
BASIC DIMENSIONS	<p><u>Under Counter:</u> Height = 33-3/4" - 35" Width = 24" Depth = 22-3/4"</p>
ELECTRICAL SUPPLY	<p>120 Volts AC / 60 Hz All models require 15 amp fuse.</p>
WATER SUPPLY	<p>Water pressure should be 15-120 P.S.I. (1.06 - 8.44 kg/cm²). Water temperature should be minimum of 120° -140° F. when it enters the dishwasher.</p>
DRAIN	<p>Flexible drain hose furnished (5/8", 3/4", 1"). High drain loop positioned on side of dishwasher. Must maintain minimum 32" height.</p>
MOTOR AND PUMP	<p>1/6 horsepower motor, non-reversing pump with solenoid actuated drain valve.</p>
WEIGHT (CRATED/UNCRATED)	<p>DW761, DW731, DW711 - 100 lbs. (45 kg.)/ - 85 lbs. (39 kg.) DW961UQ, DW871UQ, DW861UQ, DW761UQ - 117 lbs. (53 kg.)/ - 100 lbs. (45 kg.) <i>Added weight is due to additional insulation.</i></p>
CUSTOM PANEL DIMENSIONS	<p>Decorative Door Panel Insert - 1/4" x 18-3/16" x 23-9/16" (.64 cm x 46.2 cm x 59.8 cm) Decorative Access Panel Insert - 1/4" x 4-5/8" x 23-11/16" (.64 cm x 11.7 cm x 60.2 cm)</p>

CONTROL PANELS

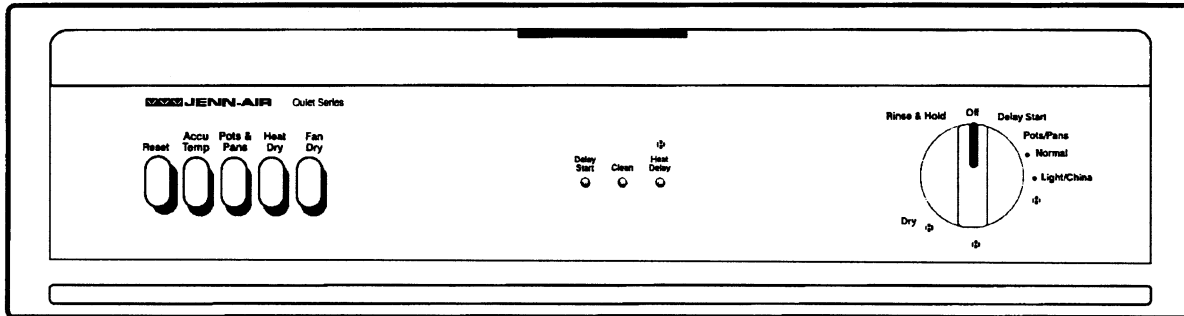
JENN-AIR DISHWASHER DW701



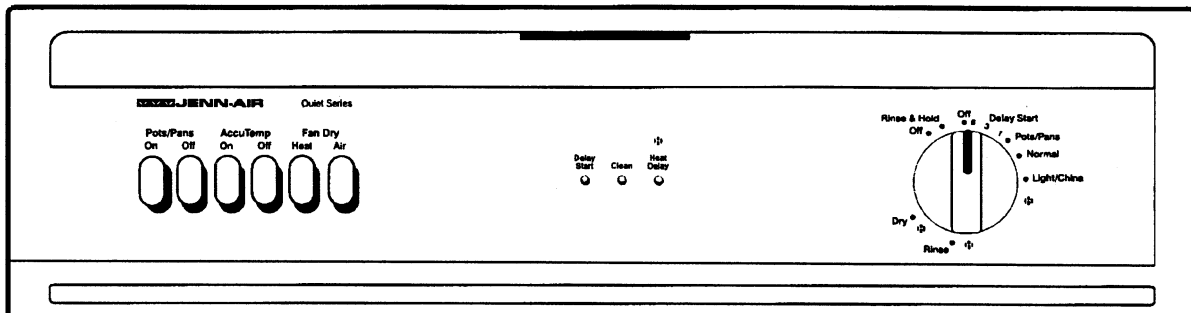
JENN-AIR DISHWASHER DW711



JENN-AIR DISHWASHER DW731

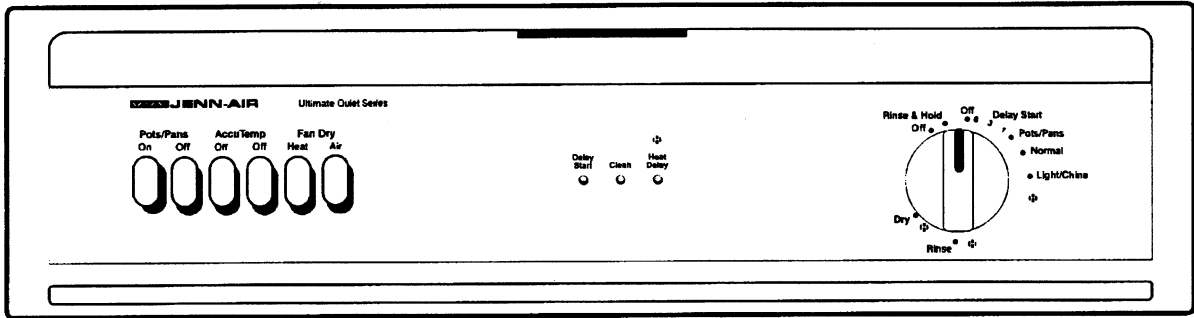


JENN-AIR DISHWASHER DW761

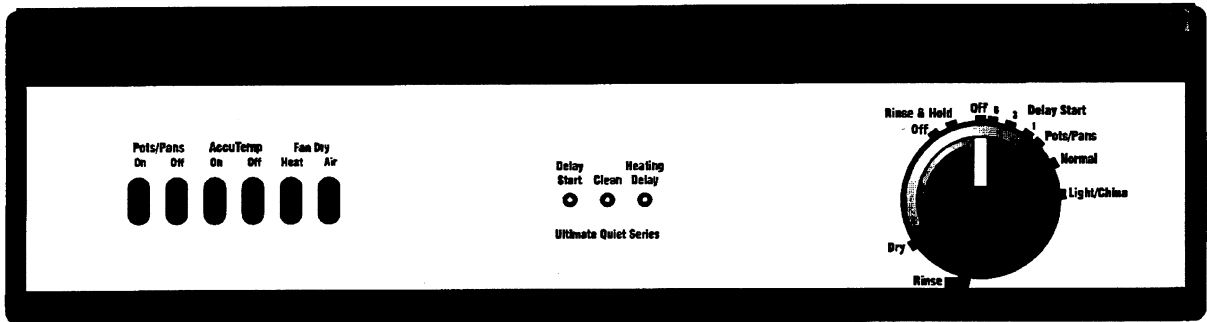


CONTROL PANELS

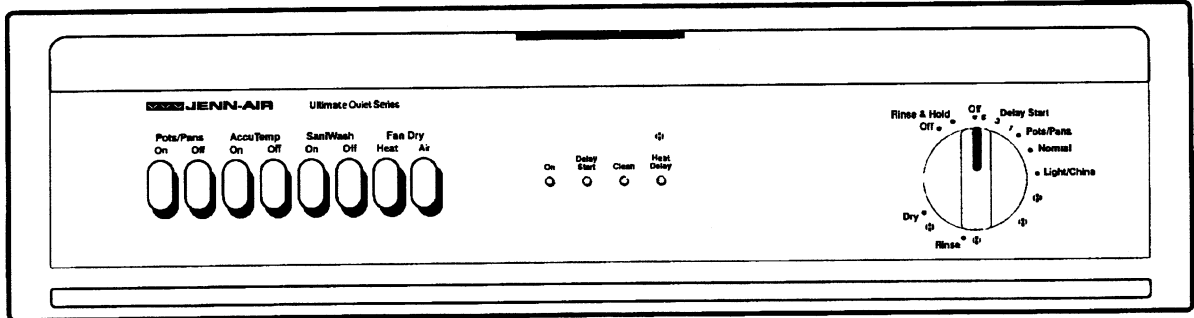
JENN-AIR DISHWASHER DW761UQ



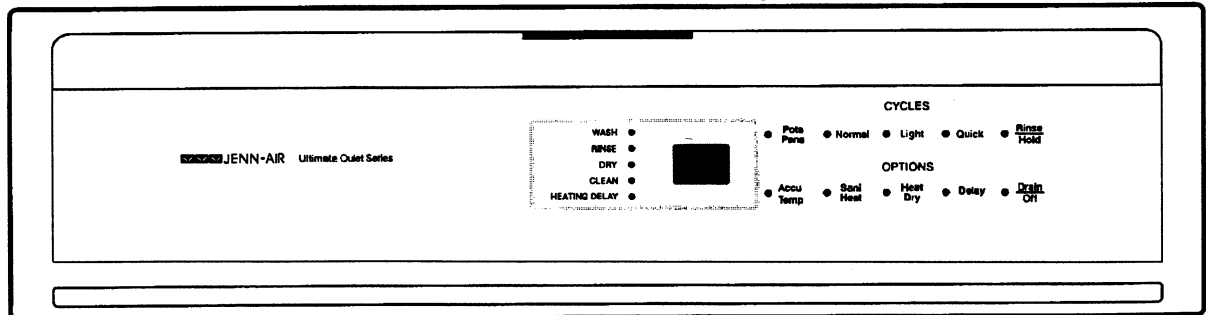
JENN-AIR DISHWASHER DW861UQ



JENN-AIR DISHWASHER DW871UQ



JENN-AIR DISHWASHER DW961UQ



FEATURES, CYCLES AND OPTIONS

FEATURES

Model Features	DW 701	DW 711	DW 731	DW 761	DW 761UQ	DW 861UQ	DW 871UQ	DW 961UQ
Cycles	Three	Four	Four	Four	Four	Four	Four	Five
Push Buttons	Rocker	4	5	6	6	6	8	10 - ETC
Lights	None	1	3	3	3	3	4	LED
Sound Package	None	Std	Std	Std	UQ	UQ	UQ	UQ
3 Level Wash	Two	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Heat Dry Option	Convct	Fan	Fan	Fan	Fan	Fan	Fan	Fan
Rinse Aid Disp.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Delay Start	No	No	1-6 Hr	1-6 Hr	1-6 Hr	1-6 Hr	1-6 Hr	9 Hr
Silverware Handle	No	No	No	Yes	Yes	Yes	Yes	Yes
5 Point Filter	No	No	Yes	Yes	Yes	Yes	Yes	Yes
AccuTemp™ Option	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sani-Wash Option	No	No	No	No	No	No	Yes	Yes
Upper Rack	Std	Std	Deep	Deep + Shelf	Deep + Shelf	Deep + Shelf	Deep + Shelf	Deep + Shelf
Lower Rack	Std	Std	Std + 3 Fold	Std + 3 Fold	Deep + 3 Fold	Deep + 3 Fold	Deep + 3 Fold	Deep + 3 Fold
Ball Tines	Std	Std	Yes	Yes	Yes	Yes	Yes	Yes
Rack Material	Vinyl	Vinyl	Vinyl	Nylon	Nylon	Nylon	Nylon	Nylon
Color	B/W	B/W	B/W/M	B/W	B/W	Pro Style	B/W/M	B/W

CYCLES AND OPTIONS

CONTROLS	DW701	DW711	DW731	DW761	DW861	DW871	DW961
Rinse & Hold	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quick Wash	No	No	No	No	No	No	Yes
Light/China	No	Yes	Yes	Yes	Yes	Yes	Yes
Normal Cycle	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pots & Pans	No	No	Yes	Yes	Yes	Yes	Yes
Heavy Cycle	Yes	Yes	No	No	No	No	No
Sani-Wash/Heat	No	No	No	No	Yes	Yes	Yes
Heat Delay w/Lite	No	Yes	Yes	Yes	Yes	Yes	Yes

CYCLE	CYCLE SEQUENCE	CYCLE TIME	WATER USAGE
RINSE & HOLD	Rinse Off	6 Minutes	1.5 Gallons (6 Liters)
QUICK WASH	Main Wash & 2 Rinses	17 Minutes 52 Minutes ¹	4.5 Gallons (19 Liters)
LIGHT/CHINA	2 Rinses Main Wash ² 2 Rinses ³ Dry	74 Minutes	7.5 Gallons (26 Liters)
NORMAL	PRE- WASH 2 Rinses Main Wash ² 2 Rinses ³ Dry	82 Minutes	9.0 Gallons (34 Liters)
HEAVY POTS/PANS SANI-WASH	PRE- WASH ² 3 Rinses Extended Main ² Wash 2 Rinses ³ Dry	99 Minutes	10.5 Gallons (42 Liters)

¹ With Heat Dry Option

² Indicates AccuTemp™ Water Heating Option

³ Indicates Final Rinse Has AccuTemp™ Water Heating Option

CYCLE DEFINITIONS

Rinse & Hold

Rinses the dishes being held for a full load. Minimizes any food odor from building up in the dishwasher. The dishwasher will fill with water to the proper level, wash for one minute and 40 seconds, then drain and turn off.

Delay Start Option

Allows the user to start the wash cycle at a more convenient or energy efficient time. On **mechanical timer models**, set the selector knob to the desired number of delay hours, select the wash option then latch the dishwasher door. An indicator will light in the center of the control panel to let the user know it is in a delay mode.

On **microprocessor models**, the *Delay* mode can delay or interrupt any wash cycle from one hour to nine hours. To set up a delay, first select the appropriate cycle and options for the load. The control will pause five seconds before starting a cycle to give the user time to select a delay time. When the *Delay* key is depressed and held down, *Delay* time will appear in the display. The clock will count down and cycle will automatically start as soon as the *Delay* time expires. *Heat Dry* may be turned *On* or *Off* any time during the *Delay* time down cycle. **(NOTE: If *Delay* is chosen without first selecting a cycle and options, the dishwasher will select the last wash cycle used in the *Delay* mode.)** The *Delay* key can also be pressed to **temporarily interrupt a cycle**.

The cycle will resume from the point of interruption when the delay time runs out or when the *Delay* key is pressed again.

Quick Wash

Washes dusty or very lightly soiled items which the user plans to store or reuse immediately. Towel drying is necessary, since heated dry cycle is absent.

Light/China

Designed for lightly soiled loads, china and crystal items.

Normal

Designed for loads containing normally soiled dishes.

Pots & Pans/Heavy

Provides a longer cycle for items with heavy or baked-on food soils.

HEATING OPTIONS

Heated Dry

Combines pulsed radiant heat with forced fan air during the drying period of the cycle. The heating element pulsates *On* for five minutes and *Off* one minute and 40 seconds periodically throughout the *Dry* cycle.

Automatic Water Heating

Established in some of the *Pre-Wash* and *Rinse* periods and the entire main wash of

the *Sani-Wash* and *Pots & Pans* cycles, the temperature of the water is raised approximately 1° F. per minute. This is preset and automatically raises the water temperature to enhance washing performance.

AccuTemp™

Checks and raises the water temperature, if necessary, to approximately 135° to 140° F. during the end of the main wash and at the middle of the final rinse periods. This option ensures that detergents will activate and the fats in the food soil will break down. It is recommended for home owners with low hot water temperature.

In **microprocessor models**: *AccuTemp™* will extend the *Main Wash* and *Final Rinse* until the thermostat closes (135° F. ±5° F.), or up to an additional 17 minutes and 40 seconds. The *Sani-Heat* option and *Pots & Pans* cycle will add heat to all washes, rinses, extend the *Main Wash* and *Final Rinse* until the *AccuTemp™* thermostat closes (135° F. ± 5° F.), or up to an additional 17 minutes and 40 seconds.

Pots & Pans

Checks and raises the water temperature, if necessary, to approximately 135° F. to 140° F. during the middle of the final pre-wash and final rinse periods and the end of the main wash. This option ensures detergents will activate and the fats in the food soil will break down on heavily soiled items. It ensures the optimum washing performance because the water temperature is checked and raised, if necessary, in the PRE-WASH prior to the main wash. This option can be used on any of the selected cycles.

Sani-Wash

Adds automatic water heating (1° F. per minute) to all pre-wash and rinse periods of the selected cycle. The water temperature is checked and raised, if necessary, to approximately 135° F. to 140° F. during the beginning of the main wash period and the middle of the final rinse period. This

option ensures detergents will activate fats, break down and increases the water temperature throughout all periods of the cycle. It ensures the maximum washing performance because the water temperature is checked and raised, if necessary in the beginning the main wash. This option maximizes the cleaning and drying performance for all selected cycles.

