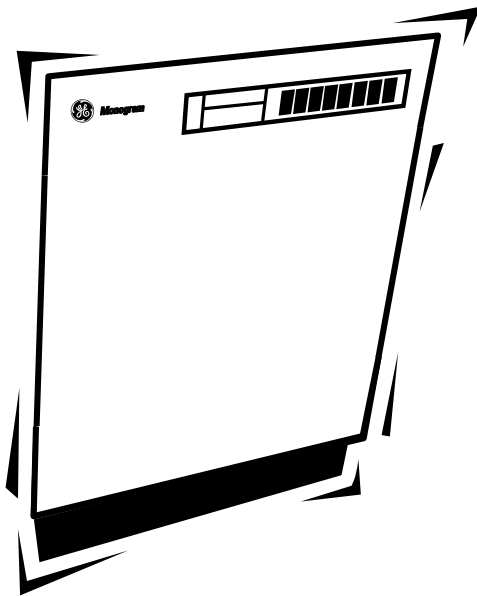
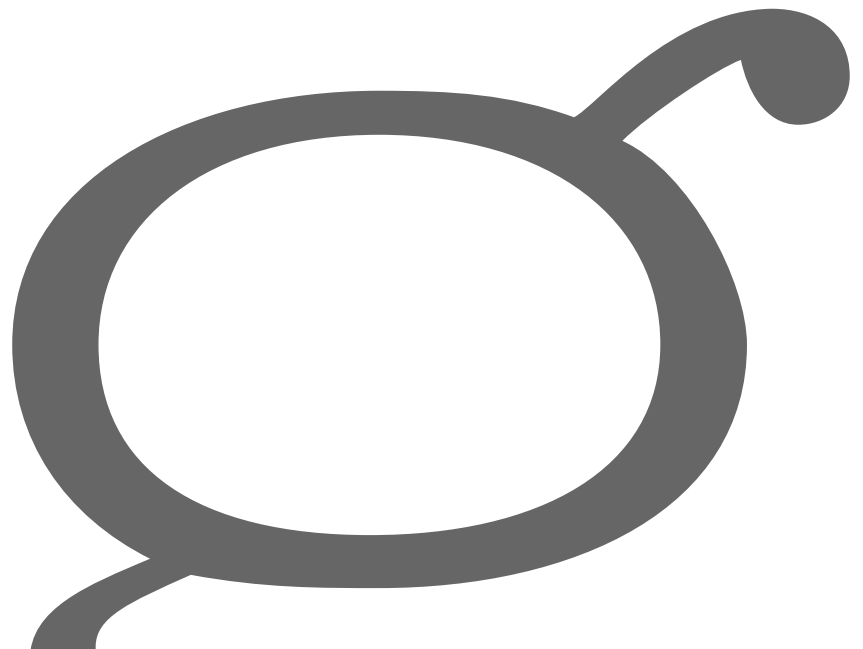




# TECHNICAL SERVICE GUIDE



**ZBD5900**  
**ZBD5700**  
**ZBD5600**  
**Dishwashers**



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# 1.0 PRODUCT INFORMATION

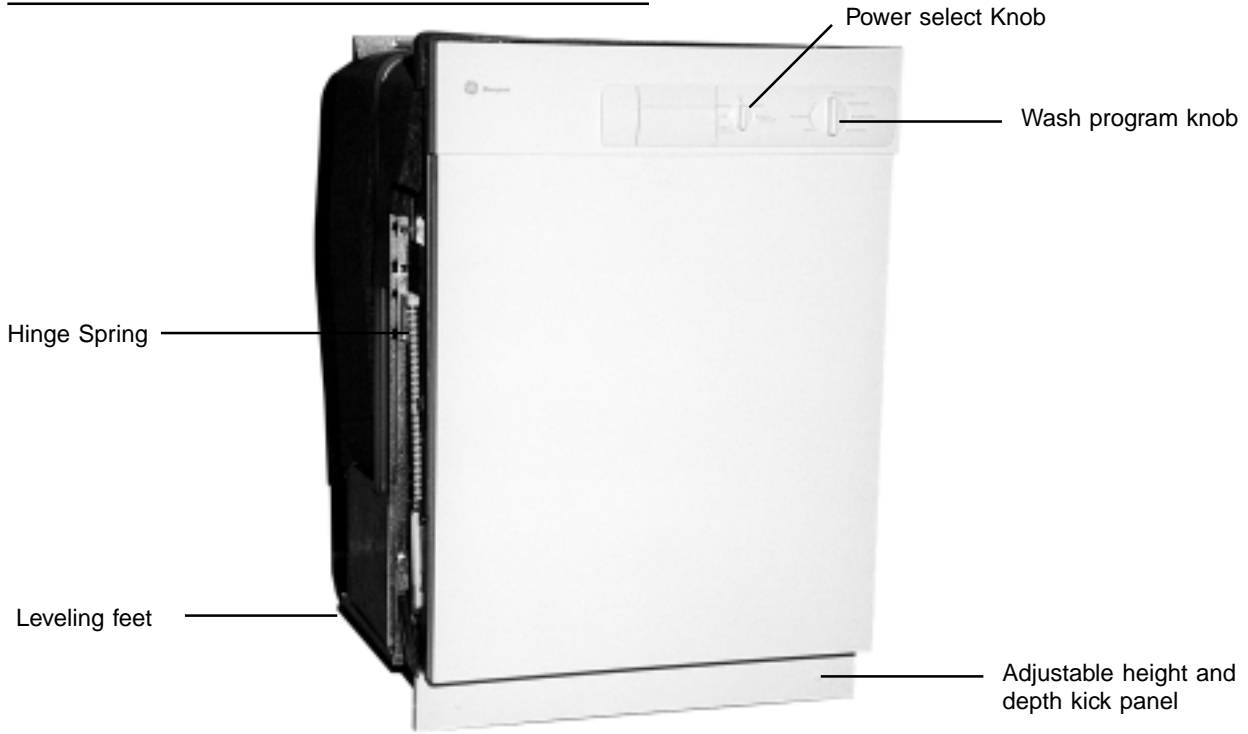
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## 1.1 DESCRIPTION

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### 1.1.1 Rotary Model 5600

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### 1.1.2 Electronic Model 5900

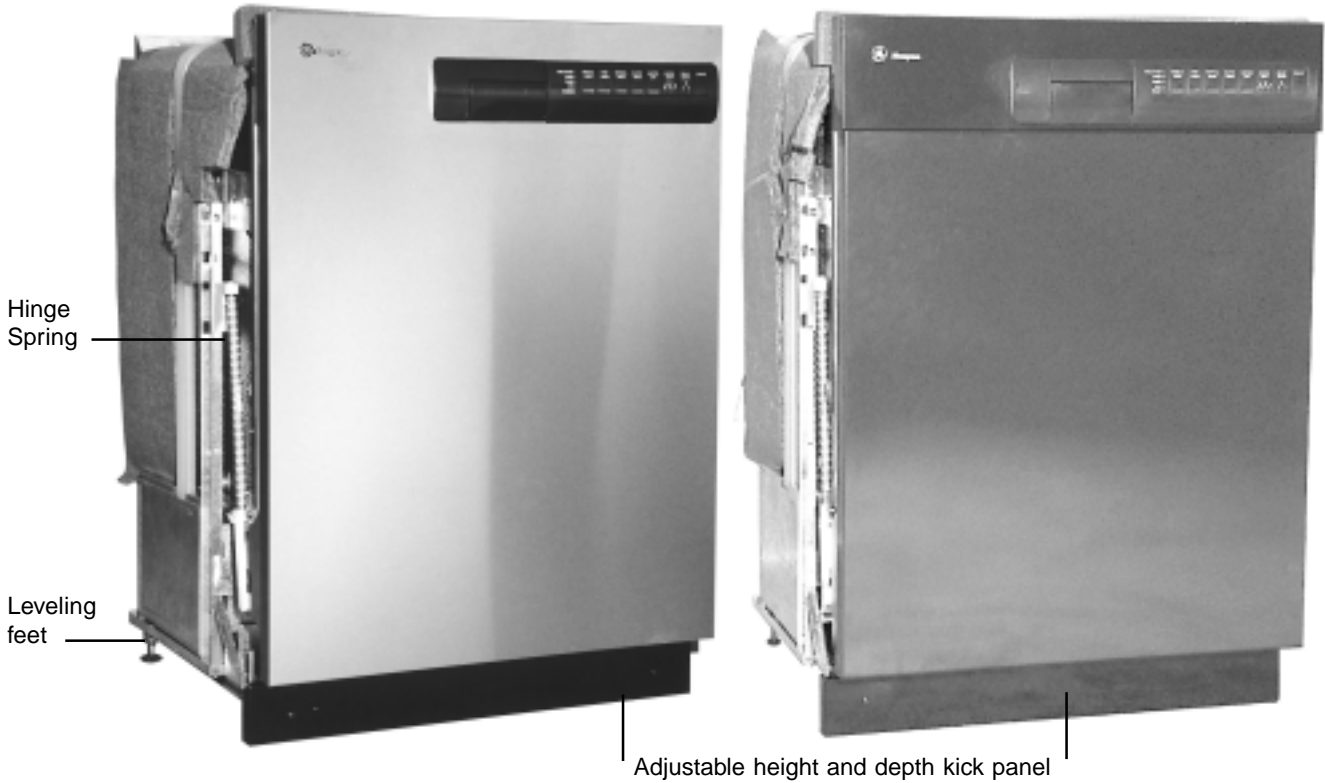
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ZBD5900 has a FULL Stainless Steel Door Panel

### 1.1.3 Electronic Model 5700

---

ZBD5700 has a separate control escutcheon with the door panel beneath it.



### 1.1.3 Interior, 5600, 5700 & 5900 Models

Light - 5700 & 5900 only

Rating Plate

Upper Basket

Lower Basket

Detergent and rinse aid dispenser



### 1.2 MODEL DESIGNATION

MODEL	5600	5700	5900
MARKET	USA	USA	USA
<b>CONTROL PANEL</b>			
Type	Rotary	Electronic	Electronic
<b>CABINET</b>			
White	Yes	Yes	No
Black	Yes	Yes	No
Stainless Steel	No	No	Yes
<b>PROGRAMS</b>			
Rinse and hold	Yes	Yes	Yes
Fast Wash	Yes	Yes	Yes
Light Wash	Yes	No	No
Normal Wash	Yes	Yes	Yes
Super Wash	Yes	Yes	Yes
<b>OPTIONS</b>			
Boost	Yes	Yes	Yes
Delay Start	No	Yes	Yes
Sanitemp	No	Yes	Yes
Heated Dry	Yes	Yes	Yes
<b>FEATURES</b>			
Place Settings	10	10	10
Interior Light	No	Yes	Yes
Overfill Protection	Yes	Yes	Yes
<b>UPPER BASKET</b>			
Height Adjustable Levels	2	2	2
Fold Down Cup Rack	4	4	4
Glass Wire Fixed	1	1	1
Glass Wire Adjustable	1	1	1
<b>LOWER BASKET</b>			
Fold Down Racks	Yes	Yes	Yes
Largest Plate (inches)	12.2	12.2	12.2
Cutlery Basket Covers	2	2	2

### FILL TIME MENU FOR ELECTRONIC POWER CONTROL BOARD

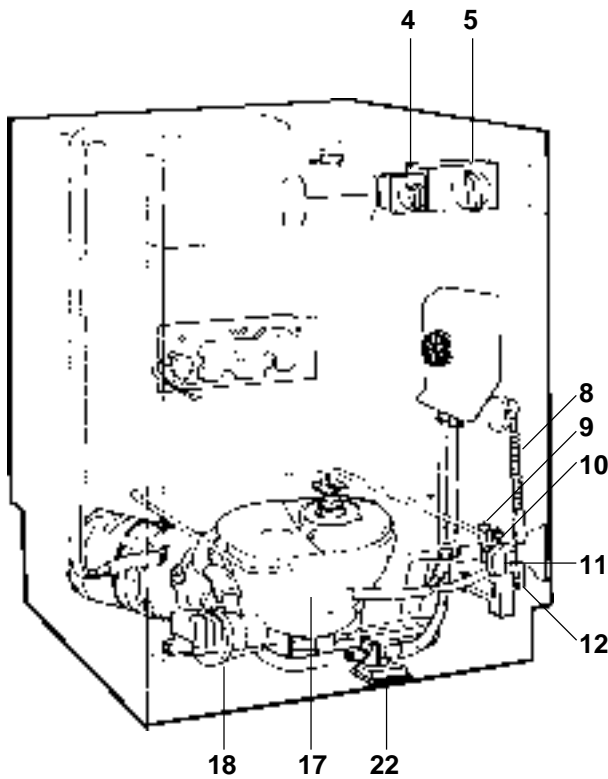
Progress Indicator Illuminated	Time in seconds
Pre-Wash	75
Wash	80 (Factory default all models)
Rinse	90
Dry	100
Clean	110

## 1.3 Major Component Location

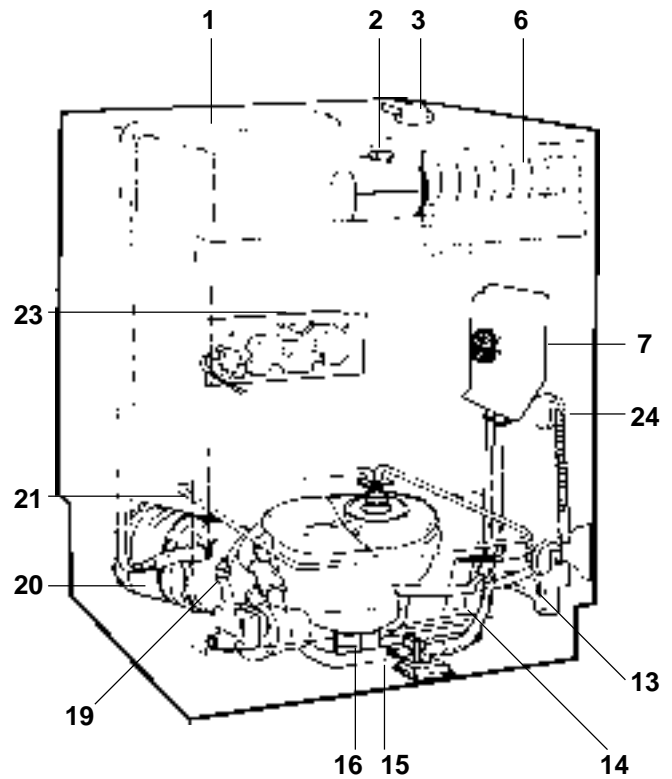
### 1.3.1 All Models - 5600, 5700 & 5900

The diagrams below illustrate the location of the major components. Refer to Section 5.1

**5600 Model**



**5700 & 5900 Models**



- |     |  |     |                                   |
|-----|--|-----|-----------------------------------|
| 1.  | Upper Basket Feed Pipe                   | 14. | Overfill Spillway                 |
| 2.  | Door Microswitch                         | 15. | Undersump - Overfill Collector    |
| 3.  | Interior Light (5700 & 5900 only)        | 16. | Undersump - Collector Float       |
| 4.  | Power Select Switch (5600 only)          | 17. | Sump                              |
| 5.  | Timer Control (5600 only)                | 18. | Drain Pump                        |
| 6.  | Electronic Controller (5700 & 5900 only) | 19. | Over-temperature Thermostat       |
| 7.  | Load Collector                           | 20. | Wash Motor Pump                   |
| 8.  | Door hinge, Spring and Push Rod Guide    | 21. | Heating Element                   |
| 9.  | Thermostat Boost (5600 only)             | 22. | Water Inlet Solenoid Valve        |
| 10. | Thermostat Normal (5600 only)            | 23. | Detergent and Rinse Aid Dispenser |
| 11. | Pressure Switch                          | 24. | Light Switch (5700 & 5900 only)   |
| 12. | Fill Time Switch (5600 only)             |     |                                   |
| 13. | Wash Motor Capacitor                     |     |                                   |

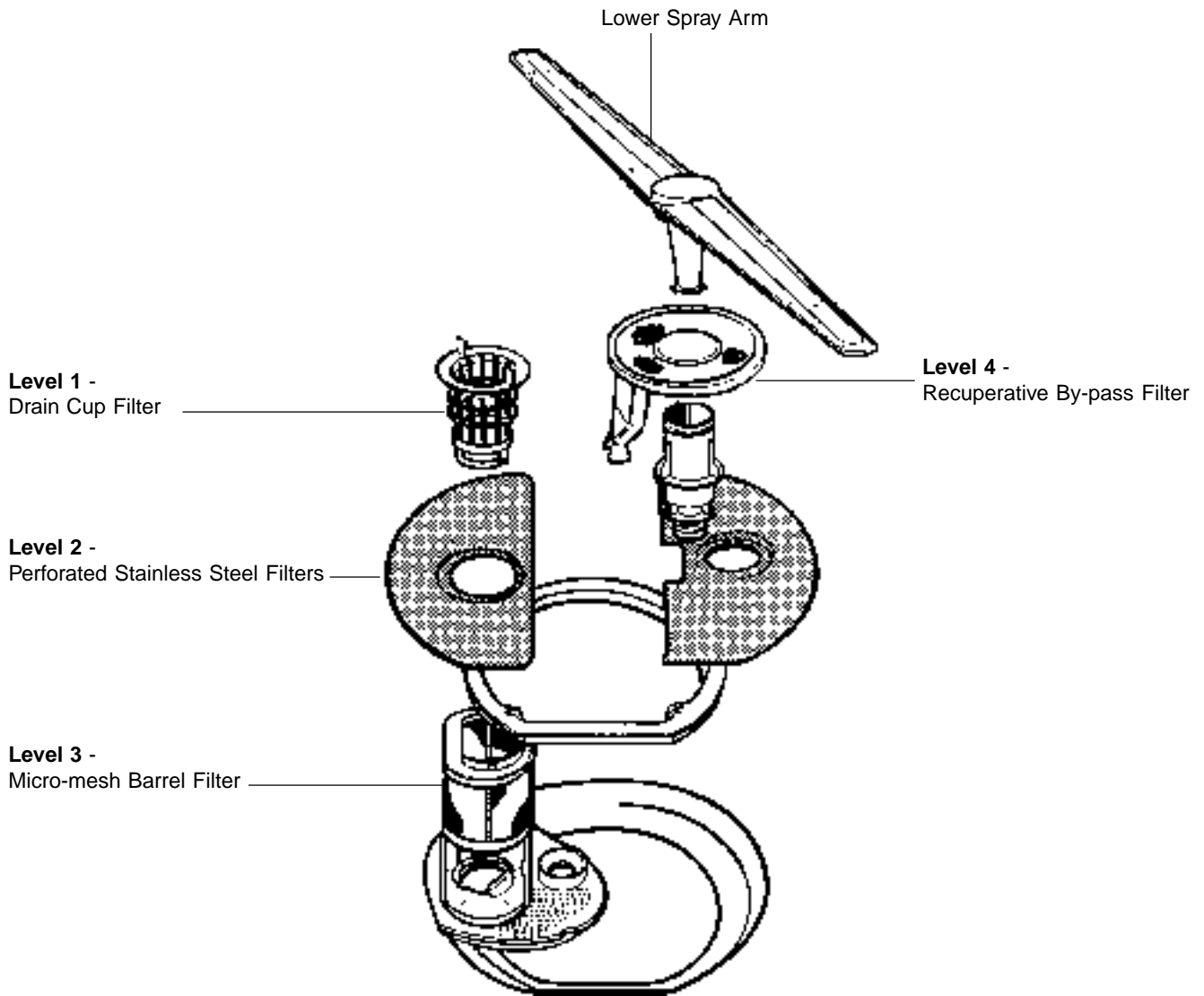
## 1.4 Micro-Filtration

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### 1.4.1 Level 4 Micro-Filtration

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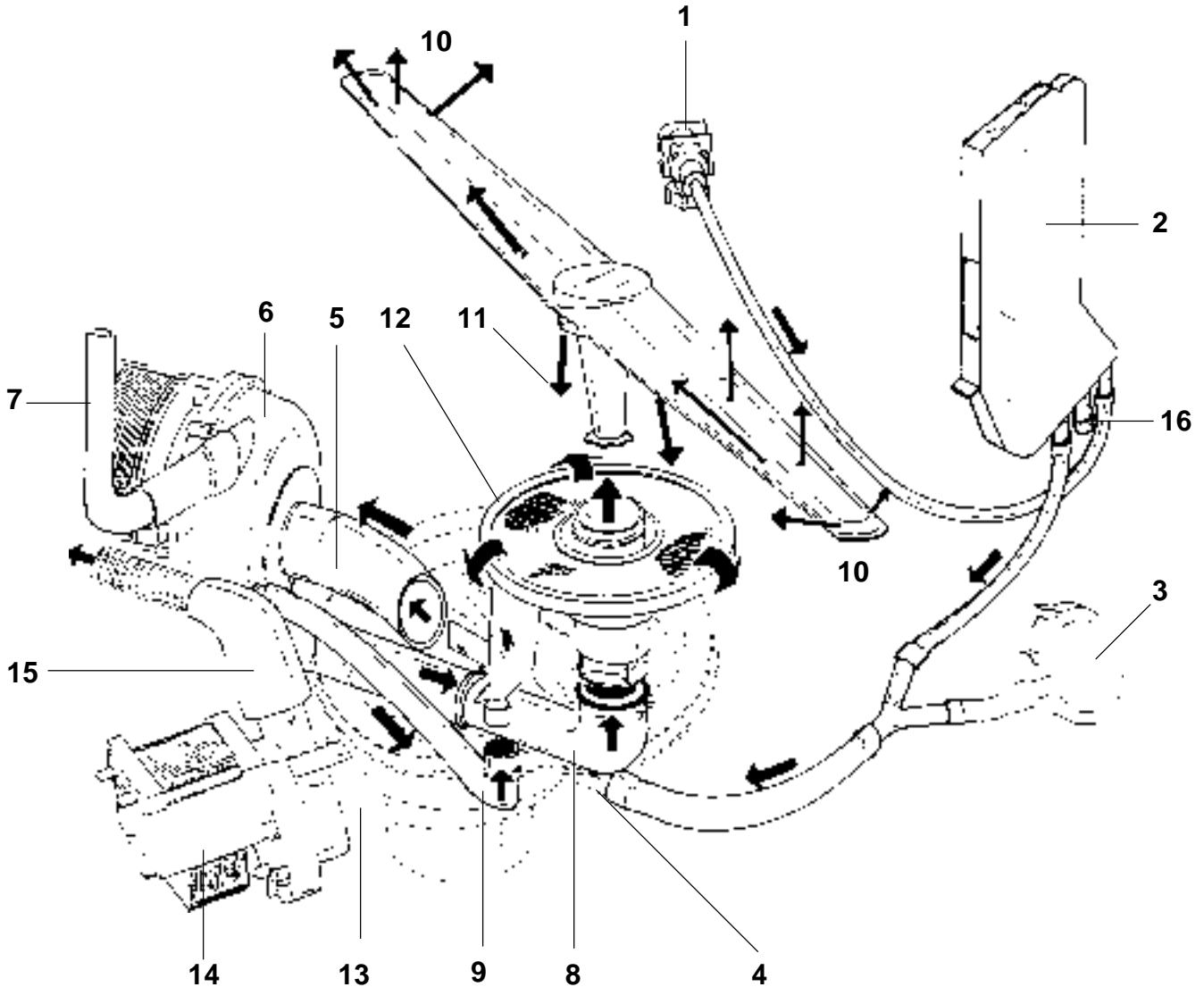
These models have a 4 level micro-filtration stainless steel filtering system.



## 1.4.2 Water flow - 4 Level System

The diagram below illustrates the water flow and identifies the main components in a 4 level micro-filtration system.

Note: The sump is drawn in dotted lines for illustration purposes.



- |    |   |     |  |
|----|---|-----|--|
| 1. | Water Solenoid Inlet Valve                | 10. | Various lower spray arm water jets           |
| 2. | Collector                                 | 11. | Lower spray arm water jets to By-pass Filter |
| 3. | Pressure Switch                           | 12. | Recuperative By-pass Filter                  |
| 4. | Sump Water Inlet                          | 13. | Drain Pump water inlet via sump              |
| 5. | Wash Pump water inlet via sump            | 14. | Drain Pump                                   |
| 6. | Wash Pump                                 | 15. | Water outlet to drain                        |
| 7. | Wash Pump water outlet to upper spray arm | 16. | Unused Port (middle nozzle)                  |
| 8. | Wash Pump water outlet to lower spray arm |     |  |
| 9. | Wash Pump water outlet to By-pass Filter  |     |  |

## 2.0 SAFETY

---

### 2.1 WARNING

---

All work on electrical or plumbing systems must be carried out by persons so qualified and in accordance with the Federal, State or local authority legislation which applies. Always ensure that the power supply box for the unit has correct polarity and is within sight and reach of the unit being serviced.

### 2.2 SAFETY PRACTICES

---

Ensure that the unit is **ELECTRICALLY SAFE** and there are no **WATER LEAKS** before and after carrying out any service work. When electrical power is required to be connected for diagnosis or test purposes, disconnect the power immediately after use.

When carrying out tests on unit, ensure that high voltages do not come into contact with low voltage circuit.

Do not operate unit with any panels removed other than the kick panel and front panel.

At the beginning and/or end of each service procedure, the appropriate icons below will appear as a reminder to observe safe practices when servicing the unit.



Turn water supply off at main or isolating faucet.



Test for water leaks before leaving.



Switch off electrical power supply.

**NOTE:** Schematics and Wiring Diagrams label **L1** as **A** for **Active**, **N** for **Neutral**, and **Ground (GND)** as **E** for **Earth**.



## 3.0 SPECIFICATIONS

### 3.1 GENERAL SPECIFICATIONS

#### 3.1.1 Control System

##### 3.1.1.1 Electronic Controller - 8 buttons

Used on 5700 & 5900 models. The controller has eight surface mounted switches.

The control switches are:

**Rinse & Hold Fast Wash Normal Wash Super Wash  
Heated Dry Water Temp Delay Start Clear**

Ten surface mounted green LED's illuminate and display the actual wash, water temperature and delay mode.

Five surface mounted green LED progress indicators illuminate and display the actual wash mode as follows:

**Pre-Wash Wash Rinse Dry Clean**

Each of the five green LED's is also utilized within the fill time mode to display the fill time in seconds. All off board components are triac controlled, except the wash motor relay and the heating element for heating & drying which are also relay controlled.

##### 3.1.1.2 Switch- Power Select- Rotary 5 position

Used on the 5600 model.

5 position switch with 45° indexing.

240/125VAC, 16A.

Double pole, double throw.

Silver contact studs.

Electrical connection - 1/4" Quick Connect male terminals.

The "Off" position is vertical with "Normal" on the left and "Boost" on the right.

##### 3.1.1.3 Timer - Electromechanical

Used on the 5600 model.

120VAC, 60Hz, 16A.

Type - Soft-set rotary self-indexing control not "push/pull" on/off.

Hollow shaft - 3/32" diameter bore.

A push rod is required for manual advance operation.

Electrical connection - 1/4" Quick Connect male terminals located on PCB.

Type timer drive motor - synchronous.

Resistance of windings 1.9K @ 68°F.

Rated input - 15mA.

#### 3.1.2 Water Circulating System

##### 3.1.2.1 Wash Motor Capacitor

370VAC, 60Hz, 15µF.

Type - metallized Polypropylene.

Electrical connection - 2 x 1/4" x 1/32" Quick Connect terminals.

For usage 120V, 60Hz @ 185°F

##### 3.1.2.2 Water Capacities

The water solenoid inlet valve is rated at a nominal 1.25 US gallons per minute. There are five possible fill time settings for electronic models: 75, 80, 90,100, 110. There are two settings for electromechanical models: 80 & 100 seconds. The factory default setting of 80 seconds results in a nominal fill of 1.17 to 1.95 US gallons subject to supply water pressure.

Water consumption: 6.0 US gallons (electronic models on fast wash)

Water consumption: 5.0 US gallons (rotary models on fast wash)

Actual program selected will vary water consumption.

Stainless Steel Tub capacity: 2.91 US gallons (sump capacity overflow level)

##### 3.1.2.3 Solenoid Water Inlet 60Hz

Operating Supply Pressure Range:

- Static Hot: 20 psi minimum – 120 psi maximum

Maximum inlet supply water temperature - 160°F

Nominal delivery flow rate from valve - 1.25 US gallons per minute.

120VAC, 60Hz.

Solenoid resistance 750/950 ohms

Electrical connection - 2 x 1/4" x 1/32" Quick Connect terminals.

##### 3.1.2.4 Drain Pump

Rated Input - 30W, 0.25A, 120VAC, 60Hz.

Resistance of Field Winding @ 68°F - 35 ohms ±10%.

Insulation - Class F.

Nominal RPM - 3000, 2 pole motor.

Motor temperature protector field winding - 338°F trips open.

Outlet nozzle equipped with non-return flap valve.

Nominal Discharge Rate - 3.96 - 5.28 US gallons/minute @ 3.25 Ft/head.

### 3.1.2.5 Wash Motor/Pump Assembly

120VAC, 60Hz, 1.7A.

110W, MCR CS&R, 3250 rpm.

Class F

Capacitor 15 $\mu$ F 370V

WARNING: Motor is fitted with internal auto reset overload and may restart without warning.

Resistance of windings @ 68°F  $\pm$ 5%

Brown & Blue - 6.9 ohms - Run

Blue & Black - 13.4 ohms - Start

Black & Brown - 20.3 ohms

### 3.1.3 Switches/thermostats

---

#### 3.1.3.1 Thermostat - Overtemp

Identification - Green Dot.

Mounting - M4 x 0.7 male thread.

Electrical connection - 1/4" Quick Connect terminals.

125V/250V.

Temperature specification: - Close 122°F  $\pm$ 10.

- Open 176°F  $\pm$ 6.

#### 3.1.3.2 Thermostat - Boost

Identification - Black Dot.

Mounting - M4 x 0.7 male thread.

Electrical Connection - 1/4" Quick Connect terminals.

125V/250V

Temperature specification: - Open 117°F  $\pm$ 6.

- Close 136°F  $\pm$ 8.

#### 3.1.3.3 Thermostat - Normal

Identification - Red Dot.

Mounting - M4 x 0.7 male thread.

Electrical connection - 1/4" Quick Connect terminals.

125V/250V

Temperature specification: - Open 99°F  $\pm$ 6.

- Close 118°F  $\pm$ 8.

