

## **WARNING : DISCONNECT THE MACHINE FROM THE POWER POINT BEFORE PERFORMING ANY OF THE FOLLOWING CHECKS**

Remove the machine top. All of the following checks can be performed without removing the machine front panel

### CHECKING INDIVIDUAL MACHINE COMPONENTS

#### Push Button Switches - Figure 1

To check the push button control panel switches, unplug the edge connectors on the timer, set the Ohmmeter to the lowest scale and test between the points indicated in Figure 1.

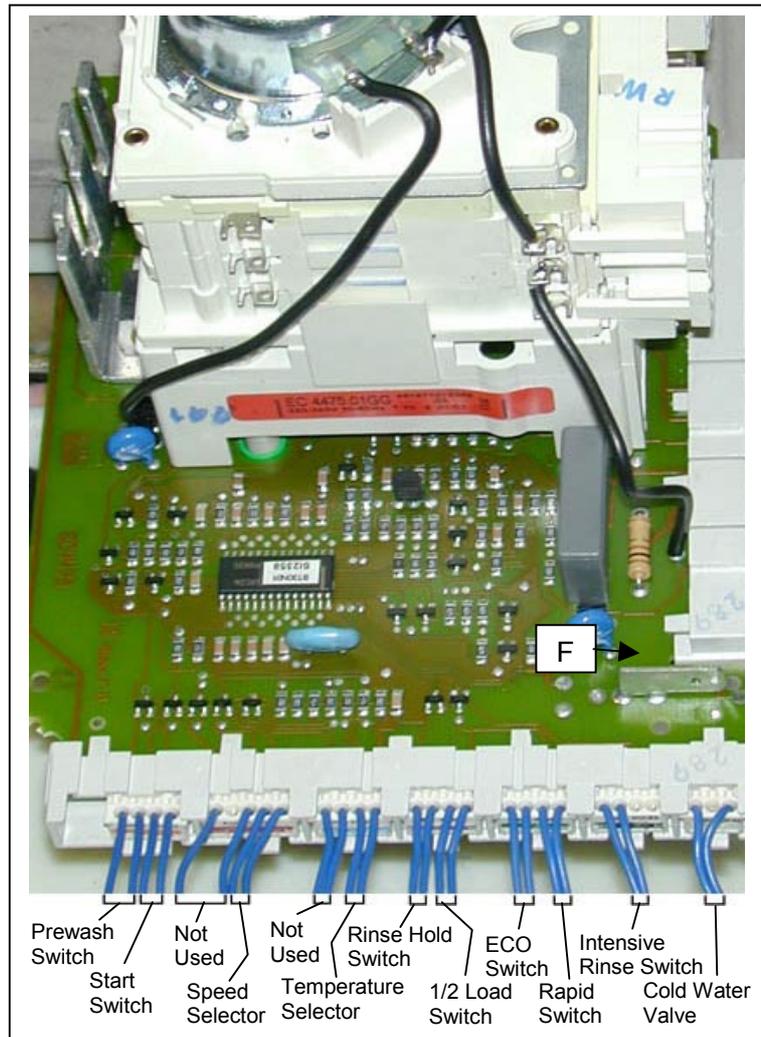
By pressing each switch, the indicated resistance will change from minimum to maximum. Remember that the Start switch button must be held in to keep the switch contacts closed

#### Temperature and Speed Selector Switches - Figures 1, 2, 3 and 4

To check the speed selector switch, unplug the speed selector switch edge connector from the timer and connect the Ohmmeter leads as shown in Figure 2 (taking care not to damage the edge connector contacts). Rotate the switch and compare the meter readings with the table in the Technical Data section of the appropriate service manual

#### Cold Water Valve - Figure 1

Select an Ohmmeter range of 5k $\Omega$  or greater and compare the reading with the valve resistance given in the Technical data section of the service manual. The valve resistance is generally in the order of 3 k $\Omega$

