Our new and improved troubleshooting section was carefully constructed to put the power to repair your machine in your hands. As you can tell, we have put a great deal of time and effort into the process. All of this can save you the cost of a service call which is approaching $150 in many markets and in many cases, we can save you the cost of parts since many parts are sold from factories unnecessarily (many parts cost over $100 alone). With all of this said, if our troubleshooting tips help you out, please donate to keep this info on the web and so we can continue to add to it for your future use. As we get the funds, we will start to post video helps too. If this info helps you, please click on the donate button and donate to help us expand and maintain our troubleshooting help. Donations are NOT tax deductable.

BELT LOSES POWER

(Bogs Down or is Sluggish)

This condition is when the treadmill operates normally without a person on the belt and then slows down when someone steps on the belt or when the treadmill operates normally for a given period of time with someone on the belt then abruptly begins to slow down.

There are four typical causes for this problem (listed in order of our experience:

1) The walking belt and/or deck are worn. (85% of the time)
2) The walking belt and/or motor belt are too tight- if you have adjusted either recently. (8% of the time)
3) The motor has lost torque and needs brushes or has demagnetized or has developed high resistance. (5% of the time)
4) The controller is dropping output. (2% of the time)

Walking Belt is Worn:

The only certain way to test for a worn walking belt is to take a DC amp draw (if you have a DC treadmill) or an AC draw (for AC). Trying to look at the belt or a feel test is highly unreliable. Better tests, if you lack a DC ammeter (they are expensive for a good one), are a coast test or an incline test. To test the deck, go back to the Troubleshooting section and download the belt and deck inspection instructions.

The coast test is to get on the treadmill as the lowest incline setting and walk on the treadmill at 3 MPH. Pull the safety key and it should

take you 2-3 full steps to stop (this is a general rule…some like a few Tunturi models stop on a dime even with a healthy belt but for most models, this tests works well upon). Fewer steps indicate high friction.

The incline test is to put the treadmill at max incline and walk on it at 3 MPH. If the treadmill operates normally at max incline but bogs down at minimum incline, replace the walking belt. Gravity takes over for the drive system eliminating much of the friction problem. On some heavily worn walking belts, this test will not eliminate the problem.

Walking Belt/Motor Belt too Tight:
If you have adjusted the walking belt or motor belt recently, check for this problem. When the belts start slipping, some people just crank down the belts and on treadmills, tighter is not necessarily better. The tighter the belts, the more the drive system has to work to keep everything moving. You should be able to lift the walking belt (with the treadmill unplugged) in the center of the treadmill about 2-3" without straining. Tighter belts should be loosen but make sure you don't create a dangerous slipping situation by loosening.

The motor belt (with the treadmill unplugged) should be able to be turned by hand to almost a 90 degree angle from its normal operating position. Loosen the belt if too tight. Make sure to test for slipping and if it does with the proper tension, replace the motor belt.

Needs Brushes / Demagnetized Motor / Resistance Problem:
Typically when we find a motor that has lost torque; it needs a new set of motor brushes. Typically we can make brushes for almost any motor if we don't already stock them. Motor demagnetization is not that common but it does happen and it is normally easy to diagnose. If you have confirmed the belt and/or deck is not worn and the belts aren't too tight, you can test for a motor torque problem.

DO NOT USE YOUR HAND OR ANY OTHER BODY PART TO IMPEDE THE MOTOR…YOU WILL LIKELY LOSE YOUR BODY PART IN THE PROCESS IF THE MOTOR IS GOOD. The step to test for the motor is to use a foreign object preferably on a long shaft. First determine the direction of the motor spin (most have directional movement printed on the motor tag), then apply pressure with an object with downward pressure on the flywheel in the direction the flywheel is turning (do not attempt to put force against the rotating direction of the flywheel as you can easily injure yourself). If you can slow the motor, typically you need brush replacement.

To test for demagnetization, the motor must be disassembled. Once you have the motor retaining bolts removed, remove the motor core by sliding it out of the end of the housing. If the magnets pull the core against the housing and it is difficult to remove, the magnets are good. If the magnets do not attract the core, the motor has to be replaced.

To test for high resistance on DC motors, you must use a multi-meter for accurate testing. Put a test lead in the positive lead (usually red) and the other in the negative lead (usually black) and then set the meter to the ohms scale. Readings that are normal are between 1 and 2. Some small motors will have higher readings and larger motors have lower readings. Readings above the normal range indicate you have high resistance in the motor and we have seen them incredibly high. Since the copper flexes every time it energizes, the ability of the windings to conduct electricity is reduced over time. Large motors typically are more cost efficient to have rewound. Smaller motors are typically cheaper to replace.

Controller:

This is the most uncommon of the causes. Typically replacing a controller in this situation will not solve the underlying problem and then you will end up replacing a belt as well as a control. Normally if a control is dropping output, it will do it with a person on the belt or not. Tests of DC output dropping is normal in many controls since they have a current limiter which will automatically drop output to prevent burning up the board. This is best diagnosed by eliminating the other possible problems first. If you are left with the control as the cause, replace the control.