#### 3.1.3.4 Microswitch - Undersump Overfill

250/125V, 10A, UL approved.

185°F maximum temperature.

Switch Mode - SPST.

Circuit - normally Open.

Silver CAD oxide contacts.

Electrical connection - 2 x 1/4" Quick Connect terminals.

#### 3.1.3.5 Switch-Light

Models 5700 & 5900 only

240V/120VAC, 5A.

Circuit - normally Open.

Electrical connection - 2 x 1/4" Quick Connect terminals.

#### 3.1.3.6 Switch - Fill System

125V/250VAC, 16A, UL approved.

Model 5600 only. Temperature - 248°F

Fixing/Mounting - snap in.

Contacts - silver.

Electrical connection - 1/4" silver plated brass Quick Connect terminals.

Switch Mode - SPST

#### 3.1.3.7 Microswitch - Door Lock

General Purpose Type approved by UL.

250/125VAC, 21A.

Pin Plunger Actuator SPST.

Normally open with common terminal at bottom.

Electrical connection - 1/4" Quick Connect terminals.

#### 3.1.3.8 Pressure Switch - Mechanical

Main Contact Load - 16A, 240/125VAC.

Contacts- Nos. 1 & 3 utilized for heater.

- Nos. 1 & 2 utilized for drain.

Electrical connection - 1/4" Quick Connect terminals.

Nominal Calibration - set 2" water

- reset 19/32" water

Operating Temperature - 185°F maximum.

UL Approved.

#### 3.1.3.9 Pressure Switch - Electronic

Main Contact Load - 1MA, 250/125VAC.

Electrical connection - 1/4" Quick Connect terminals.

Nominal Calibration - set 2" water

- reset 19/32" water

Operating Temperature - 185°F maximum.

NOTE: Contacts utilize No. 1 and No. 2 for empty condition. Contact No. 3 is not utilized.

UL Approved.

### 3.1.4 Miscellaneous

#### 3.1.4.1 Detergent & Rinse Aid Dispenser

Single solenoid type with gravity latch/lock mechanism.  
120VAC, 60 Hz.

Resistance of solenoid coil @ 68°F - ±10%.

Total capacity of detergent chamber - 37cc. (1.09fl.oz)

Minimum level detergent chamber - 25cc. (0.7fl.oz)

Pre-wash detergent chamber capacity - 10cc. (0.3fl.oz)

Total capacity Rinse Aid tank - 100/110cc. (3fl.oz)

Residual Rinse Aid in tank after optical eye action - 30cc ±5cc. (0.75-1.0 fl.oz)

Six Rinse Aid settings ranging from No. 1 (1cc - 0.03fl.oz) to No. 6 (6cc - 0.18fl.oz).

Intermediate settings No. 2 to No. 5 dispense an equal amount as per the setting number, i.e.. No. 3 setting dispenses 3cc (0.09fl.oz)

#### 3.1.4.2 Main Terminal Block and Wire Clamp

Poles - 3 marked A, N & E.

380V, 16A, from 3 x 0.03inch to 5 x 0.06inch<sup>2</sup>

Housing - self extinguishing black polyamide.

Temperature Rating - 257°F.

Metal Parts - Zinc Passivated Steel.

#### 3.1.4.3 Interior Lamp

Models 5700 & 5900 only

120VAC, 60 Hz

Lamp Globe - 120V, 15W (max) B15

Electrical Connections - 2 x 3/16" Quick Connect terminals.

Lamp Housing - 21/4" x 0.08" pitch buttress right hand thread.

Ring gasket seal incorporated in lens.

Lens marked - maximum 15 watts.

#### 3.1.4.4 Element - Heating

120VAC, 60 Hz, 1200W.

12 ohms 3 @ 68°F.

Insulation resistance - 1 meg ohms (minimum).

Element sheath material - 304 & 321 stainless steel.

Mounting - stainless steel (type 302)

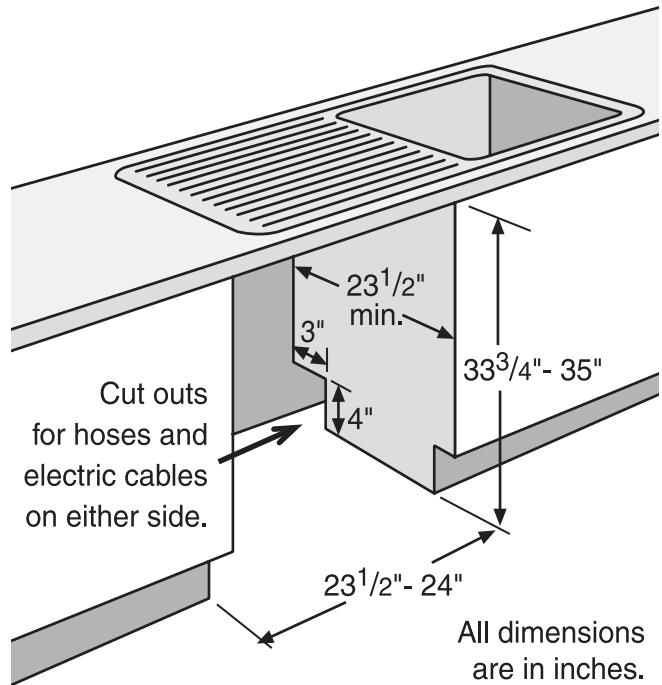
Flange and stud - M6 stainless steel (type 302-304).

Ends of sheath sealed with epoxy-epirez 324A.

Electrical connection - 1/4" Quick Connect male stainless steel (type 302-304) spade terminals.

#### 3.1.4.5 Dimensions

The diagram below illustrates the cabinet space required.



## 4.0 FAULT DIAGNOSIS

### 4.1 INTRODUCTION

There are three distinct dishwashers within the Monogram Series which can be distinguished by the type of control panel. There are two electronic models having 8 control buttons and there is one rotary electromechanical model.

Section 1.2 of this manual identifies individual model details and features, however this introduction will provide an overview of the 3 distinct models and what distinguishes one model from another.

#### 4.1.1 Electronic 8-Button 5700 & 5900 Models

The 8 button electronic models are the Monogram 5700 & 5900 Models. The “8 buttons” are from left to right, **Rinse & Hold, Fast Wash, Normal Wash, Super Wash, Heated Dry, Water Temp, Delay Start** and **Clean**. The Water Temp button provides three options in water temperature, **Normal, Boost,** and **Sani**, with **Normal** being the lowest temperature and **Sani** the highest. The **Delay Start** button enables you to start your wash at a later time either in two, four, or six hours. There are five green LED’s located on the bottom of the four wash programs and on **Heated Dry** - they illuminate once the button has been pressed. The 5 progress indicator LED’s are utilized to indicate program status and help identify fill time. They are from top to bottom, **Pre-wash, Wash, Rinse, Dry,** and **Clean**.



#### 4.1.2 Electromechanical Rotary 5600 Models

The Monogram 5600 model is fitted with a soft-set rotary self-indexing timer, which has a detent mechanism to index the timer control knob to the ‘start’ position of a wash program. Six detent positions from the 12 o’clock position form the actual programs as follows: **Rinse & Hold, Super Wash, Normal Wash, Light Wash, Dry** and **Fast Wash**.

A fill time switch is fitted behind the kick panel to select an 80 or 100 second fill time.

The rotary power select control knob - **Off / Boost / Boost + Heated Dry / Normal / Normal + Heated Dry** provides a definite “Off” position. The selection of “Normal” is an “On” position and also selects the “Normal” program which has a 126°F wash temperature. The element “Dry” program is available by selecting “Normal + Heated Dry”. The timer control knob will not advance into the “Heated Dry” mode if “Heated Dry” is not selected.

Selection of “Boost” provides wash temperatures of 142°F and the element “Dry” program (element drying) is available by selecting “Boost + Heated Dry”. The “Fast Wash” program is an express wash program and is not provided with a “Dry” mode. Residual drying provides an efficient from of drying.

**CAUTION: Do not pull the timer control knob towards you to switch on dishwasher. If the timer control knob is pulled, it will come off the shaft.**



## 4.2 ELECTRONIC 8 BUTTON 5700 & 5900 - SELF DIAGNOSIS

A total of four main test functions can be accessed to provide a diagnosis of the control system. The four test functions are as follows:

### Showroom Display:

Progress indicator LED's and program/option LED's individually illuminate in a continuous sequence.

### Display/Buzzer Test:

Test program/option LED's, progress indicator LED's and the buzzer.

### Relay/Triac Output Test:

Test all power control board (PCB) outputs.

### Fault Indication Mode:

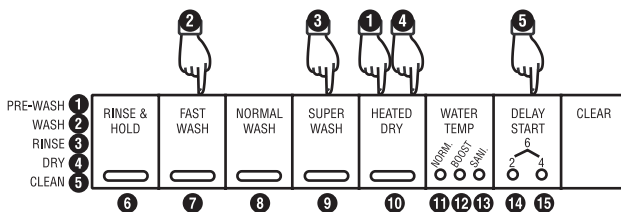
A program/option LED flashes to indicate a fault code. Fault codes are stored in EEPROM for later access.

**NOTE: Before attempting any self diagnosis functions ensure that the dishwasher is not in Child Lockout Mode or in Buzzer Silencing Mode (refer to Operating Instructions).**

### 4.2.1 Showroom Display

4.2.1.1 To access the Showroom Display Mode, the following buttons must be pressed in sequence: **Heated Dry, Fast Wash, Super Wash, Heated Dry, & Delay Start** with the door closed.

4.2.1.2 All indicator LED's will illuminate together with the buzzer sounding, then the LED's light individually in the following sequence: (1) Pre Wash, (2) Wash, (3) Rinse, (4) Dry, (5) Clean, (6) Rinse & Hold, (7) Fast Wash, (8) Normal Wash, (9) Super Wash, (10) Heated Dry, (11) Water Temp - Normal (12) Water Temp - Boost, (13) Water Temp - Sani, (14) Delay Start - 2hr, (15) Delay Start - 4hr. The display will continue even if the door is opened.



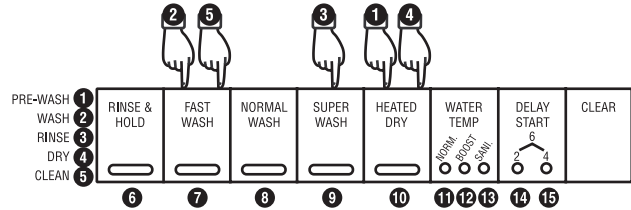
4.2.1.3 To cancel the display, repeat the sequence above : **Heated Dry, Fast Wash, Super Wash, Heated Dry, & Delay Start** with the door closed.

**NOTE: Button operation to cancel the showroom display mode is not confirmed by buzzer sound.**

### 4.2.2 Display/Buzzer Test

4.2.2.1 To access the Display/Buzzer Test Mode, the following buttons must be pressed in sequence: **Heated Dry, Fast Wash, Super Wash, Heated Dry, & Fast Wash** with the door closed.

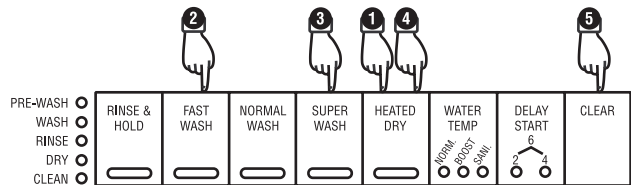
4.2.2.2 All indicator LED's will illuminate together with the buzzer sounding and then each indicator LED will illuminate individually in the following sequence: (1) Pre Wash, (2) Wash, (3) Rinse, (4) Dry, (5) Clean, (6) Rinse & Hold, (7) Fast Wash, (8) Normal Wash, (9) Super Wash, (10) Heated Dry, (11) Water Temp - Normal (12) Water Temp - Boost, (13) Water Temp - Sani, (14) Delay Start - 2hr, (15) Delay Start - 4hr.



4.2.2.3 To cancel, either enter the RELAY/TRIAC OUTPUT TEST (refer to next section 4.2.3) or follow the sequence: **Heated Dry, Fast Wash, Super Wash, Heated Dry and Clear** with the door closed.

### 4.2.3 Relay Triac Output Test

4.2.3.1 To access the Relay/Triac Output Test Mode, the following buttons must be pressed in sequence: **Heated Dry, Fast Wash, Super Wash, Heated Dry and Clear** with the door closed.



4.2.3.2 The processor will select the temperature calibration test as a default mode and illuminate a number of program/option LED's depending on the temperature at the thermistor. A total of seven relay/triac outputs of the power control board (PCB) can be accessed and individually tested by manually energizing/de-energizing the relay/triacs and the actual supply circuits to the outboard components of the dishwasher.

4.2.3.3 Press the appropriate button to energize the relay/triac output you wish to test according to the following table:

#### Program/Options button to press...

Fast Wash  
Normal Wash  
Super Wash  
Heated Dry  
Water Temperature  
Delay Start  
Clear

#### ...to test Relay/Triac output.

Detergent/Rinse Aid Dispenser.  
Heating Element (Drying)  
1 second on, 2 seconds off.  
Heating Element.  
Drain Pump.  
Wash Pump.  
Detergent/Rinse Aid.  
Water fill valve.

#### 4.2.3.4 Temperature Calibration Test:

During the relay/triac output test, the program and option LED's function as a temperature indicating bar graph. The number of LED's on at any one time is dependent upon thermistor temperature. A temperature of 113°F is indicated by only the **Heated Dry** LED illuminating. A temperature of above 210°F causes all program and option LED's to flash at 0.5 second intervals. No LED's are displayed for a temperature below 32°F. Refer to the table below:

Temp °F	Rinse	Fast Wash	Normal Wash	Super Wash	Heated Dry	Water Temp	Delay
< 34	Off	Off	Off	Off	Off	Off	Off
34-75	Off	Off	Off	Off	Off	Off	On
76-93	Off	Off	Off	Off	Off	On	On
95-111	Off	Off	Off	Off	On	On	On
113	Off	Off	Off	Off	On	Off	Off
115-129	Off	Off	Off	On	On	On	On
131-147	Off	Off	On	On	On	On	On
149-165	Off	On	On	On	On	On	On
167-210	On	On	On	On	On	On	On

4.2.3.5 Press the same program/options button to de-energize the relay/triac output.

#### 4.2.3.6 Pressure Switch Circuit Operation:

During the relay/triac output test (latching mode), the wash progress indicator LED operates as a pressure switch function indicator. A circuit between No. 1 terminal and No. 2 terminal exists when the dishwasher is empty and the wash LED is OFF. As water enters the tub and the water level increases, the pressure switch contacts open between No. 1 terminal and No. 2 terminal, resulting in an open circuit and the wash progress indicator LED will be illuminated.

4.2.3.7 To cancel the relay/triac output test mode, press the following buttons in sequence: **Heated Dry, Fast Wash, Super Wash, Heated Dry, & Clear** with the door closed.

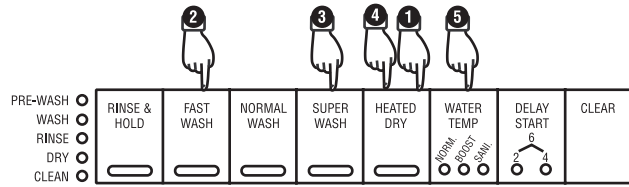
### 4.2.4 Fault Indication Mode

To assist with fault diagnosis of the dishwasher, the program/option LED's are utilized to indicate a diagnostic code. The relevant program/option LED's flash at a rate of 2 ON/OFF cycles per second once a fault is detected. If two or more faults occur during the wash program, the relevant program/option LED's flash at the 2 ON/OFF cycles per second rate.

Fault indication remains on if the door is opened and can only be cleared from the program/option LED's by pressing **Clear** at the end of the wash cycle or by starting a wash cycle.

Fault indication status is saved in EEPROM for later access.

4.2.4.1 To access the fault codes, the following buttons must be pressed in sequence: **Heated Dry, Fast Wash, Super Wash, Heated Dry, & Water Temp.**



4.2.4.2 The fault codes (if any are recorded), will then be displayed by flashing the relevant program/option LED's. Pressing the Clear button will clear the retained fault codes from the memory and the power board control (PCB) will be in standby mode with all LED's OFF.

4.2.4.3 **Fault Indication Code:** There are 5 Fault Codes as per the following table:

Fault Code	Fault Indication	Probable Fault
<b>Normal Wash</b>	Not Heating	Water Temp. rise <8°F in 15 min.
<b>Super Wash</b>	Over Temp.	Water Temp. over 180°F
<b>Fast Wash</b>	Not Filling	Fill Time option expired
<b>Rinse &amp; Hold</b>	Not Draining	Not drained within 5 min.
<b>Heated Dry</b>	Overfill	Under Sump overfill switch closed

4.2.4.4 **Not Heating Fault Indication:** During a heating cycle, if the water temperature sensed does not have a temperature increase greater than 8°F in fifteen minutes, the heating element relay is de-energized and the wash program operation continues, while rapidly flashing the **Normal Wash** LED.

4.2.4.5 **Over Temperature Fault Indication:** If at any time the water temperature sensed exceeds 176°F, the program operation continues, although an over temperature warning is indicated by a rapidly flashing **Super Wash** LED.

4.2.4.6 **Not Filling Fault Indication:** If the controller has not sensed that the pressure switch circuit is open after the selected fill time, the controller will turn off all outputs and indicate not filling by a rapid flashing **Fast Wash** LED.

4.2.4.7 **Not Draining Fault Indication:** If the controller has sensed, by the pressure switch, that the dishwasher is not empty after five minutes of draining, then all outputs will be turned OFF and the fault mode of Not Draining is indicated by a rapid flashing **Rinse & Hold** LED.

4.2.4.8 **Overfill Fault Indication:** The drain output is continuously monitored by the controller. Whenever the drain output becomes an active potential other than in a normal drain cycle, the controller switches OFF all outputs and rapidly flashes the **Heated Dry** LED. If the wash pump is on at the time of overfill, a delay of 30 seconds will occur prior to turning OFF the wash pump.

The power control board (PCB) will remain inoperative until the removal of the overfill signal. On the removal of the overfill signal the control is to revert to standby with all displays and outputs OFF.

4.2.4.9 **To Exit Fault Indication Mode:** Simply press the **Clear** button.

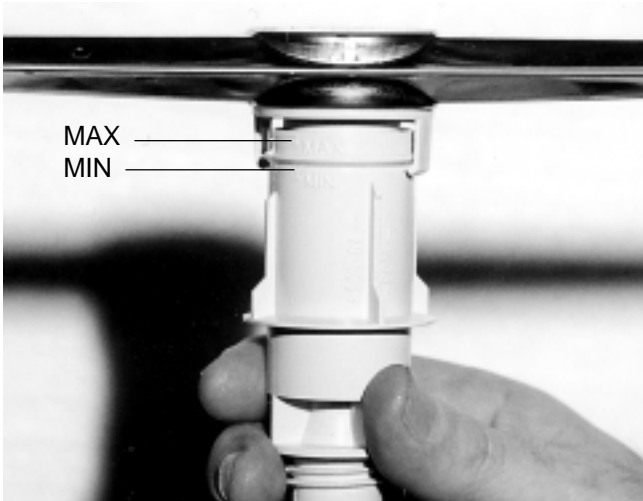


## 4.3 FILL TIME MENU

This section deals specifically with diagnosis of the fill menu for electronic 8 button models and for the rotary model. For self diagnosis, where the relay/triac output test permits outboard components to be energized and tested accordingly, refer to: Section 4.2 - Electronic 8 Button Model 5700 & 5900 - Self Diagnosis, to carry out an individually controlled test mode of each outboard component.

Also refer to the Owner's Manual for water fill level and wash program data.

The 5700 & 5900 models have a total of five fill time selections which can be accessed. The fill time mode allows a water level to enter the tub which can be compared to the "MAX" & "MIN" level markings on the lower spray arm support as shown below.



The special purpose water inlet solenoid valve is rated for a nominal delivery of 1.25 US gallons per 60 seconds fill time. The dishwasher is designed for a nominal water fill of 1.17 to 1.95 US gallons per fill cycle. The dishwasher has a factory default fill time of 80 seconds to a maximum fill time of 110 seconds.

A fill time selection of 75 seconds is also available to reduce the fill time from the default 80 seconds. A fill time of 75 seconds can be used for instances where extremely high water pressure is applied to the water solenoid valve.

For the 5700 & 5900 models (8 button), each progress indicator LED is individually illuminated to designate a fill time in seconds; (e.g. the "pre-wash" progress indicator represents 75 seconds). The fill time corresponding to each of the 5 progress indicators is as follows:

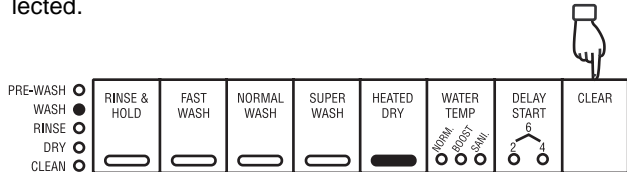
Progress Indicator Illuminated	Time in seconds
Pre-Wash	75
Wash	80 (Factory default all models)
Rinse	90
Dry	100
Clean	110

### 4.3.1 Fill Time Menu - 5700 & 5900 Models

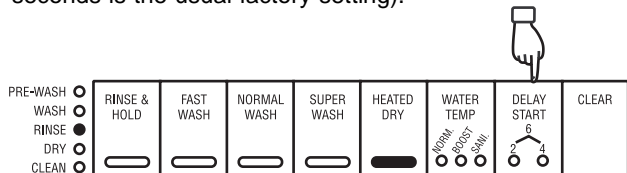
**4.3.1.1 To check the water level:** Run the dishwasher through a complete Rinse Only cycle to ensure it is emptying and filling correctly. **The water level must only be checked on the Rinse and Hold cycle.**

If connecting to low water pressure, select the **Rinse and Hold** cycle again. After the dishwasher has filled, pause the dishwasher and check the water level inside. If the water level is not between the "MAX" & "MIN" indicators, then the fill time will need to be adjusted.

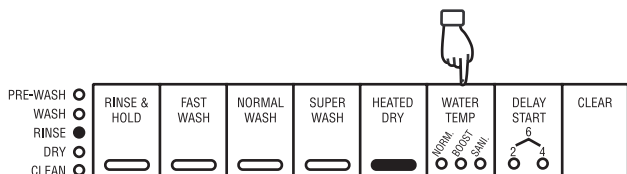
**4.3.1.2 To access the fill time menu:** Close the dishwasher door. Clear the **Rinse Only** cycle and ensure the dishwasher is not running. Switch the dishwasher power supply off and then on again to clear any preset information. Press and hold the **Water Temp** button for ten (10) seconds until the buzzer sounds, then release the **Water Temp** button. A progress indicator will illuminate indicating fill time selected.



**4.3.1.3 To select the fill time:** Press the **Clear** button to select a fill time as per the table in section 4.3 above (80 seconds is the usual factory setting).



**4.3.1.4 To check fill level selected:** Press the **Delay Start** button. The dishwasher will drain and then start filling. Listen for the dishwasher to complete filling. Once filled, the fill level must be checked to ensure fill time is correct (i.e. the water level is between "MAX" & "MIN" marks).

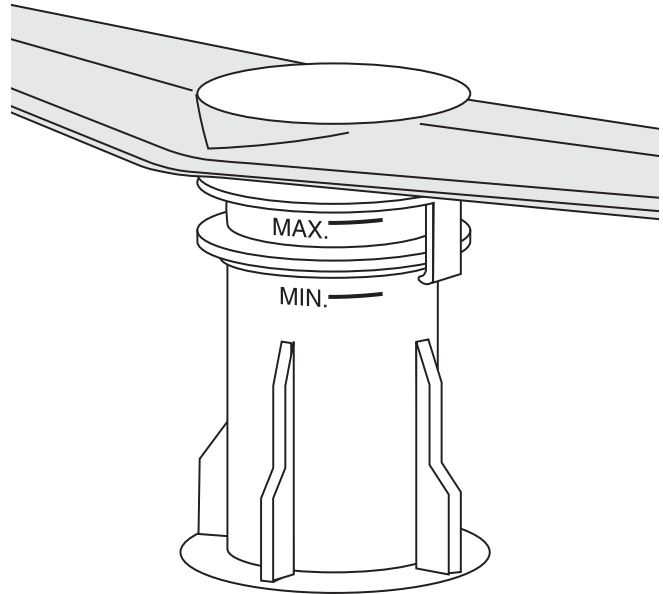
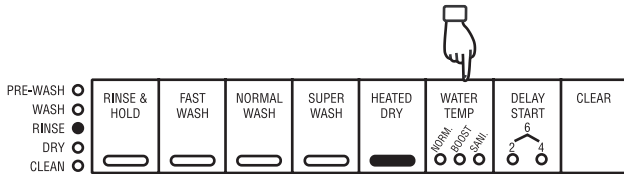


**4.3.1.5 To re-select fill time:** If the water level is not between the "MAX" and "MIN" marks, re-select the fill time as in section 4.3 above accordingly:

- If over the "MAX" marking - decrease the fill time
- If under the "MIN" marking - increase the fill time

**4.3.1.6 To store and exit fill time mode:** If the re-selected fill time is correct, press the **Water Temp** button to exit the fill time mode. Upon pressing the **Water Temp** button two functions will occur:

- The drain mode will empty the tub.
- At the end of the drain mode, the buzzer will sound and the fill time mode will be exited.



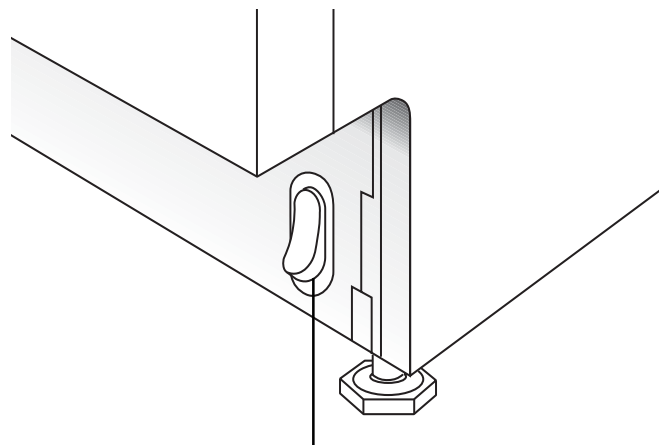
MAX and MIN fill level marks on lower spray support tower

**4.3.2 Fill Time Menu - Model 5600 (Electromechanical) Single Fill Only**

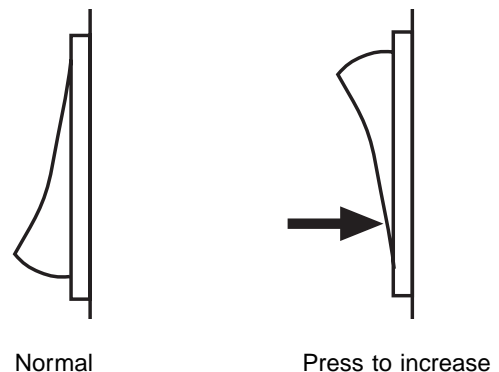
The rotary model 5600 is equipped with a fill time rocker switch to select either the factory default setting (Normal) of 80 seconds fill time, or increase the fill time to 100 seconds if the dishwasher is connected to a low pressure water supply.

**4.3.2.1 Water fill level and selection:** Once the dishwasher is fully connected, run it through a complete **Rinse and Hold** cycle to ensure it is emptying and filling correctly. For low water pressure situations, run the **Rinse and Hold** cycle 3 times. Halfway through the final **Rinse and Hold** cycle, pause the dishwasher and check the water level inside the dishwasher. If the water level is not above the minimum water level (marked on the lower spray support tower), then the fill time needs to be increased.

**4.3.2.2 To increase fill time:** Remove the front kickplate and engage the fill time switch located behind the kickplate. This will increase the fill time to 100 seconds.



Fill time switch





## 4.4 GENERAL DIAGNOSTICS - 5700 & 5900 MODELS

### 4.4.1 Overfill Mode - Drain Pump Operating Continuously

Symptom: Overfill mode indicated by **Heated Dry** LED rapidly flashing and drain pump **continuously** operating.

An overfill mode may occur if the correct fill time mode has not been selected in relation to the water pressure supplied to the dishwasher. Refer to the previous section 4.3, for fill time mode diagnostics, where the default fill time of 80 seconds is the starting point or bench mark.

The undersump overfill float is activated by 1.76 fluid oz. of water causing the microswitch lever to actuate. The microswitch operates from contact NC to NO via the float.