WIRING DIAGRAMS AND ELECTRICAL SCHEMATICS

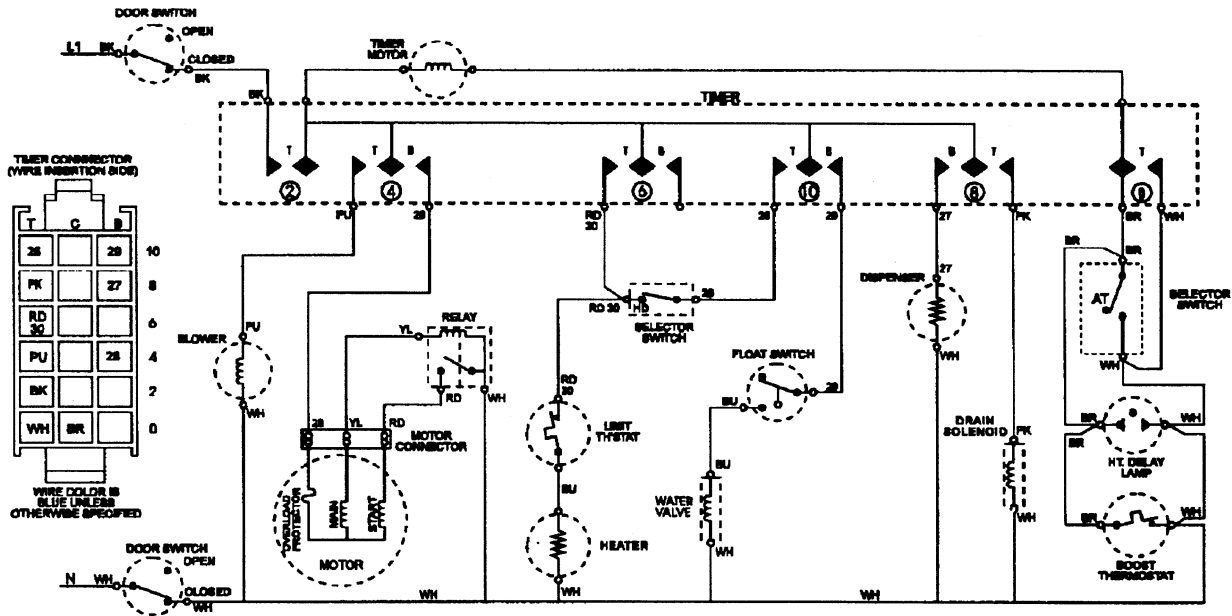
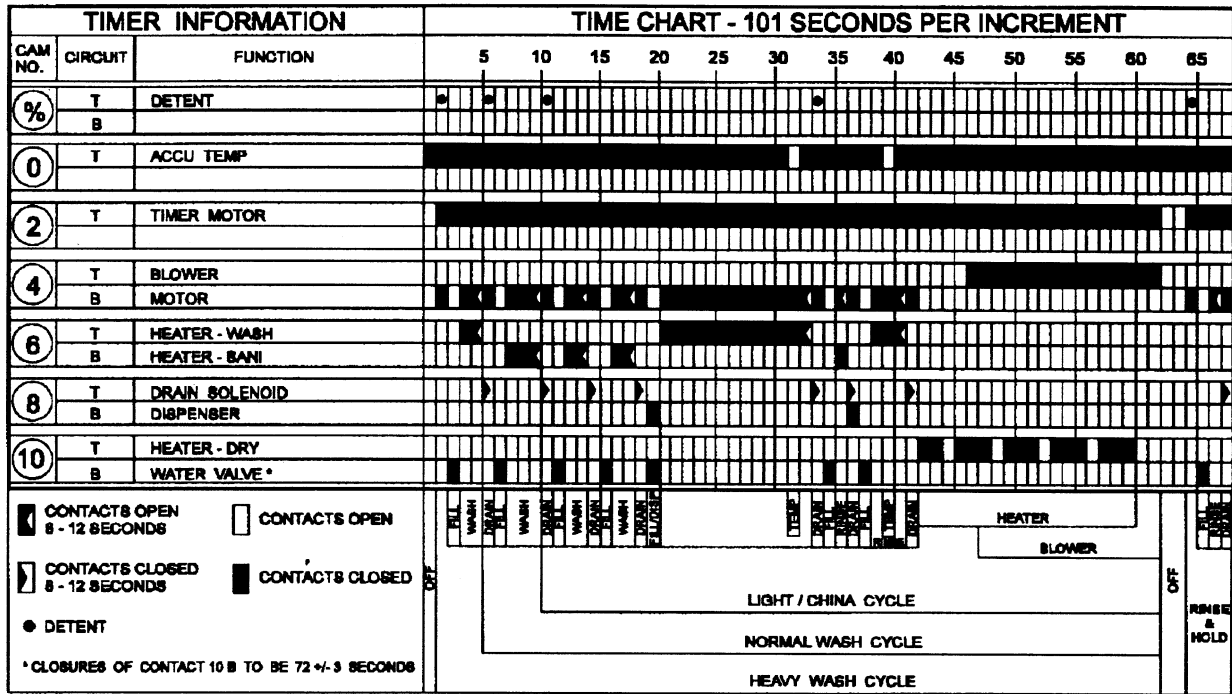
An Electrical Schematic is packed in every unit. It is located inside the console.
Always remember to return the schematic to its original location for future reference.

MODEL
DW701
DW711
DW731/DW761
DW761UQ/DW861UQ
DW871UQ
DW961UQ*

(UQ = New Sound Package - Ultra Quite)

(* = LED Microprocessor Model)

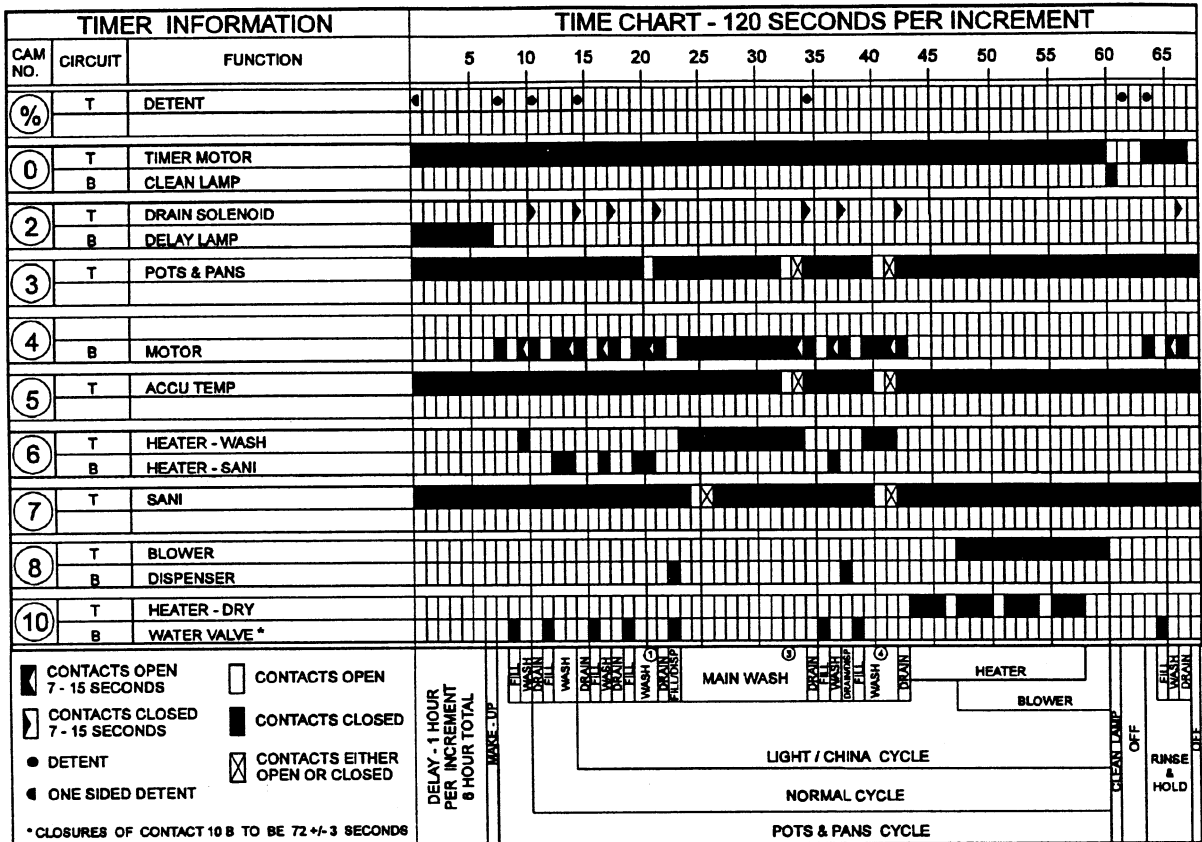
WIRING DIAGRAM AND ELECTRICAL SCHEMATIC FOR DW711



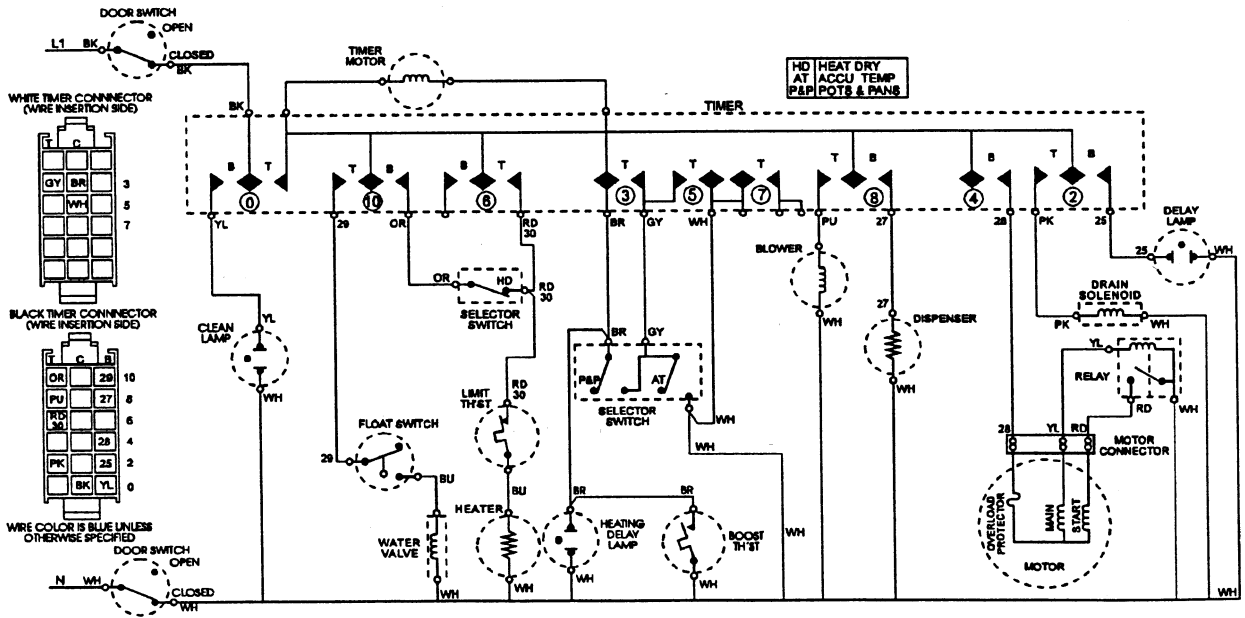
CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

WIRING DIAGRAM AND ELECTRICAL SCHEMATIC FOR DW731 & DW761



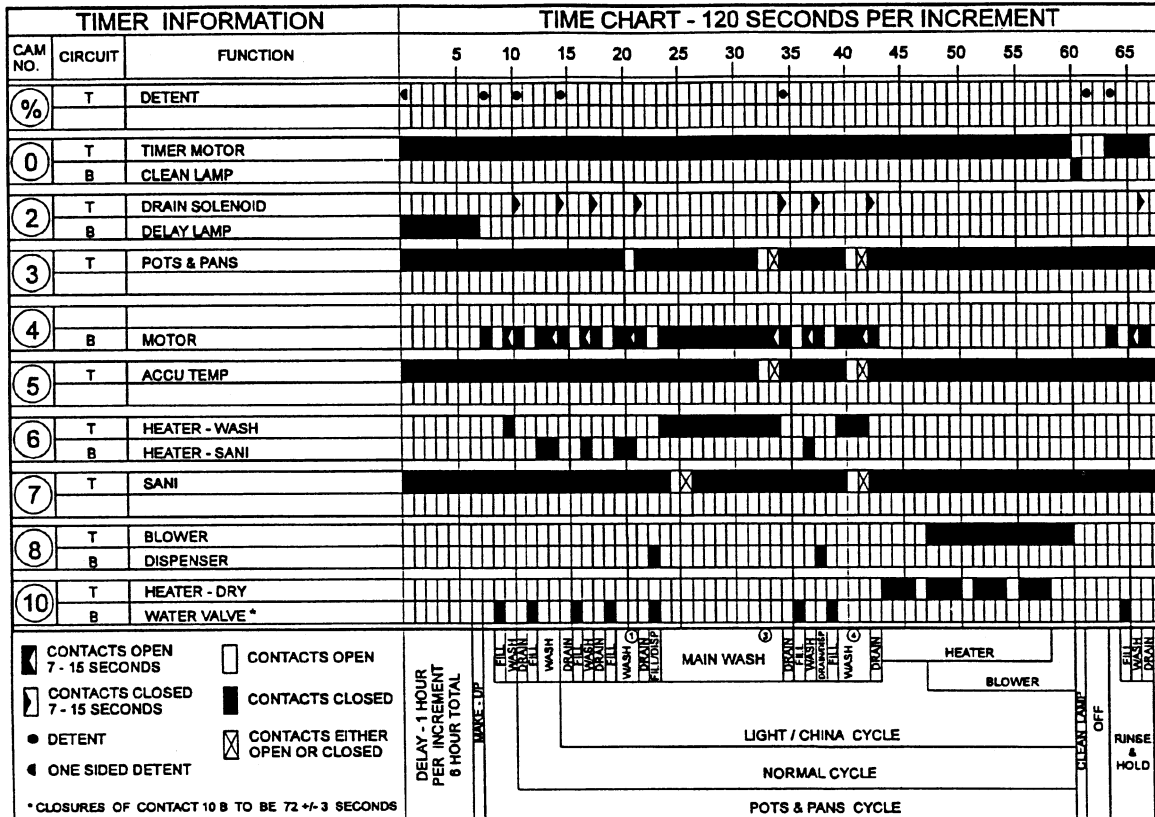
- ① CHECK THERMOSTAT IF POTS & PANS SELECTED
- ② CHECK THERMOSTAT IF POTS & PANS OR ACCU TEMP SELECTED
- ③ CHECK THERMOSTAT IF POTS & PANS OR ACCU TEMP SELECTED



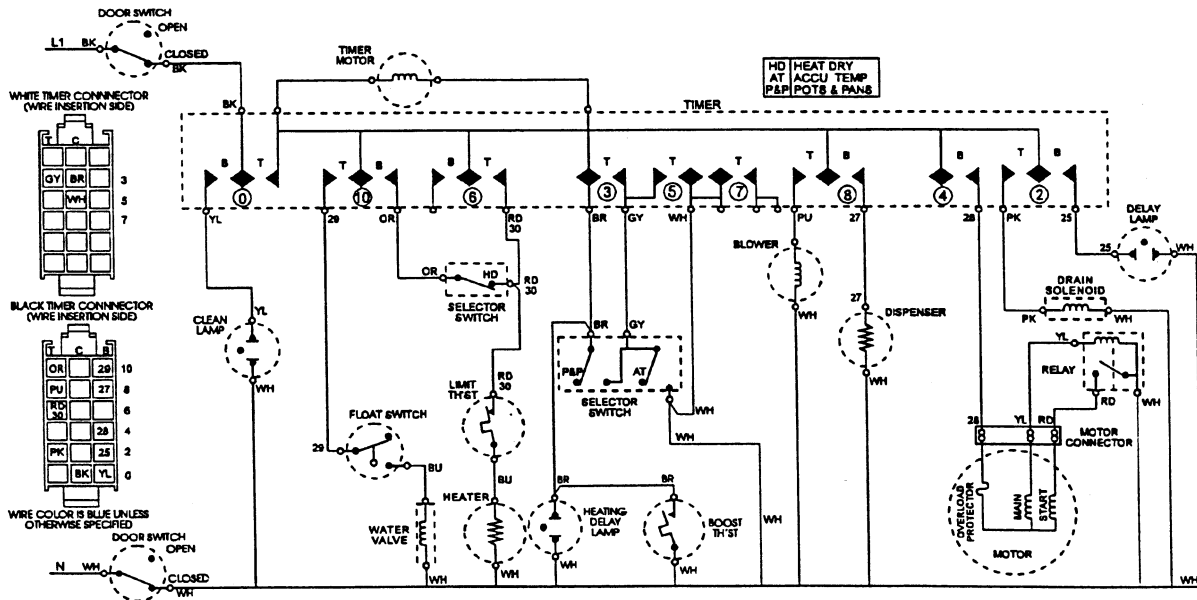
CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

WIRING DIAGRAM AND SCHEMATIC FOR DW761UQ & DW861UQ



- ① CHECK THERMOSTAT IF POTS & PANS SELECTED
- ② CHECK THERMOSTAT IF POTS & PANS OR ACCU TEMP SELECTED
- ③ CHECK THERMOSTAT IF POTS & PANS OR ACCU TEMP SELECTED