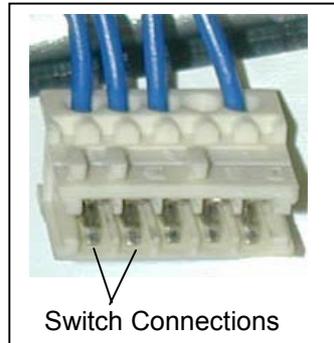


**Figure 1**



**Figure 2**

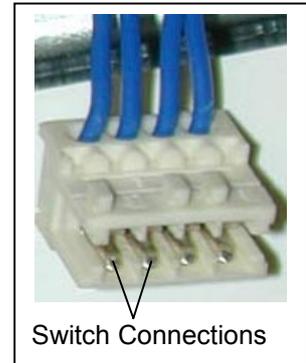
Checking Speed Selector Switch



Switch Connections

**Figure 3**

Speed Selector  
Edge Connector



Switch Connections

**Figure 4**

Temperature Selector  
Edge Connector

Door Safety Switch - Figure 5

With the power disconnected, the only component of the door safety switch that can be checked is bi-metal heater.

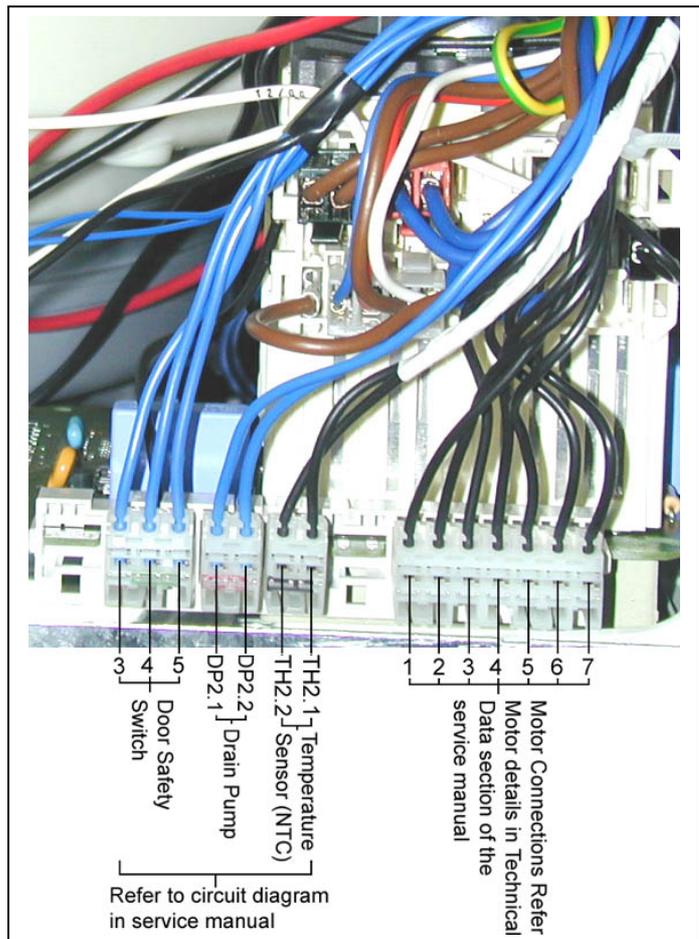
Typically, the cold resistance of the safety switch bi-metal heater (Terminals 3 & 5) is 0.7 - 0.8 kΩ

Drain Pump - Figure 5

Check the resistance of the drain pump against the figure given in the Technical Data section of the service manual.

Temperature Sensor (NTC) - Figure 5

Estimate the temperature at the sensor and check the resistance of the NTC against the figures given in the table in the Technical Data section of the service manual.



