

# L-10 Treadmill Service Manual

## Endurance and 9" Display Consoles



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## Landice Service Warranty Policy

### *PARTS*

Our policy requires that defective part(s) need to be returned back upon Landice discretion. All warranty part(s) that are required back will be billed to the Service Provider if not returned within 30 days. Landice will adjust the invoice off the account once receipt of any defective part(s) they have been returned. Landice will provide return freight tags (ARS tags) for all parts required back. It is our policy to ship all parts UPS ground. Any expedited shipments will need Landice approval.

### *LABOR*

Landice will reimburse the selling dealer or service provider according to our labor rate schedule. If you are a service provider for Landice and do not sell our product, you have the option of billing us directly or you can bill back the selling dealer. Generally, if our capped rate does meet the service provider rate then the remaining balance will be the actual selling dealer responsibility. The labor rate only covers one service call per issue, diagnostic trips and return trips is not covered under our labor warranty policy. Treadbelt and drive belt tracking, tensioning, and set-up procedures will not be covered under our labor warranty policy as well. **Set-up includes** Assembly, adjusting treadbelt and drive belt (if needed), walking the treadbelt and deck wax in and performing any additional adjustments that may have been upset during shipping.

The dealer must call for a service authorization number (SA#) **prior** to performing any service to verify the treadmill is under labor warranty and to get troubleshooting advice. It is advisable to call Landice from the customer's location in order to successfully diagnose the problem and this will ensure that the correct part(s) is shipped out the first time. Labor claim forms must be submitted within three months from the date of service was performed. All labor claim forms must be filled out completely and have the Landice authorization number at the top and including customer's signature at the bottom of the claim form.

### *FLOOR MODELS*

The following warranty applies to floor models and dealer stock. If the dealer sells a treadmill to a customer within one year of its purchase from Land ice, the warranty period will be extended to start from the date of sale to the customer. If a treadmill is over 1 year old when sold to a customer, the remainder of the parts warranty will be honored from the date of shipment not sale and will not have a labor guarantee.

**Landice Labor Warranty Policies are subject to change without notice.**

# Service Claim Form

(Submit completed form to [service@landice.com](mailto:service@landice.com) or fax to 973-927-0630)

**SERVICE CLAIM FORM****SA#** \_\_\_\_\_

DEALER INFORMATION	
Service Dealer/Dealer Name:	_____
Address:	_____
City:	State: _____ Zip: _____
Phone: _____ Fax: _____	Email: _____
Contact Name:	Contact Phone #: _____

CUSTOMER INFORMATION	
Customer Name:	_____
Address:	_____
City:	State: _____ Zip: _____
Phone Number:	Contact: _____

Treadmill Info	<input type="checkbox"/>	Elliptical Info	<input type="checkbox"/>	Bike Info	<input type="checkbox"/>	Cx8 Info	<input type="checkbox"/>
Model Type:	_____	Date of Service:	_____	Frame Serial #:	_____	Date of Purchase:	_____
DCP Serial # (if applicable):	_____						
Out of Box Problem:	Yes: <input type="checkbox"/>	No: <input type="checkbox"/>					

CUSTOMER COMPLAINT:

SERVICES PERFORMED/PARTS REPLACED:

TRAVEL/LABOR:	Travel Time:	Labor Time:	TOTAL TIME:

VALIDATION SIGNATURES:	
Service Rep Signature: _____	Date: _____
Customer Signature: _____	Date: _____

IN ORDER TO PROCESS THIS CLAIM IN THE LEAST AMOUNT OF TIME,  
**SEND THE SERVICE CLAIM WITH THE DEFECTIVE WARRANTY PART.**  
 DO NOT SUBMIT SERVICE CLAIMS WITHOUT SERVICE AUTHORIZATION NUMBERS.

04/2016

## Operation and Safety Instructions:

**Safety Information -To reduce the risk of electric shock: always unplug the treadmill from the electrical outlet immediately after using and before cleaning.**

**Always unplug the treadmill before cleaning or removing the motor cover.**

**Improper connection of the grounding connector can result in risk of electric shock. Check with a qualified electrician/service technician if you are in doubt as to whether the treadmill is properly grounded. Do not modify the plug provided with the treadmill. If the plug will not fit in the outlet, have a proper electrical outlet installed by a qualified electrician.**

### To reduce the risk of burns, fire, electric shock or injury to persons:

- An appliance should never be left alone or unattended when plugged in. Unplug from outlet when not in use and before putting on or taking off parts.
- Close supervision is necessary when the treadmill is in use or near children or persons with disabilities.
- Use the treadmill only for its intended use as described in this manual. Do not use attachments not recommended by Landice.
- Never operate treadmill if it has a damaged cord or plug, if it is not working properly, or if it has been damaged. Call your dealer or certified service provider immediately for examination and repair.
- Keep the power cord away from heated surfaces. Be sure the cord has plenty of slack and can not be pinched under the treadmill when it elevates and de-elevates.
- Never operate the treadmill with the motor cover air openings blocked. Keep the air openings free of lint, hair, dust, or debris.
- Do not drop or insert objects into any opening on the treadmill. Be sure no objects are near or beneath the treadbelt when you are using the treadmill.
- Do not use treadmill outdoors.
- Do not operate treadmill where aerosol (spray) products are being used or where oxygen is being administered.
- To disconnect, press **STOP** twice, pull the safety lanyard out, then remove plug from outlet.

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## Operation and Safety Instructions:

**Failure to observe the following warning statements can result in serious injury!**

- Do not use this product without first consulting your doctor if you suffer from any illness, condition, or disability that affects your ability to run, walk or exercise.
- Do not use this product without supervision present if you are suffering from any illness, condition, or disability which affects your ability to run, walk or exercise. Failure to do so can result in serious injury should you fall while the treadmill is moving.
- Failure to leave ample clearance around the treadmill could cause you to be trapped between the treadmill and a wall if you fall, resulting in burns or other serious injury from the moving treadmill. **Allow a minimum clearance of 18 inches (46 cm) on each side of the treadmill. Allow a minimum clearance of 6 feet (183 cm) at the rear of the treadmill.**
- Never stand on the treadmill when starting the treadmill. A sudden start could cause you to lose your balance. Always begin by placing your feet on the side traction strips, straddling the treadmill, before turning the treadmill on.
- Always wear the safety lanyard clip securely on your clothing while exercising. Failure to do so can result in severe injuries should you accidentally fall while exercising.
- Test the emergency stop safety lanyard regularly by pulling on the cord and ensuring that the treadmill comes to a complete stop when key is pulled.
- Familiarize yourself with this manual. Be sure you understand operation of the treadmill before use.
- Always follow basic safety precautions when using an electrical appliance.

**Connect treadmill to a properly grounded, dedicated electrical outlet only. See the following Grounding Instructions.**

**Do not plug treadmill into a surge suppressor or Ground Fault Interrupt (GFI) outlet.**

## Electrical Requirements

Landice requires that a dedicated circuit be wired for each piece of Landice equipment. For optimal performance, **DO NOT** plug equipment into an AFCI or GFI circuit breaker/outlet. Adapters or extension cords should not be used.

Treadmills marked 120 VAC are intended for use with a grounding plug in a nominal 120-volt circuit. Ensure the treadmill power cord is connected to an outlet having the same configuration as the plug.

Treadmills marked 200-250 VAC are intended for use on a circuit having a nominal rating greater than 120V and are factory-equipped with a specific power cord and plug to permit connection to a proper electrical circuit. Ensure the treadmill power cord is connected to an outlet having the same configuration as the plug. No adapter should be used with 200 - 250 VAC treadmills. If the treadmill must be configured for use on a different type of electrical circuit, qualified service personnel should make the proper

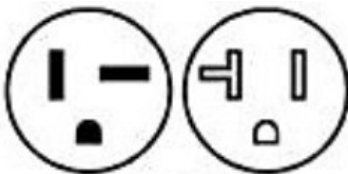
### For 220v & 110v units using 3-phase voltage:

- Each treadmill must have its own circuit breaker and be run on the same phase; same power leg.
- If 220v power is required, all treadmills must run on the same two phases (power legs) and on their own circuit breakers.

**L10 Requirements** L10 Treadmills are rated for 110 (120) VAC, 60 Hz, 20 AMP (uses a 20 amp plug, receptacle and breaker) or 220 VAC, 60 Hz, 10 AMP (uses a 15 amp plug, receptacle and breaker).

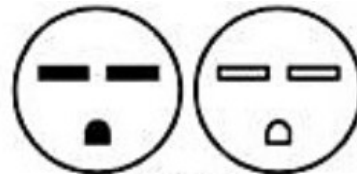
### **L10 Club 110v Electrical Requirements**

Plug NEMA Style 5-20P  
Receptacle NEMA Style 5-20R



### **L10 Club 220v Electrical Requirements**

Plug NEMA Style 6-15P  
Receptacle NEMA Style 6-15R





## Multimeter Instructions

### Using Your Multimeter

A Multimeter is a device used to measure a variety of electrical functions. The multimeter best suited to diagnosing a treadmill will be able to measure AC and DC voltage, as well as Ohms and electrical continuity.



**Make sure the batteries in your Multimeter are fresh before you begin!**

**Vac – Alternating Current** reverses polarity from plus (+) to minus (-). For the L10 Treadmill, you can test **Vac** coming from the outlet into the unit, and from the lower board into both the elevation motor and the drive motor.

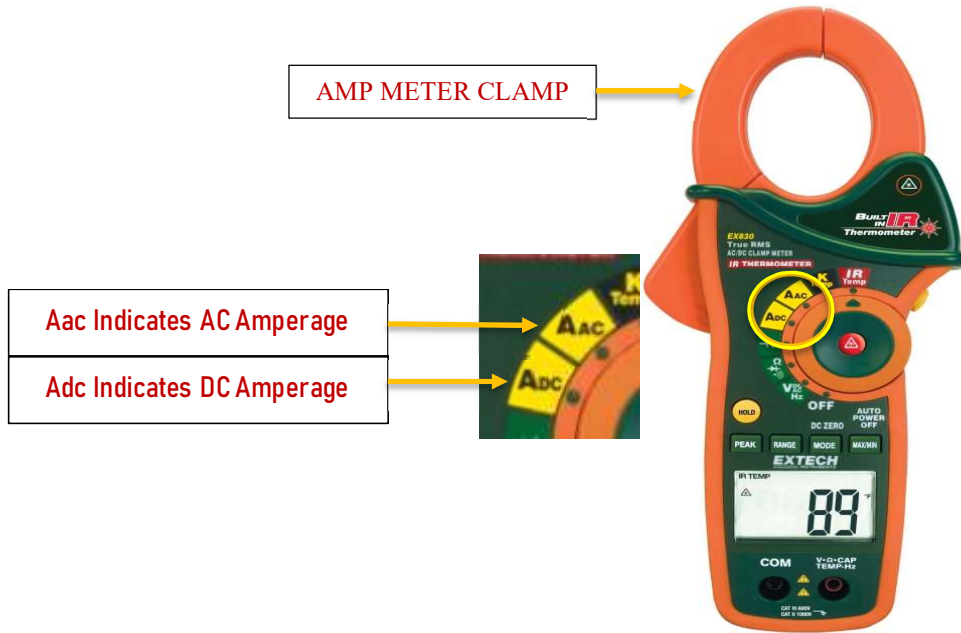
**Vdc – Direct Current** only flows in one direction, and provides a constant voltage over time. L10 Treadmills do not use DC.

**Ohms** – The electrical resistance of a component or conductor measured in **ohms**. You can check the condition of a potentiometer or line cord by measuring the ohms.

**Continuity – Electrical Continuity** is the continuous, uninterrupted flow of electricity. You will use continuity to check fuses, wire harnesses and pins for any interruption. You can also use it to perform a membrane bypass test (where applicable).

## Measuring AC & DC Amperage:

**AC** Amperage must be performed on the **BROWN WIRE** of the line cord.  
**DC** Amperage must be performed on the **BLACK WIRE** from the drive motor.



### PERFORMING AMPERAGE INSTRUCTIONS

Start by clamping your meter to the wire. While straddling the belt, start the treadmill and bring the speed up to **3.0 mph** at **0% elevation**. Once the treadmill is up to speed start walking on the treadmill while looking at the voltmeter. The voltmeter will start giving you an amperage reading. The average highest reading possible equals your amperage reading. The more friction between treadbelt and deck, as well as the heavier the load on the belt, the hotter the treadbelt will become, which will increase your amperage reading.

### USE THE CHART BELOW TO DETERMINE THE TREADBELT CONDITION

AC Amperage	DC Amperage	Treadbelt Condition
2.0-4.0 AC Amps	4.5-6.0 DC Amps	Good
4.1-5.9 AC Amps	7.0-9.0 DC Amps	Normal
6.0-10.0 AC Amps	9.0-12.0 DC Amps	Replace

## Maintenance Checklist

### Weekly Maintenance:

- Wipe down display. Use mild solution of non-phosphate cleaner on damp microfiber cloth.
- Wipe down handrails and traction strips with soft cotton cloth and mild soap and water. Cloth should be damp not wet.
- Vacuum or wipe down the deck area between treadbelt and frame, including the visible part of the rear roller.
- Clean treadbelt walking surface: Vacuum treadbelt to remove loose dirt. If vacuuming does not remove dirt, Landice recommends the use of a medium stiff nylon bristle brush to remove dirt trapped in treadbelt surface. A damp (not wet!) sponge can be used to finish the cleaning process.

### Monthly Maintenance:

- Take off motor cover and vacuum. Be careful not to touch any of the circuit boards.
- Turn on the treadmill. Elevate treadmill to 15%. Turn off the treadmill. Vacuum under and around the treadmill. Turn on the treadmill and return to 0% elevation.
- Examine the deck and treadbelt for wear and replace if necessary.
- Check condition of line cord for any cuts, gouges, or broken prongs on the plug ends.

### Every Six Months:

- Check all nuts and bolts for tightness, especially the upright bolts and handrails.

You can also perform an amperage check to see if the treadbelt is dragging excessively and thus drawing excessive current as follows:

1. Install AC clip-on ammeter around hot lead on line cord.
2. Turn treadmill ON and increase speed to 3.0mph.
3. Let speed stabilize and record the AC amperage.
4. Decrease speed to 1.0mph and have a person weighing at least 150 lb step onto the treadbelt.
5. Increase speed back up to 3.0mph.
6. Let speed stabilize and record the AC amperage. Compare the two readings.

**Note:** Current draw for a new or well-maintained 110V treadmill with a 150lb load at 3mph will be approximately 6A, for 220V units it will be approximately 3A. If the load is higher than 150lb, then adjust the amperage upward., if load is lighter the amperage draw will be less. Example 200lb load @3mph=8amps.