CAUTION

Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

SCHEMATIC FOR DW961UQ*

CYCLE INFORMATION

POTS & PANS CYCLE 89 min.				NORMAL CYCLE 89 min.				LIGHT/CHINA CYCLE 82 min.				QUICK CYCLE 16 or *46 min.				DRY			
F	P	R	D	F	P	R	D	F	P	R	D	F	P	R	D	F	P	R	D
PRE	WASH	WASH	WASH	PRE	WASH	WASH	WASH	PRE	WASH	WASH	WASH	PRE	WASH	WASH	WASH	OFF	HEATER	HEATER	HEATER
3:30	1:40	1:40	1:40	3:30	1:40	1:40	1:40	3:30	1:40	1:40	1:40	3:30	1:40	1:40	1:40	6:00	24:00	24:00	24:00
M	N	N	N	M	N	N	N	M	N	N	N	M	N	N	N	ON	OFF	ON	OFF
HEATER ON				HEATER ON				HEATER ON				HEATER ON				OFF	ON	OFF	ON
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MAYTAG

**Customer
Service**

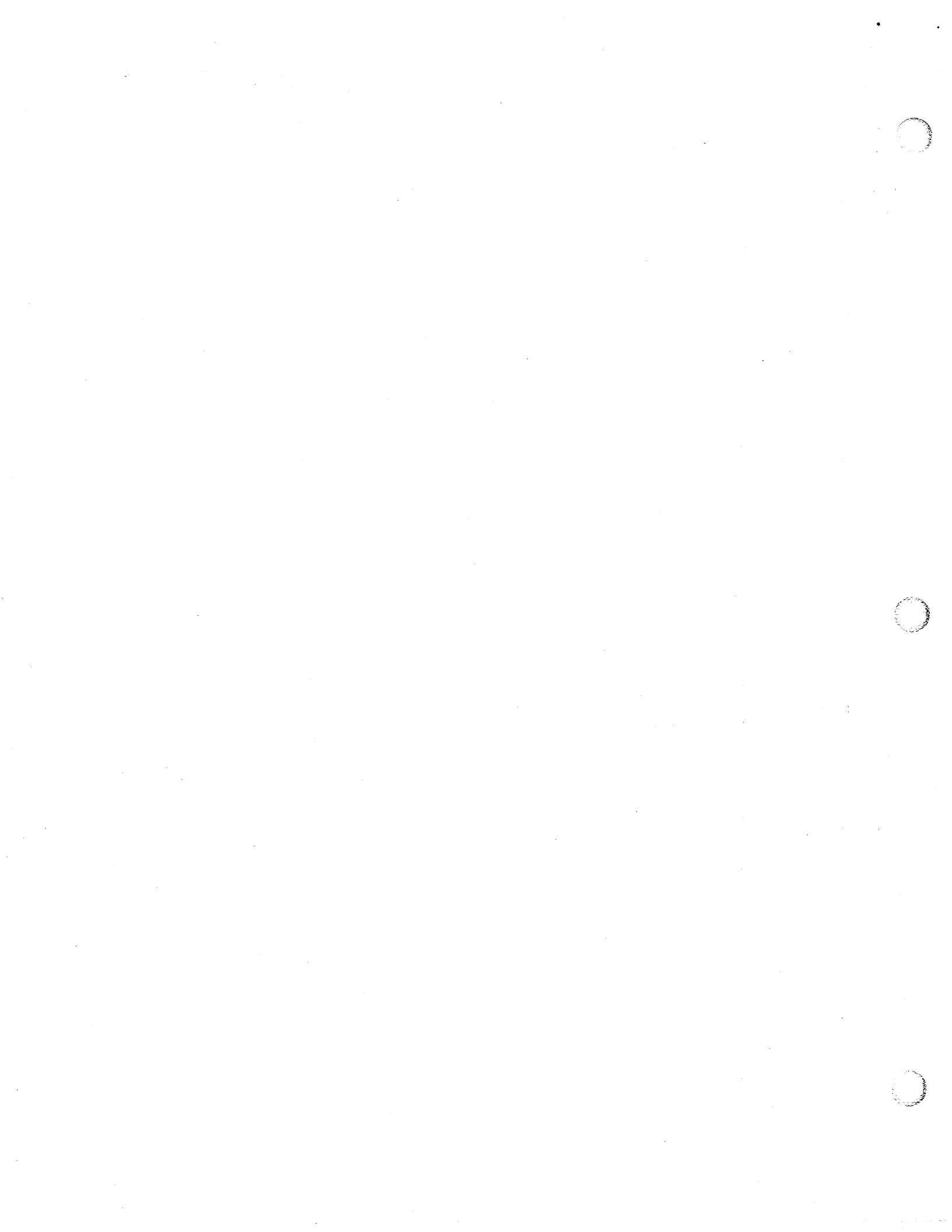
**240 Edwards St. S.E.
Cleveland, TN 37311**

MAYTAG

Jenn-Air

**Dishwasher
Service Manual
Expressions™ Collection**

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Revised 2/97



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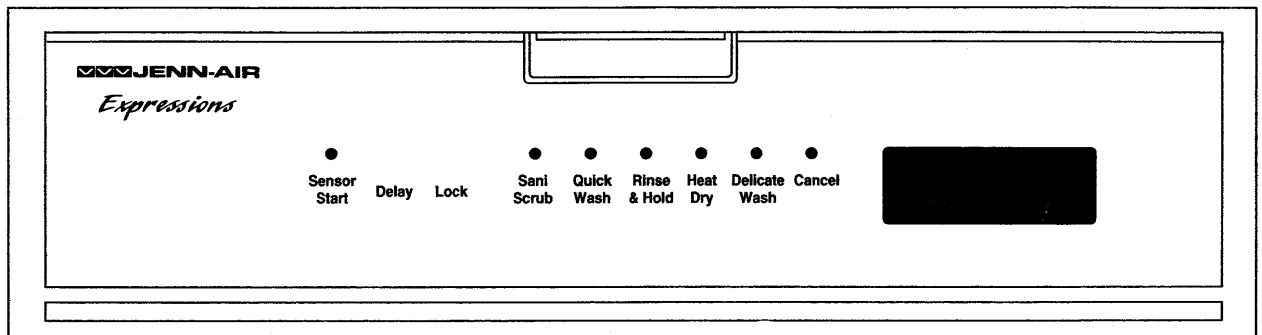
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INTRODUCTION

This service supplement consists of service information pertaining to the

DW1000 Jenn Air Model Dishwasher

For other service related information, refer to Jenn Air Dishwasher Service Manual, part number 16006946.



DW1000

For additional information on issues encompassed in this manual, including safety issues, contact:

Maytag Customer Service
240 Edwards Street S.E.
Cleveland, TN 37311


Phone: 615-472-3333
FAX: 615-478-0649

SAFETY PRECAUTIONS

This service manual is intended to assist you in diagnosing conditions which may develop in the Jenn Air Expressions™ dishwasher. Electrical component testing is for the most part, made with an appliance test meter and consists of checking for open or closed circuits, along with the use of a clamp-on ammeter. Mechanical checks are made through sight and sound.

This manual is designed for the technician who is familiar with the operation and construction of Jenn Air products. Information contained in this manual is intended for use by a qualified service technician, familiar with proper and safe procedures to be followed when repairing an electrical appliance. All tests and repairs should be performed by a qualified service technician equipped with proper tools and measuring devices. All component replacements should be made by a qualified service technician, using only MAYTAG CUSTOMER SERVICE replacement parts.

Improper assembly or adjustment may occur if service or repair is attempted by persons other than qualified service technicians or if parts other than MAYTAG CUSTOMER SERVICE replacement parts are used. Improper assembly or adjustment can cause hazardous conditions.

▲ CAUTION	There can be risk of injury or electrical shock while performing services or repairs. Injury or electrical shock can be serious or even fatal.
	

PERSONAL SAFETY PRECAUTIONS

Note: An appliance should always be disconnected from power source before attempting replacement of component parts.

This appliance must be properly grounded. Never plug the appliance into a receptacle which is not grounded adequately and in accordance with local and national codes. See installation instructions for grounding this appliance.

Appliances with the UL symbol on the data plate have been listed with Underwriters' Laboratories, Inc.; those with a CSA monogram on the data plate have been certified by the CSA Testing Laboratories as complying with Canadian Standards Association requirements. Nevertheless, as with any equipment using electricity and having moving parts, there are potential hazards. To use this appliance safely, the operator should become familiar with the instructions for operation of the appliance and always exercise care when using it.

IMPORTANT SAFETY NOTICE AND WARNING

The California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) requires the Governor of California to publish a list of substances known to the State of California to cause cancer or reproductive harm, and requires business' to warn customers of potential exposures to such substances.

SECTION 1. SPECIFICATIONS

BASIC	Height = 33 3/4" - 35 1/4" (85.7cm - 89.5cm)
DIMENSIONS	Width = 24" (61cm) Depth = 23 1/2" (59.7cm)
ELECTRICAL SUPPLY	120VAC/60HZ All models require 15 amp fuse.
WATER SUPPLY	Water pressure should be 15-120 P.S.I., (1.06-8.44 kg/sq.cm). Water Temperature should be 120°F - 140°F when it enters the dishwasher.
DRAIN	1/2" I.D. Flexible drain hose furnished. High drain loop positioned on side of dishwasher, maintain 32" height.
MOTOR & PUMP	1/3 Horsepower, reversible; two-stage pump for circulation and draining.
WEIGHT	CRATED = 118 lb. (53.5kg) UNCRATED = 103 lb. (46.7kg)
TRIM KIT	Door Panel Insert = 1/4" x 18-3/16" x 23-9/16" (.64cm x 46.4cm x 60.2cm) Access Panel Insert = 1/4" x 4-5/8" x 23-9/16" (.64cm x 11.8cm x 60.2cm)

SECTION 2. WARRANTY

EXPRESSIONS DISHWASHER WARRANTY

Full Three Year Warranty

Any part which fails in normal home use during the first three years after the date of original retail purchase, will be repaired or replaced free of charge.

Limited Five Year Warranty on Wash System and Solid State Controls

Any parts of the system including the complete power module assembly, center spray nozzle, spray arms, top wash arm hose, motor, AND—on Computer Touch Control Models only—any microprocessor and touch pad assemblies which fail in normal home use during the second through the fifth year from the date of original retail purchase, will be repaired or replaced free of charge for the part itself, with the owner paying all other costs, including labor.

Limited Five Year Rack Warranty (Available on Select Models)

Should the Duralon™ coated racks rust during the five year period starting from the date of original retail purchase, repair or replacement will be made free of charge for the part itself, with the owner paying all other costs, including labor.

FULL LIFETIME Warranty Against Leaks on Dishwasher Tub and Door Liner

Should a water leak develop in the tub or door liner in normal home use starting from the date of original retail purchase through the life of the dishwasher, repair or replacement of the tub and/or door liner will be made FREE OF CHARGE. These full warranties and the limited warranties apply when the appliance is located in the United States or Canada. Appliances located elsewhere are covered by the limited warranties only, which include parts which fail during the first year.

Canadian Residents

This warranty covers only those appliances installed in Canada that have been listed with Canadian Standards Association unless the appliances are brought into Canada due to transfer of residence from the United States to Canada.

To Receive Warranty Service

- First:** Call or write the JENN-AIR dealer from whom your appliance was purchased or the authorized service firm designated by the dealer.
If you have moved from the selling dealer's service area call or write any authorized JENN-AIR dealer or authorized service firm at your new location. Check the telephone directory yellow pages to identify the dealer or service firm in your area.
- Second:** Should your contact with the dealer or the service firm fail to satisfactorily resolve the problem, contact the manager of the dealership or the manager of the service firm for assistance.
- Third:** Should you not receive satisfactory warranty service from one of the above or need help in identifying an authorized service firm write Jenn-Air Customer Assistance, c/o Maytag Customer Service, P.O. Box 2370, Cleveland, TN 37320-2370, and arrangements for warranty service will be made. If the problem is urgent, call Jenn-Air Customer Assistance, c/o Maytag Customer Service at (800) 688-1100.

When contacting Jenn-Air Customer Assistance, c/o Maytag Customer Service be sure to include the model and serial number of your appliance, the name and address of the dealer from whom you purchased the appliance and the date of purchase.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Should you still have a problem, write to: Major Appliance Consumer Action Panel, 20 North Wacker Drive, Chicago, Illinois 60606. MACAP is an industry sponsored but independent group of consumer experts who receive and act on complaints from appliance owners.

NOTE: When writing about an unsolved service problem, please include the following information:

- (a) Your name, address and telephone number;
- (b) Model number and serial number (found on the upper left corner of the tub opening) of your appliance;
- (c) Name and address of your dealer and date the appliance was bought;
- (d) A clear description of the problem you are having;
- (e) Water hardness, detergent brand and amount, water temperature, and cycle used.

SECTION 3. CONTROL PANEL

A	B	C	D	E	F	G	H	I
●			●	●	●	●	●	●
Sensor Start	Delay	Lock	Sani Scrub	Quick Wash	Rinse & Hold	Heat Dry	Delicate Wash	Cancel

FEATURES

- A. SENSOR START** This key will activate the smart cycle. The indicator on the pad will light and a tone will sound when the pad is pressed. By using a variety of sensors, the dishwasher will judge the water temperature, soil level and detergent, as well as the wash arm speed and rotation. It then develops an optimum cycle based on the information gathered. Continuously throughout the cycle, the dishwasher will check the conditions. **Note: The consumer may notice the time display will change (either up or down) as the unit adjusts to the conditions.** This is normal operation.
- When Sensor Start is selected, all other selected cycles are cancelled. However, the Sensor Start key must be selected before the end of the first fill. WASH & Wash Droplets will be displayed in the display area at the beginning of the cycle.

CYCLE SETTING	PRE-WASHES	MAIN WASHES	RINSES	FILLS	WATER USAGE
NO SOIL	0	1	2	3	3 GAL.
LITE	1	1	2	4	7 GAL.
LITE-PLUS	1	1	2	4	7 GAL.
NORMAL	2	1	2	5	9 GAL.
HEAVY	3	1	2	6	11 GAL.

B. DELAY

This key will activate the delay mode. When pressed, 10 minutes will be displayed. Delay time can be increased by 10 minute increments with each touch of the key pad. It will increase to 60 minutes and continue to increase in one hour increments until 12 hours is displayed. To cancel, press the Delay key pad again. The dishwasher will automatically start as soon as delay time ends.

C. LOCK

This key will activate a control lockout feature. All keys will remain inactive till the control lock is de-selected. To activate, press the key 3 times within 3 seconds. LOCKED will be displayed in the display area. To deactivate, press the key 3 times within 3 seconds.

WASH CYCLES

	CYCLE SETTING	SEQUENCE	APPROX. CYCLE TIME	WATER USAGE
D.	SANI SCRUB	PRE-WASH 2 RINSES MAIN WASH 2 RINSES DRY <i>plus</i>	75 MINUTES 35 MINUTES HEATING DELAY** = 110 MINUTES	11 GALLONS
E.	QUICK WASH	WASH and 2 RINSES DRY	17 MINUTES 35 MINUTES*	5 GALLONS
F.	RINSE & HOLD	RINSE	6 MINUTES	2 GALLONS

* Occurs if HEAT DRY is selected.

** The FINAL RINSE is heated to approximately 150° F. The time required will vary depending on the water temperature at beginning of the rinse.

G. HEAT DRY

This key will activate the heating element during the Dry cycle. When depressed, HEATED DRY will display in the display area. If depressed again, the element will be deactivated and only the blower will operate during the Dry cycle. If activated in the Sensor Start cycle, the control board will sense the water temperature of the last rinse cycle and lengthen the heater on time appropriately.

H. DELICATE WASH

This key will activate the Delicate Wash mode. To activate, select another cycle (Sensor Start, Quick Wash or Sani Scrub) then depress this key pad. Any cycle, including Sensor Start, can become a gentle wash and dry cycle for china and crystal. This wash provides a reduced water velocity during washes and rinses by reducing the water fill by one quart. To accomplish this, the fill time is reduced to 70 seconds. In addition, no heat is added to the Dry Cycle until the blower comes on.

I. CANCEL

Pressing this key once will cancel any cycle before it is finished. The unit will drain, if needed, then shut off. Pressing the key twice will turn off all VFD displays.

VACUUM FLUORESCENT DISPLAY



*** CYCLE PROGRESSION INDICATORS ***

WASH

The estimated cycle time remaining for the wash portion of each cycle will be displayed in minutes. The Wash symbols will display during the fill portion and alternate to have the appearance of wash action after the motor has started.

- RINSE** The estimated cycle time remaining for the rinse portion of each cycle will be displayed in minutes. The Rinse symbols will display during the fill portion and alternate to have the appearance of rinse action.
- DRY** The estimated cycle time remaining for the dry portion of the cycle will be displayed in minutes. The oscillating fan and red squiggles will be displayed in the VFD during heated dry, no red squiggles if heated dry is not selected. The fan blades will be alternated to give appearance of fan blowing when blower is on. The fan blades will remain motionless when the blower is not on.
- CLEAN DRY** When the wash cycle is over, CLEAN will be displayed in the VFD.

