

>> No Motor Movement Voltage Checkpoints

Upper Board Checkpoints

Procedures:

Using a dc volt meter (if non-auto ranging set for the 20vdc range), test the voltage at the grey and again at the white console cable connections using the yellow, orange or red wires as ground. Two tests are to be performed; test once with power on before the treadmill is started and again after Start is pressed.

Desired Results:

The voltage charts contain typical desired results on a fully functional system. A variance from the norm would indicate a defective component.

Checkpoint	Voltage Before Start	Volatge After Start
Console Cable Grey to Yellow (Gnd)	0.0 vdc	0.3 +/- .3 vdc, increases as speed increases. (as shown on console)
Console Cable White to Yellow (Gnd)	4.3 +/- .3 vdc	0.0 vdc

Lower Board Checkpoints

Console Cable Connection

Procedures:

Using a dc volt meter (if non-auto ranging set for the 20vdc range), test the voltage at the grey and again at the white console cable connections using the yellow, orange or red wires as ground. Two tests are to be performed; test once with power on before the treadmill is started and again after Start is pressed. Note: this is the same procedure as the upper board console cable connection. If results vary from the upper board, the console cable is the likely cause and a continuity check should be performed.

Desired Results:

The voltage charts contain typical desired results on a fully functional system. A variance from the norm would indicate a defective component.

Checkpoint	Voltage Before Start	Volatge After Start
Console Cable Grey to Yellow (Gnd)	0.0 vdc	0.3 vdc, increases as speed increases. (as shown on console)
Console Cable White to Yellow (Gnd)	4.3 vdc	0.0 vdc
Note: 2.75 Hp motors and higher: the reading on the console cable -white to yellow (gnd) is 1.6 + or - .3vdc		

Digital Speed Sensor Connection

Procedures:

Using a dc volt meter (if non-auto ranging set for the 20vdc range); test the voltage at the red wire and again at the yellow wire using the blue, black or black as ground. The yellow wire should be measure twice, once with the optic speed sensor obstructed and once not obstructed. This can be done by slowly turning the motor and aligning the tines or open spaces of the optic disk with the sensor.

Desired Results:

The voltage charts contain typical desired results on a fully functional system. A variance from the norm would indicate a defective component.

Checkpoint	Voltage With Sensor Obstructed	Volatge With Sensor Not Obstructed
Yellow Digital Speed Sensor	5.0 +/- 0.4 vdc	0.3 vdc
Red Digital Speed Sensor	5.0 +/- 0.4 vdc	5.0 +/- 0.4 vdc

>> No Motor Movement Voltage Checkpoints Continued

Drive Motor Connection

Procedures:

Using a dc volt meter (if non-auto ranging set for the 200vdc range), test the voltage at the red and black motor leads with the motor still attached.

Note: This should be tested after the console cable and optic sensor points because they can give the same results as a defective lower board.

Note: A non-functional system may still have a voltage present with no motor attached. For accurate results, the motor must be attached when the voltage is checked.

Desired Results:

The voltage charts contain typical desired results on a fully functional system. A variance from the norm would indicate a defective component.

Checkpoint	Voltage Before Start	Voltage After Start @ 0.5mph	Volatge After Start @ 10.0mph
Across Motor Out, No Motor Attached	0.0-22.5 vdc	0.0-22.5 vdc	0.0-22.5 vdc
Across Motor Out, W/ Motor Attached	0.0 vdc	2.5- 0 vdc	80-100.0 vdc

Drive Motor Checkpoints

Procedures:

Unplug the motor from the lower board. Using a dc volt meter (if non-auto ranging set for the 20vdc range), attach volt meter leads directly into the motor leads and turn the running belt.

Desired Results:

The motor should generate 5-15 vdc depending on the speed it is turned.

Procedures:

Unplug the motor from the lower board. Using an ohm meter (if non-auto ranging set for the 200 ohm range), attach ohm meter leads directly into the motor leads.

Desired Results:

The motor should read approximately 1.0-1.5 ohms.