**If the loaded current draw is substantially greater than the unloaded reading, then the treadbelt and deck system is wearing and may need replacement.**

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## Static Electricity: What to Look For

Static electricity can be generated from many sources. While a shock may occur occasionally while using the machine and is normal, it can lead to issues with the treadmill's components. Here are the most commonly found sources of Static Electricity:

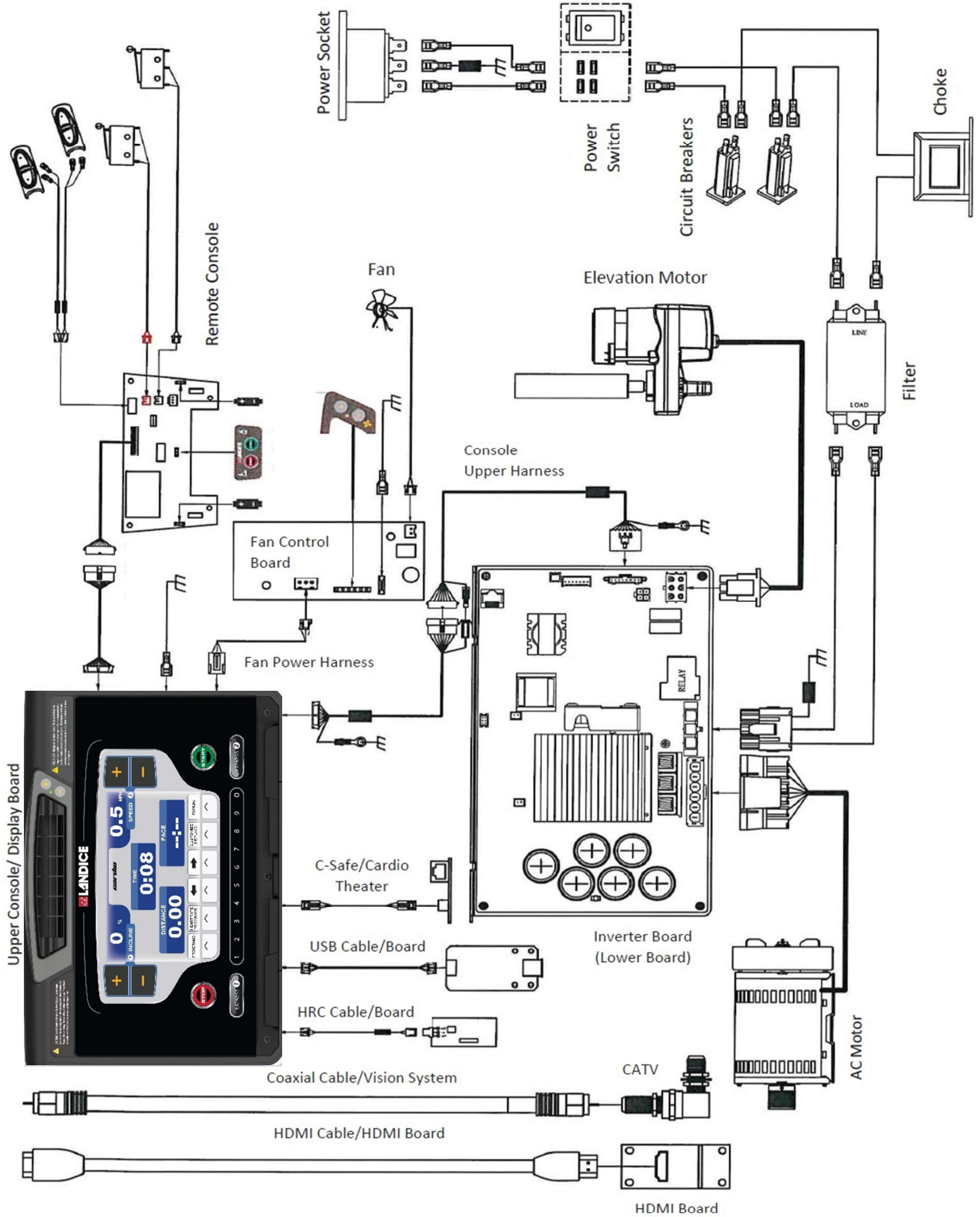
- ❖ **Treadmill placed on carpet** - When you use your treadmill directly on a carpet, it is far more prone to static build up. Instead, install a rubber treadmill mat (**LANDICE #73062**) underneath the machine. This will help reduce static buildup.
- ❖ **Dry Climate & Lack of Humidity** - Whether it's the winter months, or you live in a dry location, static buildup is more likely to occur low humidity environments. You can compensate for this by using a humidifier in your treadmill's location.
- ❖ **Dehydration and Dry Skin**- Your own level of dryness can lead to static buildup. If you are dehydrated while working out, dry skin will increase risk of static buildup. You can combat this by drinking more water, and using moisturizer as needed on dry areas of the skin.
- ❖ **Your workout clothing and shoes** - The type of material used in your workout clothes can make a world of difference when it comes to combating static buildup. Synthetic materials like Polyester, Spandex, and Acrylic fiber will build up static electricity much faster. Instead, use natural materials like Cotton in your workout clothing.  
Likewise, if your shoes are worn down, you will **dramatically** increase the chance of static buildup. Check the tread of your shoe, and replace them if they are worn down.
- ❖ **Worn out parts** - The condition of the treadbelt, deck and motor brushes can all increase the risk of static buildup. Do monthly maintenance such as vacuuming under the motor cover. Use Simple Green to wipe down the deck, hand rails and display. Check the treadbelt tension, and look for cracks or fraying. A **Landice** Authorized service provider can help to do a full diagnostic on your treadmill for a fee.
- ❖ **Using Surge Protectors, Extension Cords** - **Landice** requires plugging directly into a dedicated outlet. Using a surge protector or extension cord increases resistance on the flow of power, meaning increased stress on electrical components and premature failure, as well as the increased risk of static shock.

## Treadmill Specifications:

<b>L10-Club Treadmill Specifications</b>	
Model	L10
Display	Digital Display
Launch Date	Apr-2017
<b>Mechanical Features</b>	
Drive Motor	5HP AC Drive
Voltage	220
Speed Range	0.5 - 15.5mph
Incline	0-15%
Treadbelt	22" x 60"
Frame Material	Steel
Deck	1" Reversible
Roller	3 1/2"
Cross Bar Controls	Yes
Side Rails	Yes
Fan	Yes
Heart Rate	Yes (Contact Heart Rate - Read Only)
Accessory Pockets	Phone, tablet and 2 water bottles holders
Step-up Height from Floor to Treadbelt	9"
Electrical Requirement	220 volt, 50/60Hz, 10 amps w/ Dedicated Line
Max User Weight	500 lbs.
Product Weight	460lb
Shipping Weight	600lb
Dimensions	83" x 34" x 64"
Warranty	10 Year - Frame 5 Year - Parts 2 Year - Wear Items (deck & belt) 90 days - High Wear Items (USB port) 1 Year Labor
Certifications	UL, CAN, CE
<b>Console</b>	
CSAFE Jack	Yes (External on the side of display)
TV	Bracket with BVE TV (Optional) Coaxial cable or HDMI jack located on upright leg
USB Port	Yes (Charging capability )

Electrical Schematic:

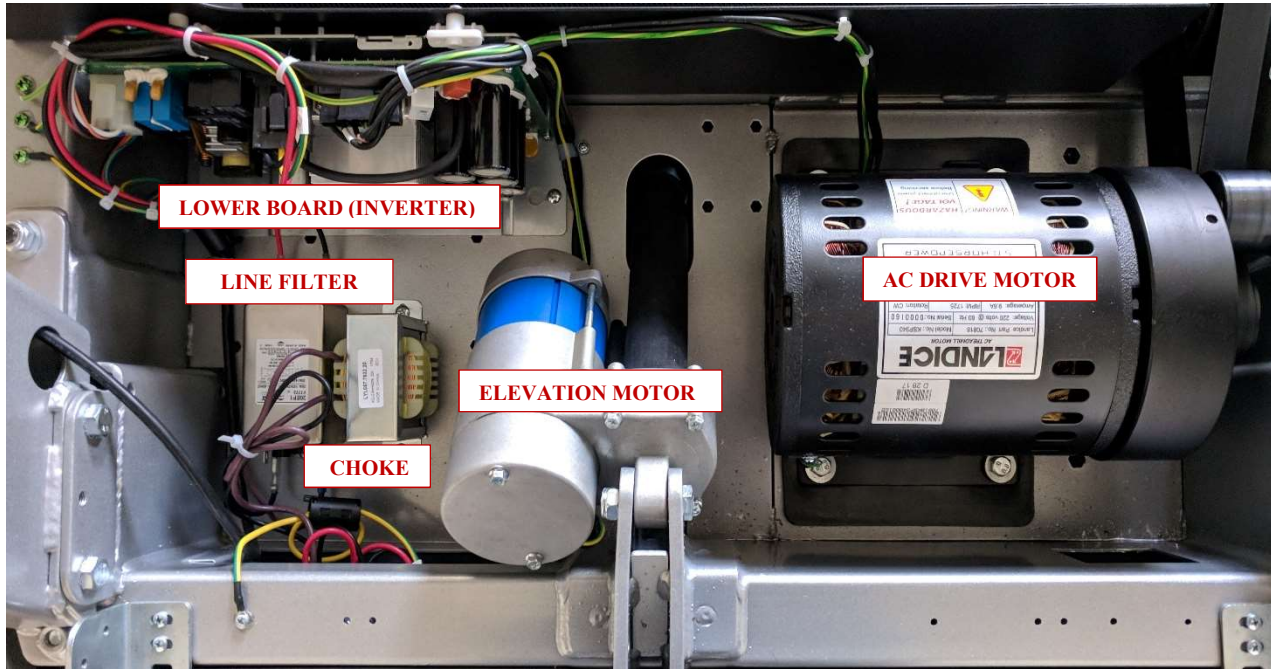
**L10 Electrical Block Diagram**



## Upper Consoles:

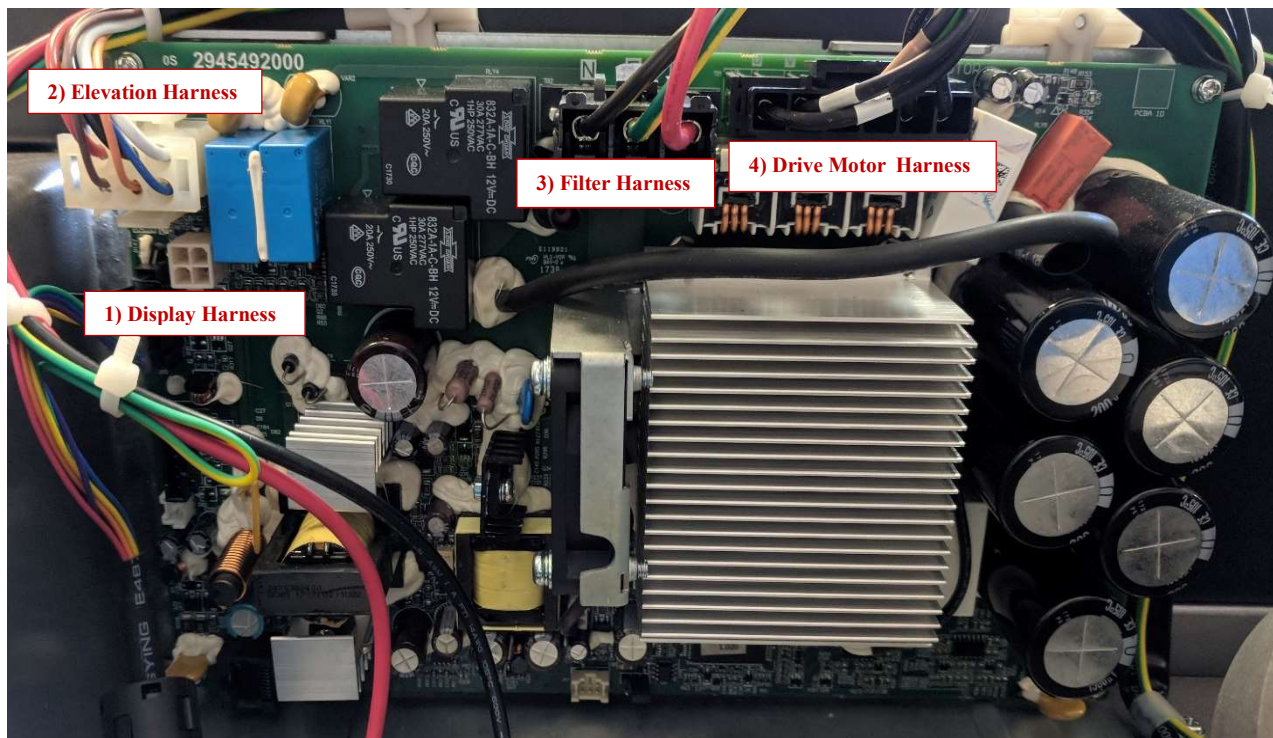


## Motor Pan Components:



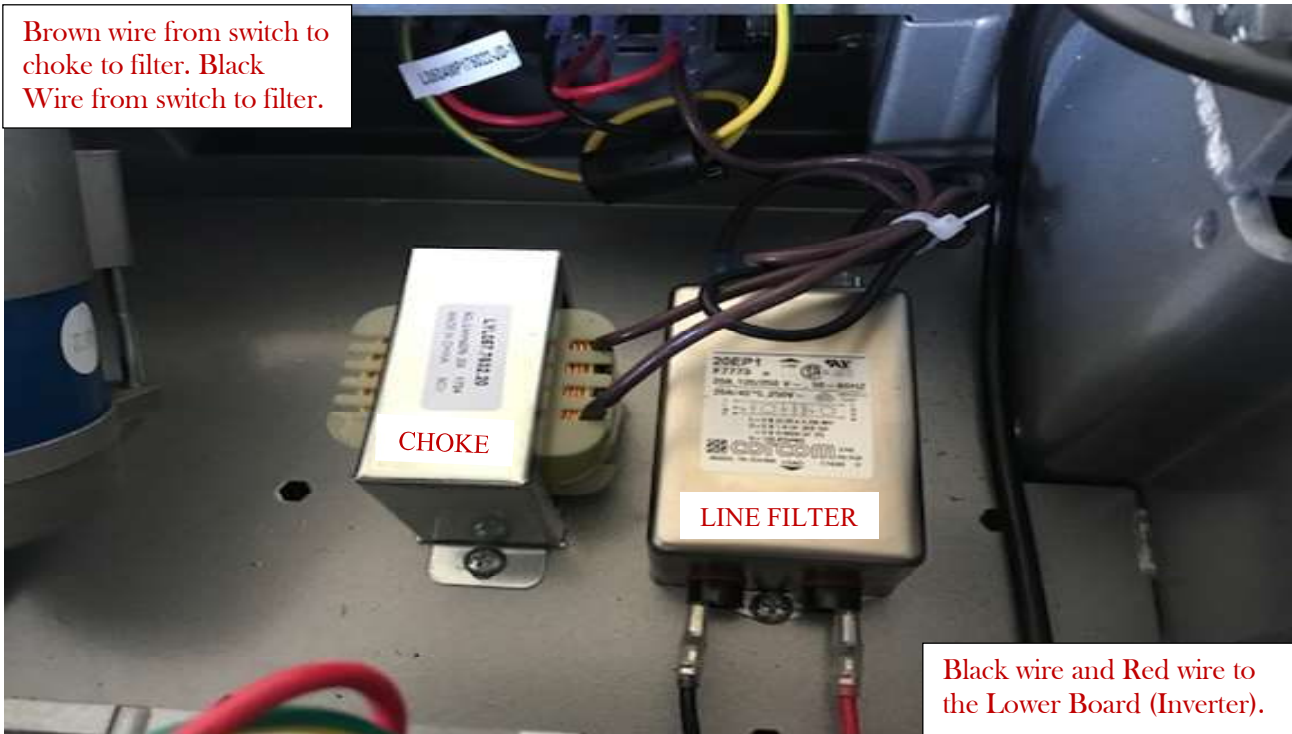
**Lower Board (Inverter- Wiring)**

- 1) From Lower Board (Inverter) to Display
- 2) From Lower Board (Inverter) to Elevation Motor
- 3) From Filter to Lower Board (Inverter) Black and Red, wires power the Inverter.
- 4) From Lower Board (Inverter) to Drive Motor





## Motor Pan Components:



## Remote Control Console:

### Remote Console Pin/Wire harness designations on L10 Treadmill.

Pins 2-7 are for Reading Switched, Pins 1, 8, and 12 are Power Pins, Pin 9 is Safety Key, and Pins 10 and 11 are the two Heart Rate Inputs.

The 12 pin Remote Console connector pinout:

- Pin1 GND1 (Output) Ground
- Pin2 P0.0 (Input) Speed up Switch
- Pin3 P0.1 (Input) Speed down Switch and Stop Switch
- Pin4 P0.2 (Input) Incline up Switch and Start Switch
- Pin5 P0.3 (Input) Incline down Switch
- Pin6 P2.70 (Output) Switch Common for Speed and Incline Switches
- Pin7 P2.40 (Output) Switch Common for Start and Stop Switches
- Pin8 +5VF (Output) 5Volt power for Heart Rate boards
- Pin9 CEO (Input) CE Safety switch
- Pin10 INT1 (Input) Heart Rate from Wireless
- Pin11 Pulse (Input) Heart Rate from Handgrips
- Pin12 GND (Output) Ground



Remote Control Console:



## Error Code & Diagnostics - Endurance Console:

Note: A logs of recent error codes are found in the Engineering Mode.

### 1.) **ER01 - Communication Error**

- Communication disruption between the inverter and the upper control board:
  - The inverter sends a signal to the upper control board every 1.5 seconds to check to see if they are still in communication with each other. If no response, the inverter shuts the AC motor down.
  - The code **CE10** appears on the display after the communication is reestablished
- The potential reasons for the communication disruption could be:
  - A faulty display board
  - A faulty inverter
  - Faulty cabling

### 2) **ER02 - Incline Motor Error**

- Loss of elevation calibration from the elevation motor to the upper display board. Or no movement from elevation motor.
  - Check for loose wires or connections. Run the Auto Calibration process to re-calibrate the elevation pot.
  - If no movement from elevation motor, check wires and connections from elevation motor to inverter board. If elevation wire is damaged, replace Elevation Motor.
  - Check harness wires from Inverter Board to Upper Board, if loose or damaged wire found, replace the Upper Harness.