*** * *SPECIAL INDICATORS* * ***

- BLOCKED DRAIN** A restriction is indicated in the dishwasher drainage system.
- BLOCKED WASH ARM** An indication something may be blocking the lower spray arm or restricting the center spray nozzle.
- CLEAN** Displays at the end of a complete wash cycle. Will remain lit until the door has been unlatched continuously for over 60 seconds.
- DELAY** Displays when the Delay key pad is pressed.
- DELICATE WASH** Displays when this option has been chosen with any wash cycle.
- HEAT DRY** Displays if Heat Dry is selected.
- HEATING** Displays when the water temperature is low and heating element is on during washing or rinsing portions of the cycle. Is NOT lit during the Dry cycle.
- LOCKED** Displays when the Lock has been activated.
- LOW RINSE AID** Indicates rinse aid level in reservoir is low. Displays at the end of the cycle as a reminder to add more rinse aid to the dispenser in the door. Will shut off after the door is opened.

- PF** Indicates a power failure occurred. Any option selected before the power failure will need to be reselected. Otherwise the dishwasher will continue the cycle it was in at the time of the failure.
- RINSED** Displays after a Rinse & Hold cycle.
- WASH ARM** Indicates a possible foaming or starvation of the pump. Dishwasher will fill and drain to correct condition, if corrected, unit will finish wash cycle and not display CLEAN light.

SECTION 4. ELECTRICAL-MECHANICAL TROUBLESHOOTING

The dishwasher is controlled through the microprocessor board in conjunction with a transformer, board mounted relays, and sensor cluster mounted in the pump housing. The transformer provides the necessary voltage(s) to the microprocessor board and the sensors. The board mounted relays function as switches to give the microprocessor board control of the individual components (motor, heater, detergent dispenser, water valve, blower and rinse dispenser).

The sensor cluster consists of a turbidity sensor, a conductivity sensor, a wash arm rotation sensor and a temperature sensor. During the Sensor Start cycle, the control board communicates with the sensor cluster to monitor dishwasher performance and selects appropriate cycles to achieve optimum washing performance.

FIELD SERVICE TESTS

The microprocessor board incorporates three test display modes to aid the servicer in diagnosing any problems with the dishwasher. The tests are comprised of the ERROR FAULT CODE listing, MANUAL FUNCTION test and the FUNCTIONAL test.

INITIAL KEY PAD SEQUENCE

All of the following test modes are started by pressing the following **Initial Sequence** of key pads followed by specific key pads that start the selected test:

	1	2	3	4	5	6	7	
●		●	●	●	●	●	●	
Sensor Start	Delay	Lock	Sani Scrub	Quick Wash	Rinse & Hold	Heat Dry	Delicate Wash	Cancel

[Next key pad depressed determines selected test mode. To end any of the following test modes, press the **CANCEL** key pad.]

ERROR FAULT CODE DISPLAY

This mode should be run prior to performing any other test modes or tests.

To start, press the *initial sequence* of keys, press **Lock** then **Sani Scrub**. The function of this display mode is to list all fault codes that are present. With a list of the fault codes displayed, the servicer can now determine which individual function needs further testing.

The following is the ERROR FAULT CODE listing of potential codes which may display. When the display begins, 00 will display to indicate the beginning of the display mode.

Each fault code will be shown in alpha/numeric order and displayed for 2 seconds before displaying the remaining codes. The display will continue to repeat the code displays, till **Cancel** is depressed. (NOTE: When CANCEL is depressed, all codes are cleared from memory.)

CODES	FAULT TYPE	DESCRIPTION	TROUBLESHOOTING
00	Beginning of Error Display Mode	If only this symbol is displayed, the controller did not detect any errors.	None required, all is working properly.
F0	Control Board Error	An error with the controller has been sensed.	Control board door circuit does not appear to be operating properly, check control board.
F1	Motor Fault - motor current not changing	An error with the motor has been sensed.	Check wiring to motor from control board. Check for bad motor.
F2	Heater Fault - heater current not changing	An error with the heater has been sensed.	Check wiring to heater from control board. Check for bad heater, open high limit thermostat.
F3	High Current Error	An error has been sensed with the electrical current within the machine. The current is higher than normal.	This error is probably caused by the heater or motor being energized when they should not be. This could be due to faulty wiring (shorts) or a welded relay. This error could also be caused by line current surges seen by the current sensor.
F4	Detergent Fault - no conductivity change	No detergent has been detected in the main wash for 10 cycles. Either the consumer is not using detergent in the main wash or an error with the detergent cup may be present.	Check that consumer is using detergent in the main cup. Check the detergent cup wax motor and the wiring to and from the wax motor.
F5	Rinse Aid Fault	An error with the rinse aid dispensing has been sensed. This may be shown after the RS functional test if the Rinse Aid does not go from full to low.	Check connector from control board to rinse dispenser. Check for bad rinse aid dispenser.
F7	Turbidity Sensor Fault	An error with the turbidity sensor has been sensed.	A bad turbidity sensor reading has occurred. Check connections to Wash Process Sensor from control board. Also check for properly operating Wash Process Sensor. Finally check control board.
F8	Wash Arm Fault	An error with the wash arm rotation system has been sensed.	A bad washer arm reading has occurred. Check connections to Wash Process Sensor from control board. Check pump for the correct back wash arms and alignment of sensor. Check for properly operating wash process sensor. Finally check control board.
F9	Thermistor Fault	An error with the thermistor has been sensed.	A bad temperature sensor reading has occurred. Check connections to Wash Process Sensor from control board. Also check for properly operating Wash Process Sensor. Finally check control board.
1F0	Washer Arm Sensor Error	An error has been detected sensing the wash arm rotation. Five cycles in a row have concluded with a blocked wash arm present. A reset of the fault codes is necessary to clear this fault.	Check magnet in back rinse arms in pump. Check for operational sensor cluster. Check user loading pattern.
1F1	Conductivity Fault	An error with the conductivity sensor has been sensed.	A bad conductivity sensor reading has occurred. Check connections to Wash Process Sensor from control board. Also check for properly operating Wash Process Sensor. Finally check control board.
1F2	High Limit Thermostat	A temperature above 155° has been detected and the heater will still turn on.	Check the high limit thermostat for operation.
1F3	Communication Problem	Control and sensor pack communications is not operating properly.	A bad communication to the sensor has occurred. Check connections to Wash Process Sensor from control board. Also check for properly operating Wash Process Sensor. Finally check control board.
1F4	Cold Water Problem	Water below 90° is being detected at the temperature sensor of the dishwasher from the inlet valve.	Check with the consumer to make sure the inlet water temperature is near 120° F. If necessary suggest that the kitchen faucet be started before the cycle is to get hotter water to the dishwasher from the start.
1F5	Current Sensor Bad	The controller has sensed that the current sensor is not changing with any loads in the machine.	A bad current sensor on the control board has been detected. Check to make sure connections to board are correct and the black power line is properly connected to the ¼" spade terminal on the board.

MANUAL TEST MODE:

This test will enable the servicer to manually turn on individual functions. Such as the motor, water valve, detergent dispenser, rinse aid dispenser, heating element and blower.

To start, press the *initial sequence* of key pads, press **Lock** then **Delay**.

After this mode is entered the following table indicates which keys will start the relays. The display will show 1 minute and keys will toggle individual functions ON and OFF as follows:

KEY PAD	RELAY ENERGIZED
SANI SCRUB	Motor
SENSOR START	Water Valve (Fill)
QUICK WASH	Detergent Dispenser
RINSE & HOLD	Rinse Aid Dispenser
HEAT DRY	Heating Element
DELICATE WASH	Blower Motor

The machine will shut off 59 seconds after the last actuation of a key.

When the test is finished and/or the repair completed, run the ERROR FAULT CODE display listing again. This confirms whether any other part is malfunctioning and the repair is completed.

FUNCTIONAL TEST MODE:

This is a longer test mode, lasting 14 minutes and 30 seconds; the display will show 14 minutes. In this mode the dishwasher is allowed to fill, wash, drain and activate the dispensers. Upon completion of this test, the unit will have checked the motor, heater and sensor circuits. The unit will then display fault codes at the end of the test. (NOTE: Fault codes F3, F4, 1F0, 1F2 and 1F4 will not be displayed in this test mode.)

The servicer must still verify the operation of the blower, water valve, dispensers, VFD segments and LED displays during the test.

To start, press the *initial sequence* of key pads, then press **Delay, Sensor Start and Cancel**.

The following is a scenario of the functions to be displayed and their time sequence.

Test Cycle:

14 minutes in the display (14 minutes and 30 second test)
5 second pause, all LED's and VFD on
"LOW RINSE AID" segments should be on entire cycle
5 seconds of blower, "DELAY", "HOURS" turned on in VFD
100 seconds fill, "WASH", "HEATED DRY", segments in VFD
200 seconds motor, "WASH", "HEATED DRY", Wash droplets active
100 seconds drain, conditioner, "DRAIN", "HEATED DRY" segments turned on
110 seconds fill, "RINSE", "DELICATE WASH", "HEATED DRY" segments on
180 seconds of motor, detergent, heater, "RINSE", "HEATED DRY", "HEATING"
segments Rinse droplets
100 seconds drain, rinse conditioner, "BLOCKED WASH ARM", "HEATED DRY"
segments on
50 seconds heater, blower, "DRY", blower fan, "CLEAN" segments on

When the test is finished and/or the repair completed, run the ERROR FAULT CODE display listing again. This confirms whether any other part is malfunctioning and the service call is complete.

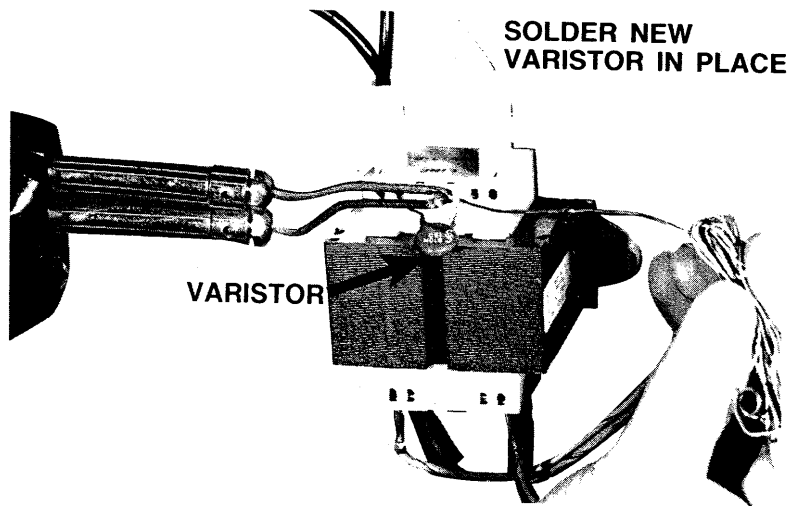
ELECTRICAL TROUBLESHOOTING: MODEL DW1000

[For additional troubleshooting and other complaints refer to Jenn Air service manual part number 16006946, section 2.]

WILL NOT START OR PROGRAM

With the door unlatched, the key pads cannot be activated. When the door is latched, depress any cycle key pad. A display of minutes will appear in the window. If not, check the following:

Varistor The varistor is designed to protect the microprocessor board from excess voltage. At normal line voltage, the varistor shows extremely high resistance. When the line voltage exceeds the threshold of the varistor, its resistance decreases to a point of providing a voltage "bleed-off" path. This will prevent line voltage surges or "spikes" from reaching the microprocessor board.



The varistor is actually a part of the transformer. Because of this, if visual inspection shows damage to the varistor, the transformer and microprocessor board should be checked. If no damage to the transformer or microprocessor board is detected, the varistor may be cut out and a replacement varistor soldered in place.

Transformer Check primary coil, BLACK to WHITE and secondary coils RD to RD, BU to YL, YL to BU, BU to BU and WH to WH. If no continuity on any check, replace transformer. Voltage checks are as follows:

⚠ CAUTION	Live voltage checks on the transformer are not recommended due to the potential of electrical shock.

WIRE 1	WIRE 2	VOLTAGE
Black	Black	120 VAC
Blue	Blue	4.1 VAC
Blue	Yellow	2.0 VAC
Red	Red	5.9 VAC
White	White	19.2 VAC

Door Switch With door switch activated, check for continuity across the switch terminals. No continuity, replace switch.

Microprocessor Check for 120 VAC input voltage to the board. Check BLACK wire to the WHITE wire on PS1 terminal connector. No voltage, check BLACK and WHITE wire harnesses from door switches. If voltage is correct, check terminal connectors to microprocessor board for good contact with board. Voltage checks for the input voltages to the board are as follows.

FUNCTION	WIRE 1	WIRE 2	VOLTAGE
Power Supply	PS2 - 1 (White)	PS2 - 2 (White)	19.2 VAC
Backlighting - key pads	PS4 - 1 (Red)	PS4 - 2 (Red)	5.9 VAC
Backlighting - key pads	PS4 - 1 (Red)	PS3 - 3 (#12)	25 VDC (Note: DC voltage)
VFD Display	PS3 - 7 (Blue)	PS3 - 9 (Blue)	4.1 VAC
VFD Display	PS3 - 7 (Blue)	PS3 - 8 (Yellow)	2.0 VAC
VFD Display	PS3 - 8 (Yellow)	PS3 - 9 (Blue)	2.0 VAC

WILL NOT FILL

Make sure unit is programmed. See "WILL NOT START OR PROGRAM".

Float Switch Check for continuity between float switch terminals (Blue to Blue). No continuity, replace switch.

Water Valve Check coil (Blue to White) terminals for continuity. No continuity, replace the water valve. If continuity present, check valve inlet for debris or for kinked inlet hose.

Microprocessor Check microprocessor board wire harness connector at microprocessor terminals PS1 - 1 to PS1 - 3. Should show continuity at the harness connection. Check output voltage of board terminals PS1 - 1 to PS1 - 3, should see approximately 120 VAC present. If not, replace the microprocessor board.

OVERFLOWS

Float Switch With float in raised position check continuity across switch terminals. Should show NO continuity. If continuity found, replace the float switch.

Water Valve With no continuity across the float switch terminals, examine the water valve diaphragm for blocked bleeder holes. Clean and return diaphragm to the valve. Change valve if necessary.

Microprocessor Check for output voltage from the microprocessor board at terminals PS1-1 and PS1-3. Should not see any voltage present. If voltage present, replace microprocessor board.

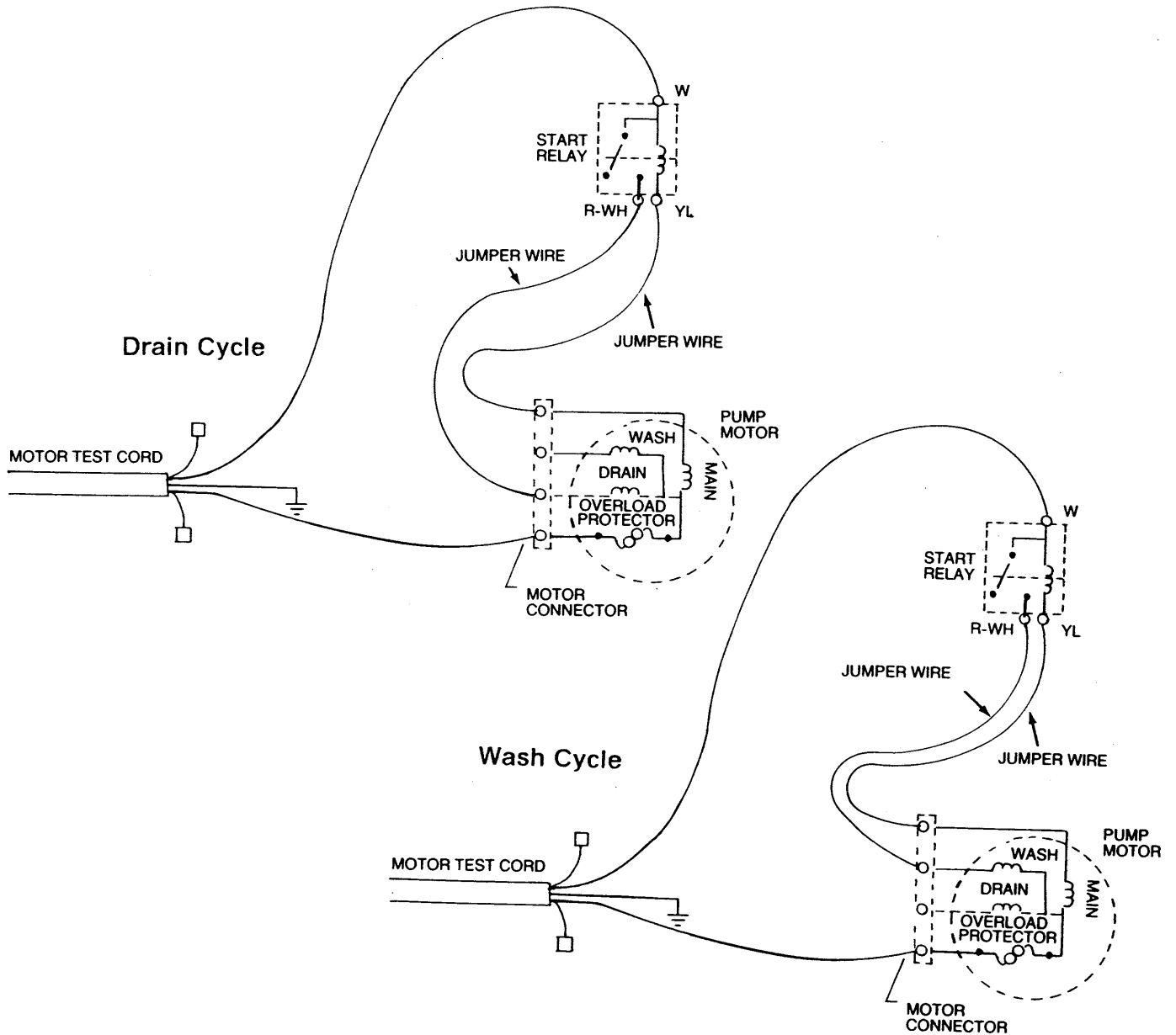
WILL NOT DRAIN

Start Relay Perform continuity check for the start relay. With the Yellow terminal in the UP position, check for continuity across the Yellow and White terminals. No continuity should be present across the White and Pink terminals. Rotate the switch 180° and check across White and Pink terminals. They should now show continuity. If continuity checks do not match the aforementioned descriptions, replace the Start Relay.