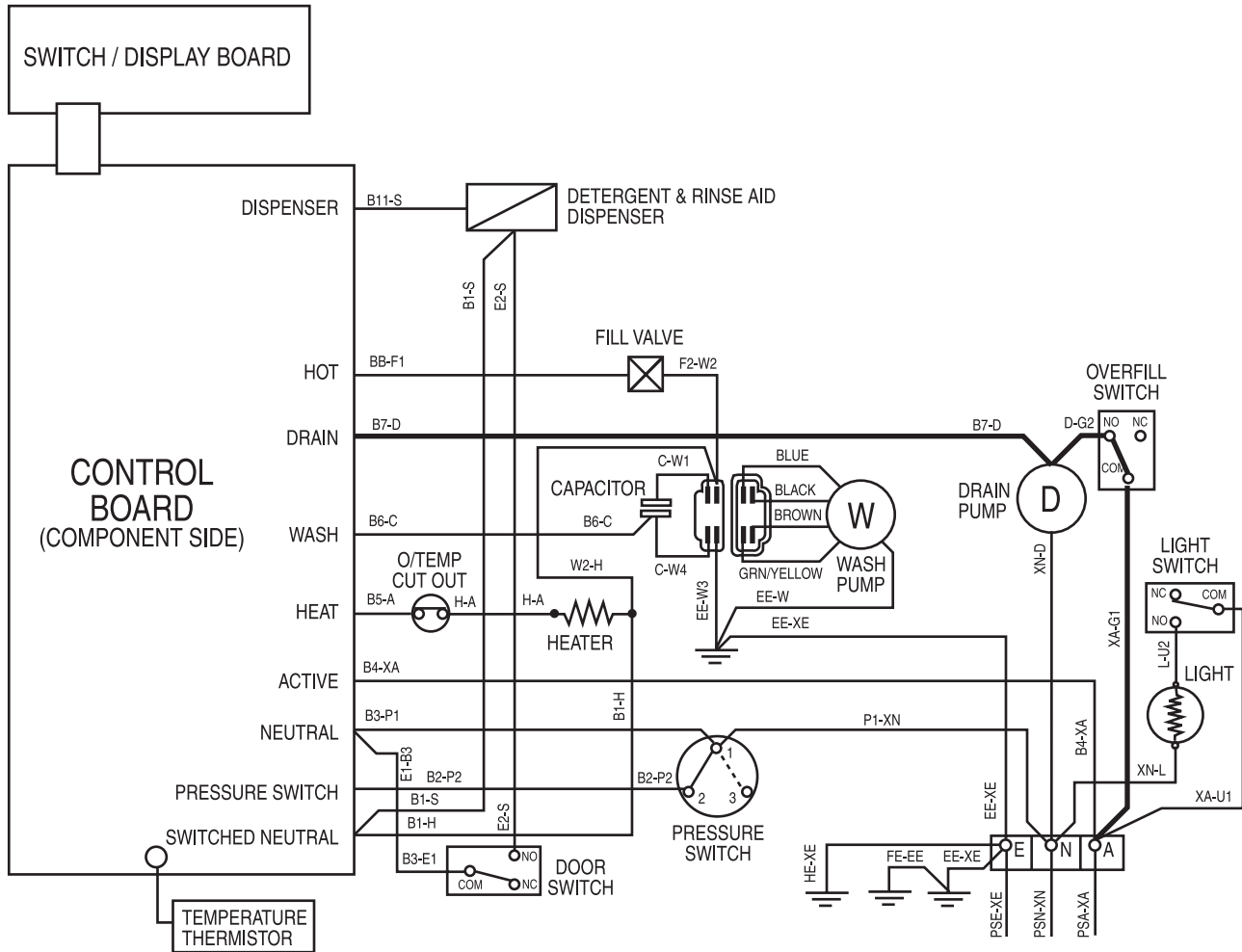
Three functions occur with the microswitch in the COM to NO continuity circuit and are listed accordingly:

- A circuit is connected to the drain pump through wire "G2-D". In this mode, the drain pump will run continuously.
- A further function is activated where the wire "B7-D" provides an active supply to the drain terminal of the electronic power control board (PCB). A monitor circuit within the electronic power control board (PCB) is activated when the drain terminal has an active potential. All outputs from the electronic power control board (PCB) are terminated and remain terminated until the active potential is turned off by emptying the overfill collector of water.
- The **Heated Dry** LED will rapidly flash.

Refer to the following circuit diagram which illustrates an overfill condition with the active circuit highlighted.

### Circuit Diagram: Overfill Condition with the active circuit highlighted

**Important. Check all wiring connections before reconnecting to supply.**



**NOTE:** Schematics and Wiring Diagrams label **L1** as **A** for **Active**, **N** for **Neutral**, and **Ground (GND)** as **E** for **Earth**.

#### 4.4.2 Overfill Mode - Drain Pump Not Operating

**Symptom:** Overfill mode indicated by *Heated Dry* LED rapidly flashing, all outputs terminated and the drain pump NOT operating.

The electronic power control board (PCB) continuously monitors the complete drain and drain pump circuit from the DRAIN terminal to the N terminal on the main terminal block. In effect, the "watch dog circuit" ensures if an open circuit is present, the *Heated Dry* LED will rapidly flash to indicate an overfill. All outputs from the electronic power control board (PCB) will be terminated.

The complete circuit with the drain pump field windings resistance of 35 ohms must provide continuity from the electronic power control board (PCB) terminal DRAIN to the neutral N terminal of the main terminal block.

Refer to the following "watch dog wiring circuit" for drain mode.

**The following malfunctions can cause the "Heated Dry" LED to rapidly flash and terminate all outputs of the electronic power control board (PCB).**

- DRAIN terminal not attached to the electronic power control board (PCB).
- Wire "B7-D" not attached to the drain pump terminal L.
- Open circuit of drain pump field windings - resistance 35

ohms  $\pm 10\%$  must be present.

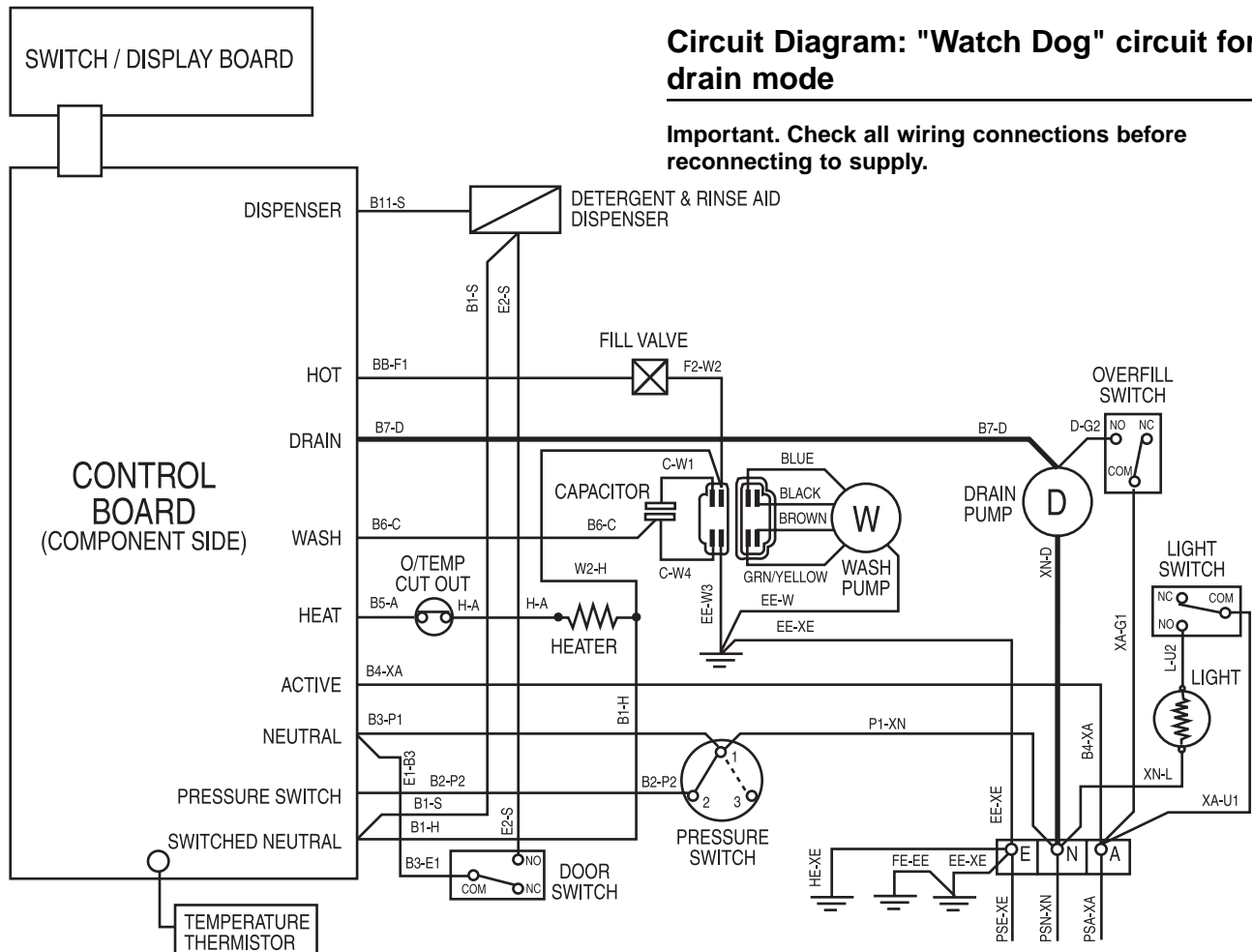
- Neutral wire "XN-D" not attached to the N terminal of the drain pump.
- Wire "XN-D" not connected to N terminal of the main terminal block.
- Any faulty Quick Connect terminals in the circuit.

**To test the continuity/resistance of the circuit, proceed as follows:**

- Remove wire Quick Connect terminal "XN-D" from N of the main terminal block.
- Remove wire "B7-D" Quick Connect terminal from the DRAIN terminal of the electronic power control board (PCB).
- Measure the resistance between wire terminals "B7-D" and "XN-D". Continuity must exist with a resistance of approximately 35 ohms.

**To test the continuity/resistance of the circuit, proceed as follows:**

- Remove wire Quick Connect terminal "XN-D" from N of the main terminal block.
- Remove wire "B7-D" Quick Connect terminal from DRAIN terminal of electronic power control board (PCB).
- Measure resistance between wire terminals "B7-D" and "XN-D". Continuity must exist with a resistance of approximately 35 ohms.



#### Circuit Diagram: "Watch Dog" circuit for drain mode

**Important. Check all wiring connections before reconnecting to supply.**

### 4.4.3 Pressure Switch and Door Microswitch circuit

The pressure switch and door microswitch is in a series wiring circuit between the neutral N terminal of the main terminal block and the electronic power control board (PCB) terminal SWITCHED NEUTRAL. The electronic power control board (PCB) has three inputs to the following terminals:

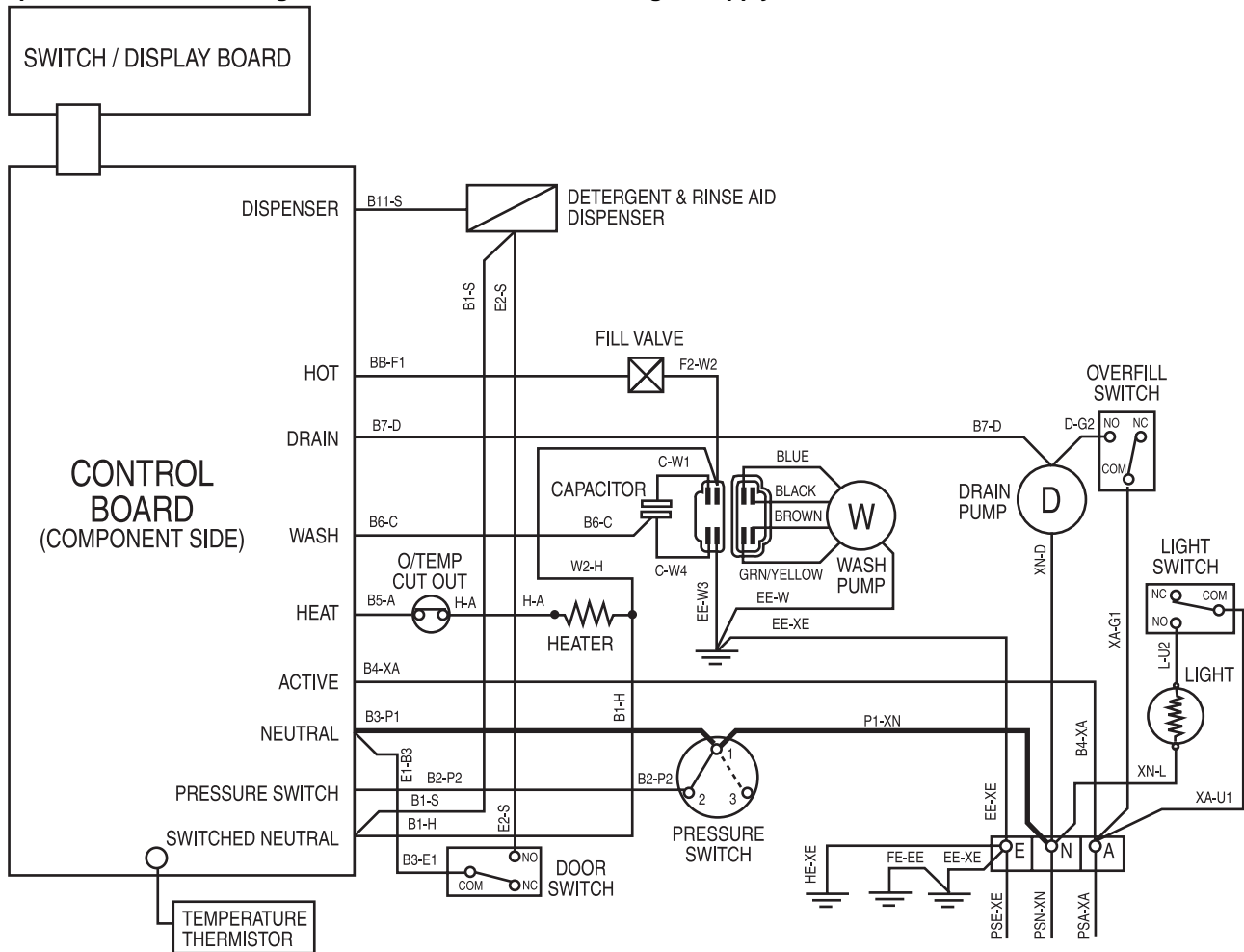
- **Neutral:** Is a direct neutral supply from the N terminal of the main terminal block. It also provides a direct neutral to contact 1 of the pressure switch. The primary function is to power the neutral side of the 120VAC transformer, which is continuously “on” to provide a secondary voltage of 12VAC for the control rail and push button operation.
- **Pressure Switch:** A circuit is provided to the electronic power control board (PCB) through the pressure switch contacts 1 to 2 (empty position). The function is to input to the controller, that the pressure switch is sensing an “empty” condition of the tub. It also provides an input to the power control board (PCB), where the pressure switch in the satisfied position (contact 1 to 3 open), senses water within the tub.
- **Switched Neutral:** The switched neutral circuit from the N

terminal of the main terminal block, is via the door microswitch, to the SWITCHED NEUTRAL terminal of the electronic power control board (PCB). If the main door is opened, all outputs (relay and triac outputs) will be disconnected.

**NOTE:** The door microswitch operates on a 120VAC circuit and carries the full operating current for relay and triac outputs.

### Circuit Diagram: Neutral

**Important. Check all wiring connections before reconnecting to supply.**

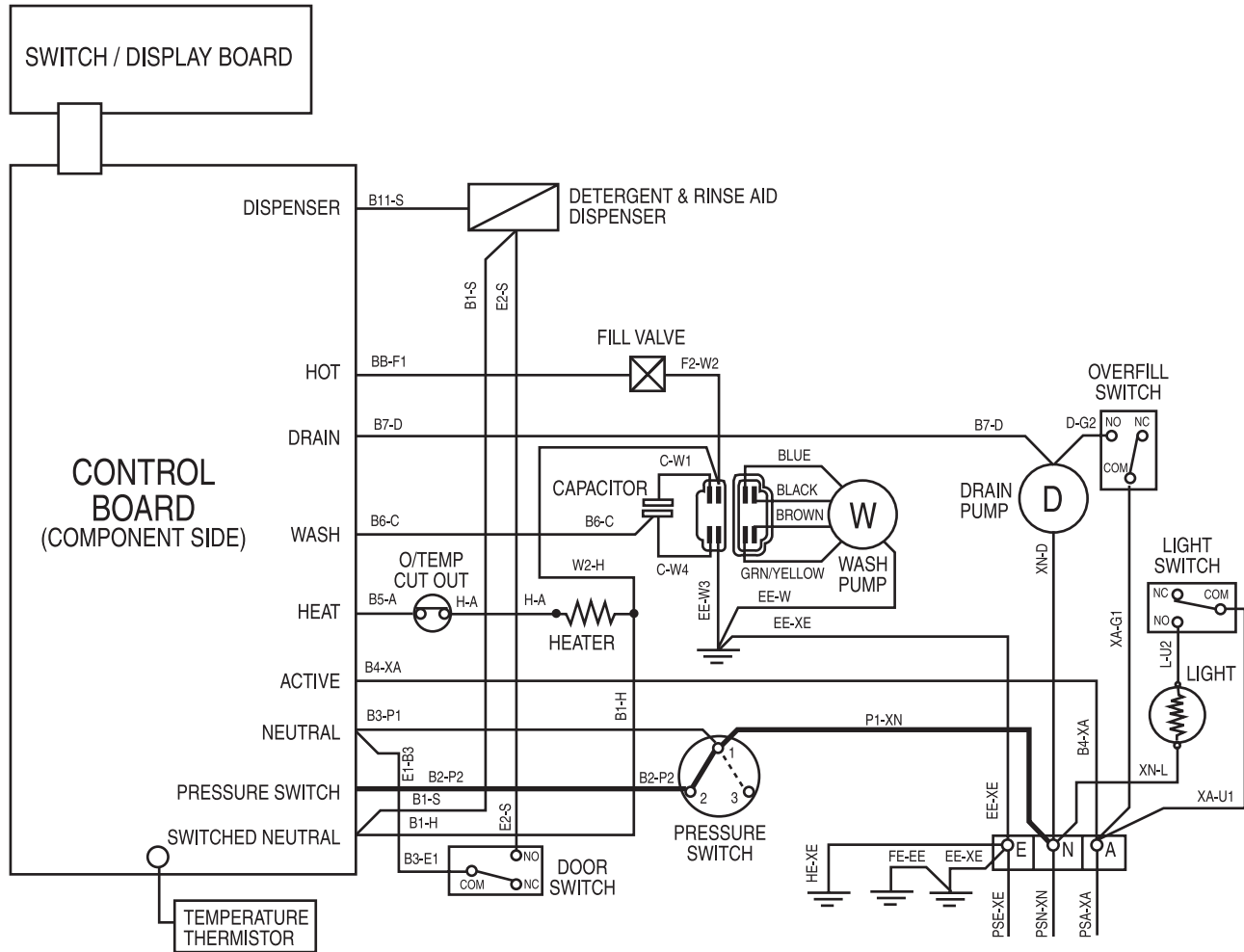


The following points are listed in relation to the pressure switch function and operation.

- The pressure switch has no control on the water level in the tub. The water level is **time fill** controlled.
- Contacts 1 to 2 provide a signal to the controller to terminate the drain mode after pump out.
- In the satisfied position, contacts 1 to 3 are open. No wire is connected to terminal 3 of the pressure switch. The controller senses the open circuit and advances the program.
- The actual “head” of water present from the bottom of the load collector to the “Y” connection of the pressure switch hoses actuates the pressure switch diaphragm. This results in a satisfied condition (i.e. contacts 1 to 3 reading an open circuit).

## Circuit Diagram: Pressure Switch

**Important. Check all wiring connections before reconnecting to supply.**



**NOTE:** Schematics and Wiring Diagrams label **L1** as **A** for **Active**, **N** for **Neutral**, and **Ground (GND)** as **E** for **Earth**.

The “Switched Neutral” circuit is designed to prevent operation of the following components, in the advent of the main door being left ajar to assist residual drying and/or a malfunction of the power control board (PCB) activating the relay/triac outputs:

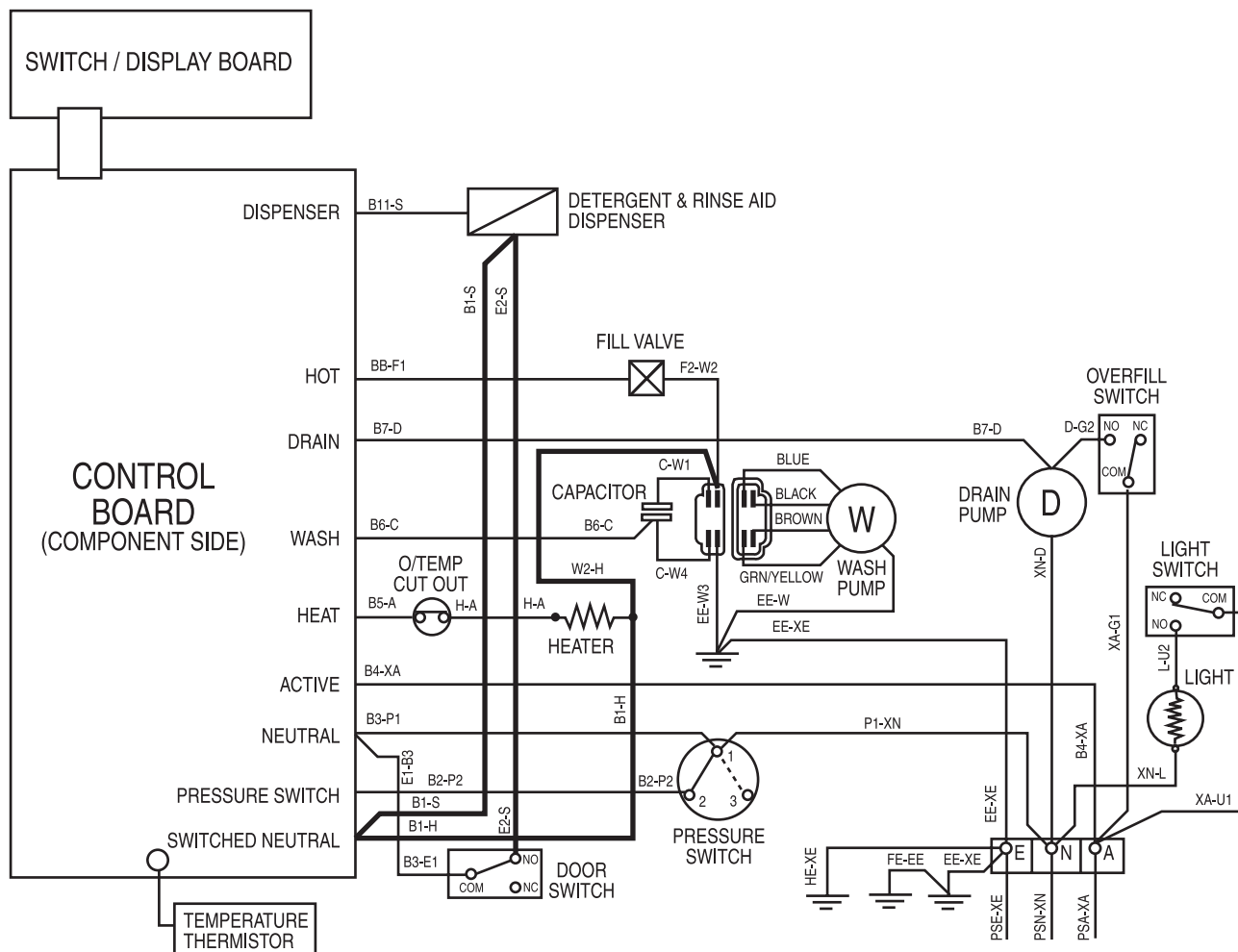
- Detergent and rinse aid dispenser
- Heating element
- Water inlet solenoid valve
- Wash motor

Operation of the door microswitch is therefore a 120VAC Neutral circuit, which in the COM to NC position, open the switched neutral circuit and hence prevents the operation of the above components.

NOTE: The NO terminal of the door microswitch is connected to a wire marked “E2-S”, which connects to the detergent and rinse aid dispenser terminal. You should remove the wire from the detergent and rinse aid dispenser if the control panel is removed to access the door microswitch and “Switched Neutral” circuits to prevent strain/damage to the “E2-S” wire.

### Circuit Diagram: Switched Neutral Circuit

Important. Check all wiring connections before reconnecting to supply.



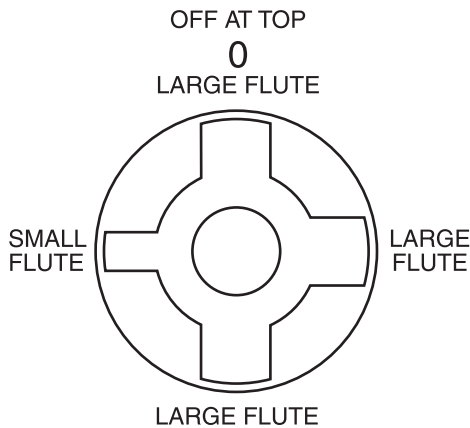
**NOTE:** Schematics and Wiring Diagrams label **L1** as **A** for **Active**, **N** for **Neutral**, and **Ground (GND)** as **E** for **Earth**.

## 4.5 GENERAL DIAGNOSIS - 5600 MODEL

To assist in diagnosis, each of the 60 timer control steps can be manually advanced. A timer access tool and timer access knob are required to access manual advance operation. They are available as a tool kit (access tool and knob) under the publication # 31-9022.

Prior to removing the timer control knob, advance the timer control knob pointer to the twelve o'clock position, which is the "OFF" position. The timer control knob can then be removed by grasping the knob and pulling towards you.

To reinstall the timer control knob, align the four flutes of the timer control shaft with the four slots in the timer control knob and push the timer control knob onto the shaft securely.



Timer access tool



**NOTE:** The nylon shaft of the timer control has three large flutes positioned at twelve o'clock, three o'clock and six o'clock. A smaller fourth flute is positioned at nine o'clock. Identify the four slots in the timer control knob and index accordingly to assist reinstallation to the timer control shaft.

Fit the timer access knob to the timer control shaft and insert the timer access tool through the hole in the center of the timer access knob. While pushing the timer access shaft in towards the timer control, rotate the timer access knob until the timer access shaft pushes in 1/2" further towards the timer control as shown.

Each step of the timer control can be manually selected so that the specific circuits are activated for diagnosis of the circuit or associated components. When the diagnosis is complete, remove the timer access shaft, rotate the timer access knob to 12 o'clock, remove the timer access knob

and replace with the timer control knob.

### 4.5.1 Operating Sequence

To start a program, the timer control knob is turned to the start of a selected wash program. If the timer control knob is turned past the selected cycle, then turned an additional full turn to the start position of the selected cycle, the escapement mechanism will advance the timer to the start of the cycle.

**NOTE:** The INTERNAL RATCHET/GEARING will be audible, however a pause of approximately one minute will occur before any electrical components operate.

Ensure the **Off/Normal/Normal+Heat/Boost/Boost+Heat** is set in one of the four "ON" selections. The control is the main active supply into the dishwasher.

At the start of any program, the **drain mode** is energized to ensure the tub is empty, prior to energizing the fill circuit. The dishwasher is equipped with a fill time system, hence the tub must be empty prior to a timed fill. A minimum **drain mode** period of forty seconds will occur prior to a **fill mode** on any program selected.

Reference to the electromechanical sequence chart (Section 6.1), determines the cam functions of the 60 steps/increments of the timer control. The wash temperature (°F) is detailed in the right hand column with wash temperatures listed for "Normal" and "Boost".

It is not necessary to document the complete 60 steps/increments since some of the functions are repeated in most programs.

The complete "Rinse" program, consisting of steps/increments No. 3 to No. 7 will be covered in full detail in the following text. A selection of the key steps/increments will also be detailed to enable a technician to diagnose an electrical or mechanical fault in conjunction with the following wiring diagrams which have the active circuits highlighted in bold lines.

The following data, applicable to the "Rinse" and other key steps/increments (e.g. "Circulate & Heat"), provides a means of checking a circuit for continuity by establishing if the electric supply is available from one component to the next component in the circuit.

E.g. if the pressure switch has electrical power available at No. 1 terminal and not present at No. 2 terminal when it is programmed to be present, this indicates either a faulty pressure switch, or the pressure switch is sensing a satisfied condition (i.e. continuity between terminal No. 1 and No. 3).

By following the components/circuit listings from one component to the next in the line component diagrams, you will identify the fault within the circuit. Each step has the applicable main circuits highlighted on the wiring diagram, to enable each main circuit to be traced from the main terminal to the relevant component. The timer sketch on the right hand side of the circuit diagram shows which contacts are energized for the particular step.