### 3) **ER03 - Safety Key/Replace Safety Key**

- The Upper display board monitors the safety circuit and flags this condition when the safety is pulled. Always check that the safety key is pushed in before proceeding.
- Potential reasons for this error are:
  - Faulty Safety circuit
  - Faulty cabling
  - Faulty Display Board

### 4) **ER04 - (Also OL) AC Motor Over-Current Error**

- The inverter monitors the AC motor in order to determine the amount of over current.
- It also monitors the amount of time that the current is over the maximum limit. The standard maximum limit is 150% of the rated current of the motor (which for the drive motor the rating is 7amps). For the error code (**OL**) to come up, the motor would have to be over loaded for over 60 seconds. The inverter would then shut down the AC drive motor.
- The potential reasons for an AC motor over-current condition could be:
  - Failure of one or more of the internal motor components (bearings, rotor, stator windings, etc.)
  - Excessive load on the AC drive motor putting excessive loading onto the motor (Friction in the belt and deck, bad roller bearing, etc.)
  - Note- a Heavy Person walking at slow speeds may cause this error due to the extra load. The same is true for a heavy person who is running at high speeds.

## Error Code & Diagnostics - Endurance Console:

### 5) **ER05 - AC Motor Voltage Error**

- AC Motor voltage monitoring  
The inverter can monitor the motor voltage and determine if it's receiving too much or too little voltage
- The potential reasons for an AC motor low or high voltage:
  - Inverter malfunctioning
  - City voltage too low or too high

### 6) **ER06 - AC Motor Over Load Error**

- The display will show **ER06** when the AC motor's thermal sensor pops
- The potential reasons for an AC motor over-load condition could be:
  - Failure of one or more of the internal motor components (bearings, rotor, stator windings, etc.)
  - Excessive load on the AC drive motor putting excessive loading onto the motor (Friction in the belt and deck, bad roller bearing, very heavy person, etc.)
  - Note- a Heavy Person walking at slow speeds may cause this error due to the extra load. The same is true for a heavy person who is running at high speeds.

## Troubleshooting & Diagnostics:

### OTHER TROUBLESHOOTING:

Display will not turn on when Start is pressed

- 1) Check for correct power voltage at the power outlet.
- 2) Check for power at the end of the power cord.
- 3) Check the On/Off switch to be "ON" position and switch lit.
- 4) Check to see if the Circuit breaker tripped. If the breaker tripped reset it, and locate the part that is causing the short.
- 5) Check for power from Filter to Inverter. Black and Red wires power the Inverter.
- 6) Check the connection from the Inverter to the Upper Display is secure.
- 7) Check for power out of the connector at the Upper Display. If less than 12vdc replace inverter.
- 8) Check if the Console LED is lit. If it's not lit, then replace the display.

### RUNNING SPEED NOT STABLE:

- 1) Check for correct power (110 or 220 VAC) at the power outlet. Low voltage will cause speed to be unstable.
- 2) Check the Drive belt for any damage and the tensioner is working correctly.
- 3) Check the Treadbelt is correctly tensioned, not slipping, and not worn out.
- 4) Check the Deck for any damaged or worn out.
- 5) Check the inverter is not damaged and is sending the proper voltage to the Drive Motor
- 6) Check the Drive Motor is operational
- 7) Rarely the Display will fail and cause the problem.

### CONSOLE BUTTONS DO NOT RESPOND TO COMMANDS:

- 1) Check connection between the keypad (membrane) and the Display are secure. Replace whichever component is faulty.
- 2) Look for visible damage to the keypad. Replace if damaged.
- 3) Check if any of the buttons feel depressed or "stuck". Replace Display if any found
- 4) If everything checks out fine, then replace the Display.

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## Display Options - Endurance Console:

### TURN OFF BEEP SOUND:

- 1) **The beeper is set to ON by default.** When a button is pressed on the display or the mini-pod a beep will sound.
- 2) **To turn off the beeper:** Press the Start button, and when the mill starts to boot up, press **Incline "Down" (-)** button and **START** button on the display to turn off the beeper. Reverse to turn back on the beeper.

### CHANGE FROM ENGLISH TO METRIC MEASUREMENTS:

- 1) Press **Start** to turn on treadmill.
- 2) Press and hold **Incline down (-)**, **Speed down (-)** and **Start** at the same time and hold down till display shows **ENG** or **MET**.
- 3) To change from one to the other press the **STOP** key. Press **ENTER** to save changes. Next it will display voltage choice (110v or 220v). To change press **STOP**, to save press **ENTER**.

### ACCESS TOTAL MILES & HOURS:

To enter engineering mode:

- 1) **Start machine and then pull the safety key out**
- 2) **Press Speed Keys + (plus) and - (minus) simultaneously and count 3 seconds.**
- 3) **Push the safety key back and then release the + and - keys.**

PO1 should appear on the screen. To change between screens, press the **ENTER** key.  
To exit Engineering mode, press **STOP** key and restart the treadmill.

To access hours go to **PA08**.

To access miles go to **PA09**.

## Engineering Mode - Endurance Console:

### FOLLOW THE STEPS BELOW TO ENTER ENGINEERING MODE:

- 1) Start machine and then pull the safety key out
- 2) Press Speed Keys + (plus) and - (minus) simultaneously and count 3 seconds.
- 3) Push the safety key back and then release the + and - keys.

PO1 should appear on the screen. To change between screens, press the ENTER key. To exit Engineering mode Press STOP key and restart the treadmill.

### **LISTING OF ENGINEERING OR PARAMETERS SETTINGS:**

PO1- Mini Speed (Minimum Speed) should be set to .5mph ENG

PO2- Max Speed (Maximum Speed) should be 15.5 mph for 220v, 12.5mph for 110v models

PO3- Max Incline (Maximum Incline) should be 15

PO4- Speed Accel Time (Speed Acceleration Time) Set to 1.2

PO5- Speed Decel Time 1 (Speed Deceleration Time) Set to 1.2

PO6- Speed Decel Time 2 (Speed Deceleration Time) Set to 2

PO7- Wheel -Set to 4.3

PO8- Total Time- Amount of Time the Treadmill is running

PO9- Total Distance- Distance the belt has traveled

PO10- Error Code Log- Previous Error

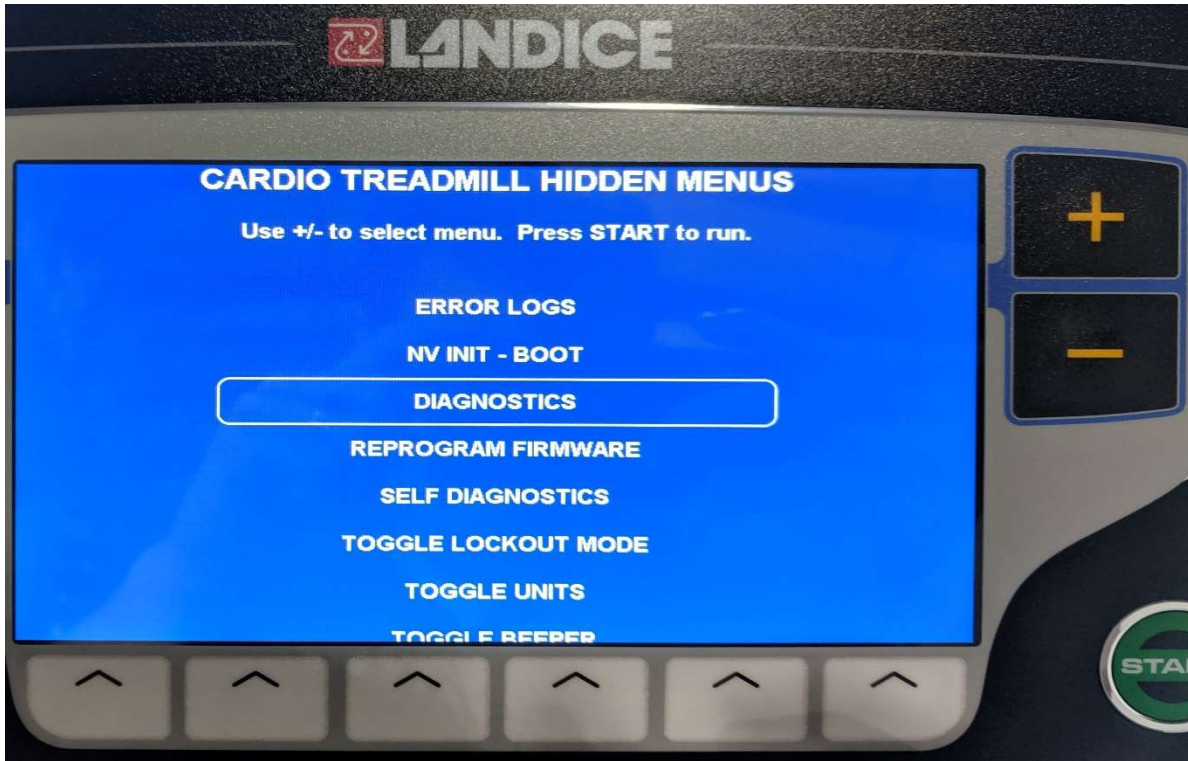
PO11- Error Code Log- Previous Error

PO12- Error Code Log - Most recent Error

## Display Options and Diagnostics- 9" Display Series Console:

### TO ENTER ENGINEERING/DIAGNOSTIC MODE:

Press and hold 3, 9 Start until the following screen comes up:



Use the +/- keys to scroll through menu, START button to enter into mode. The STOP button will go back to the menu.

**Error Logs** - Will show any errors the unit has registered while in operation.

**NV Init Boot** - Shows the software version of the treadmill.

**Diagnostics** - This screen will show the speed sensor readout, elevation pot readout, as well as other operation information.

**Reprogram Firmware** - Only to be used when updating the system software, please see the **Instructions to Install Software Update - 9" Display Series** for more information.

**Self Diagnostics** - The treadmill will auto diagnose and report any issues the software has found. Treadbelt and elevation motor may move during this process.

**Toggle Lockout Mode:** Enables or disables Lockout Mode, which will request a 4 digit pin to use the unit.

**Toggle Units:** Switches between Metric and English

**Toggle Beeper:** Enables or disables beeping function during operation and key press.

**Toggle User Presence:** Should be disabled by default. **DO NOT ENABLE!**

**Toggle Client Mode:** Enabled by default for residential models, disabled on commercial units. Allows 2 user profiles that keep track of statistics while using the treadmill.



## CT-7/PST-7 Software Update Instructions

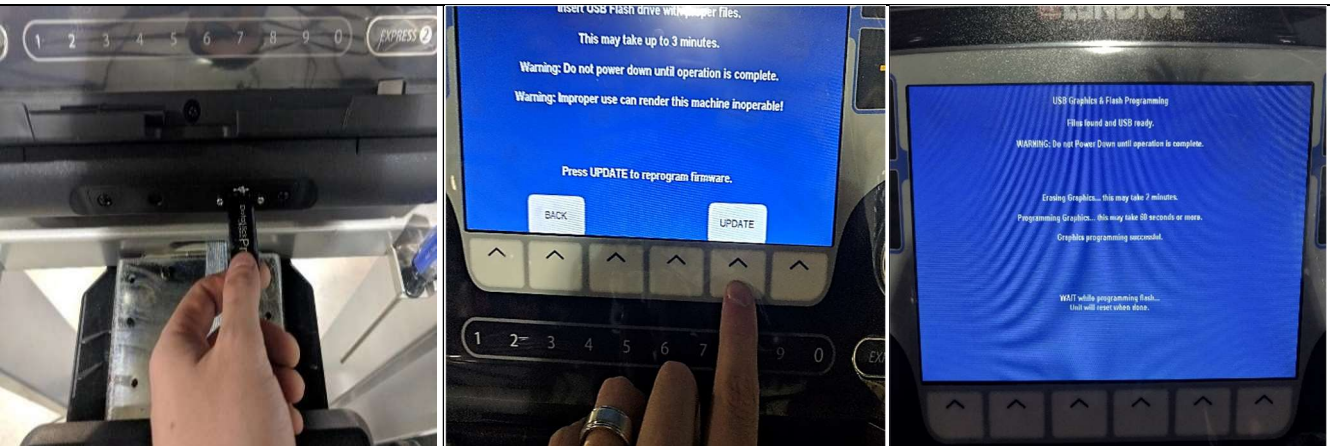
### Landice 9" Display Series Treadmill

#### Step 1



With the treadmill turned off, press the “3”, “9” and “START” key simultaneously. The Hidden Menu screen will appear. Using the “-” key, scroll down to Reprogram Firmware and press the “START” key.

#### Step 2



Insert the USB stick as shown. Then, press the button below the “UPDATE” screen prompt. The software update will install, which could take a few minutes. After it is done, the screen will flash black, and the treadmill will restart.

**PLEASE NOTE:** You can verify the software version by going back into the Hidden Menu and selecting “NV INIT-BOOT” Press **START** to verify “Booted Software x.xx” is displayed. Turn off by pressing **STOP** and restart the treadmill as normal.

**PLEASE CALL LANDICE TECHNICAL SERVICE  
1-800-526-3423, OPTION 3 FOR FURTHER ASSISTANCE**

## Membrane/Display Panel Removal & Installation Instructions:

### INTRODUCTION:

This document is for the installation and removal of the Upper Display Board for the L10 Treadmill.

### TOOLS REQUIRED:

- **Phillips Head Screwdriver**

**BEFORE YOU BEGIN:** Make sure that the treadmill is switched off at the power switch, and the line cord is unplugged from the outlet before you begin to replace the upper display board.

### Step 1



Using a Phillips Head Screwdriver, loosen and remove the three screws holding the reading rack in place. Once the screws are removed, then remove the reading rack.

### Step 2



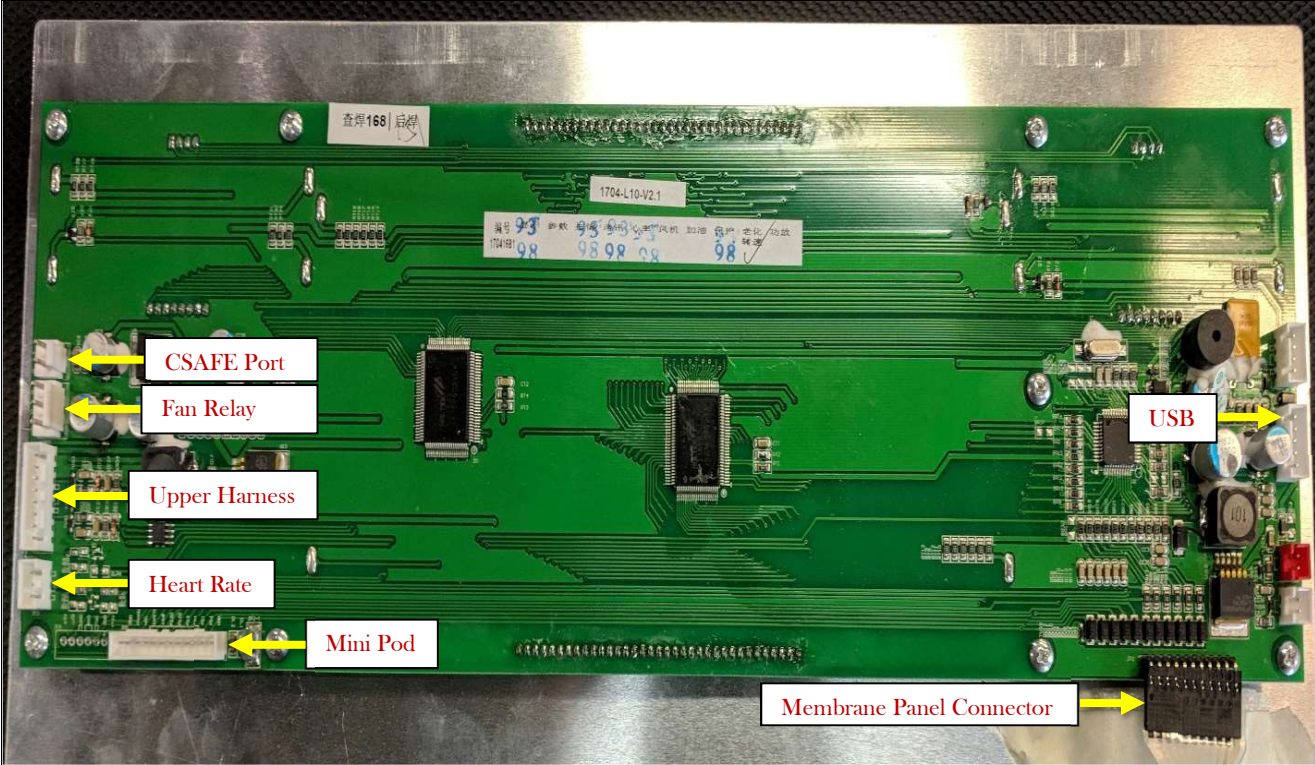
Using your hand, lift the display panel out from the bottom of the control panel, as shown above.

