

**WARNING: DISCONNECT APPLIANCE FROM MAINS BEFORE USING TEST PROCEDURE
SET THE MULTIMETER TO MEASURE RESISTANCE - Ω**

For identification, refer to the schematic and wiring diagrams.

| Function | Action | Expected Readings | Possible Fault |
|--|---|---|---|
| POT (Potentiometer) <i>Variable resistor within Speed Control</i> On 5-pin connector, measure pins 1 & 2 | Set the Speed Control to the three settings, and check. Check for a smooth resistance change as the Control is slowly rotated (use an analogue meter?) | "P": 320 Ω to 360 Ω "0": 1700 Ω to 2000 Ω "MAX": 9900Ω to 10200 Ω Smooth change in resistance as Control is rotated. | Speed Control PCB or Speed Control Module mechanical parts |
| STBY (Standby Switch) <i>"Standby" push switch (centre of Speed Control)</i> On 5-pin connector, measure pins 4 & 2 | Check resistance when at rest and also when held depressed. | At rest: 7.2 kΩ to 7.8kΩ When depressed: s/c | Speed Control PCB or Speed Control Module mechanical parts |
| HL (Head Lift) <i>Head lift sensing switch</i> On headlift connector. | Check that switch operates when the head is moved up from its locked position. Check that its resistance value remains constant when the head is locked down. | Head locked down: s/c Head not in 'locked down' position: o/c | Head Lift Switch or Locking Mechanism (Head Lift assembly) |
| SPEED COIL <i>Motor shaft speed sensor</i> On motor sensor connector, measure the white wire. | Check that the resistance of the motor shaft speed sensor is within limits. | 50 Ω to 70 Ω | Speed Coil (part of motor assembly) |
| NTC <i>Motor winding temperature sensor</i> On motor sensor connector, measure the blue wire. | Check that the resistance of the NTC fitted to the motor coil windings corresponds with the actual motor temperature. | Refer to table below | NTC (part of motor assembly) |
| MOTOR <i>Motor resistance (as seen by the electronics)</i> On the main motor winding, measure the yellow and blue wires | Check that the resistance across the motor is within limits, at all rotational positions. | 10 Ω to 50 Ω | Motor |

Note that the wire crimps of any cable connectors may also be considered as possible fault points.

o/c = open circuit resistance expected (greater than 1 MΩ).

s/c = short circuit resistance expected (less than 4 Ω).

| Motor Temperature (°C) | Nominal NTC Resistance (KΩ) |
|------------------------|-----------------------------|
| 15 | 160 |
| 20 | 125 |
| 25 | 100 |
| 30 | 80 |
| 35 | 65 |
| 40 | 53 |
| 50 | 36 |

| Motor Temperature (°C) | Nominal NTC Resistance (KΩ) |
|------------------------|-----------------------------|
| 60 | 25 |
| 70 | 17 |
| 80 | 12.5 |
| 90 | 9.1 |
| 100 | 6.7 |
| 110 | 5 |
| 120 | 3.8 |