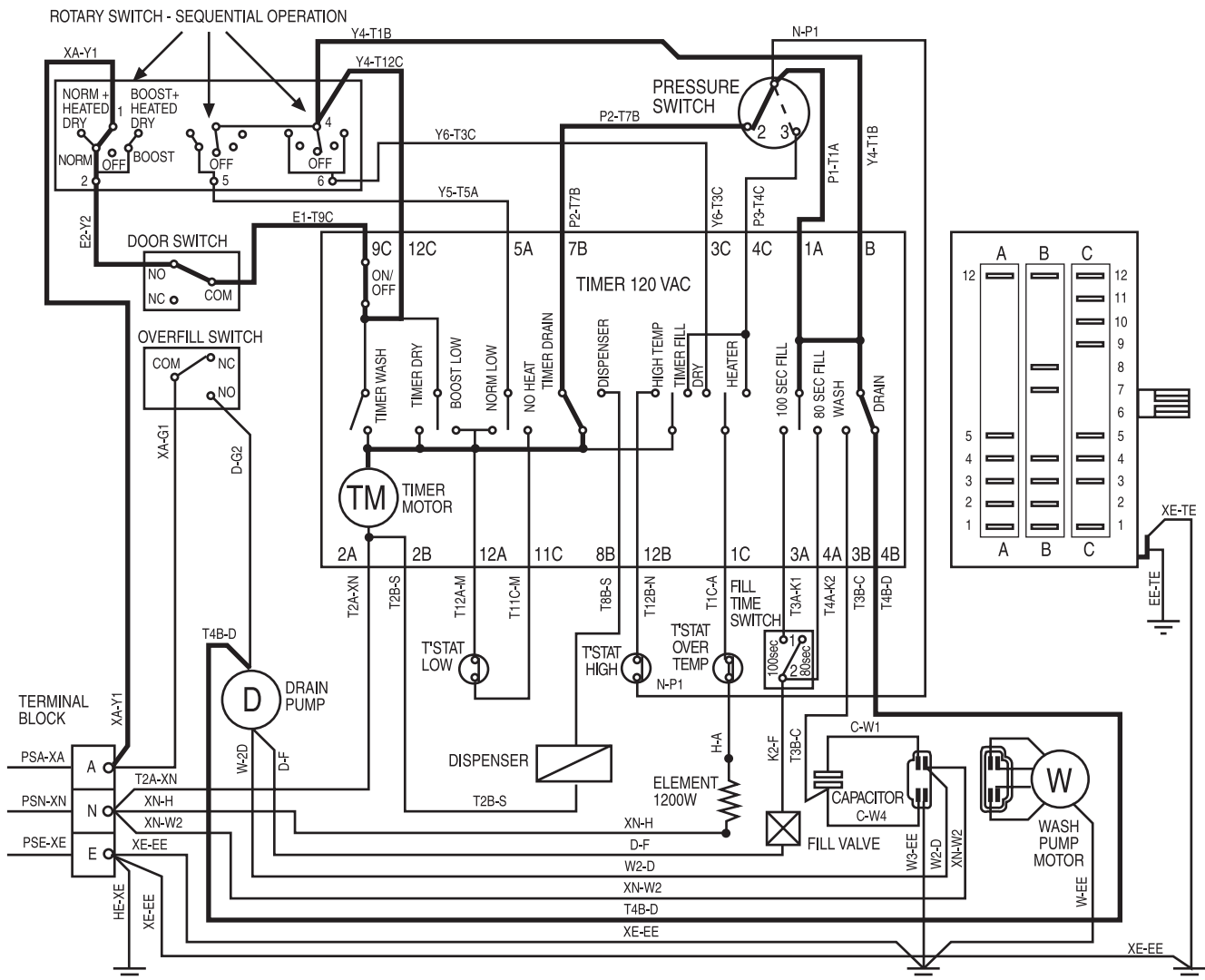
## 4.5.2 Rinse Program

The rinse program begins at step 3 and finishes at step 7, as shown in section 6.4 "Sequence Chart". The full rinse program is detailed as follows:

### 4.5.2.1 PRE-DRAIN MODE (step 3):

A pre-drain will operate as a mandatory function at the start of a program prior to the timed fill of 80 seconds (default) or a selected time fill of 100 seconds as per the fill time switch. The pre-drain mode has two main control circuits illustrated in the wiring diagram below:

### Circuit Diagram: Pre-Drain Mode 40 Seconds (Step 3)



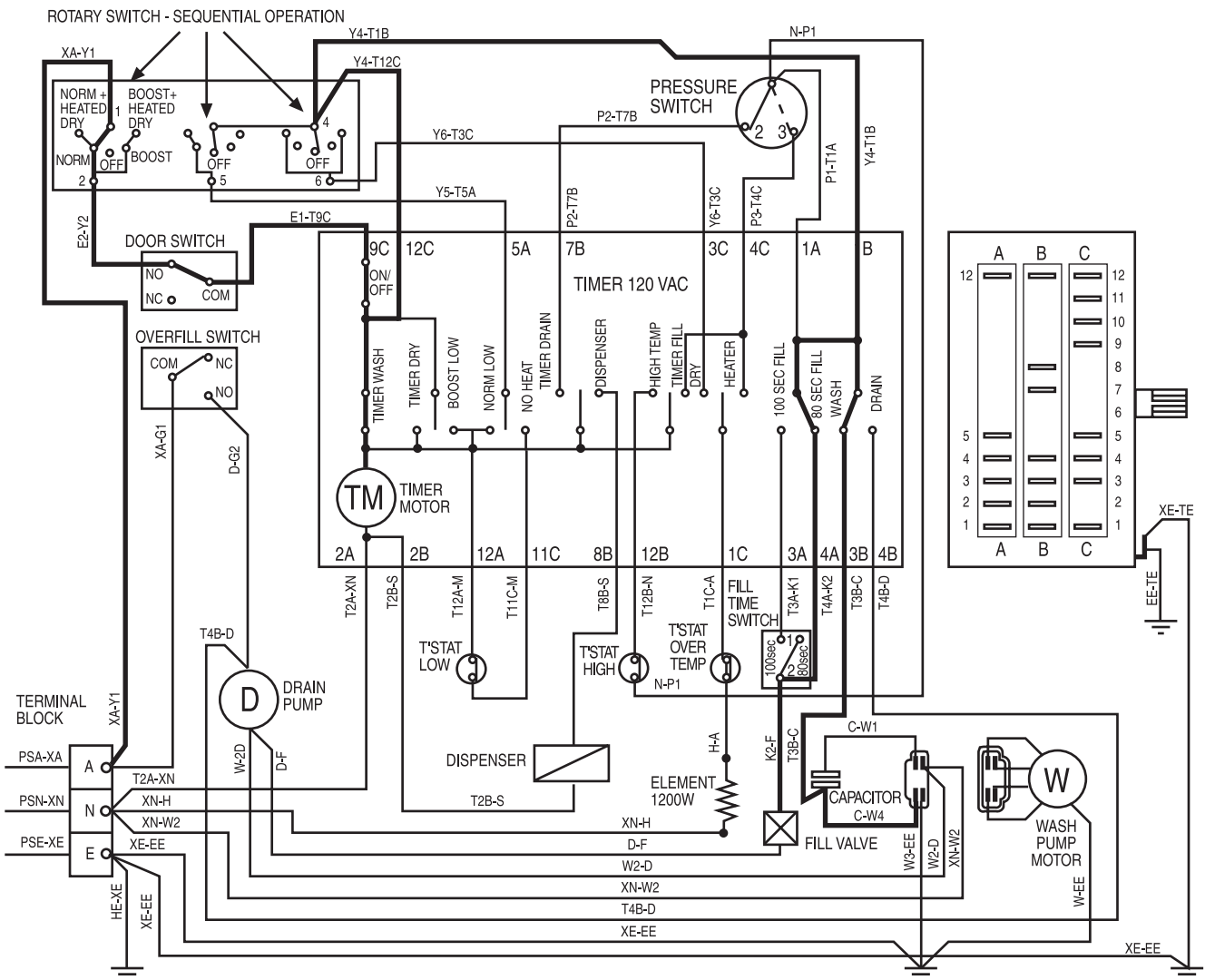
**NOTE:** Schematics and Wiring Diagrams label **L1** as **A** for **Active**, **N** for **Neutral**, and **Ground (GND)** as **E** for **Earth**.

#### 4.5.2.2 FILL & CIRCULATE MODE - 80 SECONDS DEFAULT FILL TIME (step 4):

Upon the start of a program, the dishwasher is under control of a fill time step within the timer control. A default time of 80 seconds is factory set. Selection of an additional 20 seconds is possible by engaging the fill time switch, which is located behind the electrical access panel (refer to section 5.1). With the fill time switch engaged, the total fill time is 100 seconds. The timer control will then advance the initial 80 second step to the additional second step of 20 seconds.

The Fill & Circulate mode (80 seconds) has three main control circuits illustrated in the wiring diagram.

### Circuit Diagram: Fill and Circulate 80 Seconds Default Fill Time (Step 4)



**NOTE:** Schematics and Wiring Diagrams label **L1** as **A** for **Active**, **N** for **Neutral**, and **Ground (GND)** as **E** for **Earth**.





**Timer Motor Circuit:** The timer motor circuit for the 20 second fill time (step 5) is controlled by the pressure switch, which is in a series circuit with the timer motor. This feature is designed to not allow the timer motor to advance to the “Circulate & Heat” mode without the pressure switch being in a satisfied condition (continuity between terminals 1 and 3), indicating that the pressure switch is sensing a water level present within the tub. Consequently, operation of the heating element without water in the tub is prevented by this feature.

If a program is selected and the fill valve has not allowed a water fill for any of the following reasons:

- Water gate/ball valve not turned on.
- Water inlet hose filter blocked with rust/residue.
- Faulty water inlet solenoid valve.
- Faulty/blocked pressure switch or pressure switch hose.

...then the dishwasher will operate according to the following steps:

- Cycle selected.
- The drain mode will operate.
- The timer motor will advance via the timer wash cam.
- The 80 second “fill & circulate” step is selected.
- The timer motor will advance via the timer wash cam.
- The wash motor will operate via the “**wash**” cam.
- The 20 second “fill” step is selected.
- The timer motor circuit is open through the pressure switch.
- The dishwasher timer knob will indicate a mid cycle position and will not advance.
- Complaint indicated as - “No water - stopped mid cycle” knob will remain in this step without the dishwasher operating.

**Corrective Action:** Correct the problem with the water supply and reset the timer control knob to the start of the program.

**NOTE:** If the pressure switch contacts are made, the timer will advance to the following step.



#### 4.5.2.5 DRAIN MODE 40 SECONDS (step 7):

The drain mode follows the 400 second wash program and will empty the wash water from the dishwasher.

**NOTE:** The timer motor circuit is in series with the pressure switch and the timer motor will not advance the control until the pressure switch senses the tub is empty.

The 40 second drain mode has two main control circuits:

**Timer Motor Circuit (step 7):** The timer motor circuit utilizes the pressure switch in the empty mode (continuity between No. 1 and No. 2 terminals) to advance the timer control through the 40 second drain mode.

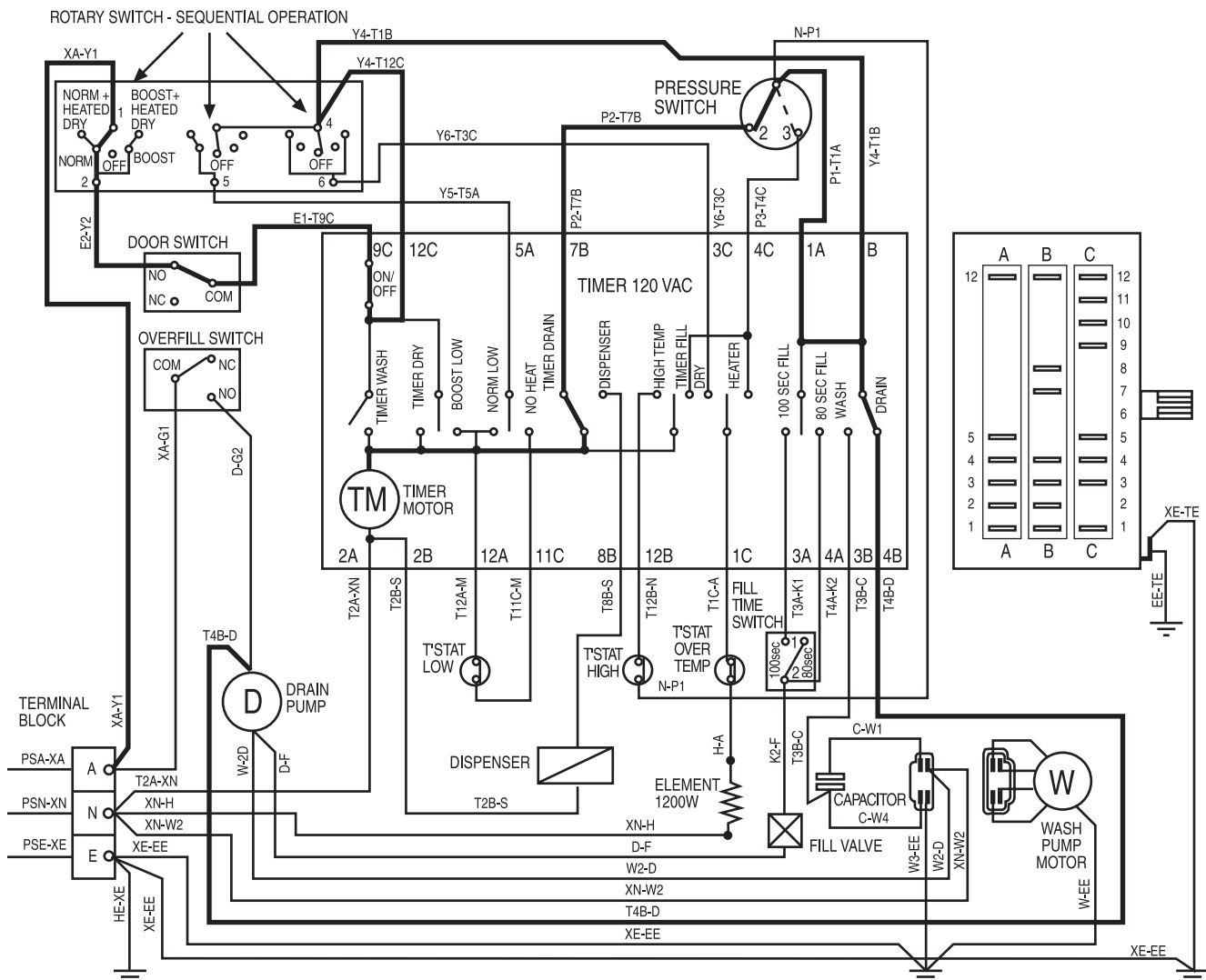
If any of the following conditions occur...

- Drain hose blocked at sink
- Drain hose kinked
- Drain pump won't pump (motor runs - impeller damaged)

... and the pressure switch has continuity between No. 1 and No. 3 terminals, sensing that the tub has water present, then the drain pump will run continuously and the timer motor will not advance to complete the **"Rinse"** program.

Complaint indicated as - "Runs continuously - will not complete cycle and water in tub".

### Circuit Diagram: Drain Mode 40 Seconds Fill Time (Step 7)



**Drain Pump Circuit (step 7):** The drain pump circuit is a direct circuit from the ON/OFF function within the timer control, to the "DRAIN" contact, also within the timer control. The drain pump circuit is dependant upon the completion of the "Rinse" program.

- The pressure switch must reset to empty (continuity between No. 1 - No. 2) for the timer motor to advance the drain cam for 40 seconds pump out time and completion of the "Rinse".
- The drain pump itself must also be efficient/operative to enable a quantity of water to be pumped from the tub, in order for the pressure switch to sense the reduction in water level and reset to the No. 1 to No. 2 continuity conditions.
- Following the 40 second drain pump operation, the timer motor advances the timer control to the "end of cycle" position, wherein the "Rinse" program is completed.

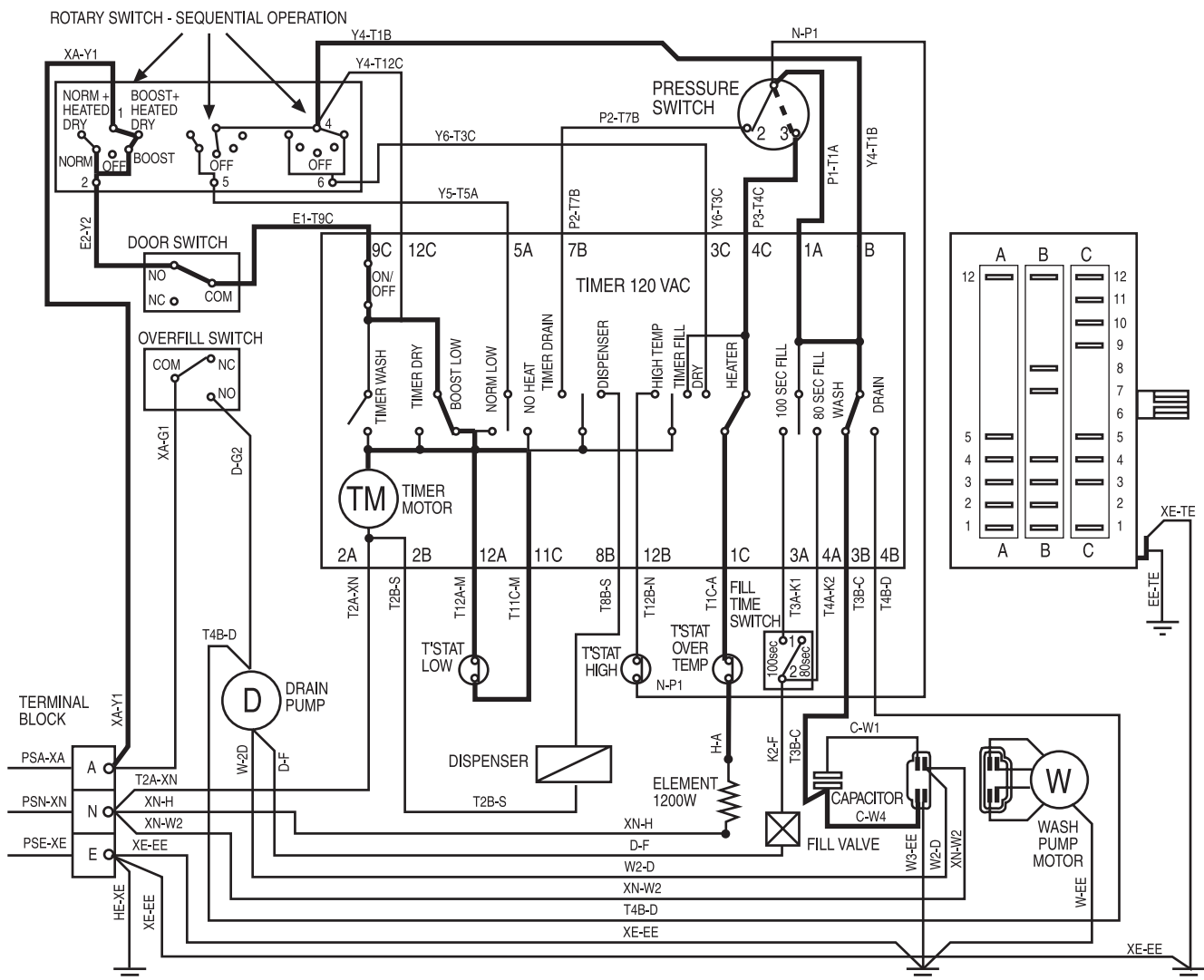
### 4.5.3 Super Wash Program

The Super Wash program consists of a total of 32 steps of the timer control. The initial step starts at step 10 as a drain mode which is identical to step 3 for the "Rinse" program. Steps 11 and 12 "Fill & Circulate" are identical to steps 4 and 5 for the "Rinse" program.

#### 4.5.3.1 CIRCULATE and HEAT T+20 (step 13):

Step 13 is a heating function, where the heater circuit is completed through the pressure switch in a satisfied mode, (continuity between No. 1 and No. 3 terminals).

### Circuit Diagram: Circulate and Heat t+20 (Step 13)



The wash motor circuit is a direct circuit from the ON/OFF function within the timer control. The timer motor will not advance until the normal thermostat (red dot) closes with a temperature rise. With the thermostat closed and continuity between both terminals, the timer will advance for 20 seconds to complete the step.

The feature of **“Normal”** on the rotary power select switch can be selected so that **“No Heat”** is applicable for step 13 and the timer motor will advance direct from the rotary switch. As both **“Normal”** and **“Boost”** can be selected through the rotary power select switch, four conditions will be present:

- **“Super Wash”** selected with **“Boost”** has a heating mode and utilizes the normal temperature thermostat.
- **“Super Wash”** selected with **“Normal”** heats only for 20 seconds.
- **“Super Wash”** selected with **“Boost + Heated Dry”** has a heating mode and utilizes the normal temperature thermostat.
- **“Super Wash”** selected with **“Normal + Heated Dry”** heats only for 20 seconds.

The Wiring Diagram on the next page illustrates the selection of **“Super Wash”** with the **“Boost + Heated Dry”** option.

Five Cam/contacts within the timer are activated as follows:

- **“Boost Low”**: Thermostat low circuit for timer motor.
- **“No Heat”**: Not electrically a function.
- **“High Temp”**: Not electrically a function.
- **“Heater”**: To raise water temperature for the normal thermostat.
- **“Wash”**: To operate the wash pump.

**Heating Circuit “Super” selected with “Boost + Heated Dry” (step 13):** The heating circuit is completed through the pressure switch. In effect, the pressure switch is in a series circuit with the heating element, to ensure the tub is filled with water to the operating level. The pressure switch must be in a satisfied condition with continuity between No. 1 and No. 3 terminals before the heating element will operate. The low temperature thermostat (normal) is shown in a satisfied condition when it allows the thermostat timer motor to advance for 20 seconds. Within Step No. 13, if either the thermostat or pressure switch are not satisfied, the dishwasher will remain on this step in the circulate mode.

#### **4.5.3.2 CIRCULATE & HEAT T+20 (step 22) SELECTED WITH “Boost + Heated Dry”:**

If the **“Normal”** program is selected, the timer control will provide the following steps:

- Step 15 - Drain 40 seconds
- Step 16 - Fill & circulate 80 seconds
- Step 17 - Fill 20 seconds
- Step 18 - Circulate 400 seconds
- Step 19 - Drain 40 seconds & start of the **“Light Wash”** program

As shown on the following wiring diagram, if a **“Normal Wash”** program is selected, the first five steps provide drain, fill & circulate, circulate and drain modes. Hence, if either **“Normal Wash”** or **“Light Wash”** program is selected, the actual “Circulate & Heat” mode is provided within the **“Light Wash”** program as 126°F for **“Normal”** and 142°F for **“Boost”** option.

Step 22, “Circulate & Heat Mode T+20 Seconds” will therefore be covered as the heating mode, providing both a **“Normal”** & **“Boost”** circuit diagram. The “Circulate & Heat Mode T+20 Seconds” has four main circuits, where the **“Boost”** selection utilizes three main circuits. The following circuit diagram illustrates the complete circuits for the **“Boost”** heating mode.

**Heating Circuit “Normal Program” selected with “Boost option” 142°F (step 22):** The heating circuit is controlled by the pressure switch and is identical to step 13 “Circulate & Heat” section.

**Wash Motor Circuit “Normal” Program selected with “Boost” option 142°F (step 22):** The wash motor circuit operates continuously from step 16 to step 18 (“Normal Program”) and step 20 to step 24 (“Light Program”). The circuit is identical to the step 13 section.

**Timer Motor Circuit “Normal Program” selected with “Boost” option 142°F (step 22) - closed circuit:** The timer motor circuit as shown in the previous circuit diagram is operative. During heating mode, the high thermostat (black dot) is a normally open circuit.

**Heating Circuit “Normal” selected with “Boost” option 142°F (step 22):** The heating circuit is controlled by the pressure switch and is identical to step 13 “Circulate & Heat”.



#### 4.5.4 Overfill Mode

An overfill condition can occur when the water inlet solenoid valve has malfunctioned and the water flow rate has increased to a rate that will cause an overfill condition to exist within the tub. The excess water will leave the tub through the overfill spillway and the initial 1.76 fluid oz. of water will enter the overfill collector.

**Operation of the drain pump will result on a continuous basis, due to the water in the overfill collector operating the microswitch by the float.** The drain pump is rated at a capacity of 3.96 - 5.28 US gallons per minute @ 39 3/8" head, therefore the overfill condition within the tub of approximately 2.91 - 3.17 US gallons will be reduced from the overfill spillway level in several seconds.

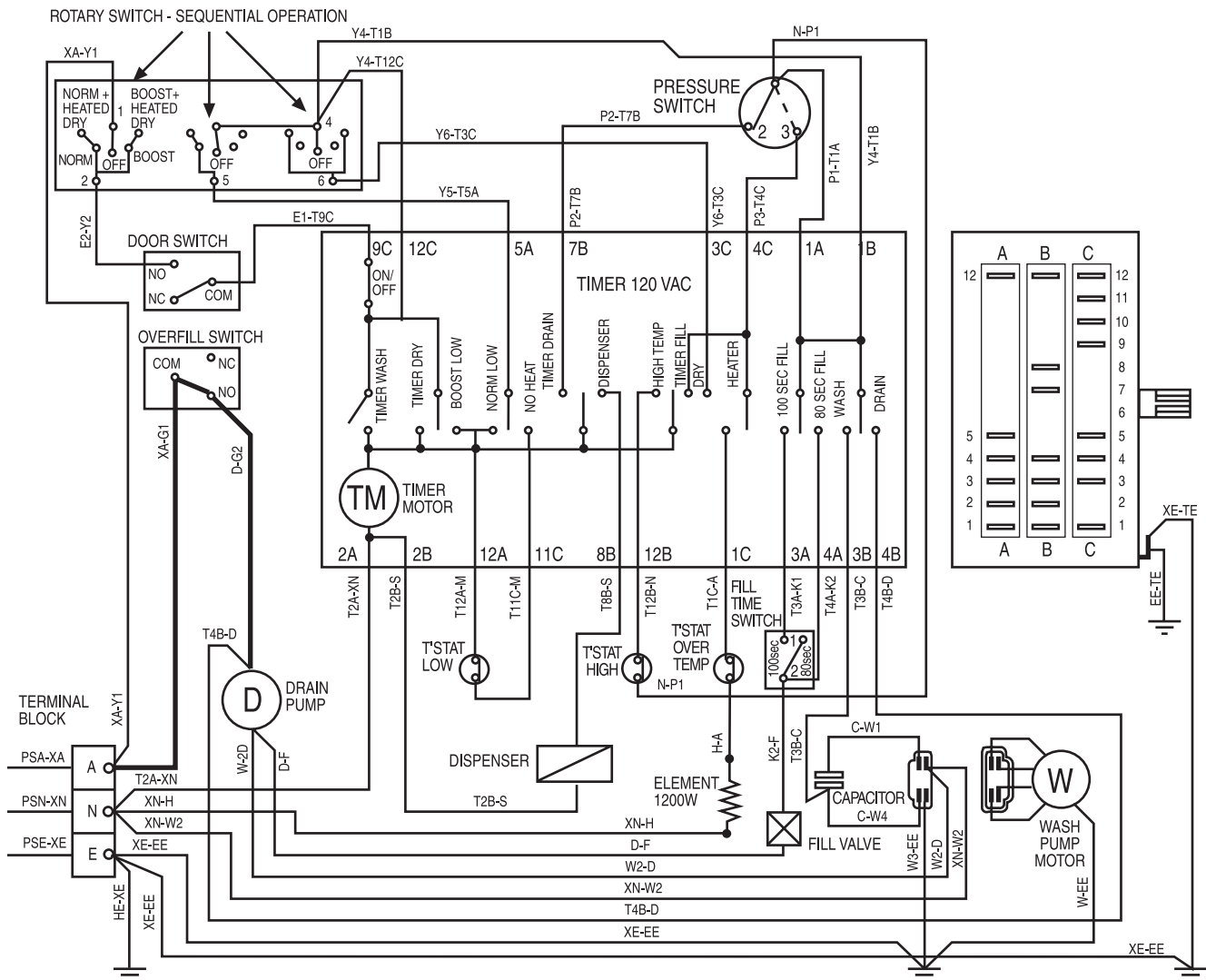
**NOTE:** The overfill collector must be emptied by a service technician when repairing an overfill mode/condition.

The operation of the circuit is as follows:

- Main Terminal - A
- Overfill Switch - COM to NO
- Drain Pump - L

The following wiring diagram illustrates the circuit for an "overfill mode".

#### Circuit Diagram: Overfill Mode





#### 4.5.5 Fill Time Switch

---

A fill time of 80 seconds is factory set using the fill time switch. For low pressure gravity fed hot water systems or any other low water pressure installation, the fill time switch should be engaged to increase the fill time. To check the fill time, run the dishwasher on the "Rinse + Hold" program three times and check the water level. If the water level is not between the "**MAX**" & "**MIN**" marks on the lower spray arm support as shown in section 4.3, then the fill time switch will need to be engaged. Refer to section 5.1 to access the fill time switch.

## 5.0 SERVICE PROCEDURES

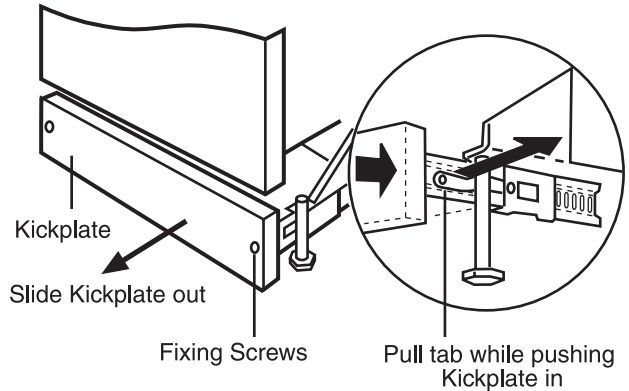
### 5.1 GENERAL ACCESS

The dishwashers have an adjustable, removable kick panel fitted in front of an electrical access panel. These panels will need to be removed to access under sump components such as the thermostats, drain pump, overflow device, water inlet solenoid valve, overflow spillway, pressure switch, wash motor capacitor, fill time switch, heating element, wash motor, sump, etc..

The front door panel will require removal to gain access to the control panel and internal components such as PCB, timer, door microswitch, door latching mechanism, wiring connections, detergent and rinse aid dispenser, etc..

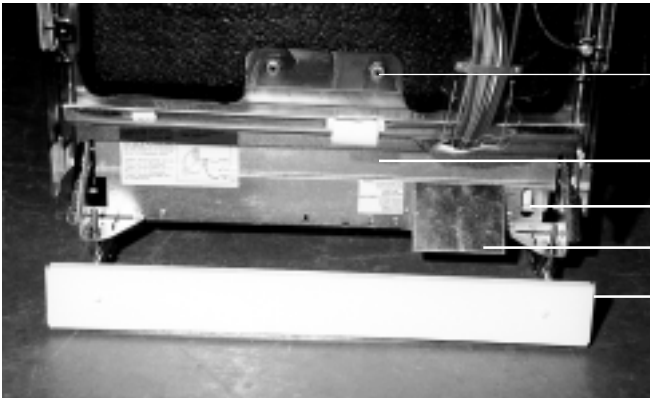
#### 5.1.1 Kick panel removal

Simply slide the adjustable kick panel forward to remove. Reinstallation of the adjustable kick panel to the dishwasher may require the kick panel to be disassembled if access to the tabs is restricted. To disassemble, remove the fixing screws. The tabs need to be pulled out while pushing the kick panel in to allow both adjustable arms to be engaged with the ratchet pawls.



#### 5.1.2 Electrical Access Panel Removal

##### 5.1.2.1 Remove the Door Front Panel. (Refer to 5.2.2 or 5.2.3)



Two Lower Front panel retaining screws.

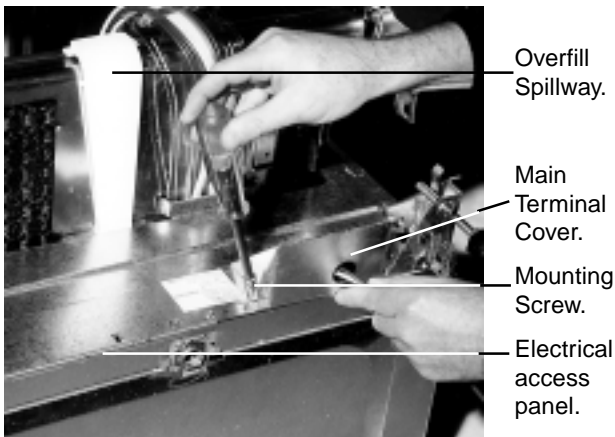
Electrical access panel.

Fill Time Switch (Model 5600).

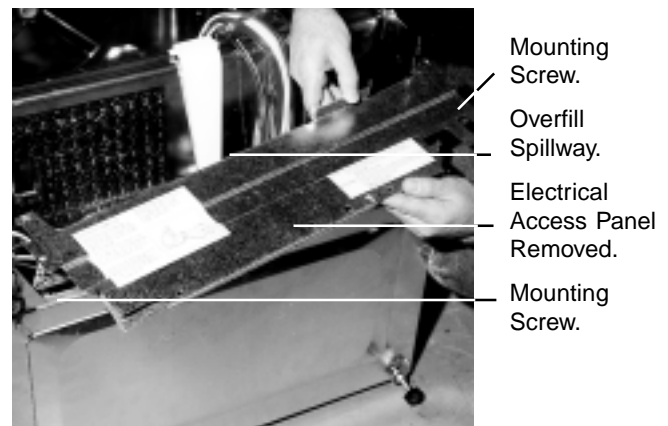
Main Terminal Cover.