**BEWARE OF THE WIRING CONNECTIONS ON THE BACK OF THE PANEL.**

## Membrane Panel/Display Removal & Installation Instructions:

### Display Board Connections Ports:

#### Step 3



Carefully disconnect each cable from the upper board, taking note of where they were connected. The illustration above will help you connect the correct cable to its corresponding port.

### Membrane Panel Replacement Instructions:



Using a Phillips Head Screwdriver, remove the (10) Phillips Head Screws connecting the membrane to the display board. Disconnect the Membrane Panel Ribbon Connector from the display board. Remove the display board away from the membrane panel, being mindful of the LCD screen.

**Simply reverse the instructions to reinstall the membrane & display board.**

## Remote Console Removal & Installations Instructions:

### INTRODUCTION:

This document is to be used for removal/installation of the Remote Console (#75020)

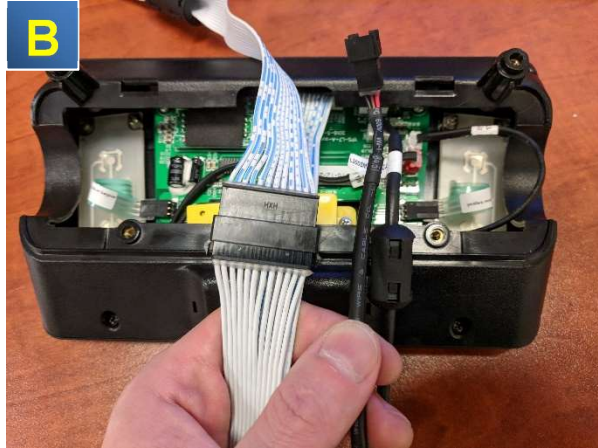
### TOOLS REQUIRED:

- **Phillips Head Screwdriver**

### BEFORE YOU BEGIN:

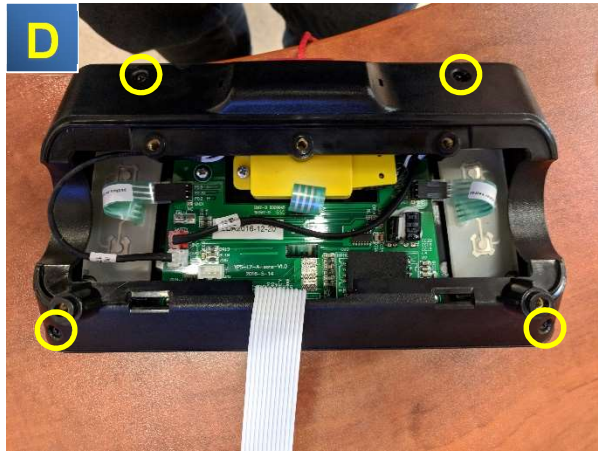
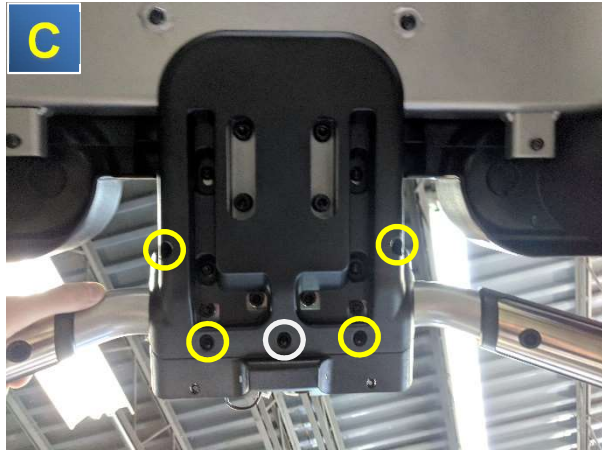
Disconnect the power source before removing the remote console.

### Step 1



Lift and remove the accessory tray cover located between the display and remote console to access the remote console wiring, as shown in Illustration A. Carefully disconnect the primary ribbon harness and wireless heart rate cable, as shown in Illustration B.

### Step 2



Using the cross tip screwdriver, remove (4) M4-16 cross head screws and (1) M4-10 screw, as shown in Illustration C. With the remote console removed from crossbar assembly, turn console over and remove (4) M3-10 cross head screws, as shown in Illustration D.

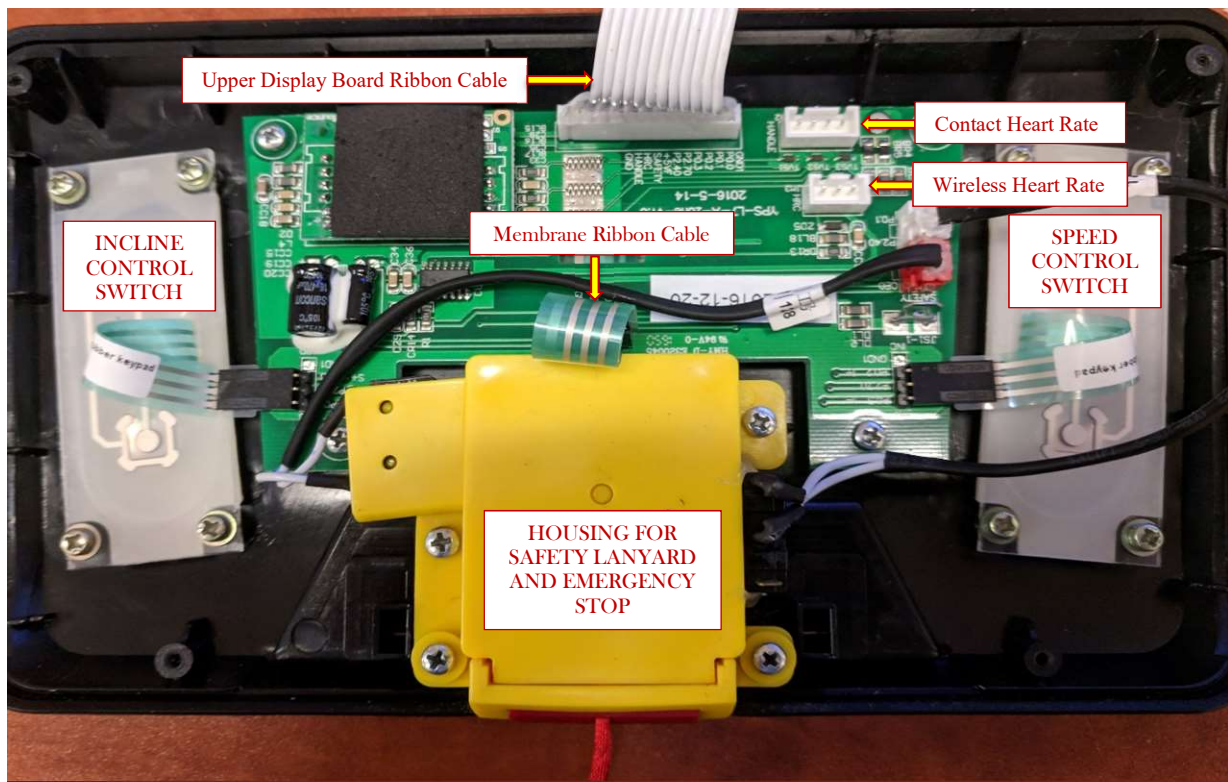
## Remote Control Console Removal & Installations Instructions:

### Step 3



Proceed to remove the remote console trim plate, allowing access to circuit board connections (Illustration E). Carefully disconnect the contact heart rate and wireless heart rate (optional with Club PT and PST) from the circuit board, as circled in Illustration F.

**TO INSTALL, REVERSE THE FOLLOWING STEPS ABOVE!**

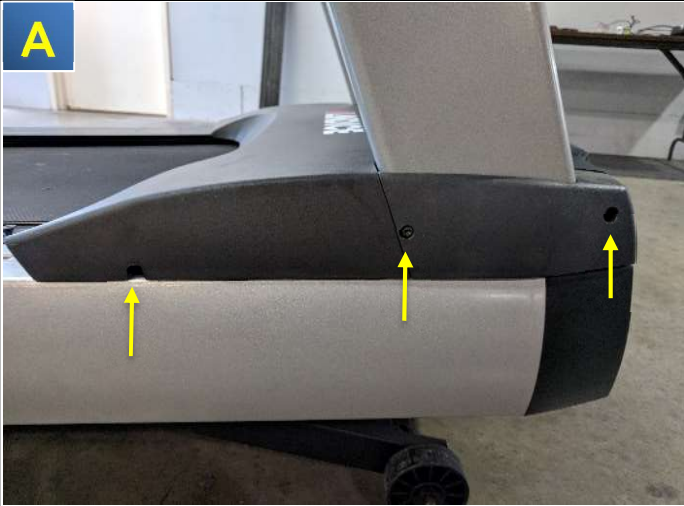


## Motor Cover Removal & Installation:

**INTRODUCTION:** This document is for installation and removal of the motor cover (#10045).

**TOOLS REQUIRED:**

**4mm Allen Wrench**



Using a **4mm** Allen Wrench, loosen and remove three Allen head bolts, one in the motor cover, and two holding the upright base cover in place, as shown in **Illustration A** and **B**. Once you remove the bolts, proceed to remove the covers on each side.



Using your **4mm** Allen Wrench, remove the 2 Allen head bolts, as shown in **Illustration C**. Repeat the same process on the other side. Once done, you can now remove the motor cover as shown in **Illustration D**.

## Side Frame Cover (Traction Strip) Removal & Installation:

**INTRODUCTION:** This document is to be used for installation and removal of the Side Frame Covers (Traction Strips - #10046)

- TOOLS REQUIRED:**
- 4mm Allen Wrench
  - 1/2" Wrench

**BEFORE YOU BEGIN:** You will need to remove the motor cover, upright base cover, and the bed end caps before you can remove the side frame covers.

### Step 1



Using your **4mm** Allen Wrench, loosen and remove the two bolts holding the bed end caps in place. Once the bolts are removed, proceed to remove both bed end caps.

### Step 3



Using your **4mm** Allen Wrench, loosen and remove the bolt from the top of the side frame cover.

### Step 4



Using your **1/2" Wrench**, loosen and remove all three side frame bolts located underneath the side frame of the treadmill.

## Side Frame Cover & Traction Strip Removal & Installation:

### Step 5



With the three bolts loosened as shown in the illustration, you can now remove the side frame cover. When installing the new side frame cover, be sure to line up the side frame cover with the mounting holes on the frame. To install, follow the instructions in reverse.



## Drive Roller Removal & Installation:

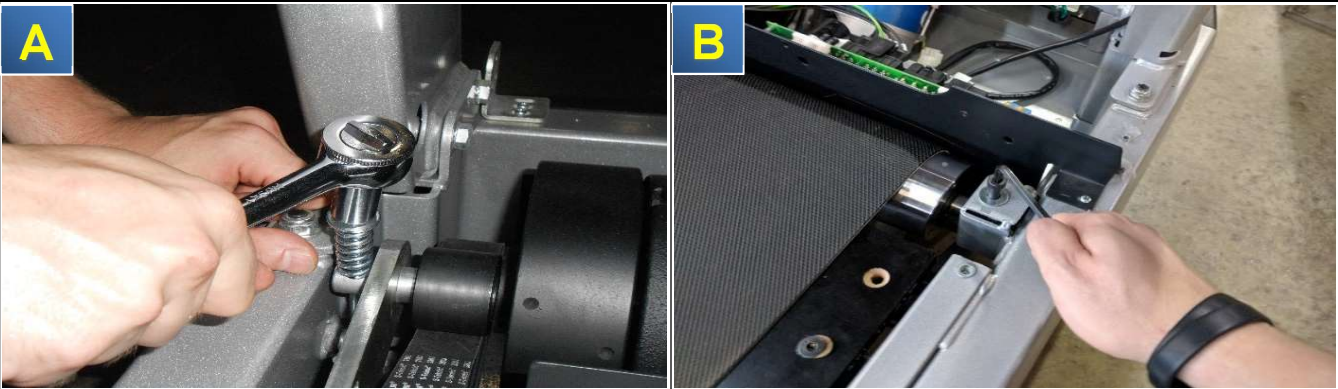
**INTRODUCTION:** This document is to be used for the installation and removal of the Front (Drive) Roller (#10028).

**TOOLS REQUIRED:**

- 5mm Allen Wrench
- ½" Socket Wrench
- Socket Wrench

**BEFORE YOU BEGIN:** You will need to remove the motor cover, upright end cover caps, and side frame cover to gain access to the drive roller. Please refer to the instructions for both **Motor Cover Removal** and **Side Frame Removal** if you need assistance.

**Step 1**



Using a ½" socket wrench, loosen and remove the front roller adjustment bolt, as shown in **Illustration A**. Remove the bolt, washer and spring, and then remove the J-hook. Using a 5mm Allen Wrench, loosen and remove the bolt holding the drive motor in place, as shown in **Illustration B**.

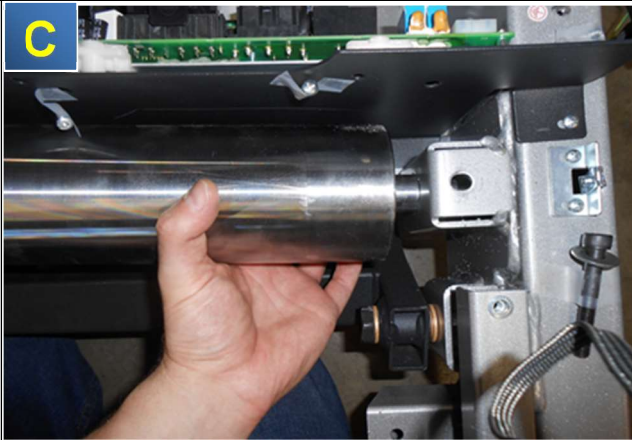
**Step 2**



With the bolts on both sides removed, you will need to remove the drive belt next. Work it slowly off the drive motor shaft, being careful not to damage the belt. You can then lift the drive roller out of the left side insert and remove the drive belt from the roller.

## Drive Roller Removal & Installation:

### Step 3



Next, remove the drive roller from the right side insert, as shown in **Illustration C**. You can now remove the front roller from the machine, as shown in **Illustration D**.

### Step 4



Remember to first place the drive belt around the drive roller and drive motor shaft, as seen in **Illustration E**. You can now place the drive roller in the left-side insert of the treadmill. The J-hook will face towards the treadbelt and is inserted through the drive pulley insert, as shown in **Illustration F**.

**It is recommended to torque the drive roller adjustment bolt to 30 foot pounds.**

**TO INSTALL, REVERSE THE FOLLOWING STEPS ABOVE!**

## Rear Roller Removal & Installation:

**INTRODUCTION:** This document is for the installation and removal of the Rear (Take-Up) Roller (#10029).

**TOOLS REQUIRED:**

- 4mm Allen Wrench
- 5mm Allen Wrench

**BEFORE YOU BEGIN:** You will need to remove the bed end caps before you can remove the rear roller.

### Step 1



Using your **4mm** Allen Wrench, loosen and remove the two bolts holding the bed end caps in place. Once the bolts are removed on both sides, proceed to remove both bed end caps.

### Step 2



Now that the end caps are removed, use your **5mm** Allen Wrench to loosen remove the two bolts holding the rear roller in place.

## Rear Roller Removal & Installation:

### Step 3



Remove the rear roller from the treadmill. When installing, be sure to line up the rear roller axle with the frame inserts shown above. The treadbelt needs to be tensioned after rear roller installation. Please refer to our **Treadbelt Tensioning & Tracking** instructions for help with adjustments of the treadbelt.

**TO INSTALL, REVERSE THE FOLLOWING STEPS ABOVE!**

### Treadbelt Tensioning:

Treadbelts are tensioned at the factory and normally need no adjustment. To determine if the treadbelt needs adjustment, perform the following test:

1. Set treadmill speed to 2MPH.
2. Walk on the treadbelt and see if the drive roller is turning, but the belt is not moving. If the belt is not moving, then tension the treadbelt by tightening the treadbelt tensioning bolts **ONLY** until belt ceases to slip.