Drive Motor Perform continuity check of the motor windings. Check DRAIN start winding (Blue to Red), WASH start winding (Blue to Gray) and the MAIN winding (Blue to Yellow). If no continuity found, replace pump and motor assembly. If continuity present, hook up motor test cord.

To test the motor we need to separate the molex connector. This can be done by twisting the connector side to side and pulling at the same time. The following drawings will help in making the proper connections for testing.

Plug test cord into properly polarized and grounded receptacle.



NOTE: DAMAGE TO THE MOTOR WILL RESULT IF THE START RELAY IS BYPASSED AND THE TEST CORD IS CONNECTED DIRECTLY TO THE MOTOR CONNECTOR.

Microprocessor Board Check the Motor Direction Relay on the board by performing a continuity check across terminals Pink to Red and Pink to Gray. If continuity is not found in either circuit, replace the microprocessor board. (Note: Only one circuit can be activated at a time.)

WILL NOT DRY

Microprocessor Perform continuity check across PS1- 1 terminal of connector and the Orange wire terminal. Should show continuity across the wire harnesses. Check for board voltage output across the corresponding microprocessor board terminals, for Heating Element. (See Diagnostic Chart, page 4-9.) Should show approximately 120 VAC when the heater relay is activated. If no voltage is present, replace microprocessor.

POOR WASHABILITY

If the consumer is not satisfied with the cycle selected by the computer, the servicer can "Bump" up the cycle normally selected by the computer during the Sensor Start. This feature is called "Intelli-Bump" and is activated by pressing **LOCK - CANCEL - CANCEL - SANI SCRUB**. To "Bump" up to another cycle, press the SANI SCRUB key pad again. The VFD will display "A0" initially. Each time Sani Scrub is depressed the unit will bump up and display A1, A2, A3, A4. After A4 the unit will reset to original factory preset mode.

[For additional troubleshooting of other complaints refer to Jenn Air service manual part number 16006946, Section 2.]

DIAGNOSTIC CHART

Following is a chart listing the output and input voltages for the microprocessor board along with their function. This chart should prove beneficial in checking the sensors and other related components. To perform continuity checks of the individual circuits away from the microprocessor, you must remove power to the dishwasher.

Note: When the door latch opens, the microprocessor shuts off all relays. Thus, no continuity checks through the board can be made.

FUNCTION	BOARD TERMINAL/WIRE	BOARD TERMINAL/WIRE	VOLTAGE -APPROX. (WHEN ACTIVATED)
Blower	PS1-1 (White)	PS1-2 (Purple)	120 VAC
Water Valve*	PS1-1 (White)	PS1-3 (Blue)	120 VAC
Detergent Dispenser	PS1-1 (White)	PS1-4 (Blue)	120 VAC
Rinse Aid Dispenser	PS1-1 (White)	PS1-5 (Pink)	120 VAC
Heating Element	PS1-1 (White)	Orange Wire	120 VAC
Sensor Cluster (Input Voltage) (Output Voltage)	PS3-3 (#12) PS3-3 (#12)	PS3-6 (#21) PS3-2 (#22)	15 VDC 15 VDC
Rinse Aid Sensor (Input) (Output)	PS3-3 (#12) PS3-3 (#12)	PS3-5 (#11) PS3-1 (#13)	15 VDC 0 VDC (Empty) 7 VDC (Full)
Motor (Main Winding)	PS1-1 (White)	Blue Wire	120 VAC
Motor (Wash Start Winding)**	PS1-1 (White)	Gray Wire	120 VAC
Motor (Drain Start Winding)**	PS1-1 (White)	Red Wire	120 VAC

*Float switch must be closed.

**Start windings only. Note: Brief voltage present till start relay drops out of circuit.

SECTION 5. SERVICE PROCEDURES

The following procedures outline those procedures which are unique to the Expressions™ dishwasher. Otherwise, the service procedures are the same as those outlined in the Jenn Air dishwasher service manual, part number 16006946.

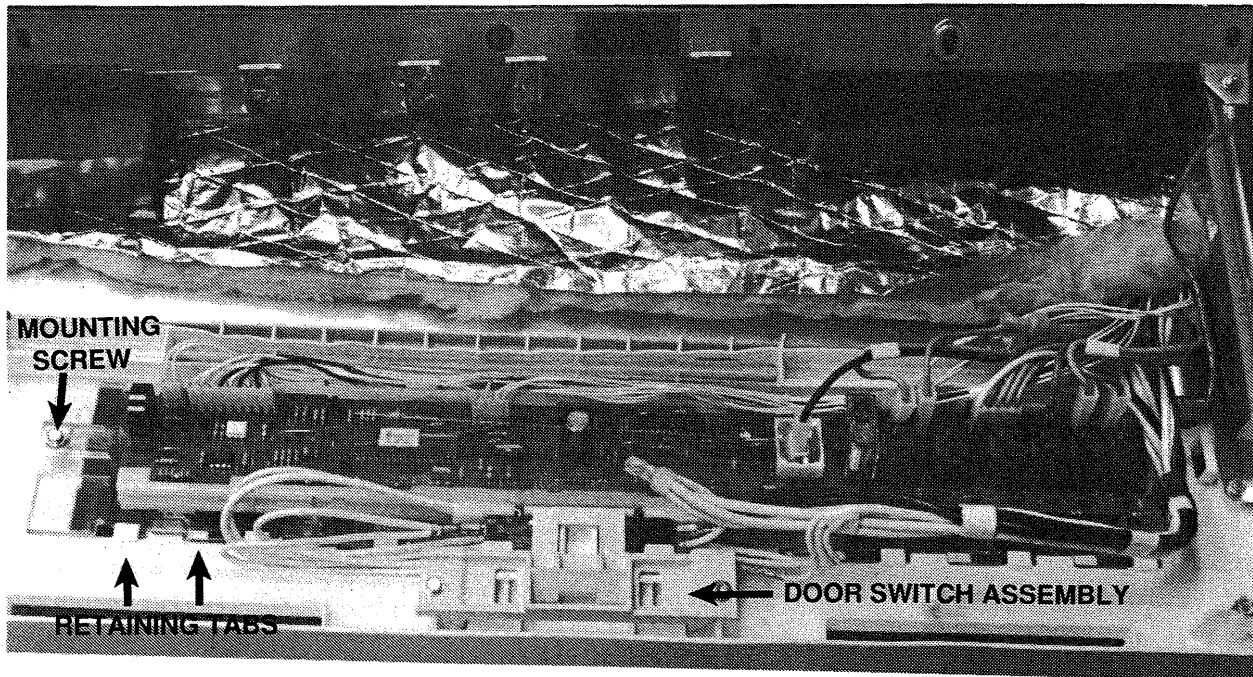
CAUTION! There can be risk of injury or electrical shock while performing services or repairs. Injury or electrical shock can be serious or even fatal.

MICROPROCESSOR BOARD

The microprocessor board is a one piece circuit board assembly. The control relays are mounted on the backside of the board as opposed to being mounted separately on earlier models.

To Remove:

1. Disconnect the power supply to the dishwasher.
2. Open the dishwasher door and remove the seven TORX screws securing the door liner to the door assembly.
3. Remove or relocate the inner door liner to gain access to the control barrier inside the door assembly.
4. Remove the control barrier by depressing the left retainer tab on the barrier. Then lift the barrier to gain access to the microprocessor board assembly.
5. Disconnect the wire harness connectors to the board and the miscellaneous wires attached. Note the wire locations for reattachment to the replacement board.



CONTROL PANEL AREA EXPOSED

6. Remove and relocate the door latch switch assembly.
7. Remove the hex head screw securing the microprocessor board assembly to the control panel.
8. Slide the microprocessor board assembly to the left, toward the direction of the mounting screw location. Disengage the retainer tabs from the control board tabs. Then lift the board assembly off of the control panel.
9. To reassemble, reverse the aforementioned procedure.

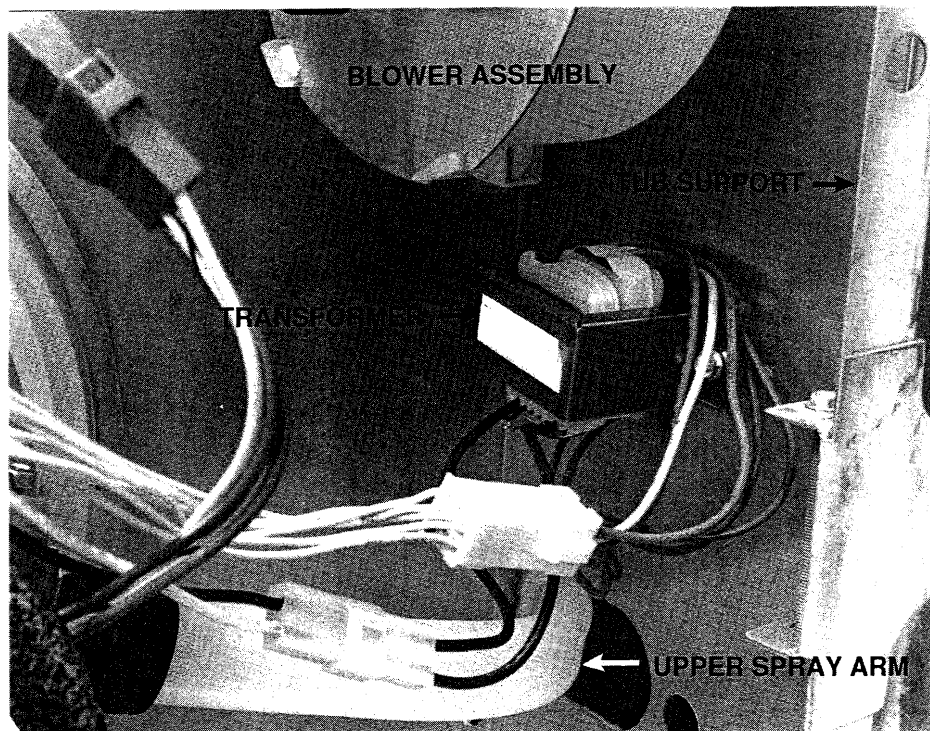
TRANSFORMER

The transformer is used to provide the proper operating voltages to the microprocessor board. The transformer is mounted to the tub support wall behind the blower assembly. Removal of the blower assembly is necessary to service the transformer.

To Remove:

1. Disconnect the power supply to the dishwasher.
2. Remove the access and toe panels of the dishwasher.

3. Remove the hex screw securing the blower assembly to the tub support ceiling. Move the blower assembly aside to access the transformer mounting screws and wiring harnesses.



4. Disconnect the two wiring harnesses from the transformer.

To check the transformer, see ELECTRICAL TROUBLESHOOTING - "Will Not Start Or Program", on page 4-5.

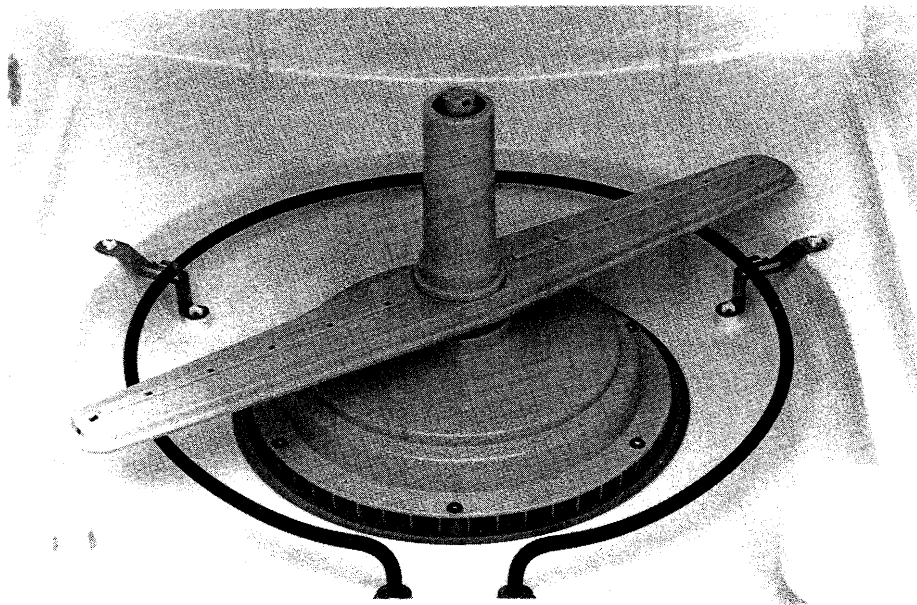
POWER MODULE

The power module consists of a "pump" and electric "motor" combined to provide drain and recirculating functions for the dishwasher cycles. If a failure is suspected inside the pump assembly, individual parts in the pump may be replaced. However, if the housing or an electrical failure of the motor needs attention, the **COMPLETE PUMP AND MOTOR (MODULE)** must be replaced.

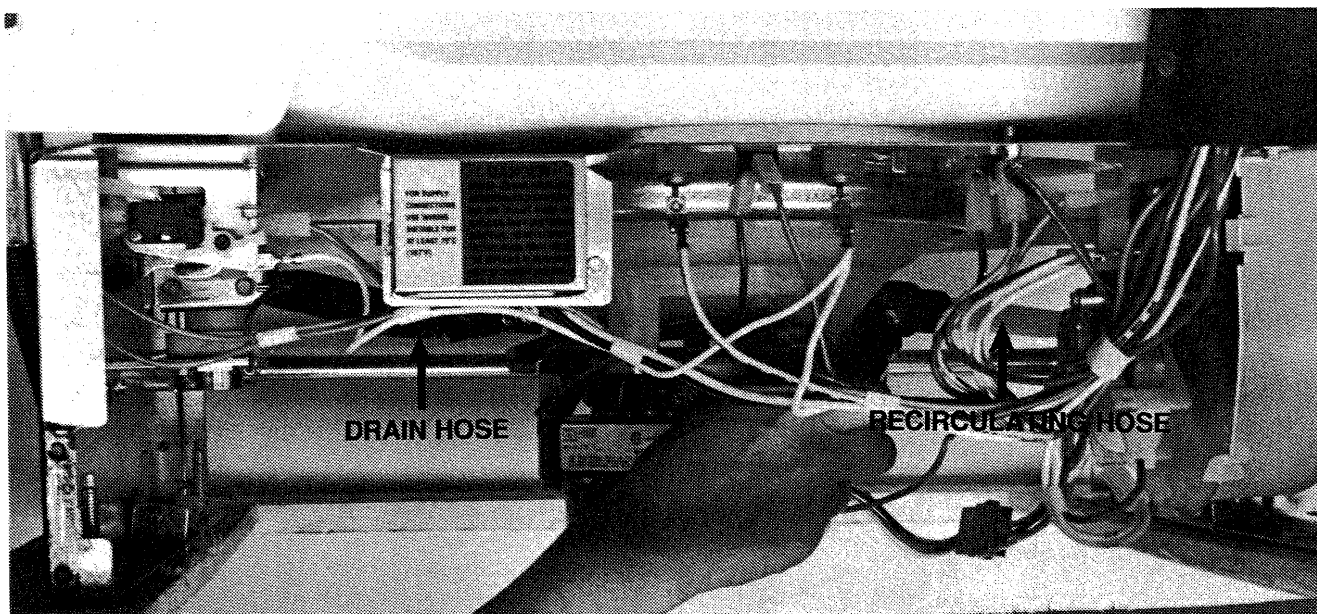
To repair the pump portion of the power module, it is not necessary to remove it from the dishwasher.