Adjustable kick panel.

##### 5.1.2.2 Remove the Main Terminal Cover.



##### 5.1.2.3 Remove the electrical access panel.



## 5.2 PROCEDURES

### 5.2.1 Door Latch



**CAUTION.** Switch off electrical power supply

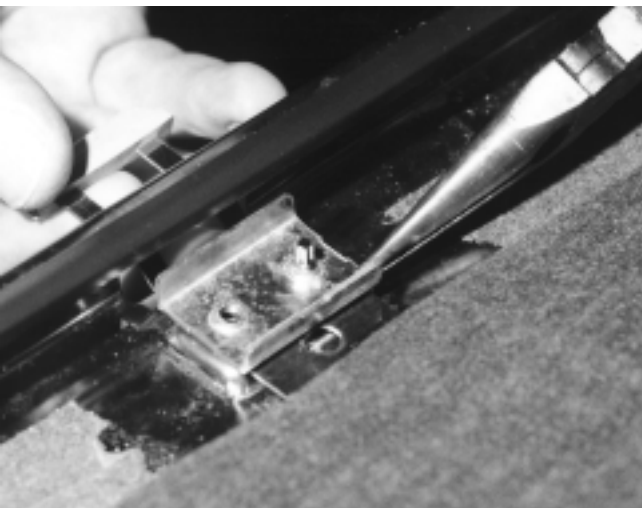


**5.2.1.1 To remove the door latch**, simply release and remove both stainless steel Phillips screws, remove the retainer clamp plate and slide the door latch through the rectangular cut out in the front flange of the tub and lift clear.

**NOTE:** There is a spacer plate between the door latch and the stainless steel tub.

**5.2.1.2** Reassemble the dishwasher in reverse order, ensuring that the spacer plate is aligned and reinstalled.

**5.2.1.3** Operate and test the dishwasher before leaving.



Door latch loose retainer plate held in position by pointed nose pliers.

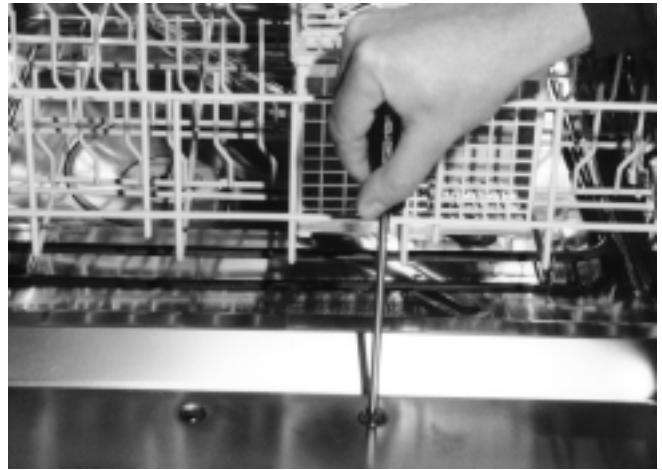
### 5.2.2 Door Panel for 5600 and 5700 Models



**CAUTION.** Switch off electrical power supply

**Note.** The door panel must be removed to improve access to the control panel.

**5.2.2.1** Open the door to the horizontal position and remove the two stainless steel Phillips screws located at the bottom of the stainless steel door liner. Each stainless steel screw has a neoprene "O" ring in a groove on the underside face of the screw head. The neoprene "O" ring should be replaced if the door panel is removed and reinstalled to prevent water leakage past the screw heads.



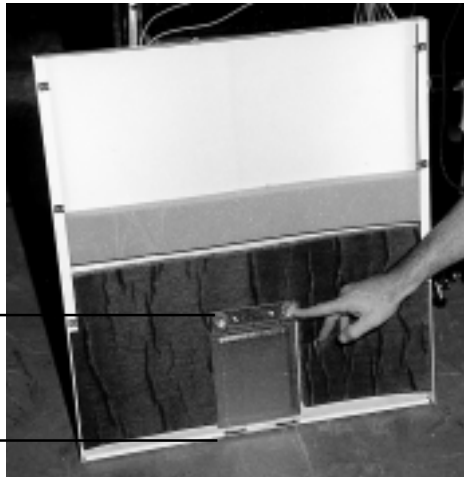
Remove 2 Screws

**5.2.2.2** Remove the three Phillips head stainless steel screws fitted to each side of the door to enable the door panel to be withdrawn from the stainless steel door liner. While removing the six stainless steel screws, ensure the door panel is supported to prevent paint damage. It is suggested to leave one central screw loose and in place for support while removing the three stainless steel screws on the other side of the door.

**5.2.2.3** To remove the door panel, support the side with all three screws removed with your knee under the door panel while holding the door panel and stainless steel door liner together on the opposite side with your free hand and remove the remaining central screw.

**5.2.2.4** Carefully lift the door panel clear from the dishwasher ensuring the lower section of the door panel clears the dishwasher and is not damaged.

**5.2.2.5** The following photo shows the internal cross brace of the door panel. There are two stainless steel Phillips screws which fit through two holes in the stainless steel door liner and engage into the cross brace. The cross brace is fixed to the door panel by two Phillips headed screws on the lower return edge of the door panel. It is recommended not to remove the cross brace for removal / reinstallation of the door panel for general service procedures. For replacement of a door panel, the two Phillips screws which hold the cross brace to the door panel are to be removed and the cross brace transposed onto the replacement door panel.



Internal cross  
brace

Two screws on  
lower return  
edge of door  
panel

**5.2.2.6** Reinstalling the door panel to the dishwasher requires the three Phillips headed stainless steel screws fitted to each side of the door to be replaced in reverse order as section 5.2.2.2

**5.2.2.7** The cross brace may not seat against the internal surface of the stainless steel door liner, hence the two stainless steel Phillips headed screws will not reach the surface of the cross brace and cannot engage with the threads on the cross brace. If this occurs, bend the cross brace slightly away from the door panel. This should supply enough tension for the cross brace to press against the door liner while the screws are being reinstalled.

**5.2.2.8** Make certain the “O rings” are in place on the cross brace screws and reinstall.

**5.2.2.9** Operate and test the dishwasher before leaving.

### 5.2.3 Door Panel Assembly - 5900 Models



**CAUTION.** Switch off electrical power supply.

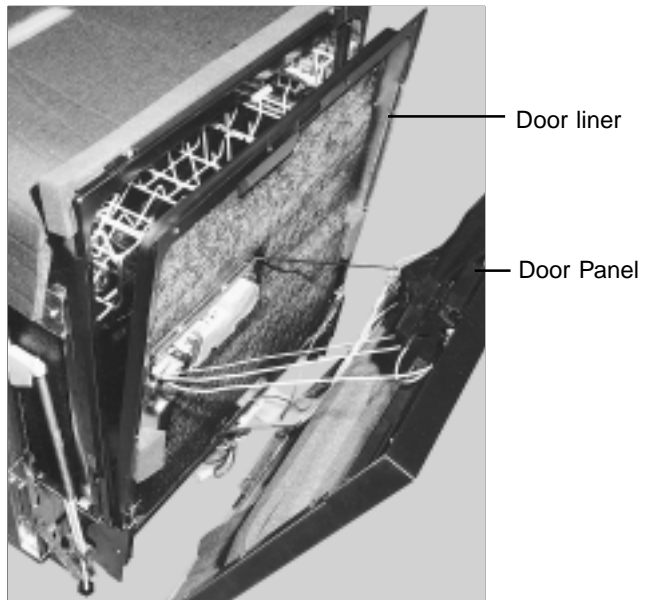
**NOTE:** The 5900 Model does not have a separate control panel. All controls are included in the door panel.

**5.2.3.1** Refer to section 5.2.2.1 for removal of the 2 stainless steel Phillips head screws located at the bottom of the stainless steel door liner.

**5.2.3.2** Remove the 4 Phillips Head countersunk stainless steel screws located across the top of the stainless steel door liner.

**NOTE:** The 4 screws have a “two start” or dual thread configuration. One thread is of a low profile while the other is of a high profile in order to prevent stripping of the carrier panel fixing points.

**5.2.3.3** Remove the three Phillips head stainless steel screws fitted to each side of the door to enable the door panel to be withdrawn from the stainless steel door liner. While removing the six stainless steel screws, ensure the door panel is supported. It is suggested to leave one central screw loose and in place for support while removing the three stainless steel screws on each side of the door.



**5.2.3.4** Lift the door panel clear. The control components will remain on the door panel but give access to both internal and external components.

**NOTE:** The wiring harness will restrict movement of the door panel.

**5.2.3.5** Reassemble the dishwasher in reverse order.

**5.2.3.5** Operate and test the dishwasher before leaving.

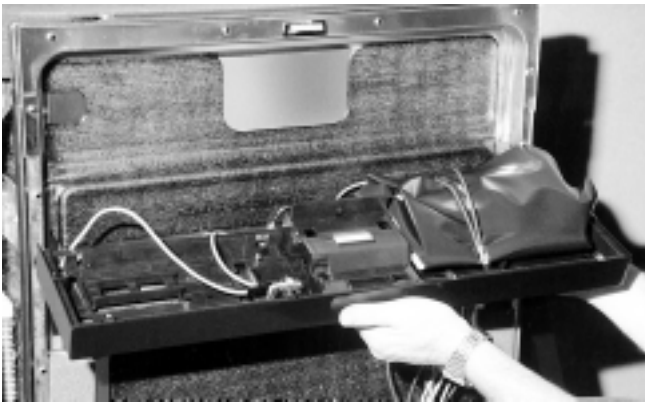
## 5.2.4 Control Panel Assembly - 5700 Model



**CAUTION. Switch off electrical power supply**

**5.2.4.1** Remove the six Phillips head countersunk stainless steel screws located at the top section of the stainless steel door liner. Four screws are located on the top of the liner flange and one screw on each side, 3 1/8" from the top corner.

**NOTE:** The six stainless steel screws which hold the control panel have a "two start" or dual thread configuration. One thread is of a low profile, while the other is of a high profile in order to prevent stripping of the control panel. The 3/4" stainless steel countersunk Phillips head screws must be used for the control panel retention.



**5.2.4.2** Lift the complete control panel assembly clear from the stainless steel door liner to access both internal and external components.

**NOTE:** The wiring harness is held within the main door and will restrict general service to the control panel and components. The door panel must be removed to improve serviceability to the control panel. Refer to section 5.2.2 to remove the door panel.

**5.2.4.3** Reassemble the dishwasher in reverse order.

**5.2.4.4** Operate and test the dishwasher before leaving.

## 5.2.5 Power Control Board (PCB) - Electronic Models 5700 & 5900

**5.2.5.1** Remove relevant door and control panels.

For doors, refer to section 5.2.2 for 5700 model and section 5.2.3 for 5900 model.

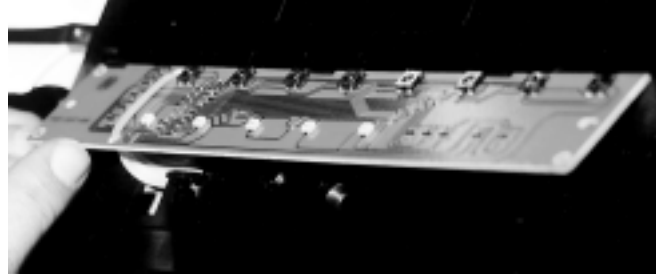
For control panels refer to section 5.2.4

Carrier panels and dress panels refer section 5.2.6

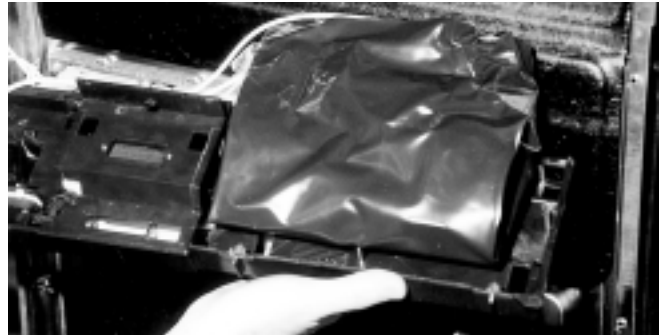
**NOTE:** Carrier and dress panel removal and reinstallation are similar for both electronic models.

**5.2.5.2** The power control board (PCB) has a switch/display

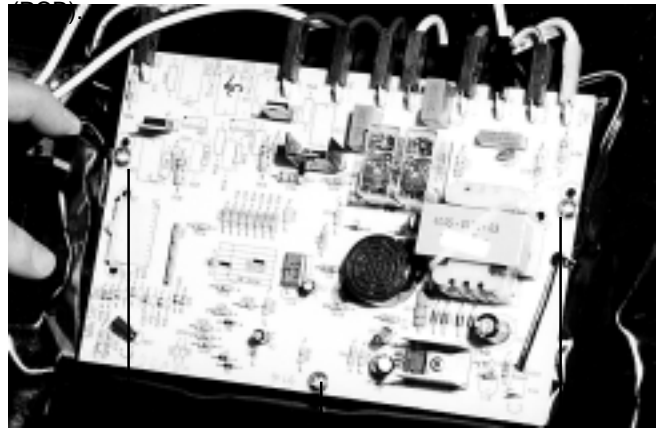
board attached by a 1" wide dual ribbon cable. Release the retaining clip shown below and lift the switch/display board away from the carrier panel.



**5.2.5.3** A drip sheet (black PVC material as shown below) covers the power control board (PCB) and must be reinstalled if a power control board (PCB) is removed/replaced. Release the drip sheet from the power control board (PCB) by removing the adhesive tape.



Sealed PVC drip sheet covers the power control board



Screw

Screw

Screw

**5.2.5.4** Undo the three (two start thread) mounting screws shown above, which fix the power control board (PCB) to the carrier panel.

**5.2.5.5** Lift the power control board (PCB) clear of the carrier panel while feeding the switch/LED board through the slot in the carrier panel.

**5.2.5.6** If fitting a new power control board (PCB), feed the new switch/LED board through the slot in the carrier panel, position the new power control board (PCB) onto the carrier panel with the drip sheet underneath it.

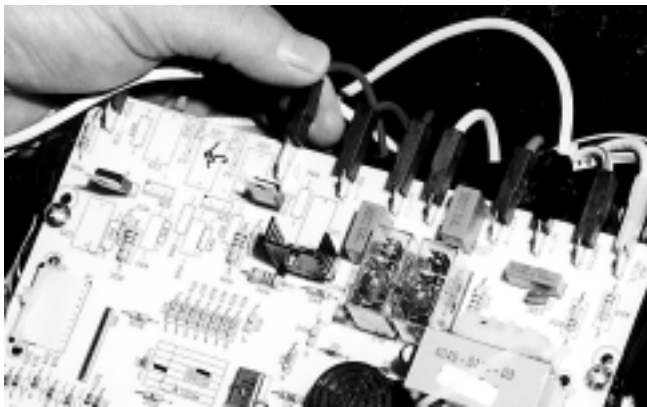


Align both the power control board (PCB) and the drip sheet with the mounting holes on the carrier panel. Fit the central top retaining screw to the carrier panel, check alignment and fit the two lower retaining screws to the carrier panel.

**5.2.5.7** Turn the carrier panel over and fit the switch/LED board to the front of the carrier panel by engaging the clips at the top, aligning the two location holes at both ends of the board and engaging the retaining clips at the bottom.

**5.2.5.8** Starting at one end of the power control board (PCB) that has been removed, remove each Quick Connect terminal and wire in sequence, and transfer to the corresponding Quick Connect terminal of the replacement power control board (PCB) now fitted to the carrier panel.

**IMPORTANT NOTE: To disconnect the Quick Connect terminals from the power control board (PCB), do not remove by pulling on the wire. The correct method is to grasp the insulator covering the Quick Connect terminal and slide the insulator back towards the wire. This will unlatch the lock which is present with all Quick Connect terminals attached to the power control board (PCB).**



Slide insulator back towards the wire to disconnect terminal.

**5.2.5.9** Upon completion of the transfer of the Quick Connect terminals to the power control board (PCB), check and establish that the loom numbering code (section 6.3) conforms to each relative terminal marking on the power control board (PCB).

**5.2.5.10** Fold the sides of the drip sheets inward and fold the long wrap at the top of the carrier panel to the bottom of the power control board (PCB).

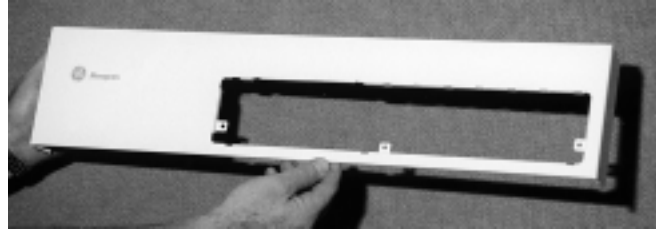
**5.2.5.11** Apply adhesive tape to hold the drip sheet securely.

**5.2.5.12** Reassemble the dishwasher in reverse order.

**5.2.5.13** Operate and test the dishwasher before leaving.

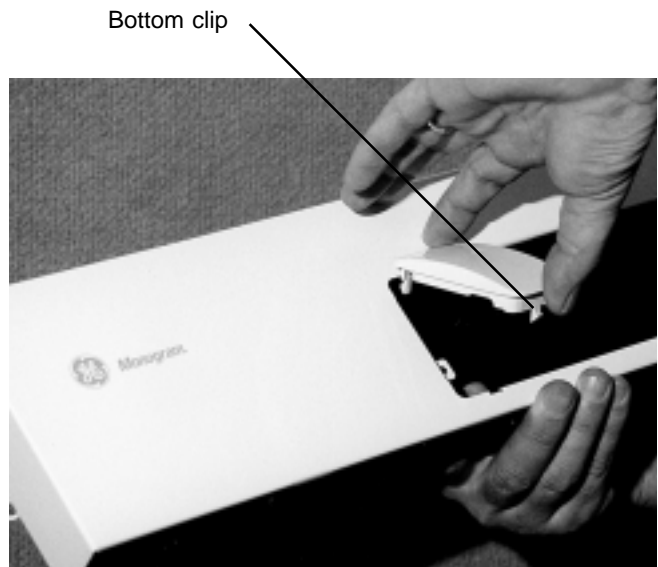
## 5.2.6 Control Panel Assembly - 5700 Model

The installation of the control panel assembly to the stainless steel door liner is covered in Section 5.2.2. Prior to removing the control panel from the dishwasher, remove the door panel as damage to the PCB can result.



**5.2.6.1 Steel Control Panel:** The steel control panel houses a carrier panel (see section 5.2.6.4) to which are attached dress panels and door handle components to form an operator control panel. Component removal/reinstallation details are as follows.

**5.2.6.2 Control Panel left hand side Dress Panel:** The left hand side dress panel fits over the front of the control panel and clips into the carrier panel behind. To remove, press out the bottom clip from behind the panel, then carefully lift the bottom up and pull away from the front. Reassemble in reverse order.



**5.2.6.3 Control Panel RH side Dress-Panel:** The right hand side dress panel is attached and removed in a similar manner to section 5.2.6.2. The three lens assemblies are held on the rear face of the panel.

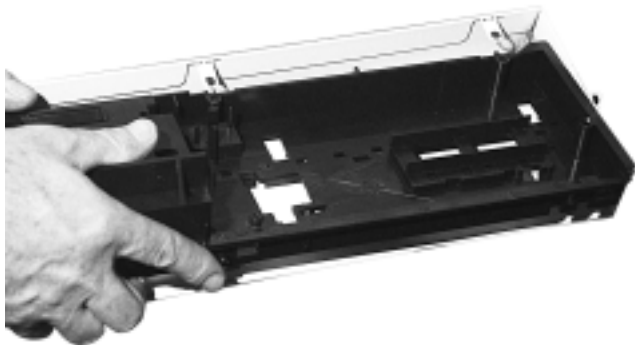
**NOTE:** While removing the panel, ensure the 6 retaining clips are not damaged. The bottom clips should be pressed out first during removal, and clipped in last on assembly. This will allow the small locators molded to the top of the panel to enter the mating recesses in the steel control panel window. Reassemble in reverse order.



**5.2.6.4 Carrier Panel:** The carrier panel is removed from the assembly by bending the two side metal retainers on the control panel to a vertical position.

**NOTE:** There are 4 plastic “spacers” fitted to the carrier panel beneath the top metal retainers.

Unscrew 3 steel screws from the front of the panel and lift the carrier panel away from the control panel in an outward and upwards direction. Reassemble in reverse order.

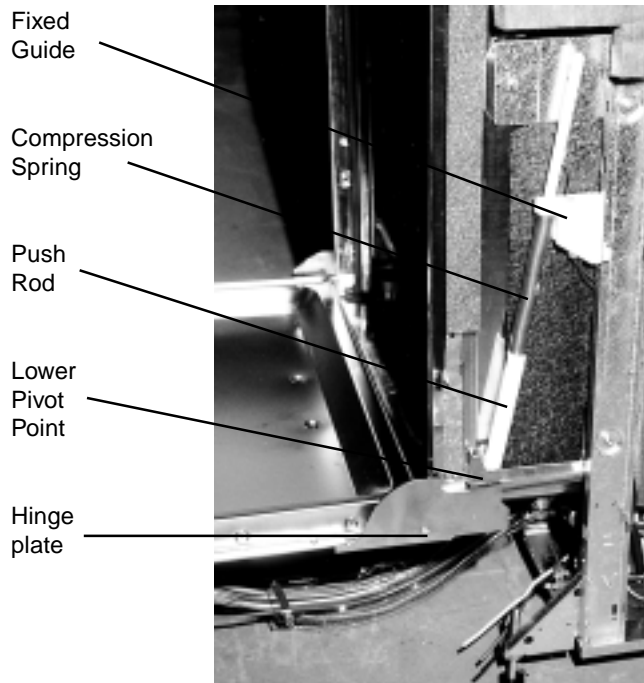


**5.2.6.5 Power Control Board (PCB):** For removal/reinstallation refer to section 5.2.5. The procedures are similar for both 5700 & 5900 models.

**5.2.6.6 Door Lock Microswitch:** Refer to the text of the Model 5600 for removal/reinstallation of the doorlock/microswitch.

**5.2.6.7 Door Handle/Door Handle Cover Plate:** Refer to the text of the Model 5600 for removal/reinstallation of the door handle/door handle cover plate.

## 5.2.7 Door Hinge, Spring and Push Rod Guides



**NOTE:** The compression spring fitted to built-in models has a brown paint mark designating the application is for a standard metal door. A yellow paint mark on a compression spring determines the spring is for an integrated model, and is fitted prior to the installation of a wood panel.

**CAUTION: Do not use yellow marked springs with a standard sheet metal door panel.**



**CAUTION. Switch off electrical power supply and turn off water supply at main or dishwasher shutoff.**



**5.2.7.1** To remove the push rod and fixed guide, close the door and push the fixed guide downward to unlatch the two retainer lug clips, while pulling the bottom of the fixed guide away from the Chassis Rail. **NOTE:** The right hand side guide housing also holds the door microswitch for the interior light. Ensure the power supply is disconnected prior to changing the door springs.

**5.2.7.2** Upon removing the fixed guide from the Chassis Rail slots, the push rod and door spring can be disconnected from the swing arm of the hinge plate by tilting the push rod outward to disengage the offset keeper/retainer.

**5.2.7.3** Reassemble the dishwasher in reverse order.



**CAUTION. Test for water leaks before leaving.**

**5.2.7.4** Operate and test the dishwasher before leaving.

**NOTE:** To replace the door hinges, the stainless steel door liner needs to be removed. Refer to the picture below and to 5.2.8.

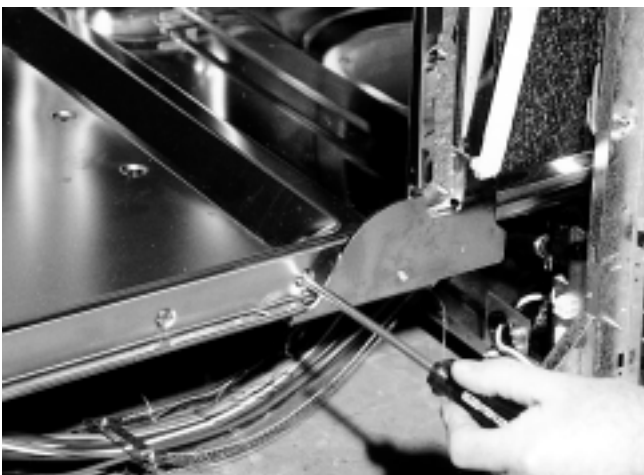


Remove  
2 screws.

### **5.2.8 Stainless Steel Door Liner**

The stainless steel door liner is held to the dishwasher by the hinges located at the base of the stainless steel tub. Two stainless steel Phillips head countersunk screws on each side of the lower section of the stainless steel door liner flange clamp the door liner to the swing arm (movable arm) of the hinges.

The fixed arms of the hinge assembly are screwed to the front flange of the tub by two stainless steel countersunk Phillips head screws, identical to the screws used on the swing arms of the Hinges. It is advised to remove both push rod springs prior to removal of the stainless steel door liner from the dishwasher.



Remove 2 screws from each side.

**5.2.8.1** Remove door panel (Section 5.2.2 for 5600 & 5700 Models, 5.2.3 for 5900 Model).

**5.2.8.2** Remove the door hinge springs and push rod guides (Section 5.2.7).

**5.2.8.3** Remove the four stainless steel Phillips head countersunk screws from the side flanges with the door in the open position, as shown right.

**5.2.8.4** Return the door to a partially closed position as shown in the photograph below to prevent damage to the spillway fixed to the front lip of the tub.

**5.2.8.5** With the swing arms of the door hinges returned to the door open position, lift the stainless steel door liner clear of the dishwasher as shown below.

Door liner to near closed position



Hinge swing arms to door open position

**5.2.8.6** Reassemble the dishwasher in reverse order.



**CAUTION. Test for water leaks before leaving.**

**5.2.8.7** Operate and test the dishwasher before leaving.



## 5.2.9 Tub Gasket

To correctly hold the tub gasket (seal) in place, a channel shaped stainless steel retainer is spot welded to the front opening of the tub. The physical characteristics of both the seal and the retainer should be understood so that they can be correctly assembled.

The retainer runs up the inside surface of the tub, across the roof, then down the other side. There is a small gap between the ends at the bottom of the tub to allow positioning of the "feet" at the ends of the rubber seal. The "heels" of these "feet" slide under the ends of the retainer.

The seal is formed by 3 ribs that run along one face of the gasket, from the heel of one foot to the other. These ribs fit against the innermost surface of the retainer channel.

**NOTE:** Locate the four gaps between the retainer and the tub, and fill these with silicone no more than 3 minutes prior to fitting the gasket.

The following procedure will assist with installation and removal of the gasket.

**5.2.9.1** To remove the tub gasket, grasp the bottom section and pull the tub gasket from the recess formed in the tub as shown below.



**5.2.9.2** When reinstalling the tub gasket to the tub retainer, begin by positioning both ends of the tub gasket into the bottom of the tub retainer, which is formed around the tub by a flange located 1/4" from the sides and top of the tub.

**5.2.9.3** The tub gasket has a molded section on each end in the form of a foot, which locates under the inner side of the tub retainer flange. Ensure the foot is correctly fitted to the retainer on each end of the tub gasket.

**5.2.9.4** With both ends of the tub gasket positively positioned in the retainer, press down onto the block molded section of the tub gasket at one end to maintain its position and start to feed the tub gasket into the retainer.

**5.2.9.5** The tub gasket has three ribs molded into the side face of the gasket and extends the full length of the tub gasket. As the tub gasket is pushed into the retainer the ribbed side face of the tub gasket engages with the side face of the retainer flange.

**5.2.9.6** The tub gasket is located within the retainer by finger pressure only, do not push the gasket "upwards" as this may stretch the tub gasket causing an excess in length to occur, resulting in the tub gasket not seating correctly.

**5.2.9.7** After approximately 12" of the tub gasket has been seated into the retainer, switch to the opposite side of the dishwasher, press down onto the block molded section of the tub gasket to maintain its position at the bottom of the tub and feed the tub gasket into the retainer by finger pressure.

**5.2.9.8** After seating approximately 12" of tub gasket into in the retainer, switch to the other side of dishwasher and repeat the procedure.

**5.2.9.9** Alternate the procedure until both sides of the tub gasket have been inserted and seated correctly.

**5.2.9.10** Starting at each top corner, seat the gasket into the radius of the tub, alternate from side to side ensuring it is seated/located correctly.



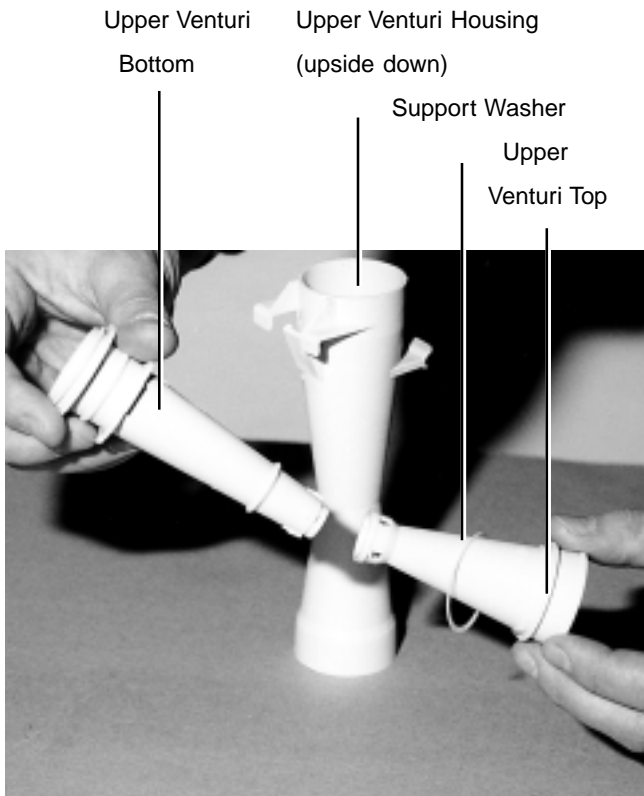
Seat 12" of tub gasket at a time, switching from side to side.

**5.2.9.11** Finally, seat the tub gasket working from each side across the top section of tub, with the center section also located into the retainer correctly without any excess length of tub gasket present.