Using your 5mm Allen Wrench, tension both bolts of the rear roller 1/4 turn **CLOCKWISE** to eliminate this slipping. Try the treadmill again to check for slipping. Repeat if necessary, but **NEVER TIGHTEN** the roller bolts more than 1/4 turn at one time.

**Perfect tension of the running belt is 0.9 to 1.1 lbs. of torque.**

### Treadbelt Tracking:

**If the Treadbelt is tracking to the Right:** Tighten the right bolt (clockwise), or loosen the left bolt (counter-clockwise) using your 5mm Allen Wrench.

**If the Treadbelt is tracking to the Left:** Tighten the left bolt (clockwise), or loosen the right bolt (counter-clockwise) using your 5mm Allen Wrench.

**Do not adjust either bolt more than ¼ turn at a time!**

**Speed of Running Belt during adjustment should not exceed 3mph.**

## Treadbelt Removal & Installation:

**INTRODUCTION:** This document is for installation and removal of the Treadbelt (#10023) and flipping the Deck (#10024).

**TOOLS REQUIRED:**

- 4mm Allen Wrench,
- 5mm Allen Wrench

**BEFORE YOU BEGIN:** You will need to remove the motor cover, upright base cover, bed end caps, side frame covers, front, and rear rollers before you can remove the treadbelt. Please refer to the individual instructions for each if you need assistance.

**Step 1**



Remove the front roller as shown in **Illustration A**. Remove rear roller as shown in **Illustration B**.

Remove the (10) Allen bolts keeping the deck in place as shown in **Illustration C**.

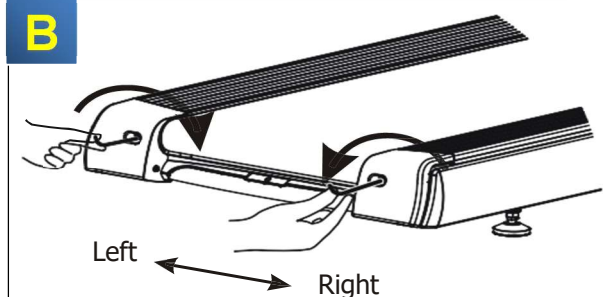
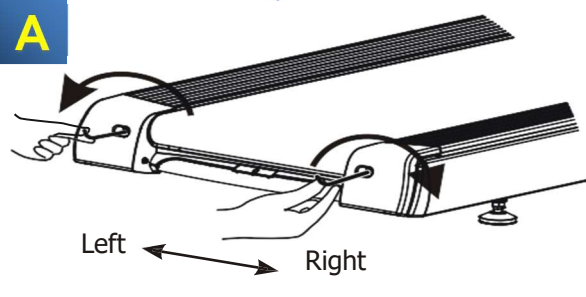
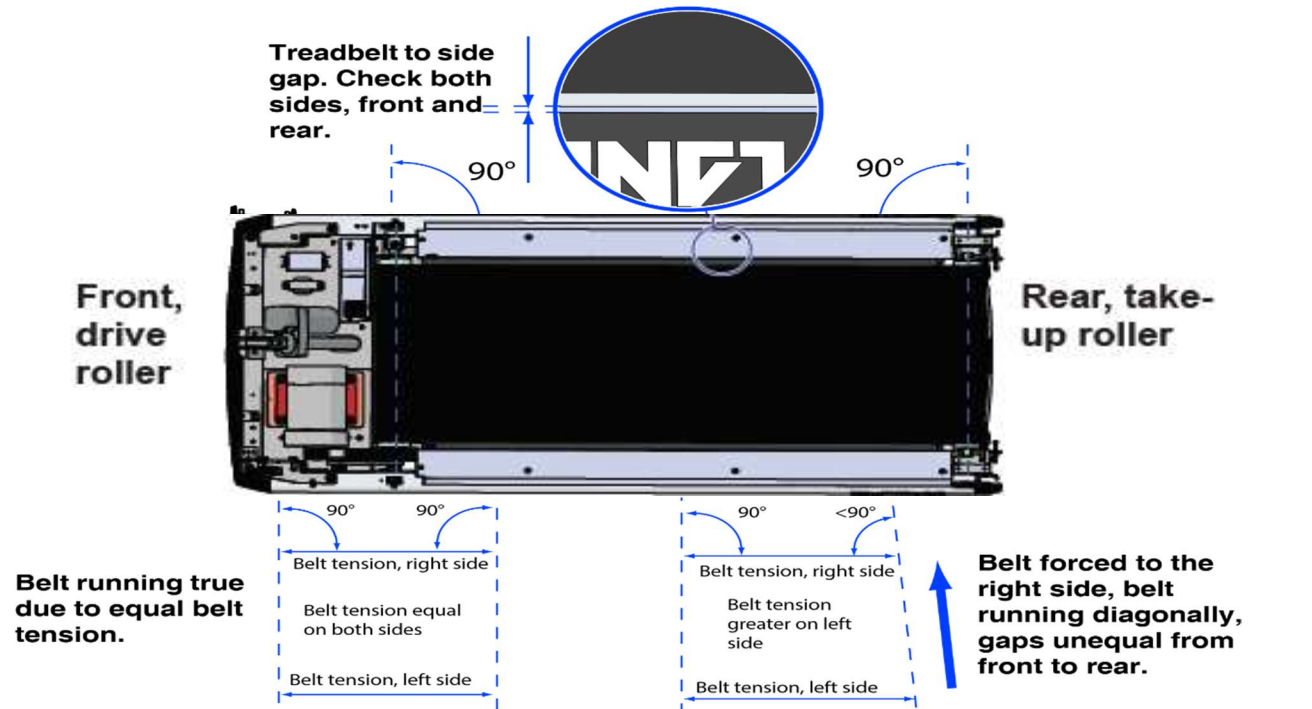
Once the deck bolts are removed, you can now lift the deck up and rest it on the side frame, allowing you to slide the belt off the deck as shown in **Illustration D**.

**If this is the 1<sup>st</sup> time replacing the treadbelt, you will need to flip the deck. If it is the 2<sup>nd</sup> time replacing the treadbelt, you will also need to replace the deck.**

## Treadbelt Tracking & Tensioning

### Treadbelt Tracking & Tensioning Instructions:

#### Tracking Instructions:



- **If the Treadbelt is tracking to the right (Figure A):** Tighten the right bolt (clockwise), or loosen the left bolt (counter-clockwise) using your 5mm Allen Wrench.
- **If the Treadbelt is tracking to the left (Figure B):** Tighten the left bolt (clockwise), or loosen the right bolt (counter-clockwise) using your 5mm Allen Wrench
- Do not adjust either bolt more than ¼ turn at a time!
- **Speed of Running Belt during adjustment should not exceed 3mph.**

## Deck Removal & Installation:

**INTRODUCTION:** This document is for removal and installation of the Deck (#10024).

**TOOLS REQUIRED:**

- 4mm Allen Wrench
- ½ Wrench

**BEFORE YOU BEGIN:** You will need to remove the motor cover, upright base cover, bed end caps, and side frame covers before you can remove the deck. Please refer to the individual instructions for each if you need assistance.

**Step 1**



Using your 4mm Allen Wrench, remove all (10) Allen head bolts securing the deck to the absorbers underneath.

## Deck Removal & Installation:

### Deck Installation/Removal Instructions

#### Step 2



With the deck bolts removed, simply slide the deck out from underneath the treadbelt and flip or replace with a new deck if it has been already flipped previously.

**(Please note that the deck can be flipped when replacing the treadbelt)**



Once the new treadbelt is replaced and the deck has been flipped, then place the assembled belt and deck on the treadmill, and reverse the instructions to finish installation. **(The arrows in the illustration below will show you where to replace the deck bolts)**



## Impact Absorbers Removal & Installation:

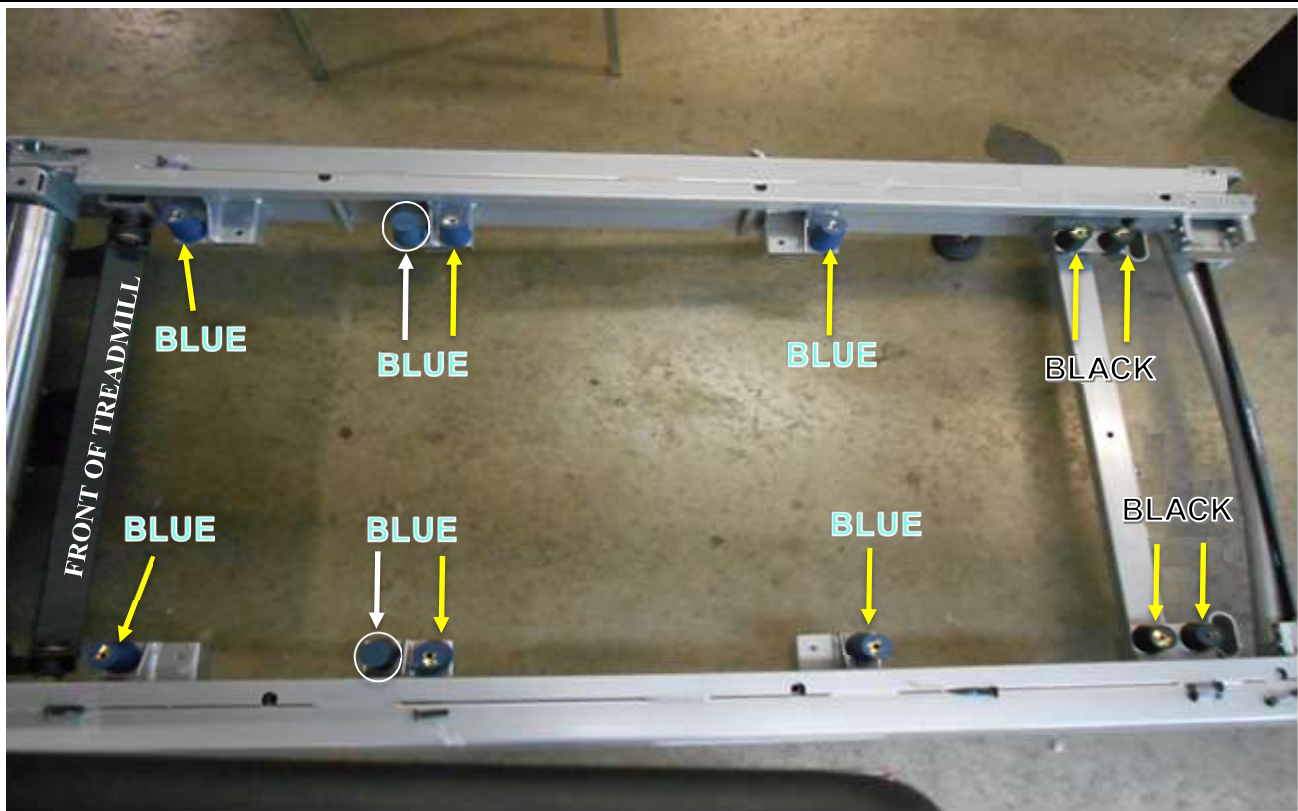
### Absorber Installation/Removal Instructions

**INTRODUCTION:** This document is for installation and removal of the absorbers.

**TOOLS REQUIRED:** • 13mm Wrench & Socket • 4mm Allen Wrench

**BEFORE YOU BEGIN:** You will need to remove the motor cover, upright base cover, bed end caps, side frame covers, treadbelt and the deck before you can remove the absorbers. Please refer to the individual instructions for each if you need assistance.

#### Step 1



**Part Number:** Black (#10026) / Blue (#10025)

Once the deck has been removed, take note of the placement of each absorber, and where the empty spaces are. As you can see in the picture above, there are both blue and black absorbers. In addition, the blue absorbers have a corresponding washer, black absorbers do not. Finally, there is one blue absorber on each side that does not have a top deck screw, they are circled above.

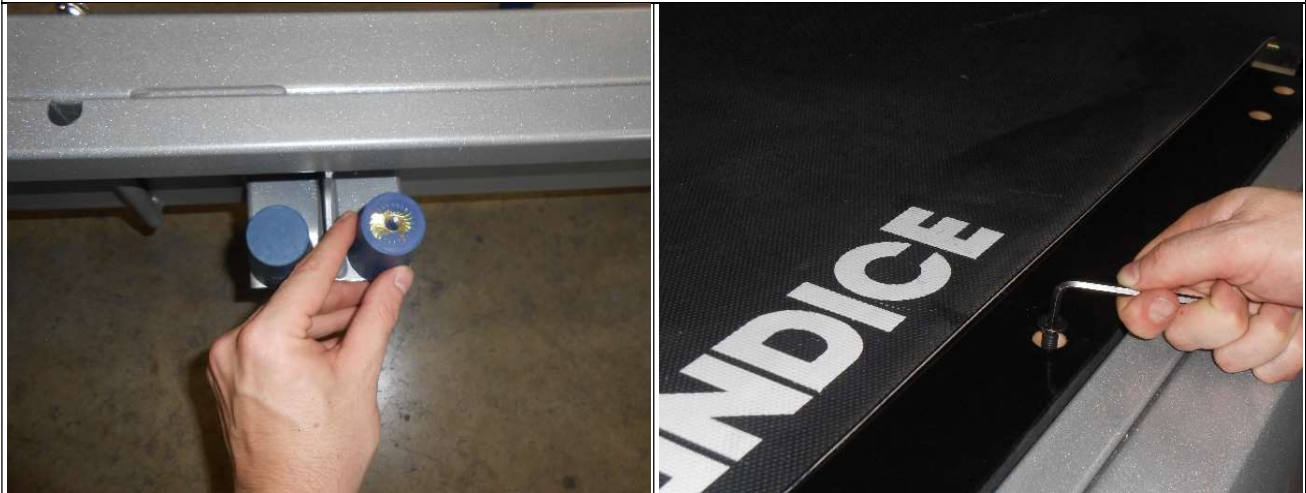
## Absorber Installation/Removal Instructions

### Step 2



Using your 13mm wrench, loosen and remove the serrated nut attached to the bottom of the absorber. It may be helpful to use the socket attachment for some of the absorbers. Remove the washer from the blue absorbers.

### Step 3



Once you have removed all the absorbers, **simply reverse the steps shown here to install.** Please use the illustration in **Step 1**, to install the impact absorbers.

## Drive Motor

### Drive Motor Installation/Removal Instructions

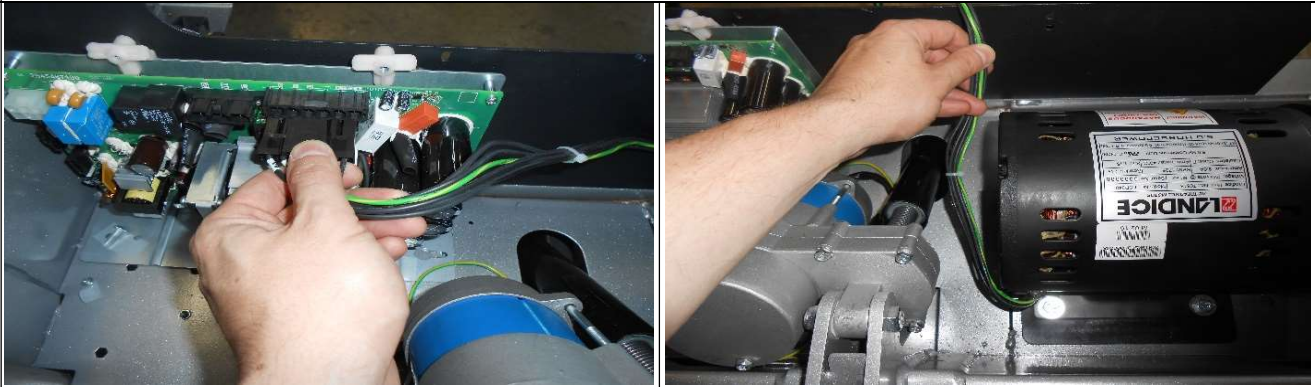
**INTRODUCTION:** This document is for installation and removal of the AC Drive Motor (#10037).

Tools Required:

- 13mm Socket
- Socket Wrench
- 4" Socket Wrench Extender

**BEFORE YOU BEGIN:** This is a high voltage AC unit. Please turn off and remove power from the treadmill before removing or installing parts.

#### Step 1



Carefully disconnect the drive motor harness from the lower board (inverter), then remove the drive motor harness from where it is routed in the motor pan.

