

Effective Date: 12/21/10	 Service Bulletin	Revision
Warranty: Depends on Install Date	How To Take an Amp Draw on Matrix Treadmills	Revised Date:
Time Required: 30 minutes	Models Affected: Matrix Treadmills	Prepared by: Kevin Oeltjenbruns

DESCRIPTION

There has been some confusion on how to correctly take an amp draw on Matrix treadmills.

SOLUTION

This simple instruction is to resolve any questions about how to take an amp draw.

TOOLS REQUIRED

Multi-meter – preferably a clamp style.

PROCEDURE

1. Remove the 2 screws holding the motor cover to the frame and remove the cover (Figures A & B).
CAUTION: Be careful not to touch or short out any live electrical voltage points.



Figure A



Figure B

2. Identify the black AC Line wire connecting to the Motor Control Board (MCB). This wire will be combined with a white and green wire in a 3 pin connector plugged into the MCB (Figures C & D).



Figure C

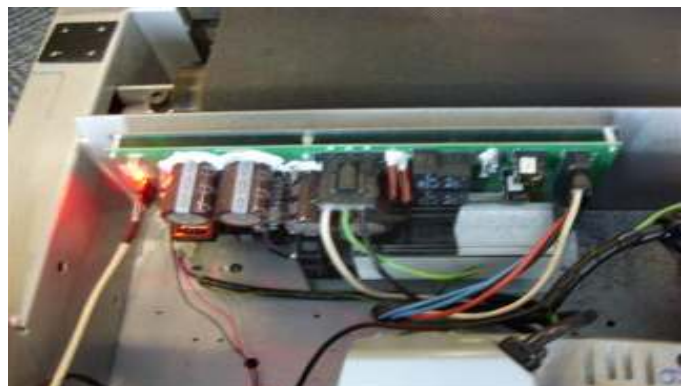


Figure D

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3. Attach the clamp of the multi-meter around the black AC Line wire near the MCB.
4. With the multi-meter in AC Current continuous measurement mode, take the current draw reading after stabilizing at a speed setting of 2mph with no load on the treadmill running belt and the incline at 0%. Repeat the same readings at 4, 6, and 12mph settings.
 - If these readings exceed 2.5 amps at 2mph, 3.5 amps at 4mph, 4.0 amps at 6mph, or 6.0 amps at 12mph there may be issues with the drive belt system impairing rotation causing additional load. The problem could be with the motor, drive belt, drive belt tensioner, or front / rear rollers.
 - If the above conditions are present, replace the problematic part and then retest the treadmill.
 - If the amp draws do not exceed the readings above without a load, continue to Step 5.
5. With the multi-meter in AC Current “max or peak” measurement mode, take the current draw reading after stabilizing at a speed setting of 2mph with a 200lb user walking on the treadmill running belt and the incline at 0%. The user should walk as consistently as possible for at least 1 minute with good balance attempting to place consistent load on the running belt with each step. Take the middle or average “max” reading from at least 3 separate repeated test runs to get as accurate a reading as possible. Repeat the same readings at 4 and 6 mph settings.
 - If these readings exceed 6.5 amps at 2mph, 12.0 amps at 4 mph, or 18.0 amps at 6mph there may be issues with the running belt drive system.
 - If the readings in Step 4 with no load are fine, the problem is likely with the running deck / belt system. The running deck comes in contact with the underside of the running belt. Check the conditions of these mated surfaces to determine if there appears to be high friction between them causing additional load on the drive system. If there is, replace the running belt and flip or replace the running deck.
 - If the running deck / belt surfaces do not exhibit high friction, check for strong odors coming from the motor or the MCB indicating over temperature conditions. Replace the motor or MCB as needed.