

4.0 Zero the Grade Actuator Motor

- 4.1 Plug the Actuator cable into the VSD.
- 4.2 Plug the Power Cord into the outlet and turn the machine on.
- 4.3 On the console press the "INCLINE UP" key to 4% incline. The shaft on the Actuator will rotate for a short period of time. Wait until it stops.
NOTE: If console displays "Grade Limit Error", turn power off, then back on and repeat Step 4.3.
- 4.4 On the console press the "DECLINE DOWN" key to 0%. The shaft of the Actuator will rotate in the opposite direction. Wait until it stops.
- 4.5 Insert a new grade nut into the grade block, and secure it with the two (2) lock washers and 4-millimeter screws.
- 4.6 Thread the Grade Block Nut onto the Actuator shaft, until the tip of the shaft can barely be seen (two or three threads inside the block).
- 4.7 Lubricate the grade block, and secure it to the swing arm using the two (2) shoulder bushings and 8-millimeter screws. Tighten the screws until the bushings are flush.
Note: When installing the shoulder bushing, turn the bushings until the flat side of the bushings match the flat side of the mounting holes on the swing arm.
- 4.8 Press the "QUICK START" key, then "INCLINE INCREASE/DECREASE" keys to verify operation.

5.0 Reinstall the Treadmill Hood

- 5.1 Install the treadmill hood over the motor compartment.
- 5.2 Install the six (6) screws in the treadmill hood and tighten.
- 5.3 Plug the AC power cord into the treadmill, and turn on the treadmill circuit breaker switch.

Problems with the Drive Motor

The 3-phase AC drive motor is equipped with thermal protection circuitry. If you receive a "POWER LOSS" error that consistently reoccurs when the power is cycled to the treadmill, perform the steps below.

To verify if the thermal switch has opened:

- 1 Unplug P5 and P6 from the VSD board.
- 2 Ohm between the two wires and verify there is a short. If your reading shows an open circuit, the motor has overheated. Let the motor cool down for 60 minutes to allow the thermal switch to close. If the problem persists, replace the deck and walk belt.

- 3 If you receive a "POWER LOSS" error after allowing the motor to cool down for 60 minutes; re-check the thermal switch wires as described in step 2. If the continuity test fails (your multimeter reads an "open"), replace the drive motor. If you have continuity between the two thermal switch wires and you receive a "POWER LOSS" error at power-up, replace the VSD.

Important: When replacing the main motor, be sure to install the rubber insulators under the washers. If after replacing the motor the belt runs backwards, swap any two adjacent motor phase wires P7 and P8, or P8 and P9.

Replacing the Drive Motor



1.0 Remove the Treadmill Hood

- 1.1 Turn the treadmill circuit breaker off, and unplug the treadmill power cord.
- 1.2 Remove the six (6) screws on the treadmill hood.
- 1.3 Lift off the hood.

2.0 Remove the Motor

- 2.1 Disconnect P5, P6, P7, P8, and P9 from the VSD board. (See appropriate wiring schematic on pages 46-48 for the location of where the plugs connect to the VSD board.)

