

# **Detailed Fault Codes – 500 Series Machines**

## **1 (00000001) Display Module Fault**

### **Action**

- a) Replace Display Module (Refer to 9.2.3 section of the service manual to ensure Display Module correctly located in console).

## **FAULT CODE = 2 (00000010) Display Module Fault**

An error has been encountered when reading the pressure sensor.

- a) Replace Display Module.

## **FAULT CODE = 3 (00000011) Motor Controller Module Fault**

### **Action**

- a) Turn machine off at wall socket and switch back on again after 5 seconds.
- b) Replace Motor Controller Module.

## **FAULT CODE = 4 (00000100) Motor Controller Module Fault**

The Display Module has encountered difficulty in communicating with the Motor Controller Module.

### **Action**

- a) Turn the machine off at wall socket and switch back on again after 5 seconds. Restart the machine.
- b) Replace Motor Controller Module.
- c) Replace Display Module. If new display Module corrects fault, refit original Motor Controller Module.

## **FAULT CODE = 5 (00000101) Communications Fault**

The Display Module has encountered difficulty in communicating with the Motor Controller Module.

### **Action**

- a) Turn Machine off at wall socket and switch back on again after 5 seconds. Restart the machine.
- b) Check that the connections of the 12 way wiring harness between the Display Module and the Motor Controller Module are sound, no corrosion etc
- c) Check for moisture in console area. Dry out if necessary.

- d) Replace Display Module.
- e) Replace Motor Controller Module. If new Motor Controller Module corrects fault, refit original Display Module.

**FAULT CODE = 6 (0000110) Display Module Fault**

The pressure sensor is sending an incorrect signal to the Display Module microprocessor.

**Action**

- a) Replace Display Module.

**FAULT CODE = 7 (0000111) Display Module Fault**

The Display Module microprocessor found a memory fault.

**Action**

- a) Replace Display Module

**FAULT CODE = 8 (00001000) Display Module Fault**

The Display Module microprocessor has been unable to start up correctly.

**Action**

- a) Turn machine off at wall socket and switch back on again after 5 seconds. Restart the machine.
- b) Replace the Display Module.

**FAULT CODE = 9 (00001001) Display Module Fault**

The Display Module has not been correctly located in the console. This will not activate location switch.

**Action**

- a) Refer to section 9.2.3 of the Service Manual.
- b) If this fault has appeared during normal operation of the machine, replace Display Module.
- c) If this fault has appeared after installation of a new Display Module, enter the option Adjustment Mode. This will re-set the microprocessor.

**FAULT CODE = 10 (00001010) Temperature Sensor Fault**

The temperature sensor may be open circuit or ambient temperature is below –10deg C.

**Action**

- a) Check the 12-way harness between the Display Module and the Motor Controller Module for bad connections.
- b) Check for moisture in the console area.
- c) Replace the Display Module.
- d) Replace the Motor Controller Module. If new Motor Controller Module corrects fault, refit original Display Module.

#### **FAULT CODE = 11 (00001011) Pressure Sensor Fault**

While measuring the water level the display microprocessor has detected a negative pressure. This may have been caused by reconnecting the pressure tube to the pressure sensor while the bowl has been partly filled with water.

##### **Action**

- a) Check bowl is fully pumped out, remove pressure tube from pressure sensor, clear pressure tube of any water and reconnect tube.
- b) Replace the Display Module.

#### **FAULT CODE = 12 (00001100) Flood Protection Fault**

The Display Module has found the water level to be above the flood level and tried to pump the excess water out. After pumping for 30 seconds, it has been unable to lower the water level below the flood level. Either the water valves are stuck on and are letting water in at a flow rate that is higher than the pump can handle, or the pump is blocked and can't remove the excess water.

##### **Action**

- a) Check that the water valves turn off mechanically (remove power from machine). If not, replace faulty valve or valves.
- b) Check pump and drain hose for blockages. Check drain hose is at the correct height and is not kinked.
- c) Replace the Display Module.

#### **FAULT CODE = 13 (00001101) Display Module Fault (Pump Circuit Error)**

The Display Module detected that the pump is not in circuit.

##### **Action**

- a) Refer to fault 14.

#### **FAULT CODE = 14 (00001110) Pump Connection Fault**

The Display Module has detected that the pump is not on when it should be.

**Action**

- a) The pump is fitted with a thermal cut out device. Check if this device has been activated. If it has, wait until pump cools down before restarting. Check for any pump blockage and check condition of pump, ie pump seizure.
- b) Check for open circuit pump windings. Check the resistance of the pump.
- c) Check the pump harness or the connectors for an open circuit.
- d) Replace Display Module.