#### Step 2



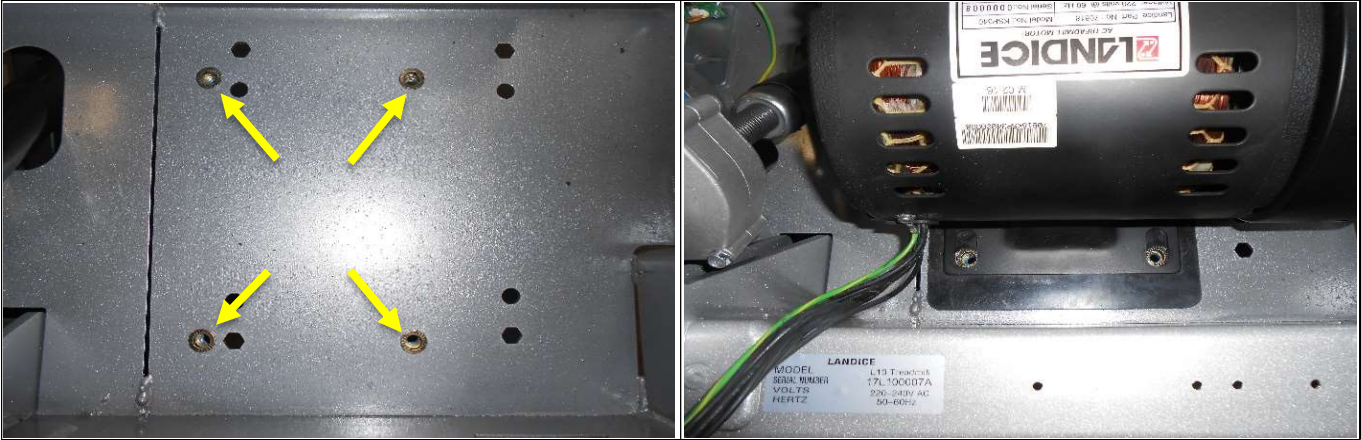
Carefully work the drive belt off the drive motor shaft. Then, using the 13mm socket wrench, remove all 4 mounting bolts holding the drive motor in place.

**We recommend using a 4" socket wrench extension for easier access.**

## AC Drive Motor Removal & Installation:

### Drive Motor Installation/Removal Instructions

#### Step 3



Locate the 4 brass threaded inserts in the motor pan. Install the drive motor in the motor pan, aligning the motor bracket with the 4 brass threaded inserts.

#### Step 4



Assemble all (4) bolts with the flat metal washer and rubber grommet as shown in the illustration above. Using this hardware, proceed to mount and secure the drive motor to the motor pan. Then, use the 13mm socket wrench to secure and tighten all 4 motor bolts to the motor pan.

**Simply reverse the instructions to finish installing the drive motor.**

**Part Number: (Drive Motor 110v/220v - #10037)**

## Drive Belt Installation & Removal

### Drive Belt Installation/Removal Instructions

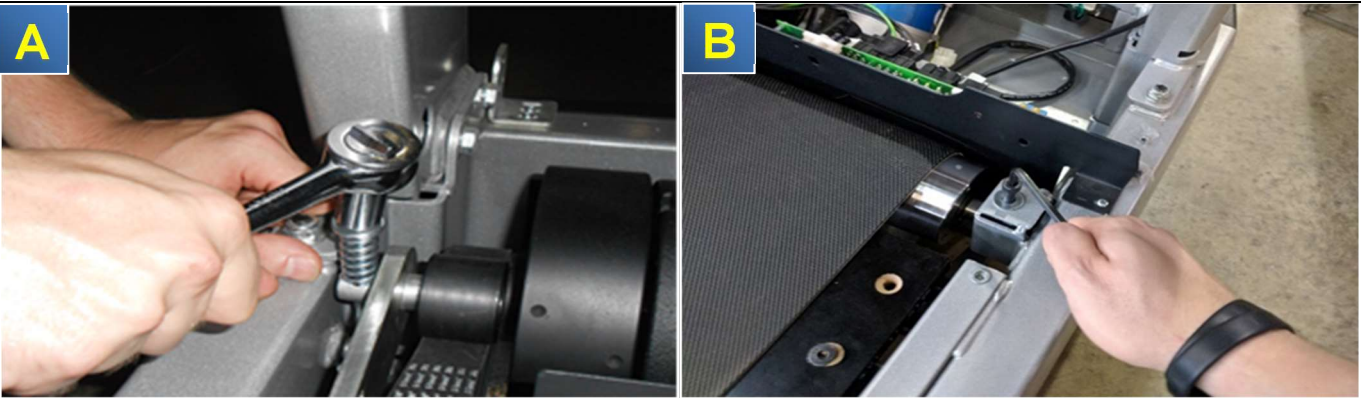
**INTRODUCTION:** This document is for the installation and removal of the drive belt (#10030)

**TOOLS REQUIRED:**

- 5mm Allen Wrench
- ½” Socket & Socket Wrench

**BEFORE YOU BEGIN:** You will need to remove the motor cover, upright end cover caps, and side frame cover (**Left Side Only**) to gain access to the drive belt. Please refer to the individual instructions for both **Motor Cover Removal** and **Side Frame Removal** if you need assistance.

#### Step 1



Using a ½” socket wrench, loosen and remove the front roller adjustment bolt, as shown in **Illustration A**. Remove the bolt, washer and spring, and then remove the J-hook. Using a 5mm Allen Wrench, loosen and remove the bolt holding the drive motor in place, as shown in **Illustration B**.

#### Step 2



With the bolts on both sides removed, remove the drive belt next. Work it slowly off the drive motor shaft, as shown in **Illustration C**, being careful not to damage the drive belt. You can then lift the drive roller out of the left side insert, and remove the drive belt from the roller, as shown in **Illustration D**.

**It is recommended to tighten the drive roller adjustment bolt to 30 foot pounds.**

**To install the drive belt, please reverse the steps shown here.**

## Elevation Motor Removal & Installation:

### Elevation Motor Installation/Removal Instructions

**INTRODUCTION:** This document is for installation and removal of the Elevation Motor (#10064).

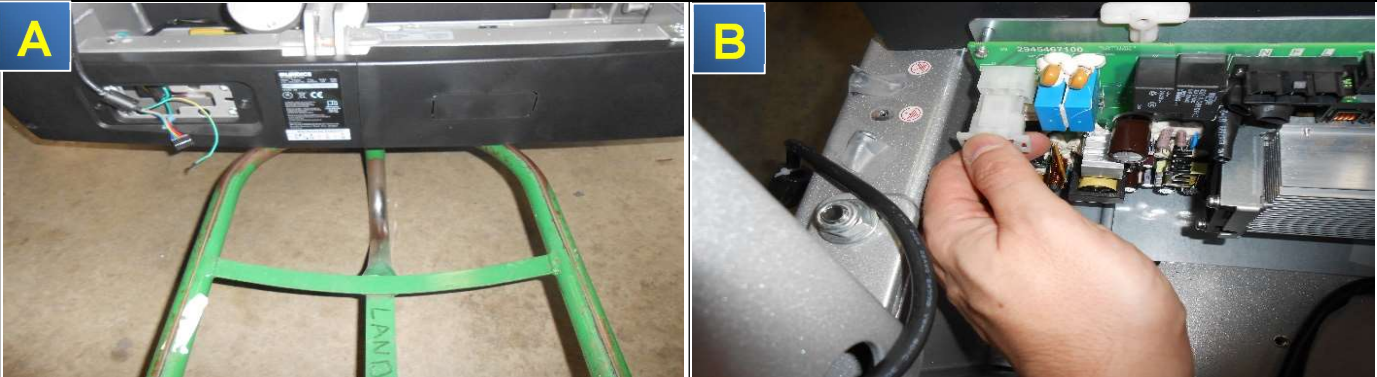
**WARNING: THIS IS A HIGH AC VOLTAGE SO BE SURE TO UNPLUG THE TREADMILL**

**TOOLS REQUIRED:**

- 13mm Socket Wrench
- 5/8" Wrench
- Phillips Head Screwdriver

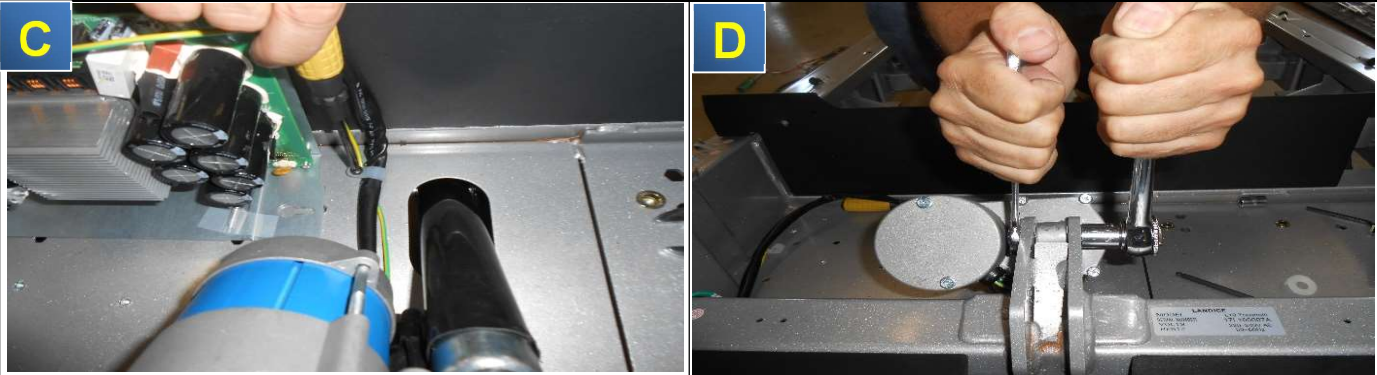
**BEFORE YOU BEGIN:** Please turn off and remove power from the treadmill before removing or installing parts. It is also helpful to have something to prop up the front of the treadmill before removing and installing the Elevation Motor.

#### Step 1



Place a block or something solid underneath the front of the treadmill, allowing you access to underneath the motor pan, as shown in **Illustration A**. Then, disconnect the elevation harness connector from the Lower Board (Inverter) as shown in **Illustration B**.

#### Step 2



Using the Phillips head screwdriver, remove the screw securing the harness cable to the motor pan, as shown in **Illustration C**. Then, use the 13mm socket wrench to hold the nut in place, and use the 5/8" wrench to remove the bolt, as shown in **Illustration D**.

## Elevation Motor Removal & Installation:

### Step 3



Underneath the motor pan, use the 5/8" wrench to remove the nut and bolt connecting the elevation shaft to the leg assembly, as shown in **Illustration E**. Remove the elevation motor, as shown in **Illustration F**.

### Step 4



**To Install, reverse the steps shown here to finish installation.** It is recommended to partly tighten the trunnion bolt first, as shown in **Illustration G**. Then, adjust the shaft of the elevation motor to align with the holes in the elevation leg assembly, as shown in **Illustration H**. Next, slide the bolt through the elevation legs and then tighten fully. Finally, return to the trunnion bolt and finish tightening, as shown in **Illustration I**.

### Calibrating the Elevation Motor



**To calibrate the elevation motor:** Start the machine. Pull out the Safety Key, as shown in **Illustration J**, until the display shows the version #, as shown in **Illustration K**. Push the safety key back in, and hold the **Incline +** and **Speed +** buttons, until the screen changes to Auto Adjust, as shown in **Illustration L**. The auto calibration process will then begin.

**CAUTION- The Treadmill will incline and decline by itself during this process!**

## Inverter Board (Lower Board) Removal & Installation:

### Inverter Board (Lower Board) Installation/Removal Instructions

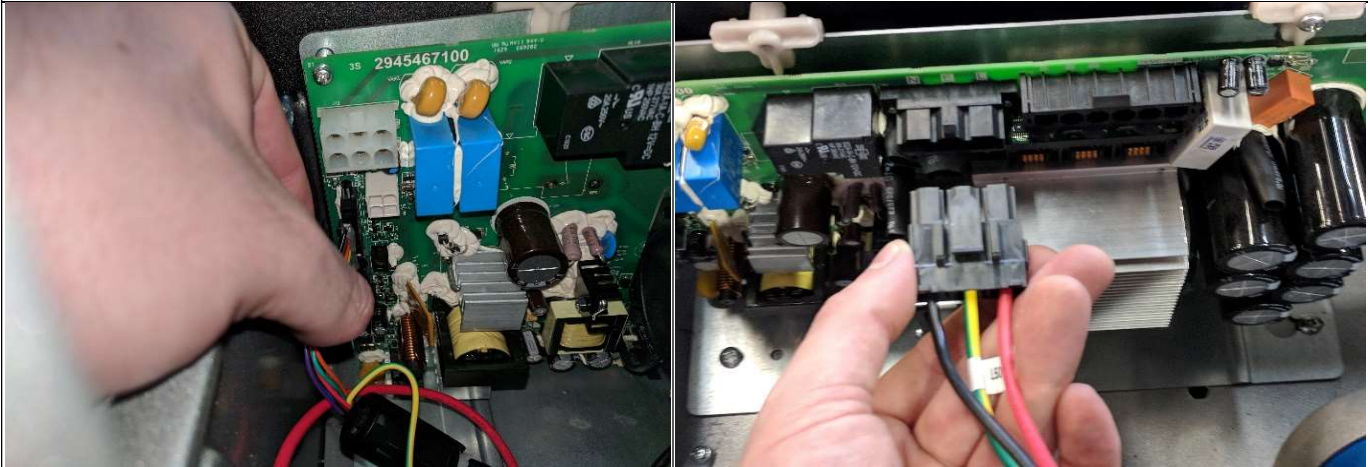
**INTRODUCTION:** This document is to be used for installation/removal of the Inverter board(#10011).

**TOOLS REQUIRED:**

- Phillips Head Screwdriver
- Cordless Screw Gun w/ Phillips Head Tip

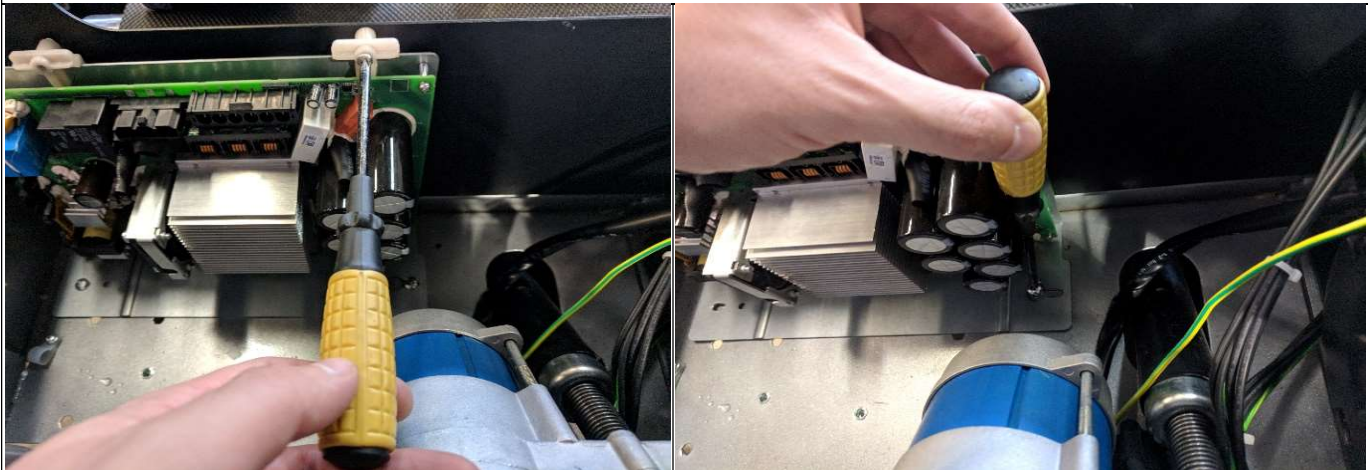
**BEFORE YOU BEGIN:** Power off the unit and unplug from power source before removal.

#### Step 1



With the unit powered off, remove each connected harness from the inverter board (Lower Board). Be careful not to yank on the connector tab, as it can break if forcefully removed.

#### Step 2



Using a Phillips head screwdriver, remove the 2 screws mounting the lower board to the dust-shield. Remove the two screws mounting the lower board to the motor pan.



## Inverter Board (Lower Board) Wiring Schematic:

### Step 3



With the screws removed, and all harnesses disconnected, proceed to remove the lower board from the motor pan. **To install, simply reverse the steps shown here.** The illustration above shows where each harness connects on the lower board.