To Replace The Power Module

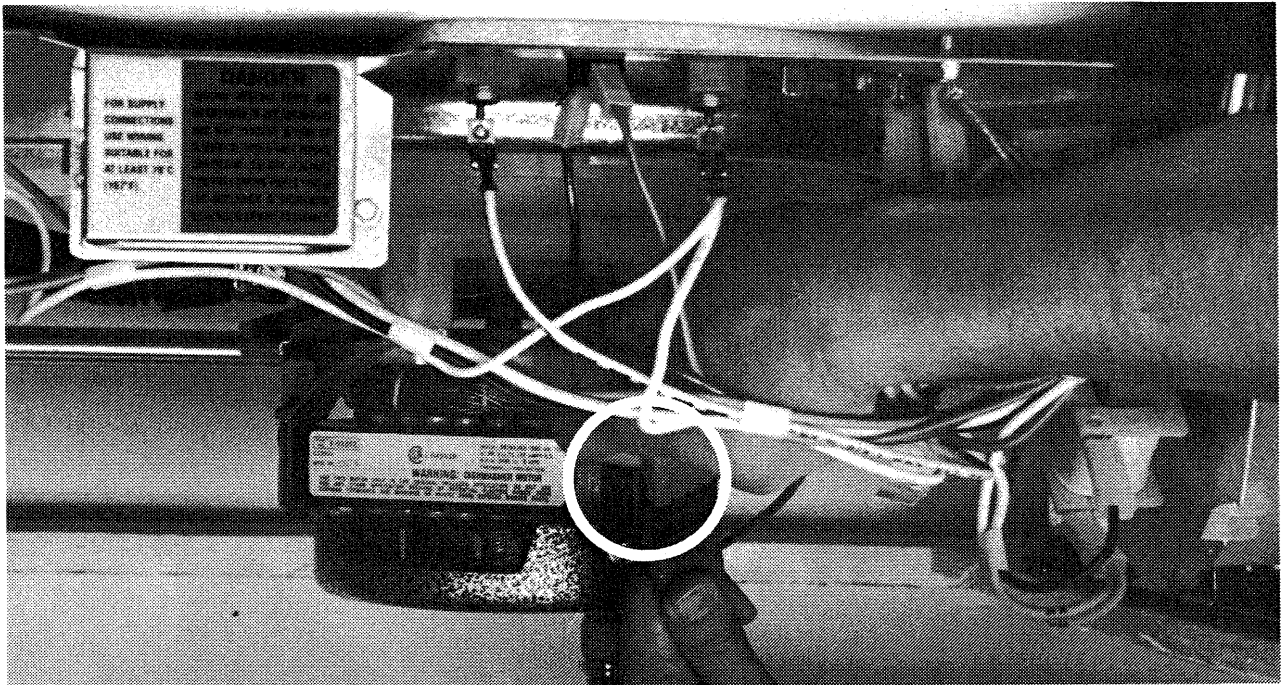
Unscrew center wash tower from inside dishwasher and remove lower spray arm.



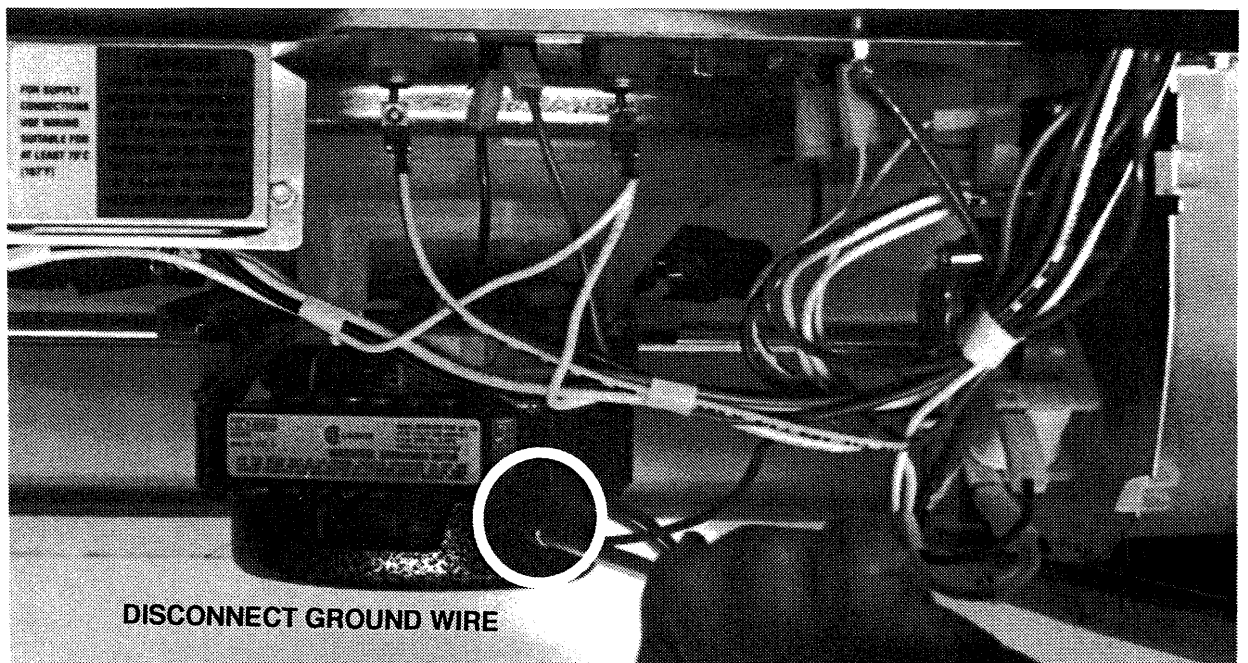
1. Remove lower access panel.
2. Loosen drain hose clamp (left side of module) and disconnect drain hose from pump housing.
3. Loosen recirculating hose clamp (right side of pump housing) and remove recirculating hose.



4. Disconnect wire harness connector from drive motor. Note: This can be reconnected 180° wrong. Observe proper connection before removal.



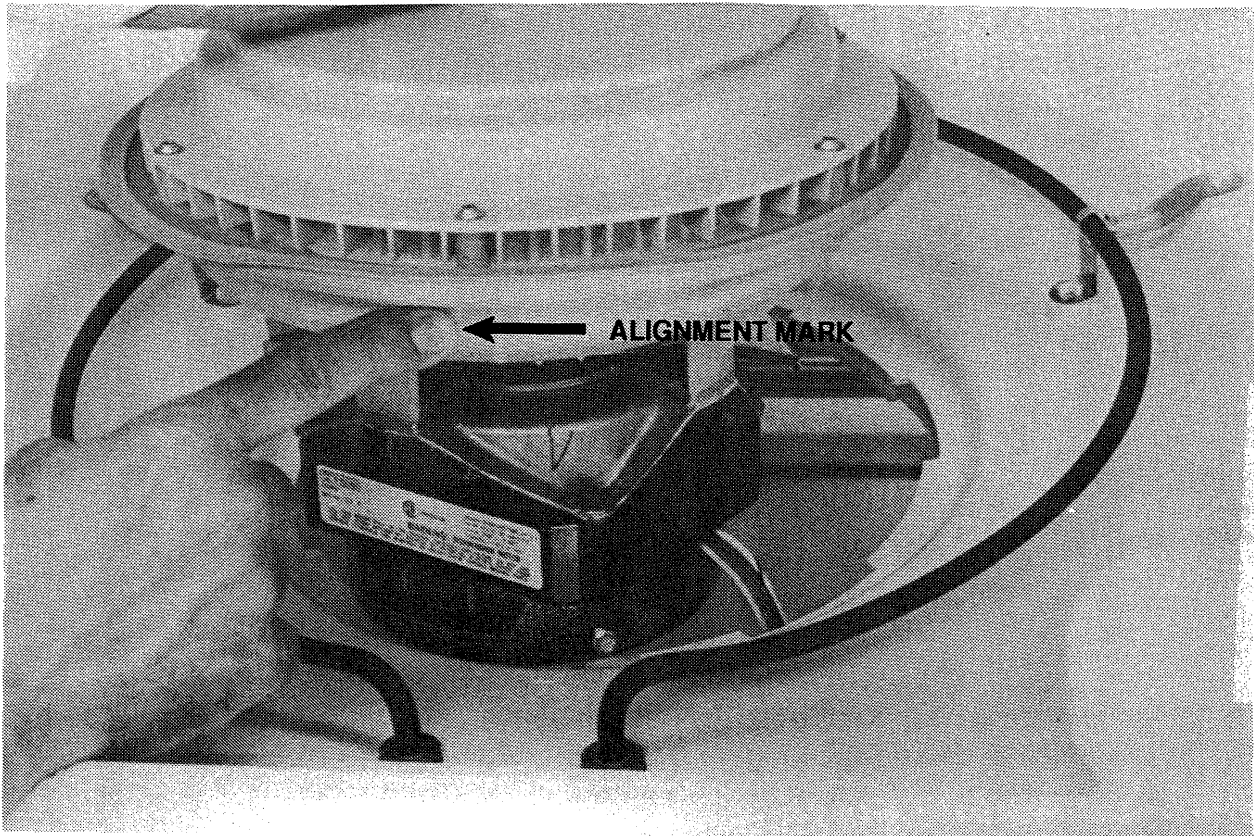
5. Remove hex screw holding motor ground wire to motor frame.



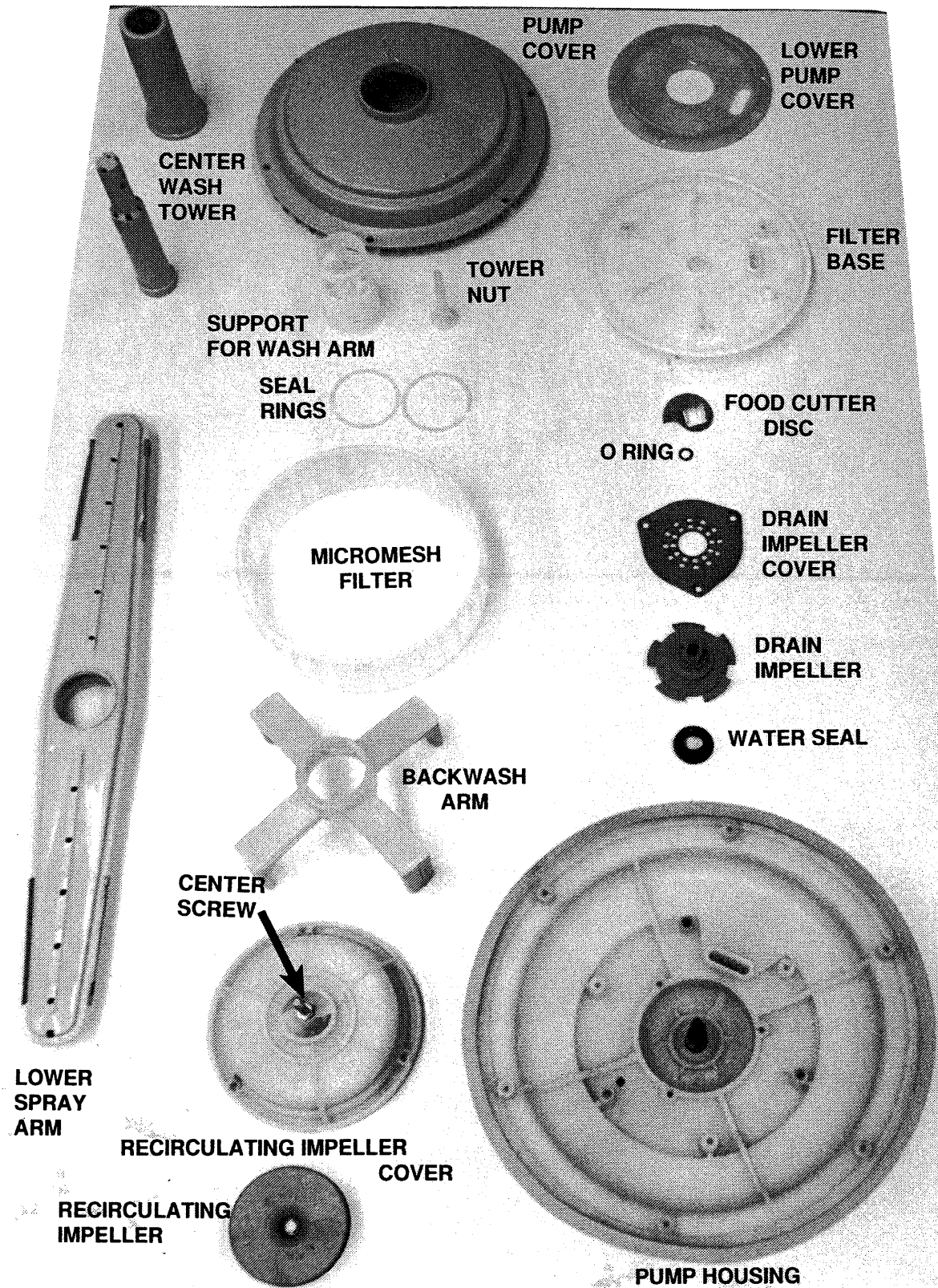
6. Push clamping ring handle (on left side of power module) toward the rear of the dishwasher to disengage module from tub. Align notches in module and clamping ring to pull assembly up and out of the dishwasher.



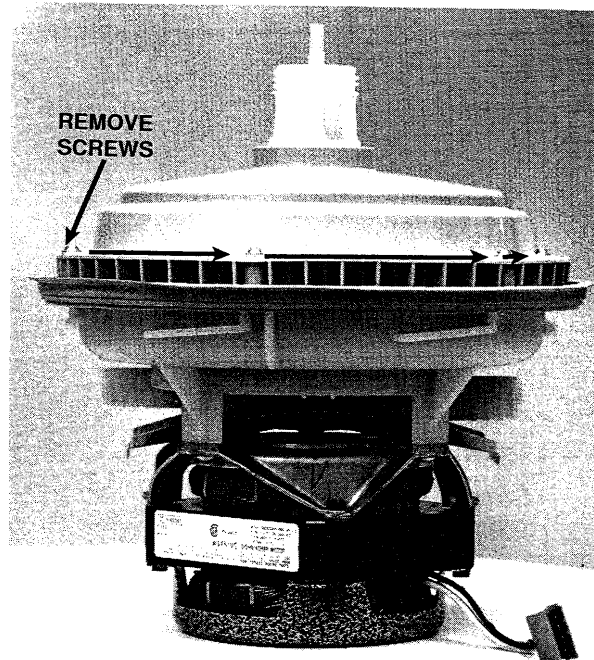
7. Note position of pump housing gasket for reassembly. Also, note alignment mark for reassembly.



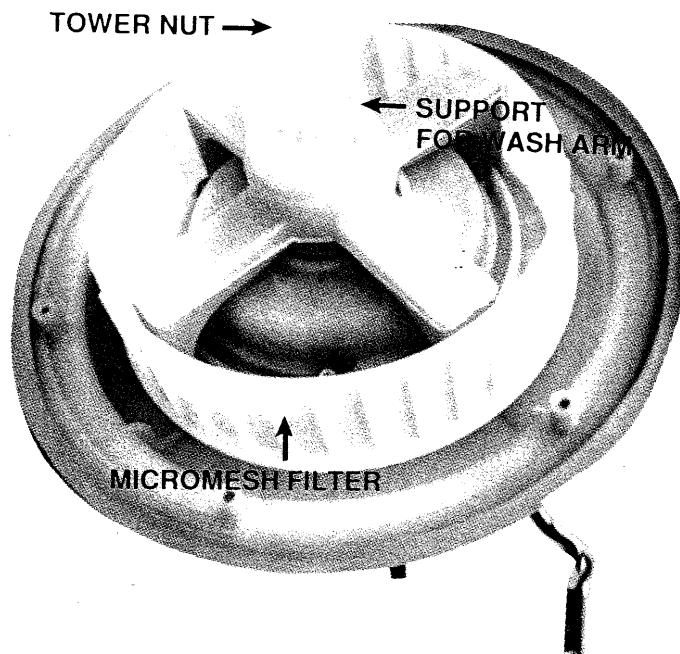
Power Module Disassembly



1. Unscrew center wash tower to remove lower wash arm assembly.

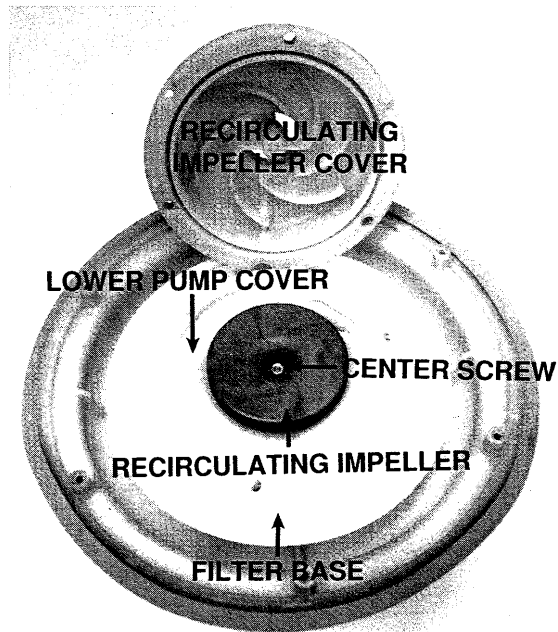


2. Remove 6 screws securing pump (strainer) cover to pump housing. **NOTE:** 2 seals are in strainer hole. Pull cover off.
3. Pull off back wash arm.