**FAULT CODE = 15 (Display Module Fault (Pump Circuit Error))**

The Display Module has read an incorrect voltage on the pump circuit.

**Action**

- a) Replace Display Module.

# If the machine is running at well below its rated supply voltage and the pump has operated for more than 4 seconds at this voltage, this fault will also appear.

**FAULT CODE = 18 (00010010) Display/Motor Controller Out of Sequence**

# Same as number 17.

**FAULT CODE = 19 (00010011) Display/Motor Controller Out of Sequence**

# Same as number 17.

**FAULT CODE = 20 (00010100) Display/Motor Controller Out of Sequence**

# Same as number 17.

**FAULT CODE = 22 (00010110) Display/Motor Controller Out of Sequence**

# Same as number 17.

**FAULT CODE = 23 (00010111) Display/Motor Controller Out of Sequence**

# Same as number 17.

**FAULT CODE = 28 (00011100) Display/Motor Controller Out of Sequence**

# Same as number 17.

**FAULT CODE = 29 (00011101) Display/Motor Controller Out of Sequence**

# Same as number 17.

**FAULT CODE = 30 (00011110) Display/Motor Controller Out of Sequence**

# Same as number 17.

**FAULT CODE = 32 (00100000) Display/Motor Controller Out of Sequence**

The Display Module has detected that the pump is on when in fact it is off. This suggests a fault in the Display Module.

**Action**

- a) Check for moisture in the console area.
- b) Replace Display Module.

**FAULT CODE = 33 (00100001) Water Valve Fault**

The most likely cause of this fault is that one or both of the valves have not been connected correctly or not connected at all. A secondary cause is that one or both of the valve coils are faulty (open circuit).

**Action**

- a) Check that the wiring to the valves are correct.
- b) Check that the valve coils are not open circuit.
- c) Replace the Display Module.

**FAULT CODE = 34 (00100010) Motor Controller Module Fault (Brake Resistor)**

The circuit that controls braking of the motor is faulty.

**Action**

- a) Replace Motor Controller Module.
- b) Replace Display Module as well.

**FAULT CODE = 35 (00100011) Motor Controller Reset Error**

The Display Module has sent a false signal to the Motor Controller Module.

**Action**

- a) Check the connection on the 12-way harness between the Motor Controller Module and the Display Module.

- b) Replace the Display Module.

#### **FAULT CODE = 36 (00100100) Water Leak Fault**

The water level has been topped up more than 4 times during agitate. This is excessive as normally only one or two top ups are required to replace the air that has escaped from a full load during agitate. The most likely cause is that the machine is syphoning. The other alternative is that the machine has developed a leak.

#### **Action**

- a) Check hose guide is fitted and check hose does not protrude more than 20mm beyond the guide. Check drain hose is 850-1200mm from floor.
- b) Check pressure tube connection on outer bowl.
- c) Check for water leaks by looking through the front inspection cover.

#### **FAULT CODE = 37 (00100101) Pump Blocked Error**

While draining, the water level reading from the pressure sensor has not changed for over 10 seconds. The three likely reasons for the fault is: (1) That the drain hose has been squashed or kinked and the pump out rate has been dramatically reduced. (2) The pump is partially or fully blocked. (3) The machine is pumping to an unusually high head or into an extended length of drain hose. In these cases flow rate could be significantly impaired.

#### **Action**

- a) Check that the drain hose has not been kinked or blocked.
- b) Check length of drain hose does not exceed the specified maximum length. A 1-metre extension hose of the same diameter fitted to the existing drain hose is the maximum allowable length. Try to reduce length if excessively to long.
- c) Refer Section 15.1 Pump Blockage Procedure.

#### **FAULT CODE = 38 (00100110) Pressure Sensor Fault**

The Pressure Sensor has recorded a water level of empty while it is agitating. The water level must have been greater than empty for the machine to begin agitating. The most likely cause of this fault is that the pressure tube has been severed, fallen off, or is leaking while agitating. Alternatively, the pressure sensor may be faulty.

#### **Action**

- a) Check that the pressure tube is intact, has not been cut and is not leaking.
- b) Replace the Display Module.

#### **FAULT CODE = 39 (00100111) Pressure Tube/Sensor Fault**

The probable cause of this fault is that the pressure tube has become blocked or kinked or has fallen off completely. Alternatively the pressure sensor may be faulty.