## Landice Vision System Installation Instructions:

### LVS Installation Instructions

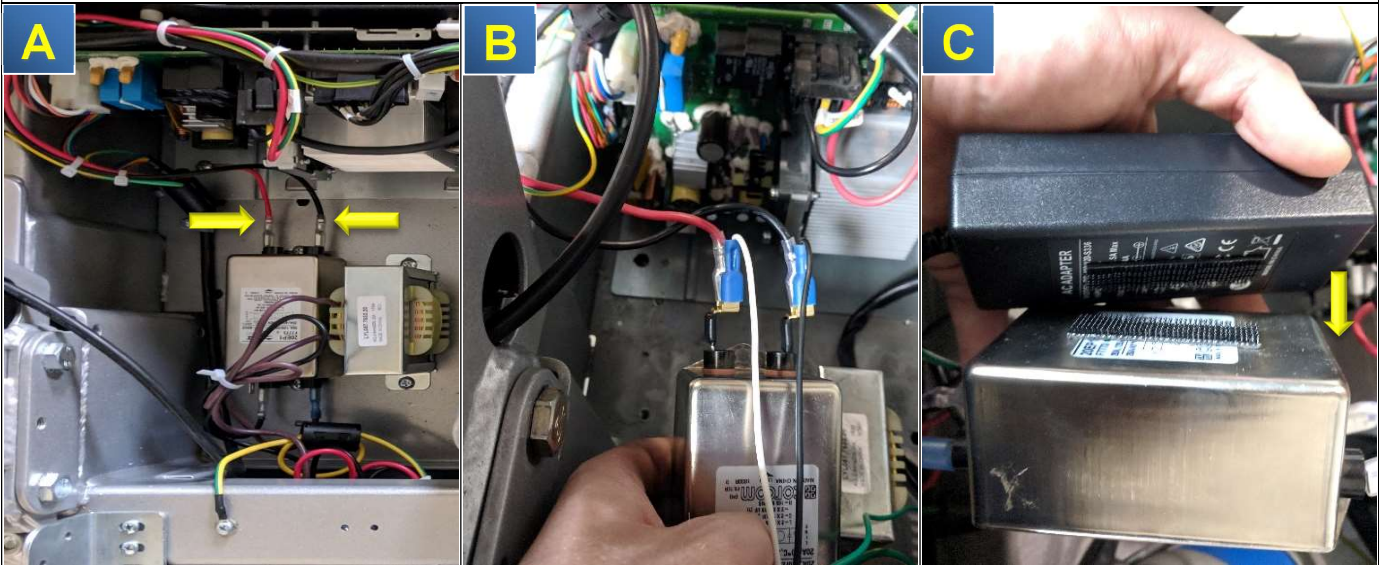
**INTRODUCTION:** This is to be used for installation of the Landice LVS Vision System.

**TOOLS REQUIRED:**

- 4mm Allen Wrench
- Phillips Head Screwdriver
- ¼ Metal Drill Bit & Cordless Drill
- Wire Guide

**BEFORE YOU BEGIN:** You will need to unplug the treadmill and remove the motor cover before installation. Please refer to the instructions [Motor Cover Removal & Installations](#) if you need help with the removal of the motor cover.

### Step 1



Disconnect the **Red** and **Black** wires from the Line Filter as shown in **Illustration A**. Using the brass splitters, connect the splitter to Line Filter. Reattach the **Red** & **Black** wires to each bottom splitter, and then connect black and white power wires as shown in **Illustration B**. Using the **Interlocking Velcro** adhere one piece to the top of the Line Filter, and the other piece to the bottom of the AC Transformer. Once the Velcro is installed interlock both the AC Transformer and the Line Filter together as shown in **Illustration C**.

## LVS Installation Instructions:

### LVS Installation Instructions

#### Step 2



Using a **Phillips Screw Driver** loosen and remove all (3) Phillips Head Screws, then the reading rack, and finally remove the display assembly from the control console as shown in **Illustration A**. Using a **4mm Allen Wrench**, loosen and remove all 4 (M6x75) button head cap screws holding the control console to the upright. Carefully remove the control console from upright, being mindful of the wires in the console as shown in **Illustration B**. Using a harness guide wire tie, snake the AC power cable down through the upright assembly and proceed to connect the female end to the male end of the AC transformer. Using the same guide wire tie, proceed to run the HDMI or the Coaxial cable through the upright as shown in **Illustration C**. Once the cables are routed, reinstall the console by following **Illustration B**.

**“ENSURE ALL WIRES ARE ROUTED AWAY FROM FAN AND RELATED COMPONENTS”**

#### Step 3

### LVS Bracket Installation Instructions:



Remove the rear access cover by loosening and removing the (4) M6 button head screws as shown in **Illustration A**. Mount the **LVS bracket** in its place using the same hardware as shown in **Illustration B**. **Route the power and video cables through the bracket tube**. Once the cables are routed through the bracket tube, mount the vision system to the bracket using the provided (4) Phillips Head Screws as shown in **Illustration C**.

## LVS Installation Instructions:

### BVE Remote Control Installation Instructions

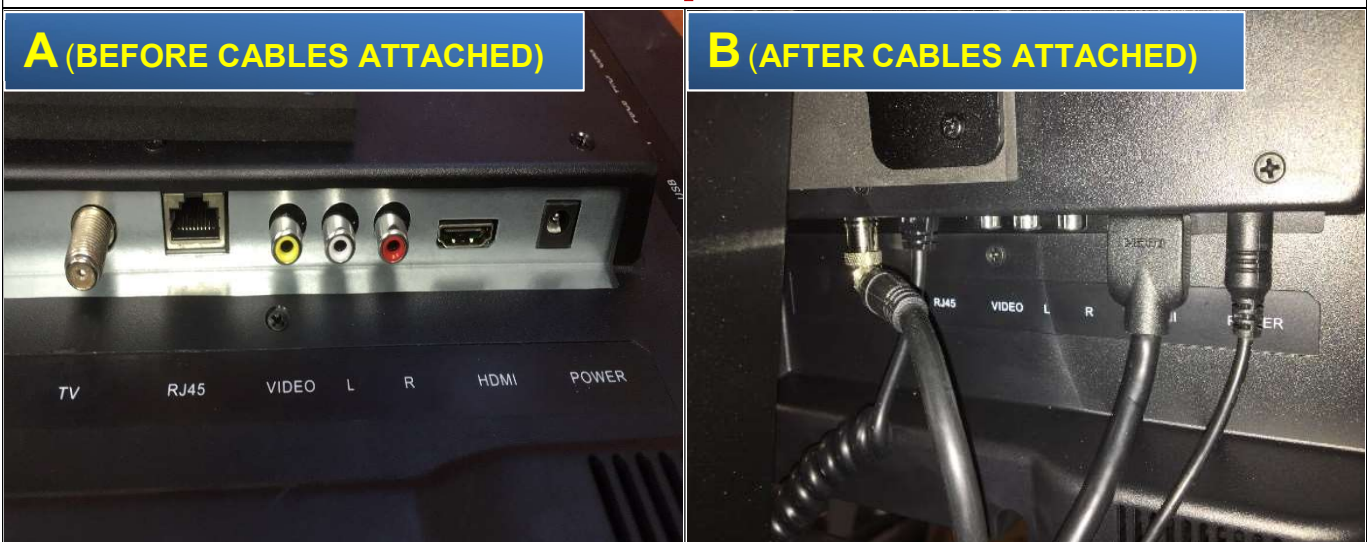
#### Step 4



Using the BVE Mounting Bracket, measure and mark the holes for the mounting bracket in its place on the back of the console as shown in **Illustration A**. Then using a drill and a  $\frac{1}{4}$ -20 Drill Bit, drill out the mounting holes and mount the Remote Control Bracket in its place. From the inside of the console, install the metal reinforcement bracket along with the (2)  $\frac{1}{4}$ -20 stop nuts securing the bracket in its place as shown in **Illustration B**. Using your Phillips Head Screwdriver, mount the BVE Remote Control on the end of the bracket and tighten it in place as shown in **Illustration C**.

### LVS Wiring Connections Instructions

#### Step 4



Attach the power and remote control cabling as shown above. The remote control will fit in the RJ45 port. Finally, connect the coaxial and HDMI cables into their respective ports. Check all connections, and plug the treadmill into a power source to verify the BVE system is functioning correctly.

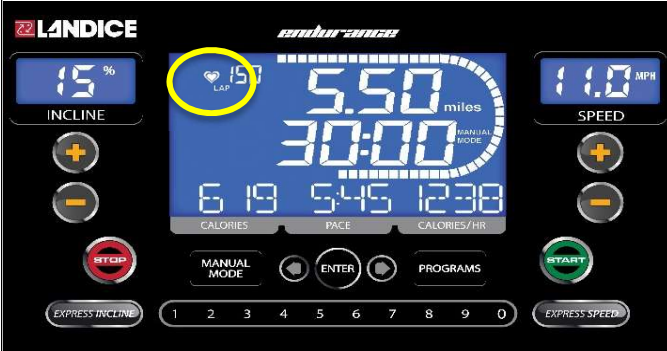
## L10 Button Feedback

<b><u>L10 Button Feedback</u></b>	
<b><u>Display Buttons</u></b>	
<b>Button</b>	<b>Code</b>
<b>INCLINE +</b>	<b>21</b>
<b>INCLINE -</b>	<b>22</b>
<b>SPEED +</b>	<b>23</b>
<b>SPEED -</b>	<b>24</b>
<b>STOP</b>	<b>8</b>
<b>START</b>	<b>7</b>
<b>EXPRESS 1</b>	<b>9</b>
<b>EXPRESS 2</b>	<b>10</b>
<b>^ 1</b>	<b>1</b>
<b>^ 2</b>	<b>2</b>
<b>^ 3</b>	<b>3</b>
<b>^ 4</b>	<b>4</b>
<b>^ 5</b>	<b>5</b>
<b>^ 6</b>	<b>6</b>
<b>Keypad # 1-0</b>	<b>11-20</b>
<b><u>Remote Console</u></b>	
<b>INCLINE +</b>	<b>33</b>
<b>INCLINE -</b>	<b>32</b>
<b>SPEED +</b>	<b>31</b>
<b>SPEED -</b>	<b>30</b>
<b>STOP/SAFETY STOP</b>	<b>28</b>
<b>RESUME</b>	<b>29</b>

## Contact Heart Rate Diagnostics:

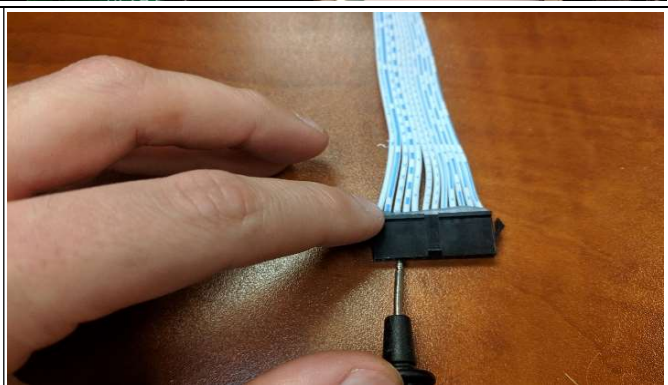
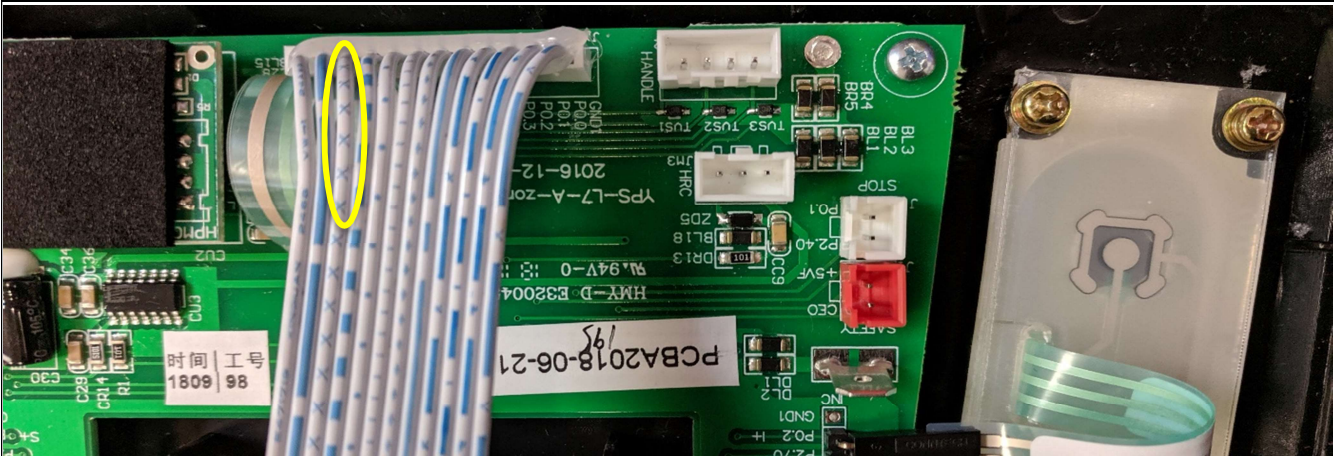
### Contact Heart Rate Diagnostics

#### Step 1



Place your hands on both pulse grips and keep them there for 5-10 seconds. The heart rate icon should blink, and provide BPM information. If it doesn't appear, you will need to remove the outer cover of the Remote Console (see Remote Console Instructions) and proceed to Step 2.

#### Step 2



Using a voltmeter set to "Continuity", locate the 3<sup>rd</sup> wire in on the Ribbon Cable (X pattern on wire) and place one prong. Place your other voltmeter prong on the corresponding wire at other end of harness. If continuity passes (voltmeter will beep), move to the next segment of the Ribbon Cable and repeat. If the ribbon cable passes continuity, check for bent pins at the Upper Board.

**If continuity fails along the ribbon cable, Replace the Remote Console (P/N 75020) and Ribbon Cable (P/N 10033)**

## Contact Heart Rate Diagnostics:

### Heart Rate Diagnosis

#### ACCUTRACK CHR Crossbar Diagnosis:

1. There should be a constant 4.8-5.0Vdc across the red & brown wires on ACCUTRACK CHR Crossbar harness. If there is 0Vdc then the remote console is bad. If the ACCUTRACK CHR Crossbar is working properly this is what you should see with your voltmeter (Not touching the grips).

**TABLE A – Without Accutrack**

WIRES	Vdc	OHMS
RED & BLACK	0 Vdc	0.99m OHMS
RED & BROWN	5 Vdc	No reading
BLACK & BROWN	4.5 Vdc	6.07m OHMS

If the ACCUTRACK CHR Crossbar **is** working properly with a Pulse Simulator or when touching the grips, this is what you should see on your meter.

**TABLE B – With Accutrack**

WIRES	Vdc	OHMS
RED & BLACK	0 – 1.2 Vdc	5-35m OHMS
RED & BROWN	3.2 – 5 Vdc	6.13m OHMS
BLACK & BROWN	0.3 – 4.5 Vdc *NOTE: Fluctuation will get faster as you increase heart rate*	1.750 – 1.751m OHMS *NOTE: Ohm reading increases as you increase the heart rate on pulse simulator*

If the ACCUTRACK CHR Crossbar **is not** working properly with a Pulse Simulator or when touching the grips, this is what you should see on your meter.

**TABLE C –Failed Accutrack**

WIRES	Vdc	OHMS
RED & BLACK	5Vdc	No reading
RED & BROWN	Steady 1.96Vdc	No reading
BLACK & BROWN	Steady 2.97Vdc	OL

If you get readings from TABLE B and the console will not output a heart rate reading then the upper board has failed.

## Pulse Heart Rate Diagnostics:

### Heart Rate Receiver / Chest Strap Diagnosis:

1. There should be a constant 4.5Vdc – 5Vdc across the brown & black wires on the heart rate receiver harness. If you measure 0Vdc across those two points, then the remote control console is bad.
2. If the heart rate receiver is working properly, this is what you should see on your voltmeter.

**TABLE A – (Without Transmitter)**

WIRES	Vdc	OHMS
BROWN & BLACK	5 Vdc	6.13m OHMS
BROWN & RED	5 Vdc	0m OHMS
BLACK & RED	0.7 Vdc	0m OHMS

If the heart rate receiver is working properly with your pulse simulator or chest strap, this is what you should see on your voltmeter.