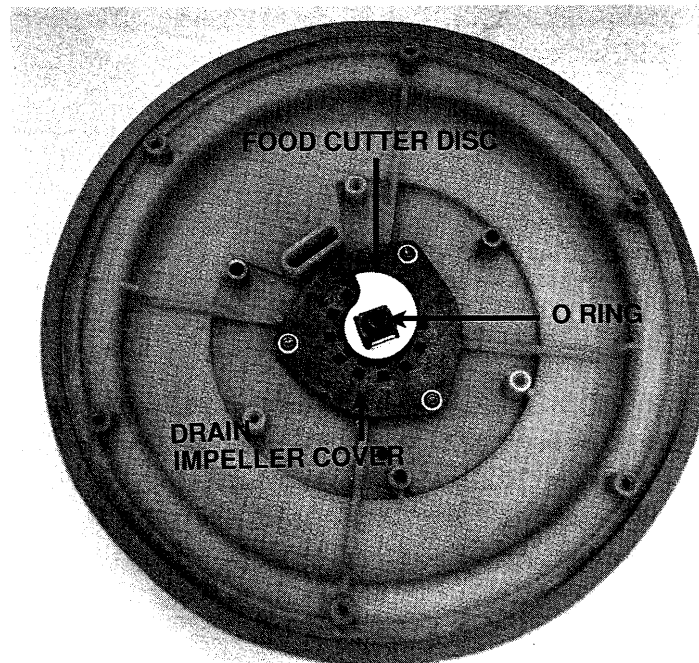
4. Unscrew tower nut from support for wash arm. Raise support off shaft.
5. Pull out micromesh filter.

6. Remove 3 screws holding recirculating impeller cover in position. Pull cover off.



7. Remove center screw holding recirculating impeller to motor shaft.

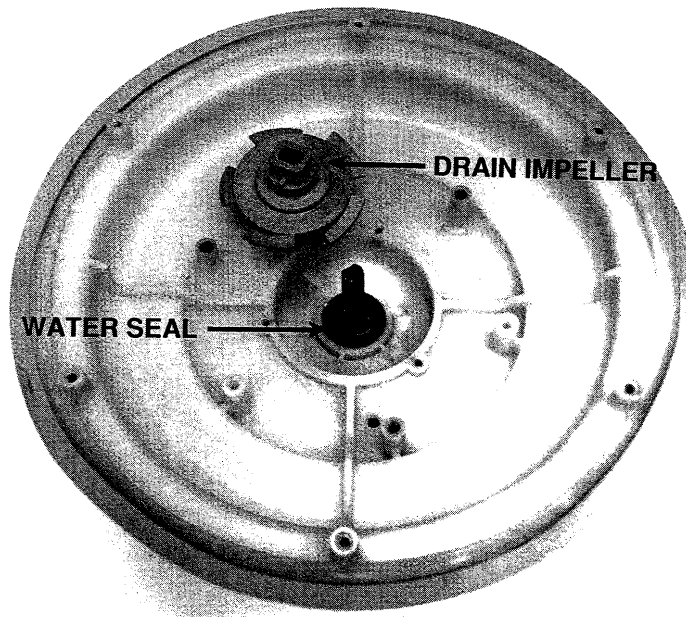
8. Lift off impeller, lower pump cover and filter base.



9. Pull off food cutter disc.

10. Carefully remove "O" ring from motor shaft.

11. Remove 3 screws from drain impeller cover.

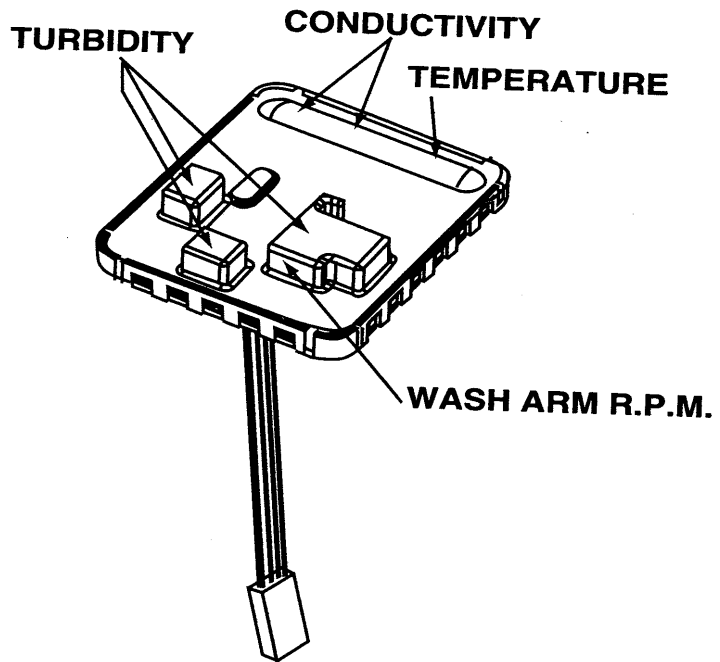


12. Lift cover off.
13. Pull out drain impeller.
14. Carefully pull out the water seal.

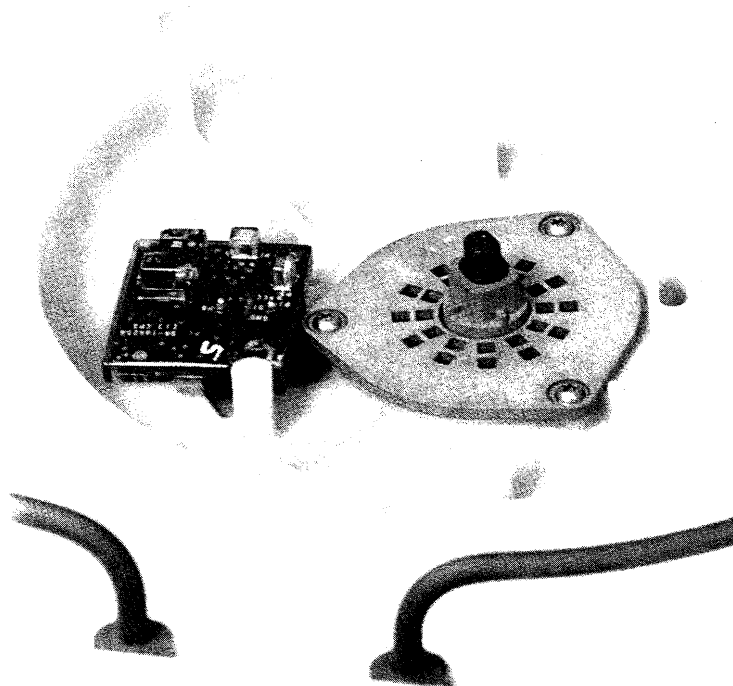
This is the extent of teardown recommended. Replace complete power module assembly if pump housing must be repaired or replaced.

SENSOR CLUSTER

The sensor cluster is equipped with four sensors in the pump housing. The sensor cluster consists of a turbidity sensor, a conductivity sensor, a wash arm rotation sensor and a temperature sensor. These sensors inform the control board of the conditions present in the dishwasher. From this information, the control board will determine the number of washes and rinses required to obtain maximum washability.

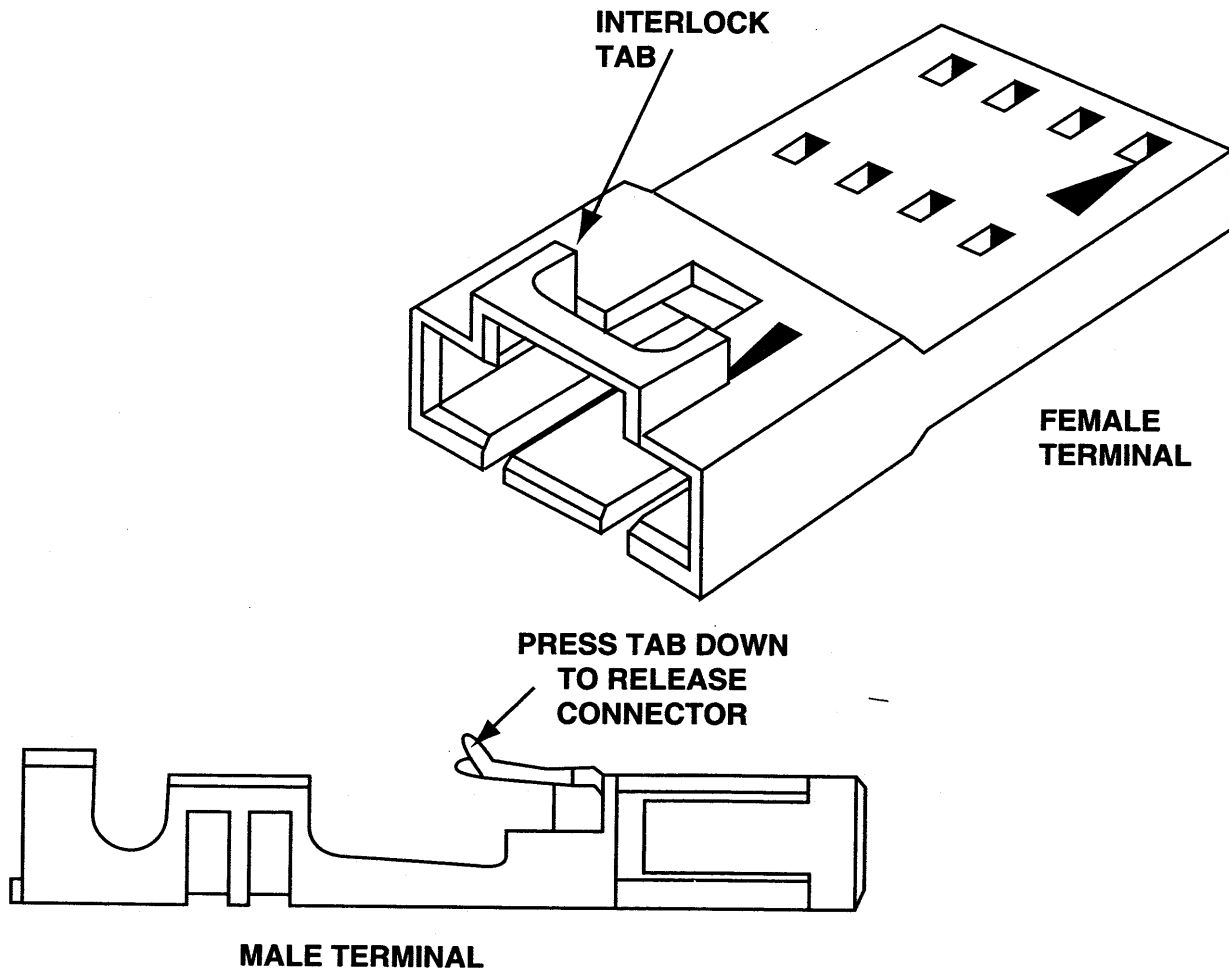


The sensor cluster is mounted inside of the power module assembly, through the lower half of the pump housing. Removal of the pump and motor assembly is necessary to service this area.



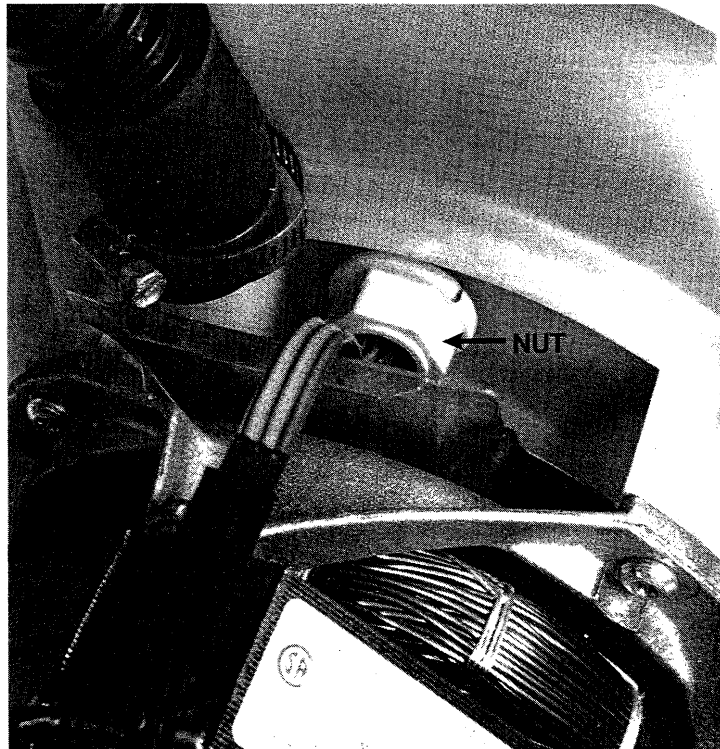
To Remove:

1. Disconnect power supply to the dishwasher.
2. Remove the access and toe panels to gain access to the pump locking ring, pump module wiring harnesses.
3. Disconnect wiring harnesses to the motor and the sensor cluster. To disconnect the sensor harness connector, depress the center tab and separate the connectors. Remove the ground wire from the motor.

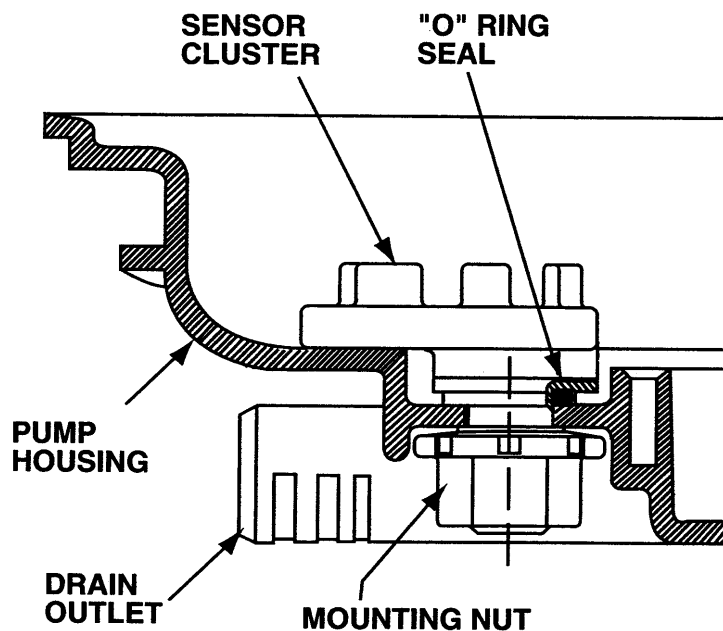


4. Disconnect the drain hose and upper spray arm hose. Have a towel handy in case of water spillage.
5. Loosen the locking ring from the pump and motor assembly.
6. Open the door and remove the lower rack.
7. Remove the pump module assembly by lifting upward.

8. Disassemble the pump module by removing the center spray nozzle, lower spray arm, strainer, pump filter, rinse arm assembly with magnets, wash arm support, recirculating impeller cover, recirculating impeller, lower pump cover and filter base.