**Figure 5**

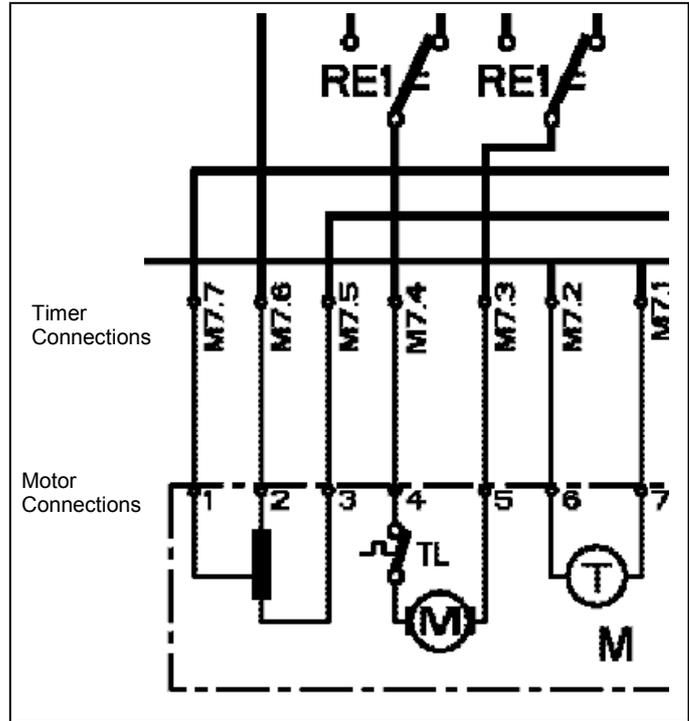
**Motor - Figures 5 and 6**

Check the resistance of the motor components against the figures given in the Technical Data section of the service manual.

It is possible to get large variations in the resistance of the armature (Terminals 4 & 5) as the circuit is via the motor brushes. Move the washing drum slightly to obtain a readable figure.

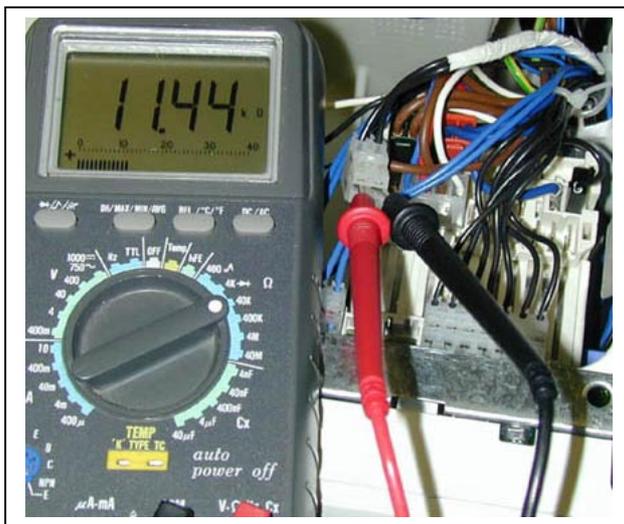
If the motor is very hot, the thermal overload may have opened. Allow to cool before testing.

**BEWARE:** The resistance of most of the motor parts are very low and few multimeters are capable of giving a truly accurate reading.



**Figure 6**

- Connections 1,2 & 3 : Field windings
- Connections 4 & 5 : Armature (Inc thermal overload & brushes)
- Connections 6 & 7 : Tachometer



**Figure 7**

Checking NTC - Figure 5

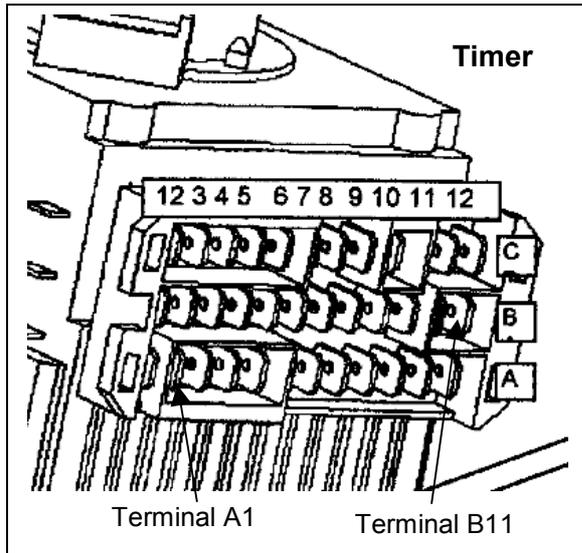
The meter in Figure 4 indicates that the resistance of the NTC is 11.44 kΩ.