## 5.2.10 Upper Venturi Assembly

The upper venturi assembly consists of the upper venturi housing, upper venturi top and upper venturi bottom. The upper venturi housing is attached to the upper basket assembly by a molded retaining clamp and support lugs in the housing. The hollow upper venturi housing is fitted with the following components which rotate within the upper venturi housing.

**NOTE:** The thread is left hand.



- Upper Venturi Top - fitted to the top of the upper venturi housing and has a fitted support washer. The upper venturi top should be prevented from rotating when removing the upper spray arm.
- Upper Venturi Bottom - fitted to the bottom of the upper venturi housing and attached to the upper venturi top collet and four barb clips. A left hand threaded boss on the lower face is provided to screw the upper spray arm onto. **Do not over tighten when reinstalling the upper spray arm onto the upper venturi bottom.**

To remove the upper venturi housing from the upper basket assembly, proceed as follows:

**5.2.10.1** Remove the upper spray arm.

**5.2.10.2** Insert a screw driver between the upper venturi housing and the upper basket cross bar support as shown below left. Gently pry the retaining clamp of the upper venturi housing, while carefully applying pressure to the top of the upper venturi assembly until clear of the upper basket cross bar support. As shown in the following picture.



**5.2.10.3** The opposite side to the retaining clamp will still be held to another upper basket cross bar as shown below.



**5.2.10.4** Pry the upper venturi assembly from the cross bar and remove the upper venturi assembly from the underside of the upper basket.

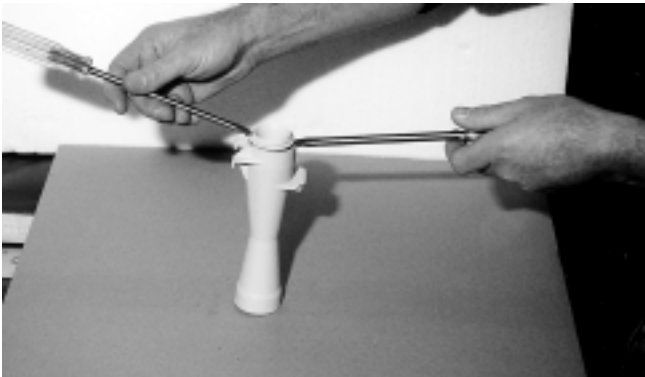
**5.2.10.5** To reinstall the upper venturi assembly, refer to section 5.2.13 or refer to section 5.2.11 if the upper venturi assembly requires disassembly.

### **5.2.11 Upper Venturi Assembly - Disassembly**

**In general practice, the upper venturi assembly will not need to be disassembled except to replace the teflon support washer after a considerable service life, or perhaps damage to the left hand thread of the upper venturi bottom from misuse or cross threading.**

**5.2.11.1** Stand the upper venturi assembly upside down on a flat surface or bench top.

**5.2.11.2** Insert two wide bladed screwdrivers between the under side of the upper venturi bottom flange and the end face of the upper venturi housing as shown below.



**5.2.11.3** Gently exert an even pressure downward with both screwdrivers to pry the upper venturi bottom from the upper venturi housing. Refer to the photo in section 5.2.10 which shows both the upper venturi top and the upper venturi bottom with the teflon support washer disassembled from the upper venturi housing.

### **5.2.12 Upper Venturi Assembly - Reassemble**

**5.2.12.1** Before reassembling, inspect the left hand thread of the upper venturi bottom for damage, clean and insert into the lower end of the upper venturi housing.

**5.2.12.2** Clean and check for damage to upper venturi top and teflon support washer.

**5.2.12.3** Insert upper venturi top and teflon support washer into the top end of the upper venturi housing and slowly rotate to engage the four barb clips located on the upper

venturi bottom.

**5.2.12.4** With the four barb clips located correctly, simply push the upper venturi bottom with a hand to snap home and engage the upper venturi bottom to the upper venturi top.

**5.2.12.5** Check and inspect to establish that both the upper venturi bottom and the upper venturi top rotate freely within the upper venturi housing.



### **5.2.13 Upper Venturi Assembly - Reinstall to Dishwasher**

Reinstallation of the upper venturi assembly to the upper basket assembly is as follows:

**5.2.13.1** From the underside of the upper basket assembly, insert the upper venturi assembly into the central section of the upper basket where the rectangular opening locates and holds the upper venturi assembly.

**5.2.13.2** Engage the left hand semi circular mount of the upper venturi housing to the cross bar of the upper basket and snap securely to the cross bar.

**5.2.13.3** With the upper venturi assembly pivoting on the semi circular mount, push the top of the upper venturi assembly towards the left hand side of the dishwasher to the full vertical position. The right hand retaining clamp of the upper venturi housing will engage the cross bar and lock the upper venturi assembly in place.

**5.2.13.4** Reinstall the upper spray arm to the upper venturi assembly.

**NOTE: The thread is left hand.**

### **5.2.14 Upper Basket Rail and Wheel Guides**

As the support plate is attached to the vertical chassis rail it remains captive even if both wheel guide axles are removed together. To remove the rail and wheel guides, proceed as follows:



**5.2.14.1** Remove both front rail guide pegs by compressing the top sections together and lifting clear from the rail guides as above.

**5.2.14.2** Slide the top basket out and clear of the rail guides.

**5.2.14.3** Remove both rear rail guide pegs from the rail guides and lift clear.

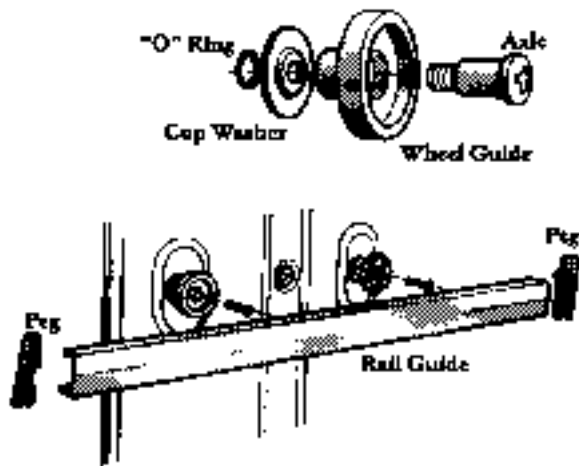
5.2.14.4 Slide the rail guides out and clear from the wheel guides.

5.2.14.5 Remove the wheel guide axles as shown below.



5.2.14.6 Ensure the stainless steel cup washer, which houses the rubber "O" ring, is identified with the recess side of the washer to the surface of the tub.

5.2.14.7 Refer to the illustration below for the correct assembly of the wheel guide axle, wheel guide, stainless steel cup washer and rubber "O" ring.



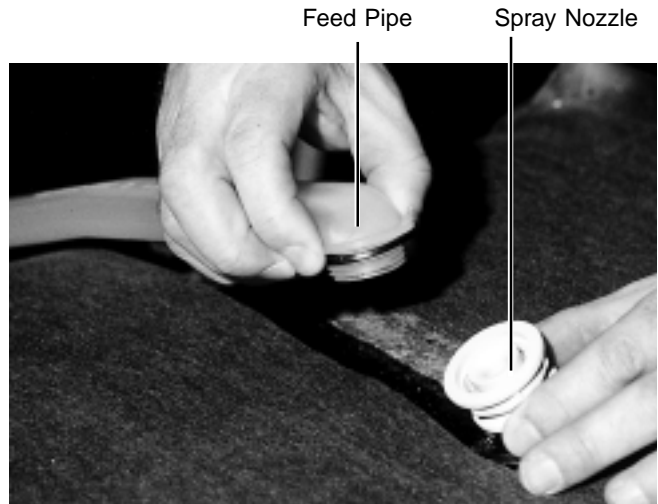
5.2.14.8 Reassemble the dishwasher in reverse order.

5.2.14.9 Operate and test the dishwasher before leaving.

## 5.2.15 Upper Basket Feed Pipe

The upper basket feed pipe is a polyethylene blow moulding mounted on the top external surface of the tub. It is held in position by the screwed spray nozzle which is located on the top internal surface of the tub. A neoprene sealing washer is fitted to the threaded and flanged outlet nozzle of the upper basket feed pipe, which is compressed by the threaded spray nozzle and forms an effective seal between the external surface of the tub and the flange of the upper basket feed pipe.

The photo below shows the upper basket feed pipe and spray nozzle removed from the tub.



## 5.2.16 Load Collector

Positioning lug bracket

Load collector nut



Hinged flap to vent tub.

Circular rubber gasket

Hose nozzles



**CAUTION. Switch off electrical power supply and turn water supply off at main or dishwasher shutoff.**

The load collector is positioned on the right hand side of the tub and provides a water fill into the tub through the circular vented load collector nut. The load collector nut is threaded into the body of the load collector and holds the load collector on the exterior surface of the tub.

A rubber circular gasket, fitted to an annular recess in the body of the load collector as shown at right, provides a positive seal between the stainless tub and the load collector. The load collector has three nozzles located on the lower section of the load collector body. The water inlet solenoid valve is connected to the rear nozzle.

The front nozzle provides an additional water fill directly into the sump cavity. During the selected time fill, the water contained within the front hose and between the bottom of the load collector and the "Y" fitting connected to the pressure switch hose, generates a column of water and an effective "head" pressure which is utilized to operate the pressure switch.

The middle nozzle is not used on these models.

To remove the load collector from the tub proceed as follows:

**5.2.16.1** Remove the dishwasher from it's installation.

**5.2.16.2** Compress the hose clamps fitted to the nozzles of the load collector with hose clamp pliers as shown below and slide clamps downward.

**5.2.16.3** Grasp each hose and turn and remove from the



load collector nozzles.

**NOTE:** Ensure the rear water inlet hose is identified with the marking on the load collector "water in" and the front hose connected to the sump is identified with the marking on the load collector as "drain".

**5.2.16.4** Open the dishwasher door to gain access to the load collector nut located on the internal right hand side surface of the tub as shown below. Insert a pair of pointed nose pliers into the open vents of the load collector nut and unscrew the load collector nut in an counter clockwise direction approximately one and one half turns and lift clear from the load collector.



Remove the load collector nut with pointed nose pliers.

**5.2.16.5** Lift the load collector clear from the dishwasher by tilting the rear of the load collector upwards, to disengage the positioning lug bracket which locates into the rectangular cut out, in the upper basket roller guide retaining plate.

**5.2.16.6** Reassemble the dishwasher in reverse order.



**CAUTION. Test for water leaks before leaving.**

**5.2.16.7** Operate and test the dishwasher before leaving.

### 5.2.17 Drain Cup Filter

The drain cup filter is located on the left hand side of the perforated stainless steel wash filter, which is held in the base of the tub, by the locking action of the drain cup filter.

**5.2.17.1** To remove, twist the two vertical handles in a counter clockwise direction, rotate the drain cup filter and lift to remove.

**5.2.17.2** To replace, reverse the procedure making sure the drain cup filter locks into position by rotating in a clockwise direction.



Rotate counter clockwise and lift up to remove.

### 5.2.18 Perforated Stainless Steel LH Side Wash Filter

**5.2.18.1** To remove the left-hand side perforated stainless steel wash filter, first remove the drain cup filter (Section 5.2.17).

**5.2.18.2** Lift the left-hand side perforated stainless steel wash filter with the micro-mesh barrel filter attached to the underside surface.

**5.2.18.3** Replace in reverse order.

### 5.2.19 Micro-Mesh Barrel Wash Filter

The micro-mesh barrel wash filter is located within the sump of the dishwasher and is attached to the LH side perforated stainless steel wash filter.

**5.2.19.1** To remove the barrel wash filter, squeeze the two clips above the surface of the LH side of the perforated stainless steel wash filter. The barrel wash filter can then be separated from the perforated wash filter.

**5.2.19.2** To reinstall the barrel wash filter, align the face of the barrel filter with the opening of the LH side perforated stainless steel wash filter and depress the two clips to lock the barrel wash filter in place.

**NOTE:** The flat surface on the perforated wash filter and the barrel wash filter must be aligned.

LH side perforated stainless steel wash filter



Micro-Mesh Barrel Wash Filter Locking clips

### 5.2.20 Recuperative By-pass Filter

This filter operates as a by-pass filter and is self cleaning by two spray jets located on the underside of the lower spray arm. The recuperative by-pass filter must be removed to gain access to the RH side perforated stainless steel wash filter.

**5.2.20.1** To remove the recuperative by-pass filter first remove the lower spray arm.

**5.2.20.2** Grasp the recuperative by-pass filter around the outer edges and pull upward, as shown below, to release the retaining clip.

**5.2.20.3** The top face of the filter, which contains the stainless steel super fine mesh, can be removed from the filter housing. Carefully pry off the four barb clips located around the central bore of the filter face and the eight barb clips positioned on the outer diameter of the filter face and lift the filter face clear of the housing.

**NOTE:** Normally, this is not required, although damage to the stainless steel recuperative mesh could require this action.

**5.2.20.4** Reassemble the dishwasher in reverse order.



Recuperative by-pass filter - pull filter up to remove



### 5.2.21 Lower Spray Arm Support

The lower spray arm support positions and holds the lower spray arm through an annular boss which engages two clips on the lower spray arm venturi.

**NOTE:** The top end of the lower spray arm support has markings designating the “max” and “min” operating water level. If the lower spray arm venturi clips cover the markings, rotate the lower spray arm by hand to observe and identify both markings. Refer to these markings when adjusting the fill time (section 4.3). The lower spray arm support is screwed into the sump by means of a RH buttress thread formed on the lower end of the lower spray arm support.

**5.2.21.1** To remove the lower spray arm support, first remove the lower spray arm and recuperative by-pass filter.

**5.2.21.2** Unscrew the lower spray arm support and lift clear.



Unscrew the lower spray arm support to remove

**NOTE:** The RH side perforated stainless steel wash filter is held in position and clamped down by the action of screwing the lower spray arm support into the threaded socket within the sump.

**5.2.21.3** Reassemble the dishwasher in reverse order.

### 5.2.22 Perforated Stainless Steel RH Side Wash Filter

**5.2.22.1** To remove the RH side perforated stainless steel wash filter, first remove the lower spray arm and the recuperative by-pass filter, then remove the lower spray arm support (Section 5.2.21).

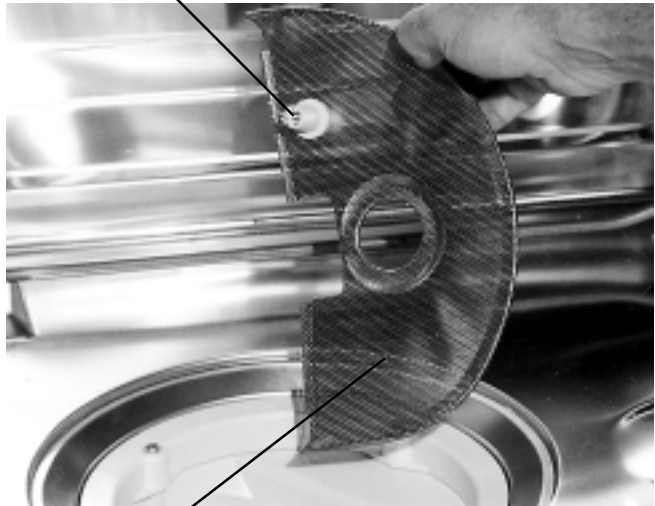
**5.2.22.2** The RH side perforated stainless steel wash filter can now be lifted out.

**NOTE:** A breather port, located at the rear of the perforated wash filter must be clear of obstructions. A blockage can cause the pump to cavitate and cause a reduction in the wash performance.

**5.2.22.3** To reinstall, replace the RH side perforated stain-

less steel wash filter in position, insert the threaded boss end of the lower spray arm support through the 1 3/8" diameter recessed hole in the perforated face of the filter and tighten. Reassemble the dishwasher in reverse order.

Breather port



RHS wash filter

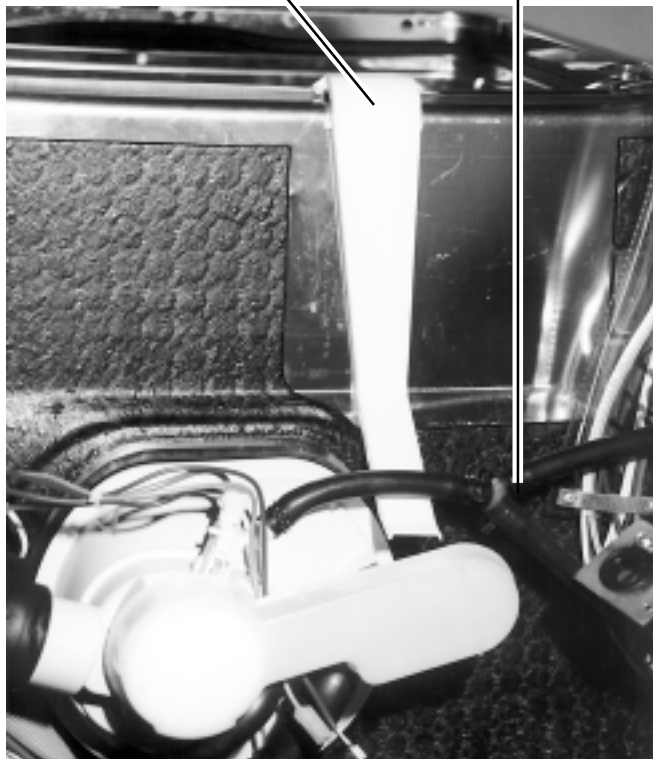
**NOTE:** The flange on the lower spray arm support exerts pressure onto the filter face and holds/locates the RH side perforated stainless steel wash filter in position.

### 5.2.23 Overfill Spillway

The overfill spillway is a plastic moulding which is attached to the front lip of the tub, as shown below.

Overfill spillway

Inlet water supply hose



**5.2.23.1** Refer to section 5.1 to gain access to the overflow spillway.

**5.2.23.2** To remove the overflow spillway, simply push the two barb clips on the sides of the overflow spillway upwards to disengage the locking action and lift clear as shown below.

Disengage clips and lift clear



**5.2.23.3** To reinstall the overflow spillway, engage the two side barb clips and push the overflow spillway downward to lock the barb clips in position.

**NOTE:** The overflow spillway must be located to the rear of the inlet water supply hose fitted to the sump nozzle as shown above.

**5.2.23.4** Reassemble the dishwasher in reverse order.



**CAUTION. Test for water leaks before leaving.**

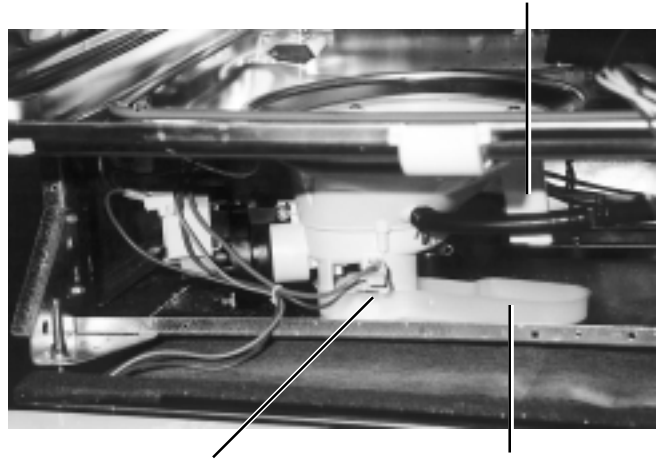
**5.2.23.5** Operate and test the dishwasher before leaving.

### **5.2.24 Undersump Overflow Float and Microswitch Assembly**

The function of the assembly, comprising of an overflow collector and a round styrene float positioned directly under the sump, is to sense an overflow condition within the tub.

An abnormally high water level in the tub will result in water discharging from the overflow spillway. The subsequent water level rise in the overflow collector (approximately 1.76 fluid oz.) will cause the round styrene float to rise and operate the microswitch via the microswitch lever.

Overflow spillway.



Undersump overflow float and microswitch assembly.

Overflow collector.

A circuit is established from the N.O. terminal of the overflow microswitch to the L terminal of the drain pump, thus energizing the drain pump to effectively lower the abnormal water level in the tub.

While in the overflow mode, three functions occur, which are listed as follows:

- The drain pump will run continuously.
- Electronic models terminate all outputs from the power control board (PCB) during an overflow mode. The feature is achieved by a 120VAC supply switched to the drain terminal of the power control board (PCB). A monitor circuit terminates all outputs if this condition is present.
- Electronic models will rapidly flash the **Heated Dry** LED.

**NOTE: To terminate the overflow mode, the overflow collector must be accessed and emptied of water (approximately 1.76 fl. oz.), for the round styrene float to lower and reset the microswitch.**

**5.2.24.1** Refer to Section 5.1 to access the undersump overflow float and microswitch assembly.

**5.2.24.2** A kitchen sponge or similar absorbent cloth can be used to remove the water from the overflow collector.

**5.2.24.3** With a small screwdriver or similar tool, gently lift the lever of the microswitch upwards to raise the round styrene float from the bottom surface of the overflow collector.

**5.2.24.4** Using a sponge or absorbent cloth, clear the water remaining under the styrene float to ensure the float rests on the bottom of the overflow collector.

**5.2.24.5** To reinstall and reassemble the undersump overflow float and microswitch assembly, refer to section 5.2.25.



**5.2.25 Undersump Overfill and Microswitch Assembly Removal/Reinstall.**

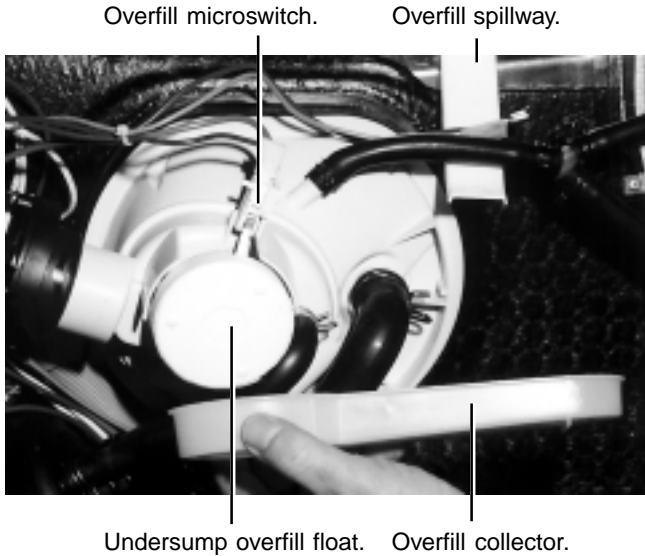


**CAUTION. Switch off electrical power supply and turn off water supply at main or dishwasher shutoff.**



**5.2.25.1** Refer to Section 5.1 for access to the undersump overfill and microswitch assembly.

**5.2.25.2** Lift the overfill collector clear as shown below.

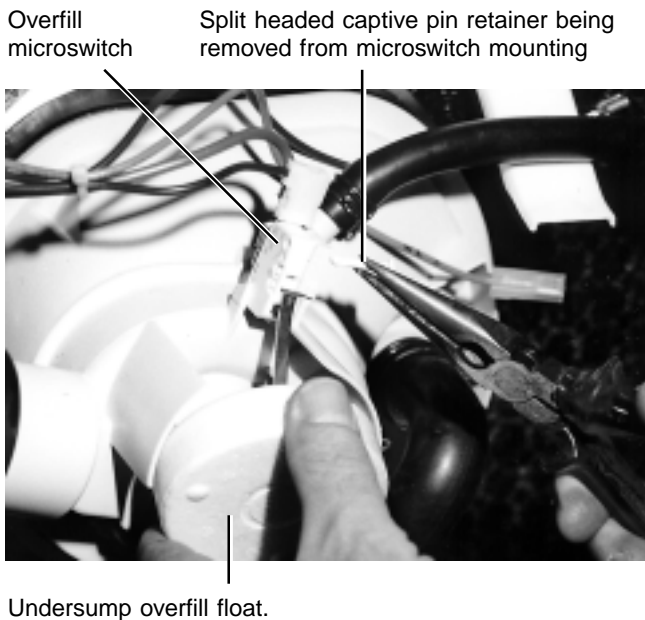


**5.2.25.5** The hooked arm of the float can then be disengaged from the float. Refer to the photograph below illustrating both the microswitch and float being lifted clear from the sump.



**5.2.25.3** The microswitch is held to the sump moulding by a split headed captive pin retainer. Refer to the picture below of the split headed captive pin retainer being removed from the microswitch/ sump with the aid of point nose pliers.

**5.2.25.4** Upon the removal of the split headed captive pin retainer, the microswitch and float can be lifted clear from the guide rails of the sump.



**5.2.25.6** Reassemble the dishwasher in reverse order.



**CAUTION. Test for water leaks before leaving.**

**5.2.25.7** Operate and test the dishwasher before leaving.

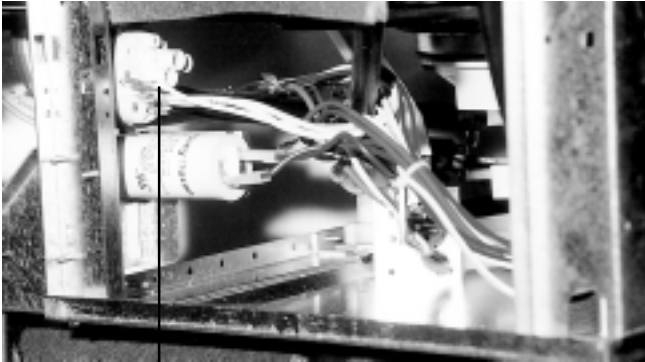
## 5.2.26 Pressure Switch



**CAUTION.** Switch off electrical power supply and turn off water supply at main or dishwasher shutoff.



**5.2.26.1** Refer to section 5.1 for access to the pressure switch.



Pressure switch

**5.2.26.2** Locate the pressure switch square detent spring mounting as shown below.



Compress Detent.

**5.2.26.3** Compress the detent spring mounting and push the mounting through the square hole in the bracket to release the pressure switch.

**5.2.26.4** Remove the pressure switch hose and wire connectors.

**5.2.26.5** Reassemble the dishwasher in reverse order.



**CAUTION.** Test for water leaks before leaving.

**5.2.26.6** Operate and test the dishwasher before leaving.

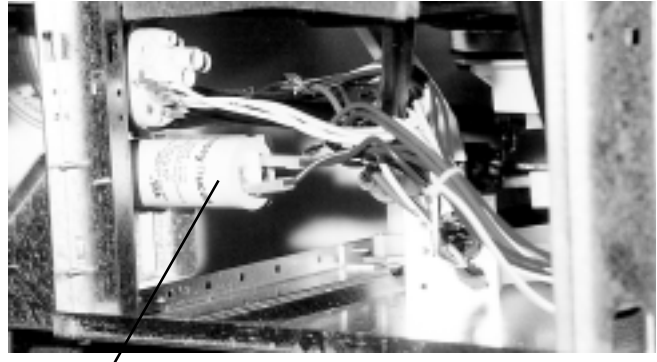
## 5.2.27 Capacitor - Wash Motor



**CAUTION.** Switch off electrical power supply and turn off water supply at main or dishwasher shutoff.



**5.2.27.1** Refer to section 5.1 to gain access to the wash motor capacitor.



Wash motor capacitor

**5.2.27.2** Compress the detent spring mounting and push the mounting through the square mounting hole in the bracket.



Squeeze to remove capacitor pressure switch

**5.2.27.3** Remove the two wires from the terminal connections of the capacitor.

**5.2.27.4** Reassemble the dishwasher in reverse order.



**CAUTION.** Test for water leaks before leaving.

**5.2.27.5** Operate and test the dishwasher before leaving.

### 5.2.28 Pressure Switch, Capacitor and Fill Time Switch Mounting Bracket



**CAUTION.** Switch off electrical power supply.

**5.2.28.1** Refer to section 5.1 to access the pressure switch, capacitor or fill time switch.

**5.2.28.2** To access the pressure switch, capacitor and fill time switch mounting bracket retaining screw, remove the capacitor from the assembly. Refer to section 5.2.27 for removal of the wash motor capacitor.

**5.2.28.3** The photo shows the single hexagon headed retaining screw accessed with a hexagon socket spintite service tool after the wash motor capacitor has been removed from the bracket.

Remove hexagon headed screw from pressure switch, capacitor and fill time switch mounting bracket



Wash motor capacitor removed from pressure switch, capacitor and fill time switch mounting bracket.

**5.2.28.4** Reassemble the dishwasher in reverse order.

**5.2.35.5** Operate and test the dishwasher before leaving.

### 5.2.29 Thermostat-Over-Temperature



**CAUTION.** Switch off electrical power supply and turn off water supply at main or dishwasher shutoff.



**5.2.29.1** Refer to section 5.1 to gain access to the over-temperature thermostat (identified by a green dot).

**5.2.29.2** Disconnect both wires from the over-temperature thermostat.

**5.2.29.3** Turn the over-temperature thermostat counter clockwise to remove. **Note this is a female threaded stud.**



Over-temperature thermostat

**5.2.29.4** Reassemble the dishwasher in reverse order.



**CAUTION.** Test for water leaks before leaving.

**5.2.29.5** Operate and test the dishwasher before leaving.

### 5.2.30 Heating Element



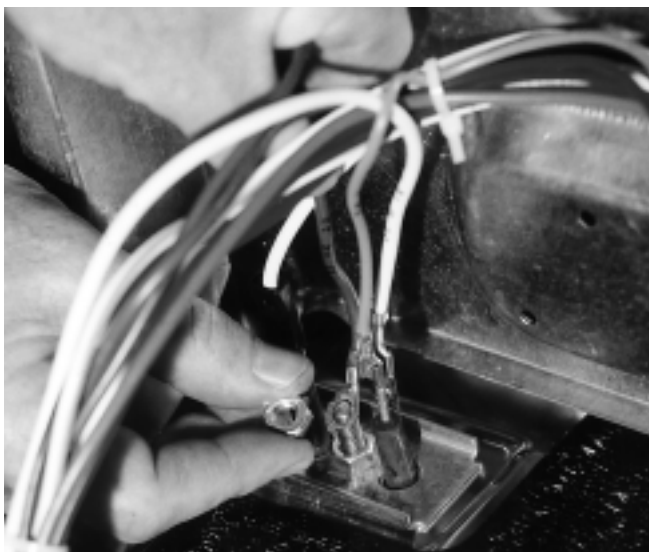
**CAUTION. Switch off electrical power supply and turn off water supply at main or dishwasher shutoff.**



**5.2.30.1** Refer to section 5.1 for access to the heating element.

**5.2.30.2** Disconnect the wires connected to the two terminals of the heating element.

**5.2.30.3** Release the mounting stud nut as shown below and remove the lock nut which holds the ground wire to the single mounting stud and lift clear.