9. Remove the nut securing the sensor cluster to the pump housing. Then lift the sensor cluster from the housing.

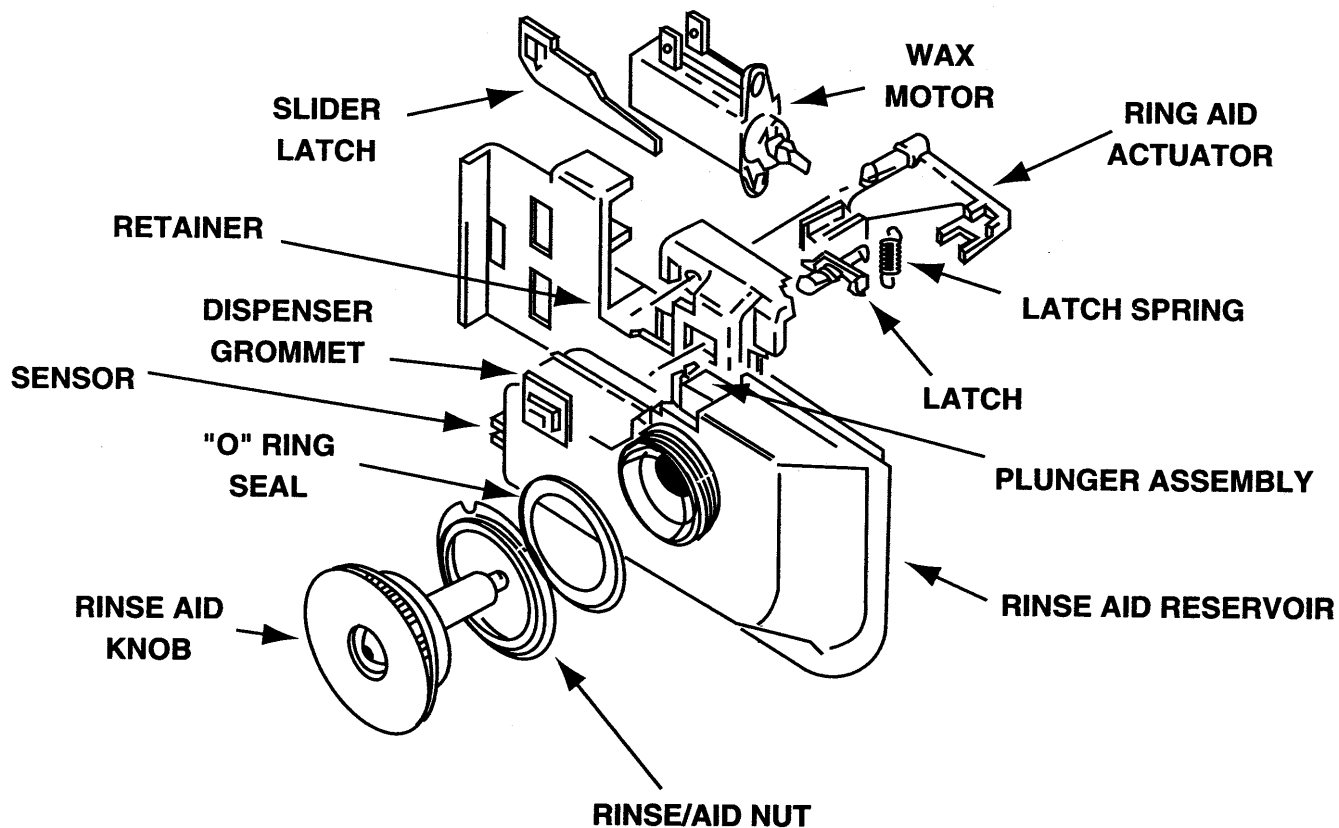


10. Examine the O-ring recessed into the sensor cluster for good seal integrity, replace if necessary.

11. To reassemble, reverse the aforementioned procedure. **Note: The sensor cluster has an alignment rib on the underside to aid in positioning.**

RINSE AID RESERVOIR WITH SENSOR

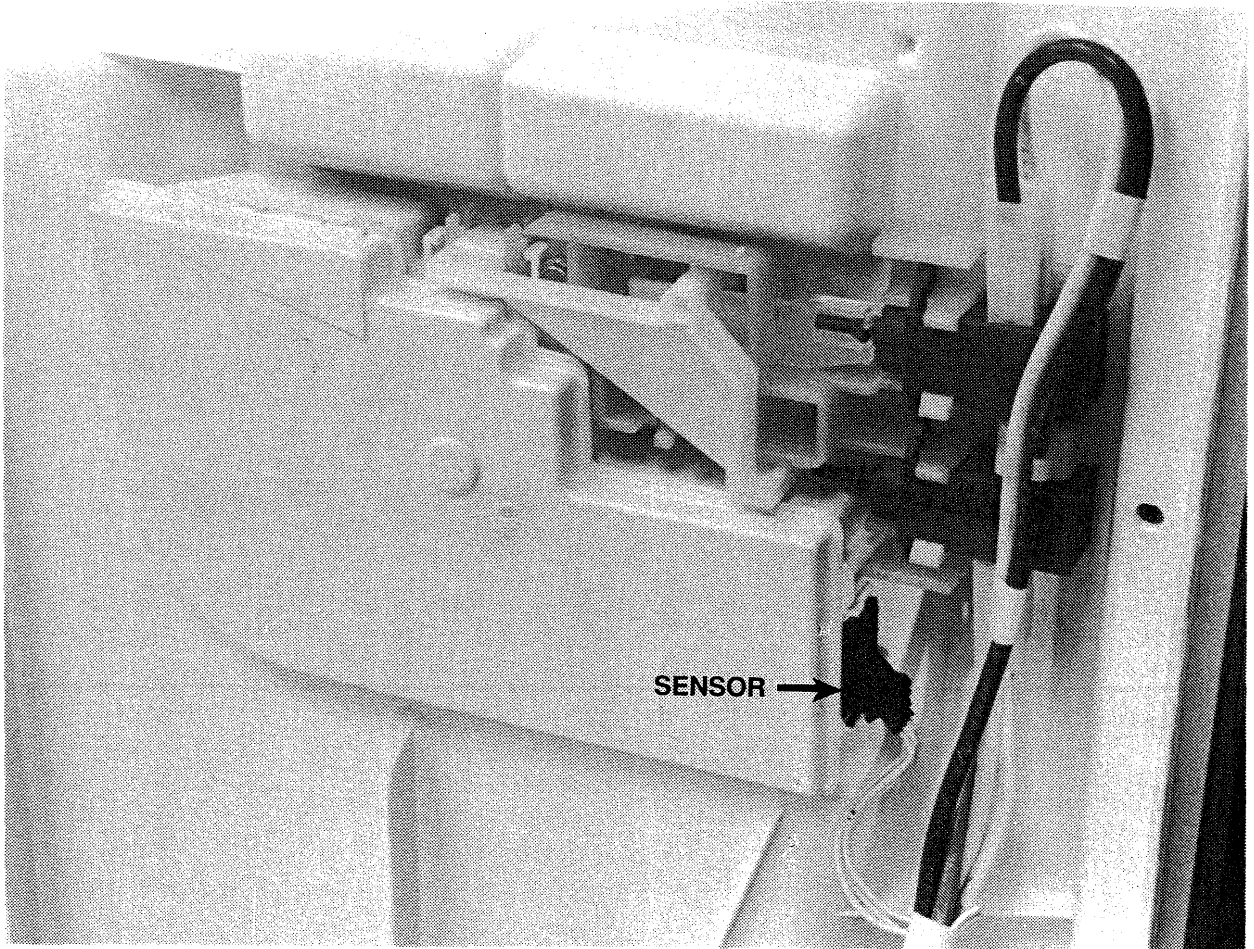
The rinse aid reservoir incorporates a sensor mechanism to inform the control board when the rinse aid level in the reservoir is low. This is done by means of a floating magnet within the reservoir. The reservoir is attached to the inside of the inner door panel. Replacement of the reservoir with sensor is necessary when the sensor failures occur.



To Remove:

1. Disconnect power supply to the dishwasher.
2. Remove the seven inner door panel screws and separate the inner door panel from the door assembly.

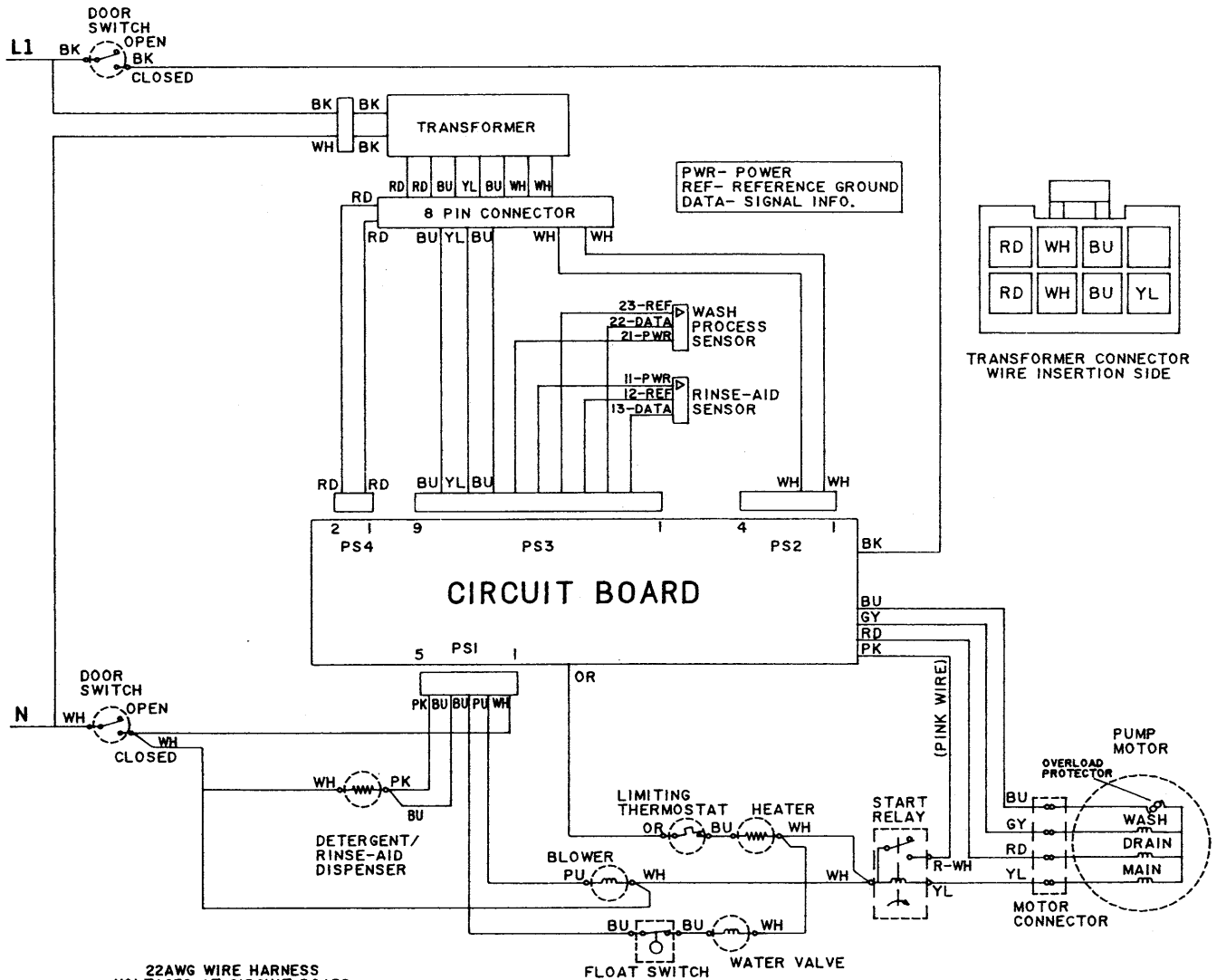
3. Disconnect the sensor harness to reservoir. To disconnect connector for the sensor harness, depress the center tab and separate the connectors.



4. Disengage the rinse aid actuator from the plunger.
5. On the face of the inner door, remove the rinse aid cap and nut.
6. Lift off the reservoir from the inner door panel for any damage. Replace if necessary.
7. To reassemble, reverse the procedure.

SECTION 6. SCHEMATIC

An Electrical Schematic is packed in every unit. It is located inside the access panel. Always remember to return the schematic to it's original location for future use.



22AWG WIRE HARNESS
VOLTAGES AT CIRCUIT BOARD

WIRE 1	WIRE 2	VOLTAGE
BU	BU	4.1VAC
BU	YL	2.0VAC
RD	RD	5.85VAC
WH	WH	19.2VAC
PS3,1	PS3,3	0VDC OR 7VDC
PS3,5	PS3,3	15VDC
PS3,6	PS3,3	15VDC
PS3,2	PS3,3	15VDC
PS4,1	PS3,3	25VDC

PSx REFERS TO CONNECTOR.
PSx,y REFERS TO
POSITION y IN CONNECTOR PSx.

CODES	FAULT TYPE	DESCRIPTION	TROUBLESHOOTING
00	Beginning of Error Display Mode	If only this symbol is displayed, the controller did not detect any errors.	None required, all is working properly.
F0	Control Board Error	An error with the controller has been sensed.	Control board door circuit does not appear to be operating properly, check control board.
F1	Motor Fault - motor current not changing	An error with the motor has been sensed.	Check wiring to motor from control board. Check for bad motor.
F2	Heater Fault - heater current not changing	An error with the heater has been sensed.	Check wiring to heater from control board. Check for bad heater, open high limit thermostat.
F3	High Current Error	An error has been sensed with the electrical current within the machine. The current is higher than normal.	This error is probably caused by the heater or motor being energized when they should not be. This could be due to faulty wiring (shorts) or a welded relay. This error could also be caused by line current surges seen by the current sensor.
F4	Detergent Fault - no conductivity change	No detergent has been detected in the main wash for 10 cycles. Either the consumer is not using detergent in the main wash or an error with the detergent cup may be present.	Check that consumer is using detergent in the main cup. Check the detergent cup wax motor and the wiring to and from the wax motor.
F5	Rinse Aid Fault	An error with the rinse aid dispensing has been sensed. This may be shown after the RS functional test if the Rinse Aid does not go from full to low.	Check connector from control board to rinse dispenser. Check for bad rinse aid dispenser.
F7	Turbidity Sensor Fault	An error with the turbidity sensor has been sensed.	A bad turbidity sensor reading has occurred. Check connections to Wash Process Sensor from control board. Also check for properly operating Wash Process Sensor. Finally check control board.
F8	Wash Arm Fault	An error with the wash arm rotation system has been sensed.	A bad washer arm reading has occurred. Check connections to Wash Process Sensor from control board. Check pump for the correct back wash arms and alignment of sensor. Check for properly operating wash process sensor. Finally check control board.
F9	Thermistor Fault	An error with the thermistor has been sensed.	A bad temperature sensor reading has occurred. Check connections to Wash Process Sensor from control board. Also check for properly operating Wash Process Sensor. Finally check control board.
1F0	Washer Arm Sensor Error	An error has been detected sensing the wash arm rotation. Five cycles in a row have concluded with a blocked wash arm present. A reset of the fault codes is necessary to clear this fault.	Check magnet in back rinse arms in pump. Check for operational sensor cluster. Check user loading pattern.
1F1	Conductivity Fault	An error with the conductivity sensor has been sensed.	A bad conductivity sensor reading has occurred. Check connections to Wash Process Sensor from control board. Also check for properly operating Wash Process Sensor. Finally check control board.
1F2	High Limit Thermostat	A temperature above 155° has been detected and the heater will still turn on.	Check the high limit thermostat for operation.
1F3	Communication Problem	Control and sensor pack communications is not operating properly.	A bad communication to the sensor has occurred. Check connections to Wash Process Sensor from control board. Also check for properly operating Wash Process Sensor. Finally check control board.
1F4	Cold Water Problem	Water below 90° is being detected at the temperature sensor of the dishwasher from the inlet valve.	Check with the consumer to make sure the inlet water temperature is near 120° F. If necessary suggest that the kitchen faucet be started before the cycle is to get hotter water to the dishwasher from the start.
1F5	Current Sensor Bad	The controller has sensed that the current sensor is not changing with any loads in the machine.	A bad current sensor on the control board has been detected. Check to make sure connections to board are correct and the black power line is properly connected to the 1/2" spade terminal on the board.

REQUIRED KEY SEQUENCE TO ENTER FAULT CODE DISPLAY MODE:

Key	Board Reaction	LED "ON" above switch	Audio Signal
Lock Key	none	NO	YES
Sani Scrub	Sani scrub cycle	YES	YES
Quick Wash	Quick wash cycle	YES	YES
Rinse and Hold	Rinse cycle	YES	YES
Heat Dry	none	NO	NO
Delicate Wash	Delicate Wash ON/OFF	YES/NO	YES
Cancel Key	Off	YES	YES
Lock Key	none	NO	YES
Sani Scrub	Fault Codes Displayed	NO	NO

This mode will display all faults that have occurred that are currently present. While this mode is in operation, pressing the CANCEL key will clear all fault codes. This should only be done to retest for faults or after problem has been resolved.

REQUIRED KEY SEQUENCE TO ENTER MANUAL FUNCTION MODE:

Key	Board Reaction	LED "ON" above switch	Audio Signal
Lock Key	none	NO	YES
Sani Scrub	Sani scrub cycle	YES	YES
Quick Wash	Quick wash cycle	YES	YES
Rinse and Hold	Rinse cycle	YES	YES
Heat Dry	none	NO	NO
Delicate Wash	Delicate Wash ON/OFF	YES/NO	YES
Cancel Key	Off	YES	YES
Lock Key	none	NO	YES
Sani Scrub	Fault Codes Displayed	NO	YES

After this mode is entered, the following table indicates which keys will start which relays. This display will show 2 minutes and the keys will toggle individual functions on as follows:

Key	Relay Energized
Sani Scrub	Sani Scrub
Sensor Start	Sensor Start
Quick Wash	Water (fill)
Delicate Wash	Detergent dispenser
Rinse and Hold	Rinse aid dispenser
Heat Dry	Heater
Delicate Wash	Blower

The machine will shut off 100 seconds after the last actuation of a key.

REQUIRED KEY SEQUENCE TO ENTER FUNCTIONAL TEST MODE:

Key	Board Reaction	LED "ON" above switch	Audio Signal
Lock Key	none	NO	YES
Sani Scrub	Sani scrub cycle	YES	YES
Quick Wash	Quick wash cycle	YES	YES
Rinse and Hold	none	NO	NO
Heat Dry	NONE	NO	NO
Delicate Wash	Delicate Wash ON/OFF	YES/NO	YES
Cancel Key	Off	YES	YES
Delay Key	NONE	NO	NO
Sensor Start	Intelligent cycle	YES	YES
Cancel	Start functional test	NO	NO

Total test time 15 minutes or less
Test sequence will turn on the segments of the VFD Test Cycle:

15 minutes in the display
5 seconds in the display
5 seconds of blower "DELAY"
100 seconds fill "WASH"
100 seconds motor "WASH"
100 second drain conditioner "DRAIN"
110 second fill "RINSE"
180 seconds of motor, detergent, heater, "RINSE", "HEATED DRY"
"HEATING" segments Rinse droplets
100 second drain, rinse conditioner, "BLOCKED WASH ARM", "HEATED DRY" segments
50 seconds heater, blower, "DRY", Blower fan, "CLEAN" segments on

MAYTAG

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