**Action**

- a) Check that the pressure tube is intact, not blocked with water or dirt, and is not kinked.
- b) Replace Display Module.

**FAULT CODE = 40 (00101000) Bowl Dis-Engaged Fault**

While carrying out a bowl check, the Display Module has found that the bowl is not engaged even though the pressure sensor indicates that the bowl is empty. The Display Module continues to check for 60 seconds, after which time it displays this fault.

**Action**

- a) If the machine is empty of water, carry out clutch disassembly procedure and inspect spline drive.
- b) If water is still visible down the centre of the agitator, i.e. the bowl should still be floating, check the pressure tube has not come off and that it is not kinked.
- c) Replace Display Module.

**FAULT CODE = 41 (00101001) Temperature Sensor Fault**

The temperature sensor is measuring temperatures above 110deg C. The fault is probably due to a short circuit in the temperature sensor wiring.

**Action**

- a) Check the 12-way harness between the Display Module and the Motor Controller Module for possible shorts.
- b) Check for moisture in the console area.
- c) Replace the Display Module.
- d) Replace the Motor Controller Module. If new Motor Controller Module corrects fault, refit original Display Module.

**FAULT CODE = 42 (00101010) Rotor Fault**

**Action**

- a) Turn the machine off at the wall and switch on again after 5 seconds. Restart the machine.

**FAULT CODE = 43 (00101011) Out of Balance Switch Fault**

When the machine has entered the final spin, it has checked the out of balance switch and has found it to be in the closed position.

**Action**

- a) Check the Out Of Balance switch and lever to make sure the switch is not jammed on.
- b) Check the wiring to the OOB microswitch. Some switches have 3 terminals. Make sure it is wired to the normally opened position.
- c) If fault persists, change the display module.

**FAULT CODE = 130 (1000010) Single Rotor Position Sensor Error**

Likely causes of this fault are bad connection on the harness between the Rotor Position Sensor and the Motor Controller Module, or faulty Rotor Position Sensor.

**Action**

- a) Check Rotor Position Harness connection on the Rotor Position Sensor and Motor Controller Module.
- b) Replace the Rotor Position Sensor.
- c) Replace Motor Controller Module. If new Rotor Position Sensor Harness corrects fault, refit the original Motor Controller Module and Rotor Position Sensor.
- d) Replace Rotor Position Sensor Harness. If new Rotor Position Sensor Harness corrects the fault, refit the original Motor Controller Module and Rotor Position Sensor.

**FAULT CODE = 131 (1000011) Rotor Position Sensor Error**

**Action**

- a) Use same procedures as fault number 130.

The Motor Controller Module Has detected excess current in the motor or electronic switches. This fault has occurred momentarily.

**Action**

- a) Check motor harness is connected to the motor by checking resistance at console end.
- b) Check motor harness, motor windings, and connectors for shorts or moisture.
- c) Check Rotor Position Sensor and harness for water, mechanical damage.
- d) Replace the Motor Controller Module.

**FAULT CODE = 133 (10000101) Repetitive Current Trip**

The Motor Controller Module has detected excess current in the Motor or electronic switches. This is a permanent fault and cannot be cleared.

**Action**

Use same procedure as Fault 132.



**FAULT CODE = 136 (10001000) Motor Stall**

The Motor Controller Module has been unable to start the motor.

**Action**

- a) Check mechanical system for obstructions which prevent rotation of the agitator and bowl.
- b) Check motor harness is connected to the motor by checking resistance at console end.
- c) Check for correct resistance in motor winding
- d) Check the Rotor Position Sensor and associate harness for water, mechanical damage or corrosion.
- e) Replace the Motor Controller Module.

**FAULT CODE = 144 (10010000) Motor Controller Software Trap**

The microprocessor in the Motor Controller Module is not operating correctly.

**Action**

- a) Turn machine off at wall socket and switch back on again after 5 seconds.
- b) Check connections on harness between Display Module and Motor Module.
- c) Replace Motor Controller Module.

**FAULT CODE = 160 (10100000) Bowl Engaged**

The bowl has re-engaged itself during agitate.

**Action**

- a) Make sure the bowl is not over loaded with too many clothes.
- b) Check that the inner bowl and agitator are not locked together by any foreign object under the agitator.
- c) Check that the spline teeth are not locked together with dirt, lint, etc. Carry out clutch disassembly procedure – Refer Section 15.4. Ensure Spline drive and spline driven are clean and undamaged.