Release the heating element mounting nut.

**5.2.30.4** Unscrew the second mounting stud nut.

**5.2.30.5** Remove the retaining clamp plate from the mounting stud and the two cold pins of the heating element.

**5.2.30.6** If the dishwasher is on its back with the base panel removed during this repair, it is recommended for safety to remove both door hinges, springs and push rod guides before opening the door to remove the heating element from the tub. Refer to section 5.2.7 for removal of door hinges, springs and push rod guides.

**5.2.30.7** Open the main door to access the heating element. The heating element is held in position by three stainless steel retainers which are spot welded to the inner surface of the base panel of the tub as shown at top right. Two retainers are at the front of the tub and one is at the rear left hand corner.

**5.2.30.8** To remove the heating element from the interior of the tub, bend the flat surface of the rear left hand stainless steel retainer by approximately 90°, this allows the mounting flange and single stud assembly of the heating element to be lifted through the tub.

**5.2.30.9** Disengage the two stainless steel retainers from the heating element.

Bend the left rear element retaining bracket.



Two front element retaining brackets.

**5.2.30.10** Lift the heating element clear from the dishwasher.

**5.2.30.11** Reassemble the dishwasher in reverse order.



**CAUTION. Test for water leaks before leaving.**

**5.2.30.12** Operate and test the dishwasher before leaving.



### 5.2.31 Water Inlet Solenoid Valve



**CAUTION.** Switch off electrical power supply and turn off water supply at main or dishwasher shutoff.

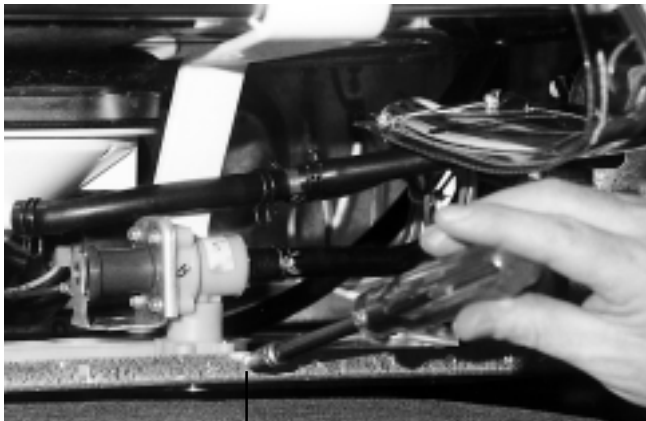


The water inlet solenoid valve is a special purpose component and is NOT to be interchanged with other water inlet solenoid valves.

The flow rate of the water inlet solenoid valve is rated at a nominal 1.25 US gallons per minute. Do not use any other type of water inlet solenoid valve.

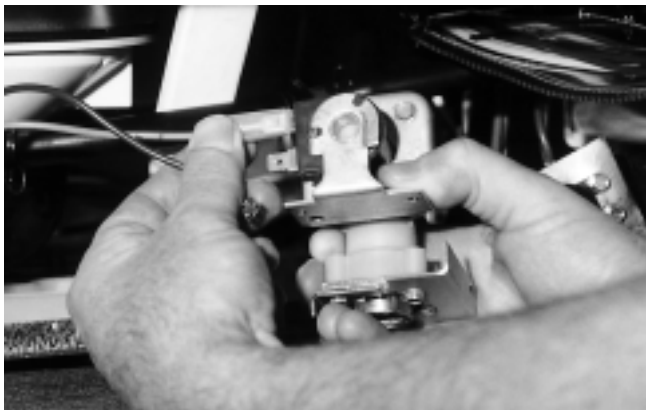
**5.2.31.2** Refer to section 5.1 for access to remove the water inlet solenoid valve.

**5.2.31.3** From the front of the dishwasher, remove the single mounting screw which holds the water inlet solenoid valve bracket to the base tray as shown below.



Remove screw

**5.2.31.4** Disconnect the two wires as shown below.



**5.2.31.5** Compress the hose clamp which holds the connecting hose and slide the clamp from the nozzle.

**5.2.31.6** Grasp the hose and remove it from the nozzle of the water inlet solenoid valve.

**5.2.31.7** Lift the water inlet solenoid valve clear of the dishwasher.

**5.2.31.8** Reassemble the dishwasher in reverse order.



**CAUTION.** Test for water leaks before leaving.

**5.2.31.9** Operate and test the dishwasher before leaving.

### 5.2.32 Drain Pump - Removal

The drain pump is a self contained motor and pump assembly mounted directly into the sump by the induction or inlet nozzle equipped with a neoprene multi-lipped cylindrical seal to prevent water leakage. A single Phillips head screw holds the complete motor and pump to the sump. Removal of the drain pump is accomplished by the following procedure:



**CAUTION.** Switch off electrical power supply and turn off water supply at main or dishwasher shutoff.



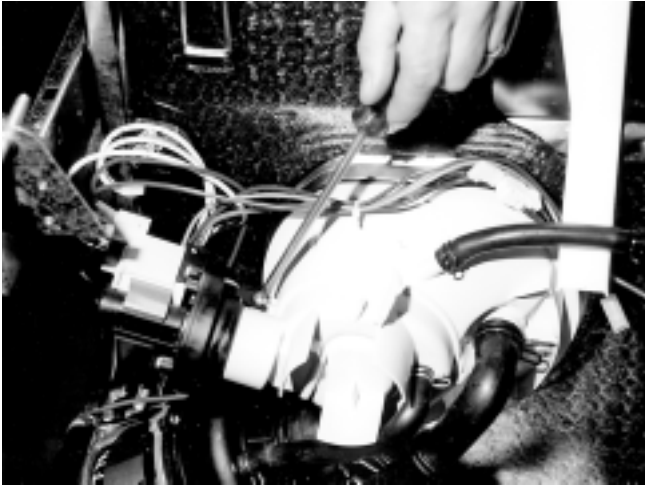
**5.2.32.1** Refer to section 5.1 to gain access to the drain pump.

**5.2.32.2** Disconnect the two Quick Connect terminals and wires from the 1/4" terminals marked "L&N" on the drain pump motor. The terminal marked "L" should be connected to the wiring harness wire marked "G2-D" (drain), which is connected directly to the overflow switch. The neutral of the drain pump marked "XN-D" should be connected directly to the "N" of the main terminal block. For rotary models, the neutral wire is marked "W2-D" and connects to "N" of the main terminal block through the wash pump motor plug.

**5.2.32.3** Remove the drain hose double coil hose clamp with a pair of hose clamp pliers from the pump outlet nozzle as shown below. Remove the molded drain hose elbow from the pump outlet. The molded elbow of the drain hose has two offset slots in the end face of the elbow, which engage with the offset lugs on the pump cover/outlet. This feature is to index the drain elbow/hose into the correct angle and position it in relation to other internal components.



**5.2.32.4** Remove the single Phillips head screw which holds the drain pump to the sump socket as shown below.



**5.2.32.5** Grasp the drain pump and pull the complete motor and pump assembly from the opening of the sump socket, wherein the drain pump nozzle and sealing ring is housed as shown below.



**5.2.32.6** The seal is removed from the pump cover/inlet and discarded. A replacement seal should be used upon reinstallation of the drain pump.

**5.2.32.7** Reassemble the dishwasher in reverse order.



**CAUTION. Test for water leaks before leaving.**

**5.2.32.8** Operate and test the dishwasher before leaving.

## **5.2.33 Wash Motor/Pump Assembly - Removal**

The wash motor/pump assembly is a high efficiency compact device horizontally mounted at a 30° angle to the rear rail and located within the rear left hand corner of the dishwasher as shown below. A centrally positioned induction or inlet nozzle on the pump cover also provides the front mounting through a short hose connected to the sump outlet with appropriate hose clamps. To remove the wash motor/pump assembly from the dishwasher, proceed as follows:



**CAUTION. Switch off electrical power supply and turn off water supply at main or dishwasher shutoff.**

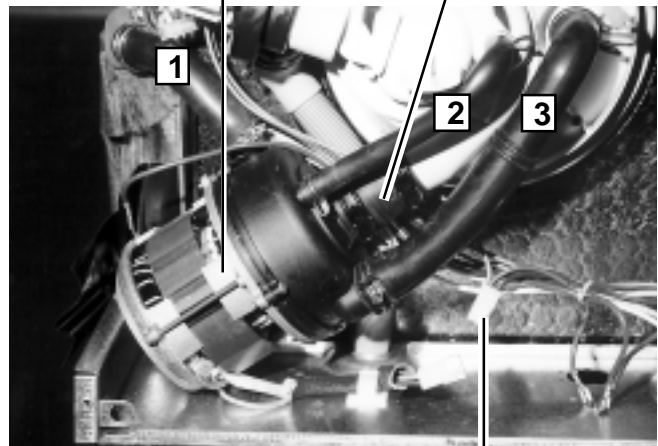


**5.2.33.1** Refer to section 5.1 to access the wash motor/pump.

**5.2.33.2** Disconnect the four pin wash motor/pump receptacle from the wiring harness/plug as shown below.

Wash motor/pump assembly

Short hose connection between pump inlet and sump nozzle.



Disconnect the four pin receptacle.

**5.2.33.3** Remove the three pump outlet hoses from the pump cover by compressing the double coil hose clamps and sliding the clamps along the hoses away from the pump cover outlets. The three hoses as shown above are identified as follows:

**1. Upper Hose:** 7/8" diameter pump outlet parallel with the base of the tub.

Function: Water supply to top spray arm.

**2. Center Hose:** 3/8" diameter pump cover outlet - hose connected to sump.

Function: Water supply to recuperative by-pass filter.

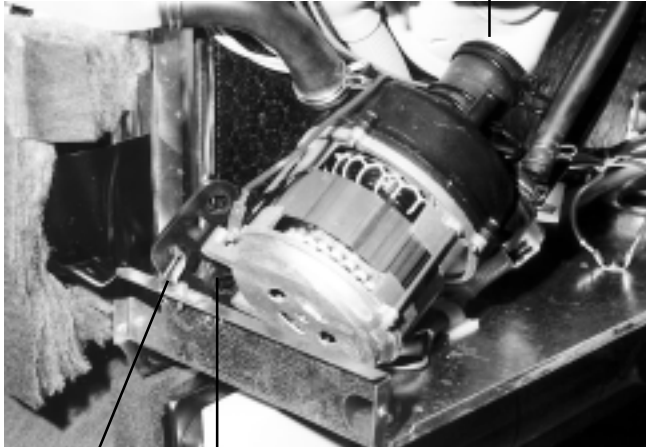
**3. Lower Hose:** 1" diameter pump cover outlet - hose connector.

Function: Water supply to lower spray arm.

**5.2.33.4** Grasp each hose in turn and disconnect them from the pump cover nozzles.

**5.2.33.5** Removal of the three outlet hoses now provides access to the centrally mounted induction/inlet nozzle of the pump cover. Compress the double coil hose clamp located on the inlet hose and slide the clamp from the nozzle towards the sump as shown below.

Move the double coil hose clamp away from wash pump/motor.



Chassis hook      Motor hooks

**NOTE:** The wash motor/pump is actually supported by the short hose between the wash motor/pump and the corresponding nozzle of the sump.

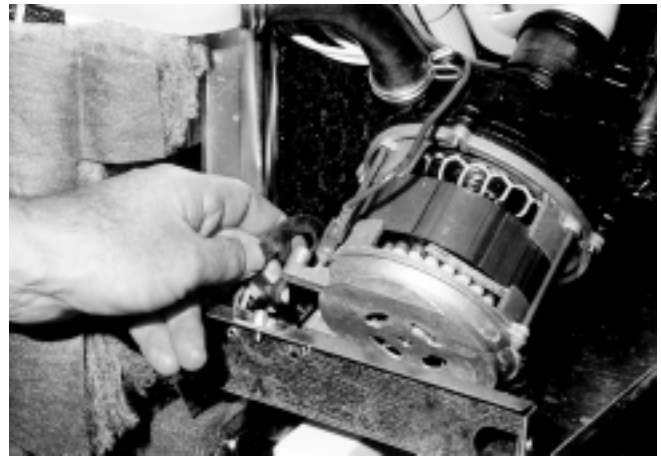
**5.2.33.6** The rear end of the wash motor is supported by a triangular, detachable, neoprene mounting support strap, which is attached to a hook located on the left hand rear chassis panel. On the rear diecast end-shield of the wash motor are support hooks. The two lower holes of the triangular mounting support strap are attached to those hooks to support the wash motor. Refer to the photo above which has the rubber triangular mounting support strap removed to clearly show the hooks.

**5.2.33.7** Two options are available to remove the wash motor triangular neoprene mounting support strap:

1. Twist the mounting support strap and push the locating hole from the front hook on the wash motor end-shield as shown above right. Push the mounting support strap up and release the mounting support strap from the hook located on the chassis panel. The rear locating hole of the mounting support strap can then be disengaged from the hook on the wash motor end-shield. The wash motor mounting support strap can then be lifted clear of the dishwasher.

OR

2. Remove the retaining screw which mounts the hook onto the chassis panel. Detach both locating holes in the mounting support strap from both hooks on the wash motor end-shield. Lift clear the mounting support strap and the detached chassis hook from the appliance.



**5.2.33.8** The wash motor/pump can then be withdrawn from the pump cover inlet hose, as shown below, and lifted clear as a complete assembly.



**5.2.33.9** Reinstall the wash motor/pump and reassemble the dishwasher in reverse order or refer to section 5.2.34 if the wash motor/pump needs to be disassembled.



**CAUTION. Test for water leaks before leaving.**

**5.2.33.10** Operate and test the dishwasher before leaving.

## 5.2.34 Wash Motor/Pump - Disassembly

**5.2.34.1** Place the wash motor/pump on the rear diecast end-shield on a table or suitable flat surface. While viewing the wash motor/pump assembly from the pump cover end, position the two support hooks formed on the diecast end shield at the twelve o'clock position. It should be noted the pump outlet nozzle for the water supply to the upper spray arm is at the nine o'clock position, while the pump outlet for the lower spray arm is at the four o'clock position. **The alignment of the pump cover to the two support hooks on the diecast end-shield of the motor must be maintained for correct installation of the wash motor/ pump to the dishwasher.**

**5.2.34.2** Directly below the pump outlet located at the four o'clock position (lower spray arm water supply) on the outer diameter, is a 1/8" diameter round locator. This locator fits into a slot on a corresponding black plastic flange, which is known as the pump plate.

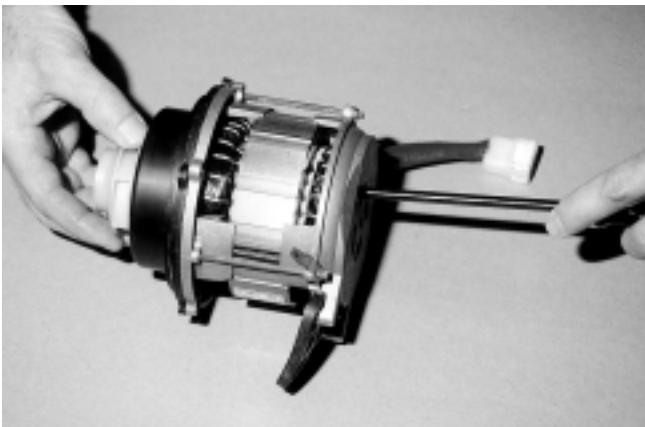
**5.2.34.3** Align the small locator and corresponding cutout (1/8" wide) and mark this location onto the diecast flanged end-shield of the wash motor (four o'clock position) with a felt tipped marking pen for reassembly purposes. Note also that the four o'clock position is identified by the electrical input wires entering the stator at this position.

**5.2.34.4** Remove the four Phillips head screws which hold the pump cover to the pump plate and wash motor flanged diecast end-shield.

**5.2.34.5** Lift clear the pump cover and the neoprene "O" ring which seals the pump cover to the pump plate.

**5.2.34.6** The pump impeller must be removed to access the removal of the pump plate.

**5.2.34.7** To remove the impeller from the shaft, insert a screwdriver into the opposite end diecast end-shield air cooling vents and engage with a blade of the cooling fan (eight diecast blades on rotor), to lock the rotor in a stationary position. While holding the screwdriver firmly, grasp the impeller and turn in a counter clockwise direction to unscrew the impeller from the shaft. Lift the impeller clear from the pump shaft.



Screwdriver inserted into cooling vents/blades to lock shaft.



**5.2.41.8** The flanged pump plate which houses the carbon faced rotary seal and bellows can also be lifted clear from the wash motor.

**NOTE:** A priming vane is attached to the pump plate, which can be removed. The white polycarbonate priming vane ensures the pump will prime and not cavitate. If necessary, remove and reinstall.



**5.2.41.9** Upon lifting the pump plate clear, the flanged diecast end-shield of the wash motor will be visible. A black plastic water slinger is attached to the motor shaft. This slinger is housed by an annular projection with a cutout at the six o'clock position. It allows water leaking past the rotary seal to exit the flanged diecast end-shield.

**5.2.41.10** Refer to section 5.2.35 to reassemble the wash motor/pump.



### 5.2.35 Wash Motor/Pump - Reassemble

**5.2.35.1** Position the wash motor with the two mounting hooks at the twelve o'clock position and the input electrical wires in a corresponding four o'clock position. Ensure the motor is electrically sound and the bearings are not water damaged/noisy.

**5.2.35.2** The pump plate is normally supplied as a replacement with the bellows and carbon faced seal factory fitted. On the underface of the pump plate are two cutouts, within the outer mounting rings, positioned on each side of a mounting hole.

**NOTE:** Ensure the white priming vane is fitted correctly.

**NOTE:** Both cutouts are to provide an exit for water leakage past the rotary seal and impeller ceramic face. This mounting hole must be positioned directly opposite the two mounting hooks at the twelve o'clock position (position the mounting hole and the two cutouts at the six o'clock position on the flanged die cast end-shield of the wash motor). Note that the large directional vane for the lower spray arm outlet is then located at the four o'clock position.

**5.2.35.3** Check the condition of the pump impeller for damage and inspect the ceramic rotary seal face for condition/damage. If damage/wear is present replace both the impeller and pump cover/rotary seal.

Ceramic face of impeller



**5.2.35.4** Fit the impeller to the right handed threaded pump shaft. Rotate the impeller and compress the rotary bellows/seal until the rotor of the wash motor starts to rotate with the impeller.

**5.2.35.5** Insert a screwdriver into the opposite end of the die-cast end-shield air cooling vent and lock the blades of the cooling fan and rotor from turning. Screw the impeller onto the shaft at the opposite side of the wash motor/pump. Tighten the impeller securely.

**5.2.35.6** Clean and reinstall the neoprene "O" ring to the pump plate if a replacement is not available. It is recommended to replace the "O" ring if the pump is serviced.

**5.2.35.7** Reinstall the pump cover to the pump plate ensuring the 1/8" nozzle on the pump cover aligns into the 1/8" cutout of the pump plate located at the four o'clock position.

**5.2.35.8** Reinstall the four Phillips headed screws to the pump cover pump plate wash motor mounting holes. Tighten all four screws evenly, alternate from side to opposite side to ensure the pump cover and pump plate compresses the neoprene "O" ring correctly.

**5.2.35.9** Make certain the impeller/wash motor rotor is free and turns without fouling the pump cover.

**5.2.35.10** Reassemble the dishwasher in reverse order.



**CAUTION. Test for water leaks before leaving.**

**5.2.35.11** Operate and test the dishwasher before leaving.



## 5.2.36 Sump

5.2.36.1 Refer to section 5.1 to gain access to sump.

5.2.36.2 To remove the sump, disconnect hoses attached to the sump nozzles (4 Hoses).

5.2.36.3 Remove the overflow collector.

5.2.36.4 Remove the Phillips head screw which holds the drain pump to the sump socket.

5.2.36.5 Remove the four mounting screws and lift the sump retainer clear as shown below.



5.2.36.6 Remove sump from beneath the tub.

5.2.36.7 Remove the sump gasket from the flange of the tub as shown below.



5.2.36.8 Reassemble the dishwasher in reverse order.

5.2.36.9 Operate and test the dishwasher before leaving.

## 5.2.37 Sump Base Plate/Non-return Flap Valve

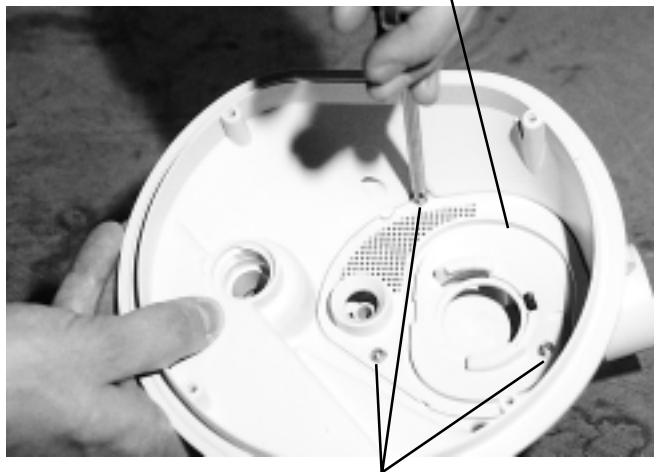
The sump base plate incorporates the non-return flap valve which can be removed and replaced as follows:

**NOTE: This procedure can also be performed while the sump is still fitted to the tub.**

5.2.37.1 Remove the lower spray arm and venturi, drain cup filter, the perforated stainless steel wash filters, the super fine by-pass filter and the lower spray arm support.

5.2.37.2 Remove the three screws (two start thread) which hold the sump base plate and lift clear.

Sump base plate

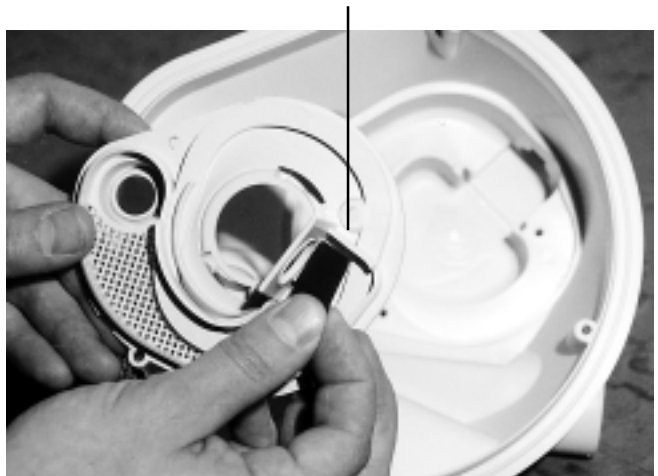


Remove 3 screws to access non-return flap valve.

5.2.37.3 Remove the non-return flap valve which is held by a hinged shank and barb clip by grasping the non-return flap valve, pressing the tip of the hinged shank into the rectangular recess and drawing the non-return flap valve from the sump base plate as shown below.

**NOTE:** The square, flat face of the non-return flap valve must seat upon the annular valve face of the sump base plate.

The non-return flap valve.



5.2.37.4 Reassemble the dishwasher in reverse order.

5.2.37.5 Operate and test the dishwasher before leaving.

### 5.2.38 Interior Light - 5700 & 5900 Models only

**NOTE:** The 5600 model (Rotary Control) is not fitted with an interior light.



**CAUTION.** Switch off electrical power supply and turn off water supply at main or dishwasher shutoff.



**5.2.38.1** Unscrew the light lens and seal from within the dishwasher tub.

**5.2.38.2** To remove the light body and holder, simply unlatch the retaining barb clip with a medium size screwdriver as shown below.

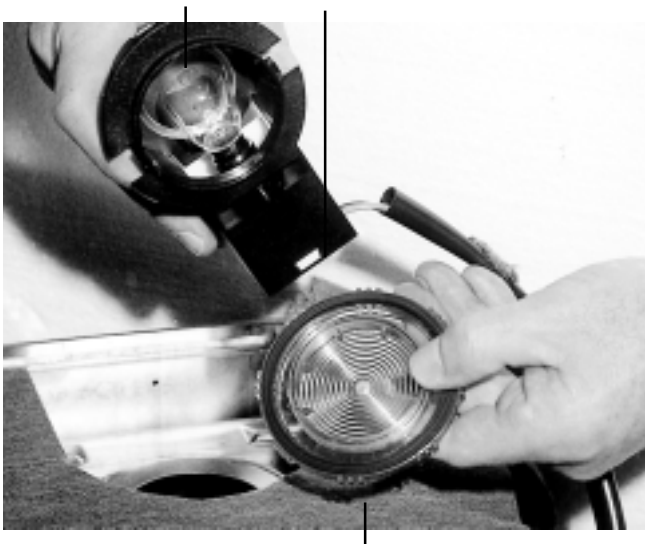


Unlatch barb clip with medium size screwdriver

**5.2.38.3** With the barb clip released, a slight pressure on the opposite barb clip will allow the light body and holder to be removed from the tub. Shown below.

**5.2.38.4** To access the wiring connections to the light holder, pry the single barb clip (below) from the terminal cover and lift clear the terminal cover.

Light body and holder      Terminal cover barb clip



Light lens and seal

**5.2.38.5** Remove the two 3/16" Quick Connect terminals from the terminals of the light holder.

**5.2.38.6** To remove the reflector from the light body and holder, simply pry the reflector retainer clips from the three cut outs of the light body and holder.

**NOTE:** The three reflector retainer clips are positioned with two retainer clips adjacent to each side of the lamp holder, while the third retainer is adjacent to the tip of the light bulb.

**5.2.38.7** Removal of the light body and holder can be carried out simply by releasing one of the locking nuts and unscrewing the locking nut from the lamp holder body.

**NOTE:** The internal locking nut adjacent to the light lens has a fixed position of approximately two threads projecting past the face of the locking nut. This relationship should be maintained for ease of removal/ reinstallation of the light globe.

**5.2.38.8** Reinstallation of the interior lamp assembly is a reversal of removal and dismantling of the lamp body and holder assembly.

**5.2.38.9** Reassemble the dishwasher in reverse order.



**CAUTION.** Test for water leaks before leaving.

**5.2.38.10** Operate and test the dishwasher before leaving.



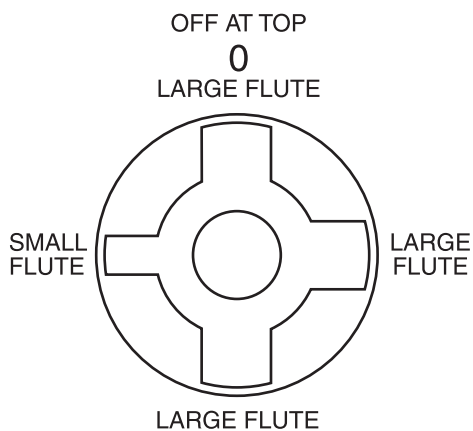


### 5.2.41 Timer Control Knob - 5600 model

**5.2.41.1** Prior to removing the timer control knob, advance the timer control knob pointer to the twelve o'clock position ("OFF" position). The timer control knob can then be removed by pulling the knob straight towards you and removing it from the timer control shaft.

**5.2.41.2** To reinstall the timer control knob, align the four flutes of the timer control shaft with the four slots in the timer control knob and push the timer control knob onto the shaft securely.

**NOTE:** The nylon shaft of the timer control has three large flutes positioned at twelve o'clock, three o'clock and nine o'clock. A smaller fourth flute is positioned at six o'clock. Identify the four slots in the timer control knob and index accordingly to assist in reinstalling.



### 5.2.42 Power Select Knob - 5600 model

**5.2.42.1** To remove the power select knob, grasp the knob and pull from the rotary switch shaft.

**NOTE:** If the power select knob is removed with the knob pointer indicating an "OFF" position, the flat on the switch shaft is vertical and on the left hand side of the shaft.

**5.2.42.2** To reinstall the power select knob, note the position on the rotary switch shaft and align the power select knob. Push on to the shaft securely.

### 5.2.43 Control Panel - 5600 model

The design of the 5600 model control panel is based on a steel outer frame surrounding an inner plastic carrier panel, to which dress panels, handle components and rotary control components are attached. The following procedures illustrate the disassembly of the complete control panel.



**CAUTION. Switch off electrical power supply.**

**5.2.43.1** First remove the complete control panel (Section 5.2.40).

**5.2.43.2** Remove the power select knob. (Section 5.2.42)



**5.2.43.3** Remove timer control knob (Section 5.2.41).

**5.2.43.4** Remove the dress panel LH side (Section 5.2.44).

**5.2.43.5** Remove the dress panel RH side (Section 5.2.45).

**5.2.43.6** Remove the 3 steel screws located at the front of the steel control panel.

**5.2.43.7** Bend the 2 side metal retaining lugs to a vertical position.

**5.2.43.8** Slide the carrier panel out of the steel control panel.

**5.2.43.9** Reassemble the dishwasher in reverse order.

**5.2.43.10** Operate and test the dishwasher before leaving.

### 5.2.44 Dress Panel LH Side - 5600 model

**5.2.44.1** To remove the dress panel LH side cover, first remove the control panel (Section 5.2.40).

**5.2.44.2** Unlatch the bottom clip from the back of the carrier panel. Push forward and withdraw the dress panel from the face of the control panel by pulling it out, down and away. This disengages the 2 locking toes from the recesses in the top of the steel control panel.

**5.2.44.3** To reinstall, locate the 2 top locking toes and clips first, then push the panel firmly in, locking the bottom clip in place.

**5.2.44.4** Reassemble the dishwasher in reverse order.

**5.2.44.5** Operate and test the dishwasher before leaving.



### 5.2.45 Dress Panel RH Side - 5600 model



**CAUTION. Switch off electrical power supply.**

**5.2.45.1** Remove control panel (Section 5.2.40), timer control-knob (Section 5.2.41) and power select knob (Section 5.2.42).

**5.2.45.2** Removal of the dress panel RH side is similar in procedure to the dress panel LH side. Unlatch the two bottom clips which hold the dress panel RH side to the carrier frame and lift clear.



Control panel RH side cover.

**5.2.45.3** To reinstall, engage the two top clips into the two slots in the control panel and carrier frame and re-latch the bottom clips to secure.