The table in the Technical Data section of the service manual for the AWM312/3 gives a resistance of 9.8 kΩ at 30°C and 35.9 kΩ at 0°C. As the temperature of the NTC was estimated to be around 20°C, 11.4 kΩ would seem satisfactory

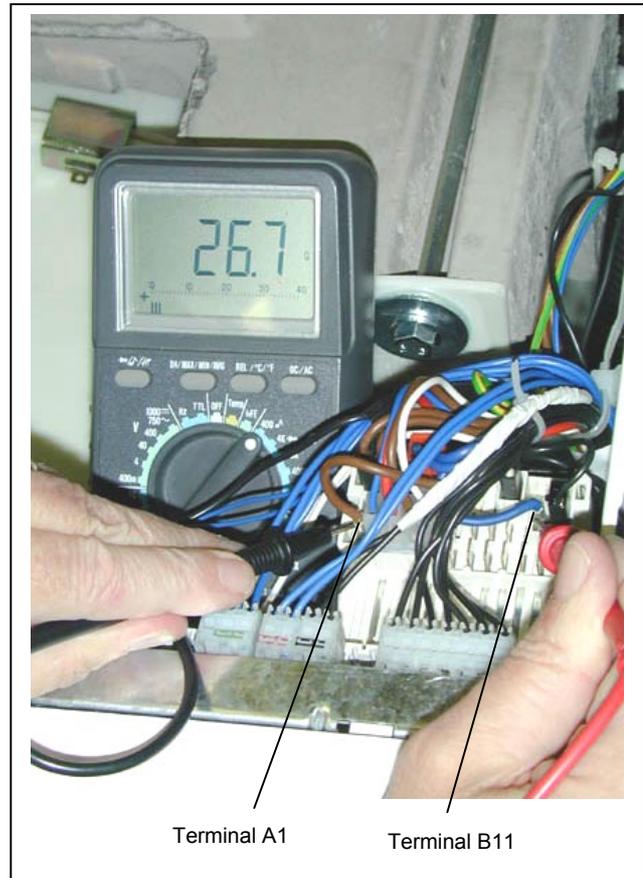
### Checking the Heater Element - Figures 8 and 9

Set the Ohmmeter on a range of about  $50\ \Omega$  and check the resistance between terminals B11 (Blue wire) and A1 (Brown wire).

Typically, the resistance of the heating element is in the order of  $27\ \Omega$



**Figure 8**



**Figure 9**

### Checking the Hot water Valve

The hot water solenoid valve is connected between terminals F (see Figure 1) and B12 of the timer. (Terminal F is shown in Figure 1). One of these connections **must** be disconnected from the timer or an incorrect reading will result. Typical resistance of these valves is in the order of  $3\ \text{k}\Omega$ .

### Checking the Door Microswitch

Operating the door handle will open and close the door microswitch. Ensure that the switch is operating positively by connecting the Ohmmeter between terminals C4 and C5 and operating the door handle. As the door is opened, small movements of the door handle should not cause the switch to operate.

### Checking the Pressure Switch (Pressostat)

It may be easier to check the pressure switch by removing the switch from the machine. This can be done without removing the machine front panel. Disconnect the tube and wiring harness and turn the switch approximately 90° to release the fixing.

With the pressure switch removed, the switch across contacts 11 & 12 should be closed. Gently blowing into the chamber will cause contacts 11 & 12 to open and contacts 11 & 14 to close. Added pressure into the chamber will cause contacts 11 & 16 to close

Also check that the tube from the switch to the tub is clear of any blockages.



Figure 10



SERVICE POINTER  
AWM312 FRONT LOAD  
WASHING MACHINE

Issue : 1  
Issued : 20 July 2001  
Page : 6 of 6

**THE FOLLOWING CHECK REQUIRES THE MACHINE TO BE CONNECTED TO THE ELECTRICITY MAINS. THE CABINET IS SOLIDLY EARTHED AND THE COMPONENTS ARE AT MAINS VOLTAGE ABOVE EARTH. THIS IS A HIGHLY HAZARDOUS SITUATION AND CONTACT WITH LIVE PARTS WILL CAUSE DEATH.**

Checking the Door Safety Switch

As the door safety switch contacts are closed by the action of a bi-metal strip, the switch cannot be checked without connecting it to the mains.



Figure 11