**5.2.45.4** Reassemble the dishwasher in reverse order.

**5.2.45.5** Operate and test the dishwasher before leaving.

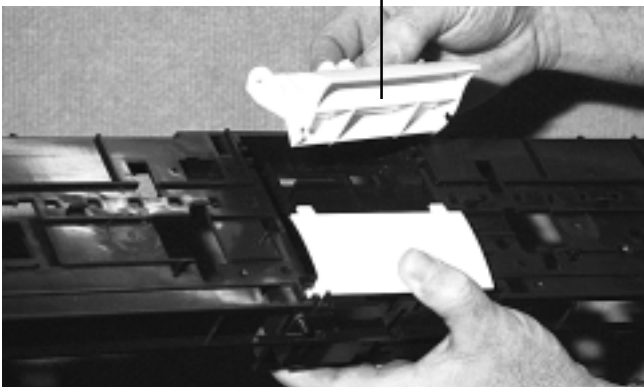
### 5.2.46 Door Handle - 5600, 5700 & 5900 Models



**CAUTION. Switch off electrical power supply.**

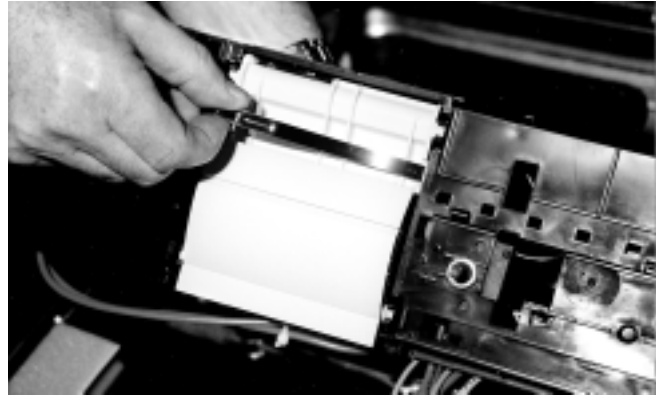
**5.2.46.1** For models 5600 and 5700, remove the control panel (Section 5.2.40). For model 5900, remove the door panel (Section 5.2.3). Remove dress panel LH side (Section 5.2.44) and dress panel RH side (Section 5.2.45).

Door handle.

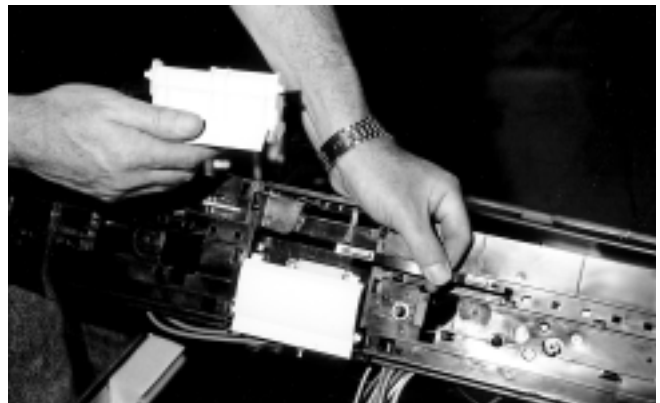


**5.2.46.2** Compress the detent clip of the leaf spring on the end adjacent to the door lock microswitch.

**5.2.46.3** Slide the leaf spring through the two retaining slots formed in the control panel carrier frame. You must compress the detent clip again in order to pass it through the opposite side slot. Lift the leaf spring clear.



**5.2.46.4** Grasp the door handle nozzle on one end and lift outward to unclip the nozzle from the control panel carrier frame.



**5.2.46.5** With one door handle nozzle unclipped from the control panel carrier frame retainer, exert pressure on the opposite side to release the door handle. Lift the door handle clear.

**5.2.46.6** Reassemble the dishwasher in reverse order.

**5.2.46.7** Operate and test the dishwasher before leaving.

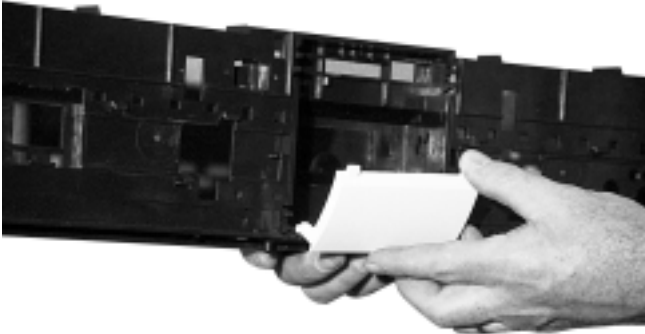
### 5.2.47 Door Handle Cover Plate - 5600, 5700 & 5900 Models



**CAUTION.** Switch off electrical power supply.

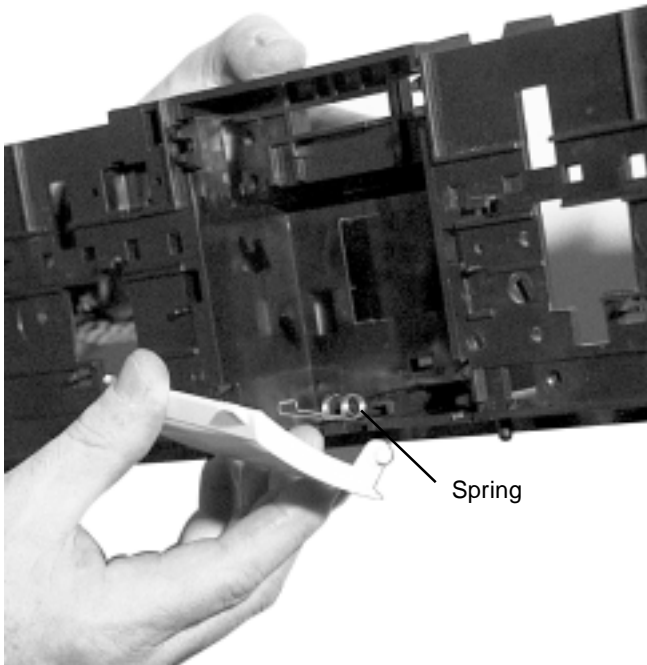
**5.2.47.1** Remove the door handle (Section 5.2.46).

**5.2.47.2** Grasp the flange of the door handle cover plate which protrudes below the bottom edge of the carrier panel and spring both retaining tabs from the carrier panel.



Door handle cover plate

**5.2.47.3** Remove the door handle cover plate spring. Refer to the picture below.



**5.2.47.4** Reassemble the dishwasher in reverse order.

**5.2.47.5** Operate and test the dishwasher before leaving.

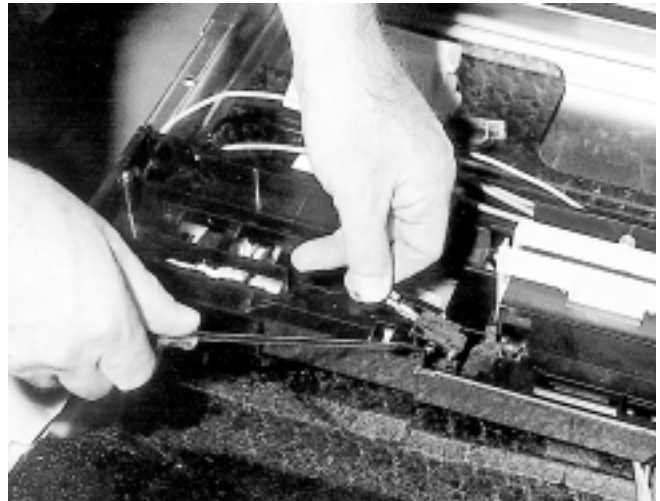
### 5.2.48 Door Lock Microswitch - 5600, 5700 & 5900 Models



**CAUTION.** Switch off electrical power supply.

**5.2.48.1** Remove both wires from the microswitch and snip the retaining wire tie from the body of the microswitch.

**5.2.48.2** Slide the tip of a small screw driver between the microswitch and the surface of the carrier panel. With a pair of needle nose pliers, insert a tip of the pliers into the adjacent mounting hole of the carrier panel. Position the other tip of the pliers on the microswitch top retainer clip and carefully release the retainer clip. At the same time, lift the microswitch with the small screwdriver, which will assist in its removal.



**5.2.48.3** Repeat the procedure with the lower retainer clip, although the clip will require unlatching without the aid of a mounting hole. Carefully lift the microswitch from the two mounting posts and lift clear. Reassemble the dishwasher in the reverse order. To reinstall the microswitch, a replacement wire tie is required.

**5.2.48.4** Operate and test the dishwasher before leaving.

### 5.2.49 Door Lock Microswitch Lever - 5600, 5700 & 5900 Models



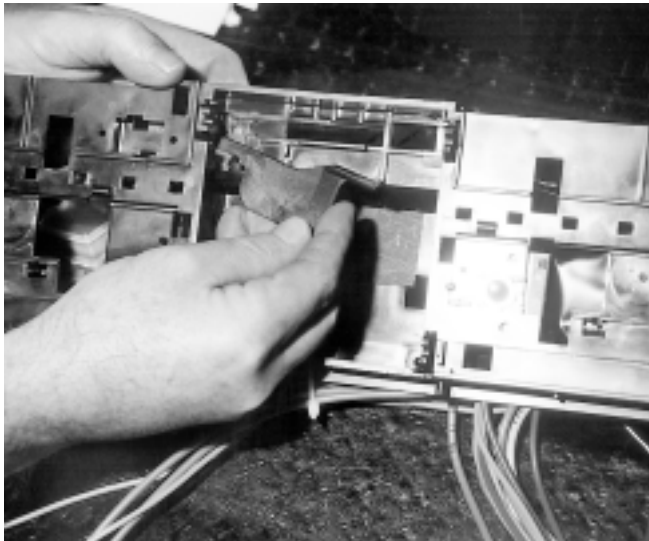
**CAUTION.** Switch off electrical power supply.

**5.2.49.1** To remove the door lock microswitch lever, first remove the door lock microswitch (Section 5.2.48).

**5.2.49.2** Exert pressure against the flanged head of the pivot point of the microswitch lever. The pivot point will spring from the control panel carrier frame.



**5.2.49.3** Twist the microswitch lever and remove from the front central square aperture of the control panel carrier frame.



**5.2.49.4** Reassemble the dishwasher in reverse order.

**5.2.49.5** Operate and test the dishwasher before leaving.

### 5.2.50 Timer Control - 5600 Model



**CAUTION.** Switch off electrical power supply.

**5.2.50.1** First remove the timer control knob from the shaft. Prior to removing the timer control, release the adhesive tape which holds the drip sheet over the timer control. Remove the two mounting screws and remove the drip sheet.

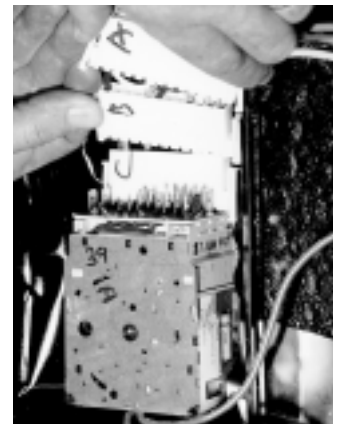
**NOTE:** The long wrap of the drip sheet is to the top of the control panel.

**5.2.50.2** On the left hand side face of the timer control is located the electrical input/output 1/4" terminals mounted on a printed circuit board. The wiring harness connections to the timer control are grouped into three white nylon block connectors. These are plugged into the three rows of terminals mounted on the side face of the timer control.

**NOTE:** On the top right corner of each white nylon block connector is a small rectangular locator, 3/16" long by 3/32" wide. The locator is used to identify the top of the block connector. Ensure each locator is to the top face of the timer control.



Remove 2 screws



Nylon blocks marked accordingly



**CAUTION:** It is possible to interchange white block connectors. Mark the face of the white block connector with a felt tipped pen to identify the front, middle and rear block connectors. On the lower edge of the printed circuit board are 3 letters identifying the following rows of terminals:

Front Row C

Middle Row B

Rear Row A

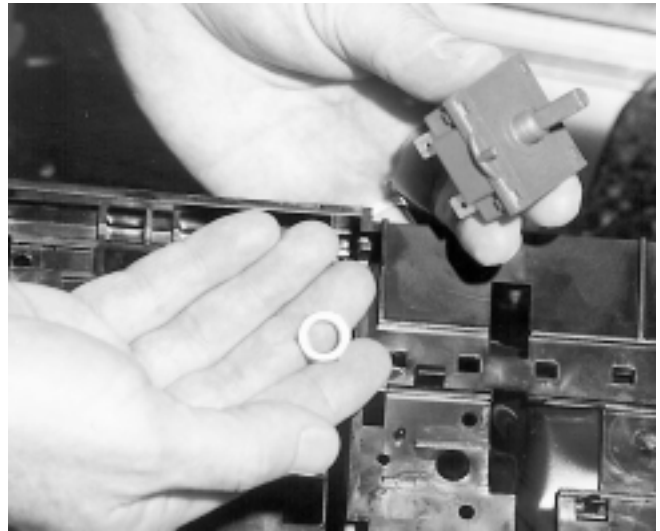
Mark the face of the white block connectors as they are removed from the timer control.

**5.2.50.3** To remove the three white block connectors, simply grasp the block connector at each end and squeeze the detent type retainers to release both pawls.

**5.2.50.4** Remove the ground connection to the timer control and lift the timer control clear.

**5.2.50.5** Reassemble the dishwasher in reverse order.

**5.2.50.6** Operate and test the dishwasher before leaving.



Switch removed

### 5.2.51 Power Select Switch - 5600 Model

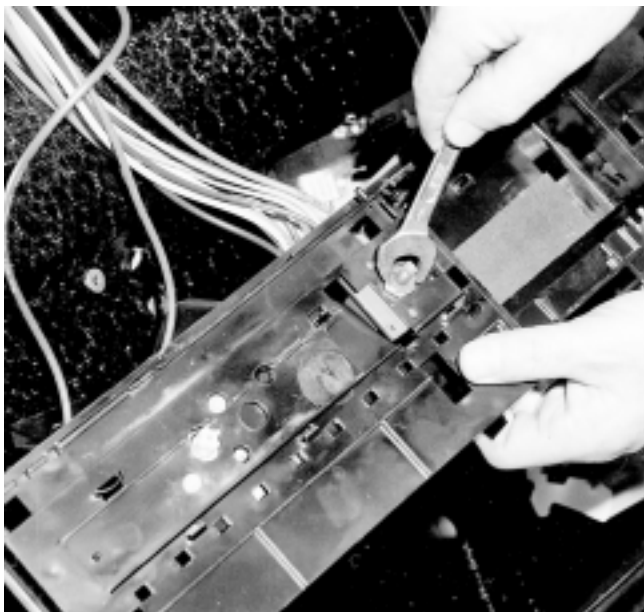


**CAUTION.** Switch off electrical power supply.

**5.2.51.1** To remove the power select switch, first remove the control panel assembly (Section 5.2.40).

**5.2.51.2** Remove the power select knob (Section 5.2.42).

**5.2.51.3** Remove the 9/16" hexagon flat nut from the power select switch.



**5.2.51.4** Lift clear the rotary control switch with the wiring harness attached to the terminals.

**5.2.51.5** Identify the terminal numbers 1, 2, 4, 5 and 6 with the corresponding wiring numbering system and remove the terminals from the rotary control.

**5.2.51.6** To reinstall the switch, reconnect the wiring to the correct terminals.

**5.2.51.7** Fit the power select switch to the control panel carrier frame, ensuring the locator is engaged in the correct locating hole in the control panel carrier frame.

**5.2.51.8** Reinstall the 9/16" hexagon flat nut to the power select switch. Do not overtighten.

**5.2.51.9** Reassemble the dishwasher in reverse order.

**5.2.51.10** Operate and test the dishwasher before leaving.

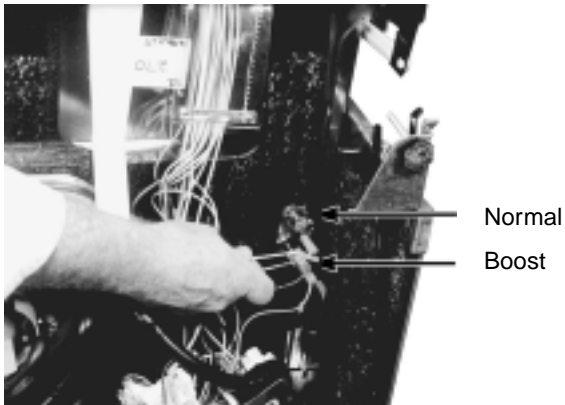
### 5.2.52 Thermostat - Normal (red dot) and Thermostat - Boost (black dot) - 5600 Model



**CAUTION. Switch off electrical power supply.**

The normal thermostat and boost thermostat are positioned on the right hand side of the dishwasher. The boost thermostat (black dot) is 1 9/16" directly to the rear of the normal thermostat (red dot). Reference to the photo below clearly indicates the actual position of both control thermostats on the underside of the tub.

A projection welded stud with an internal M4 x 0.7 thread is used to mount both control thermostats to the underside of the tub. The body of the normal thermostat and the boost thermostat has a male M4 x 0.7 thread configuration, which is screwed into the projection welded stud.



**5.2.52.1** To remove either normal or boost thermostat, refer to section 5.1 for access. Access will be improved by removing the pressure switch, capacitor and fill time switch mounting bracket (section 5.2.28).

**5.2.52.2** Remove the two wires from the terminals of the thermostat as shown below.

**5.2.52.3** Unscrew the appropriate thermostat from the projection welded stud (approximately five turns) as shown below.

Unscrew control thermostat from stud



**5.2.52.4** Lift the thermostat clear from the dishwasher.

**5.2.52.5** The wires connected to both thermostats are identified as follows:

#### Thermostat - Normal (red dot)

The 2 blue wires removed from normal thermostat are interchangeable.

One blue wire marked "T12A-M15" is connected to the timer terminal marked 12A.

The other blue wire marked "T11C-M" is connected to a timer terminal marked 11C.

#### Thermostat - Boost (black dot)

An orange wire marked "P1-N", connected to the number 1 terminal of the pressure switch, is connected to one of the terminals of the thermostat (either terminal).

The other wire, colored red and marked "T12B-N" is also connected to the timer terminal marked 12B. The "T12B-N" red wire can also be fitted to either terminal of the thermostat.

**5.2.52.6** Reassemble the dishwasher in reverse order.

**5.2.52.7** Operate and test the dishwasher before leaving.

### 5.2.53 Fill Time Switch - 5600 Model

The fill time switch is located on the bracket mounted on the front right hand chassis rail, which is also used to mount the wash motor capacitor and pressure switch.

To remove the fill time switch proceed as follows:



**CAUTION. Switch off electrical power supply.**

**NOTE:** Ensure the orientation of the switch position within the bracket remains the same when replaced.

**5.2.53.1** Refer to section 5.1 to gain access to the fill time switch.

**5.2.53.2** Compress the detent spring with a pair of needle nose pliers at the back of the mounting bracket, while pushing the fill time switch forward.

**5.2.53.3** When clear of the mounting bracket, remove the two wires from the terminal connections of the fill time switch.



**5.2.53.4** Reassemble the dishwasher in reverse order.

**5.2.53.5** Operate and test the dishwasher before leaving.

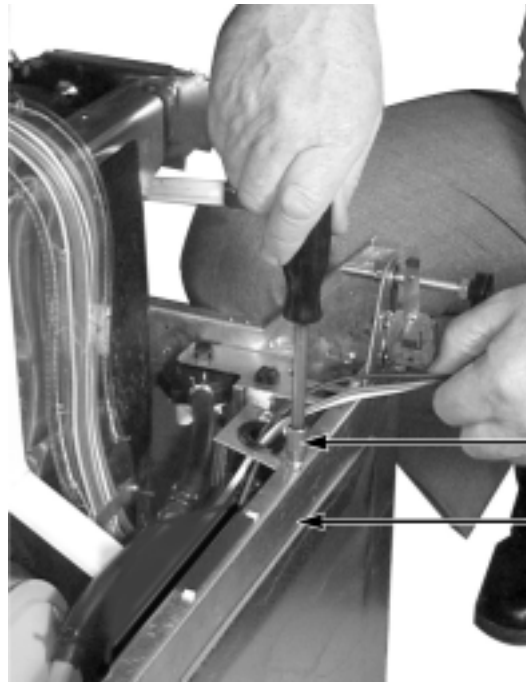
### 5.2.54 Main Terminal Block



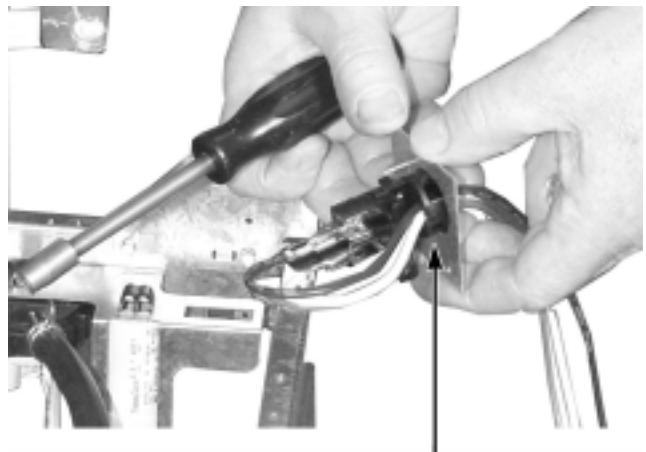
**CAUTION. Switch off electrical power supply.**

**5.2.54.1** Refer to section 5.1 for access to the main terminal block.

**5.2.54.2** Remove the main terminal block as illustrated.



Main terminal mounting bracket  
Base panel - Front edge



Main terminal assembly

**5.2.54.3** Reassemble the dishwasher in reverse order.

**5.2.54.4** Operate and test the dishwasher before leaving.

## 6.0 WIRING / PROGRAM INFORMATION

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### 6.1 LOOM NUMBERING CODE

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<b>Part Name</b>	<b>Suffix</b>
Over Temperature Thermostat	A
Electronic Control Board	B
Capacitor	C
Drain Pump	D
Door Microswitch	E
Fill Solenoid	F
Overfill Microswitch	G
Element	H
Light	L
Pressure Switch	P
Detergent Dispenser	S
Light Microswitch	U
Wash Pump	W
Terminal Block	X
Earth Terminal (Device Code)	E
Active Terminal (Device Code)	A
Neutral Terminal (Device Code)	N
Frame Earth	EE

#### **Microswitch Connections**

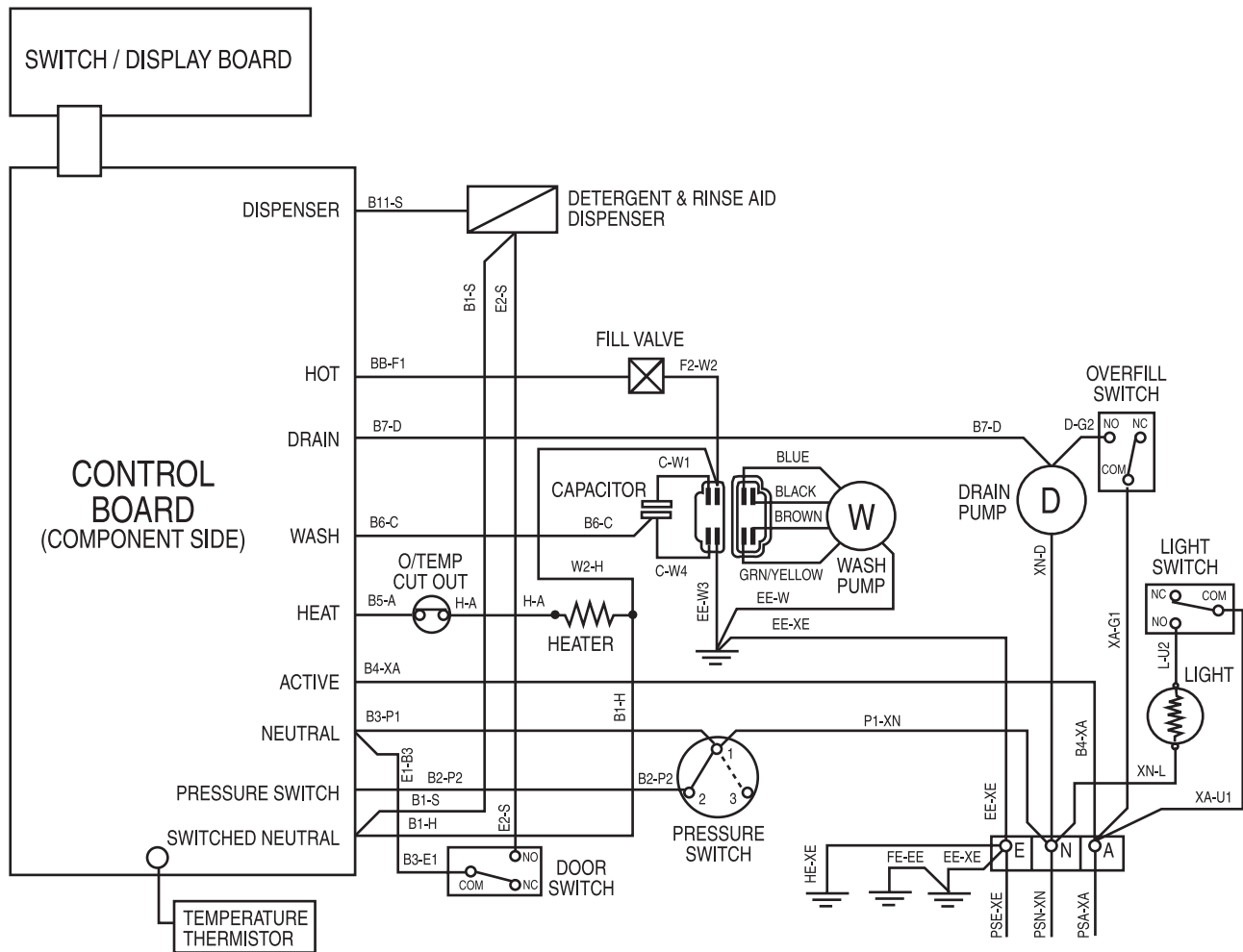
Common Pin	1
Normally Open Pin	2
Normally Closed Pin	3



## 6.5 Wiring Diagram - 5700 & 5900 Models



Important. Check all wiring connections before reconnecting to supply.



**NOTE:** Schematics and Wiring Diagrams label **L1** as **A** for **Active**, **N** for **Neutral**, and **Ground (GND)** as **E** for **Earth**.

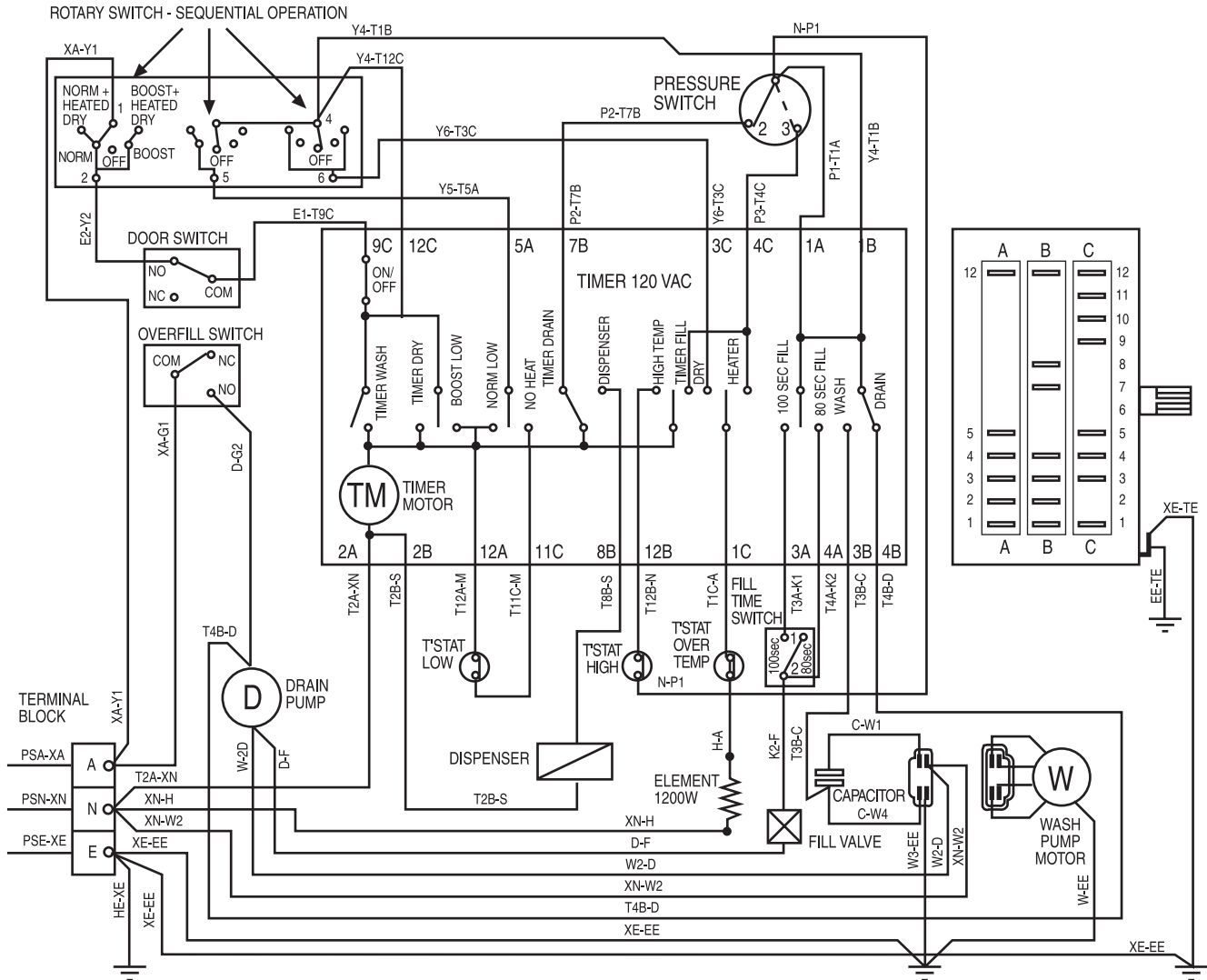




## 6.5 Wiring Diagram - 5600 Model



Important. Check all wiring connections before reconnecting to supply.



**NOTE:** Schematics and Wiring Diagrams label **L1** as **A** for **Active**, **N** for **Neutral**, and **Ground (GND)** as **E** for **Earth**.