**TABLE B – (With Transmitter)**

WIRES	Vdc	OHMS
BROWN & BLACK	5 Vdc	0m OHMS
RED & BLACK	0.1 – 0.4Vdc	0m OHMS
RED & BROWN	Voltage will fluctuate from 2.9 Vdc – 4.9 Vdc (Fluctuation gets faster as you increase your heart rate)	Ohms will Fluctuate from 6.10m ohms – 20m ohms (Fluctuation gets faster as you increase your heart rate.)

**If you get the readings from TABLE B and the upper display board still will not show a heart rate output then the upper board has failed.**

If the heart rate receiver is **not** working properly with your pulse simulator or chest strap, this is what you should see on your voltmeter:

**TABLE C – (Heart Rate Receiver Failed)**

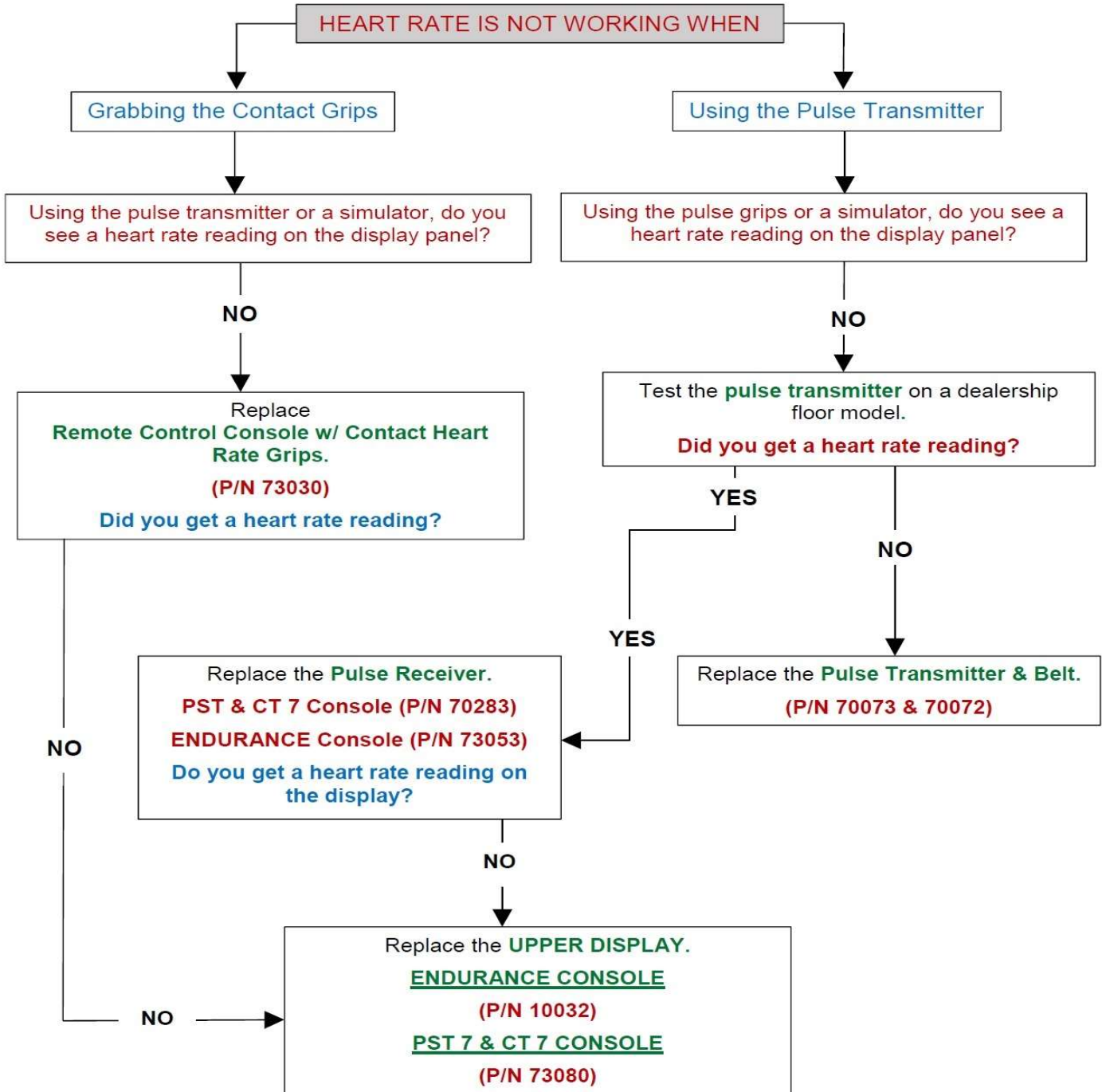
WIRES	Vdc	OHMS
BROWN & BLACK	5 Vdc	0 ohms
RED & BLACK	0.1 – 0.4 Vdc	0 ohms
RED & BROWN	2.9 (Reading will be steady)	6.10 OHMS (Reading will be steady)



## Heart Rate Diagnostics Flow Chart:

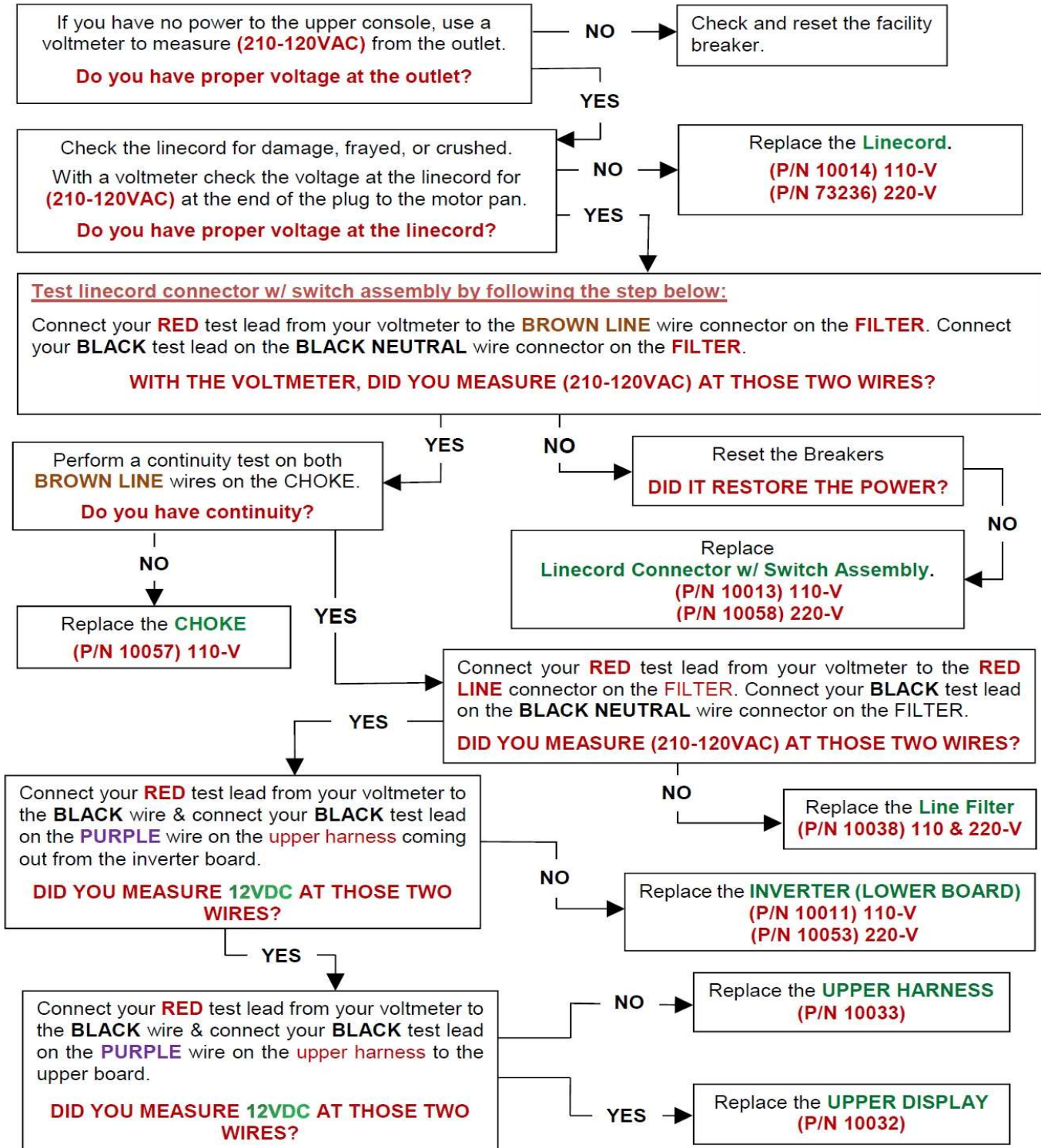
**NOTE: USE THIS FOR DIAGNOSING NO HEART RATE:**

**Error Code: No Heart Rate Reading**



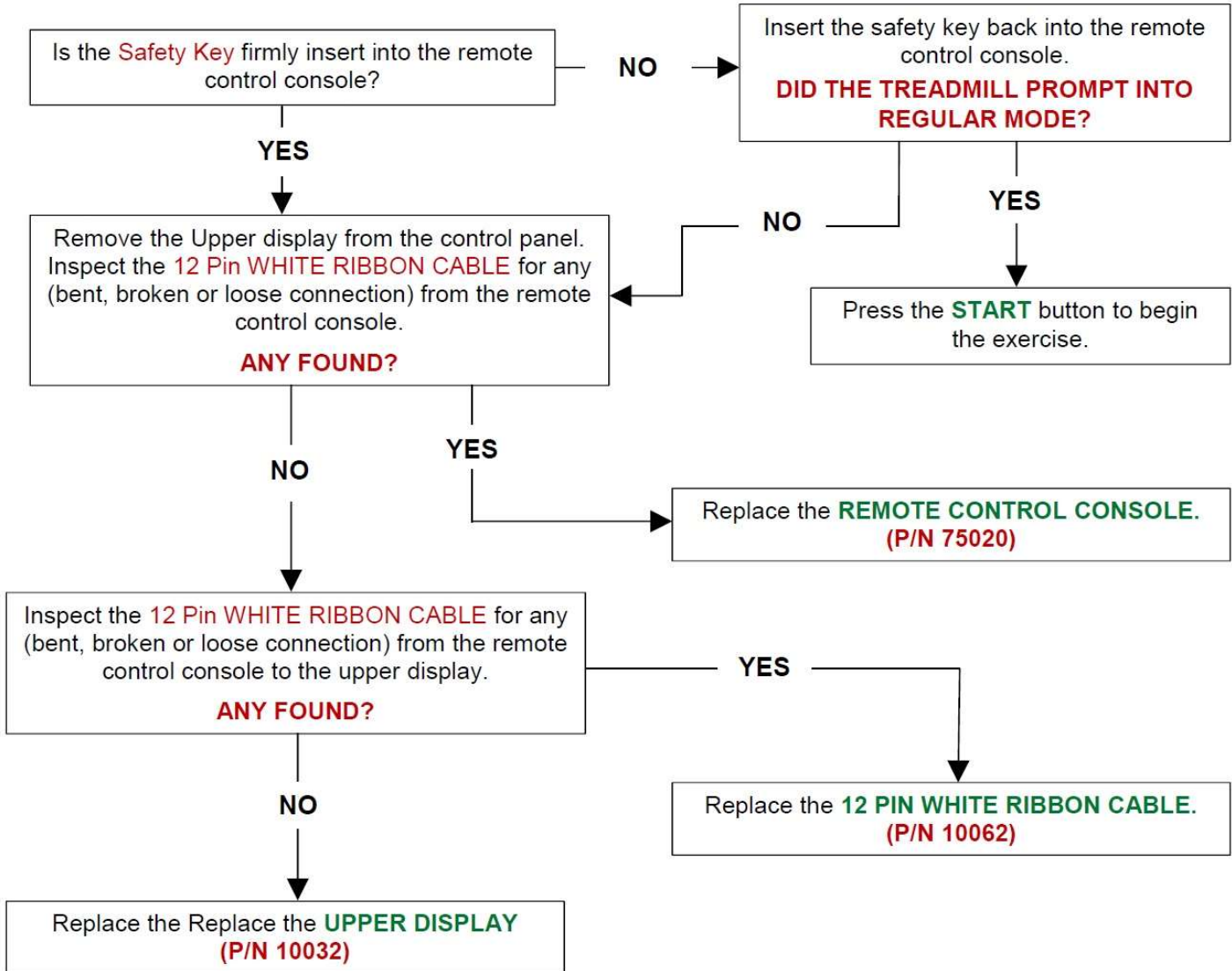
## No Power to Upper Console - Endurance

**NOTE: USE THIS FOR DIAGNOSING ENDURANCE CONSOLE**  
**Error Code: No power to the upper console**



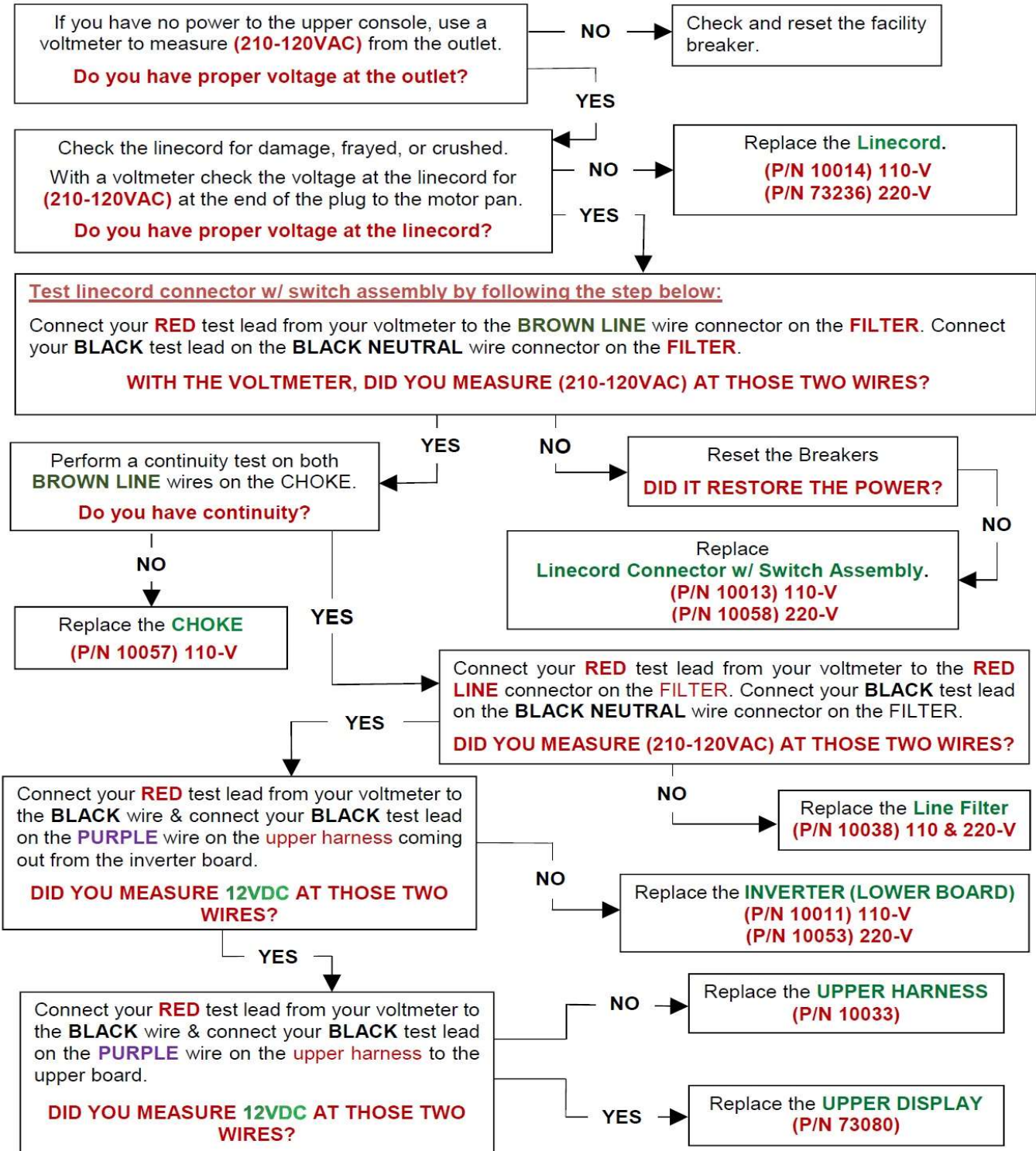
## Safety Key Error - Endurance Console

**NOTE: USE THIS FOR DIAGNOSING ENDURANCE CONSOLE**  
**Error Code: Display reads ER03 Speed Window**



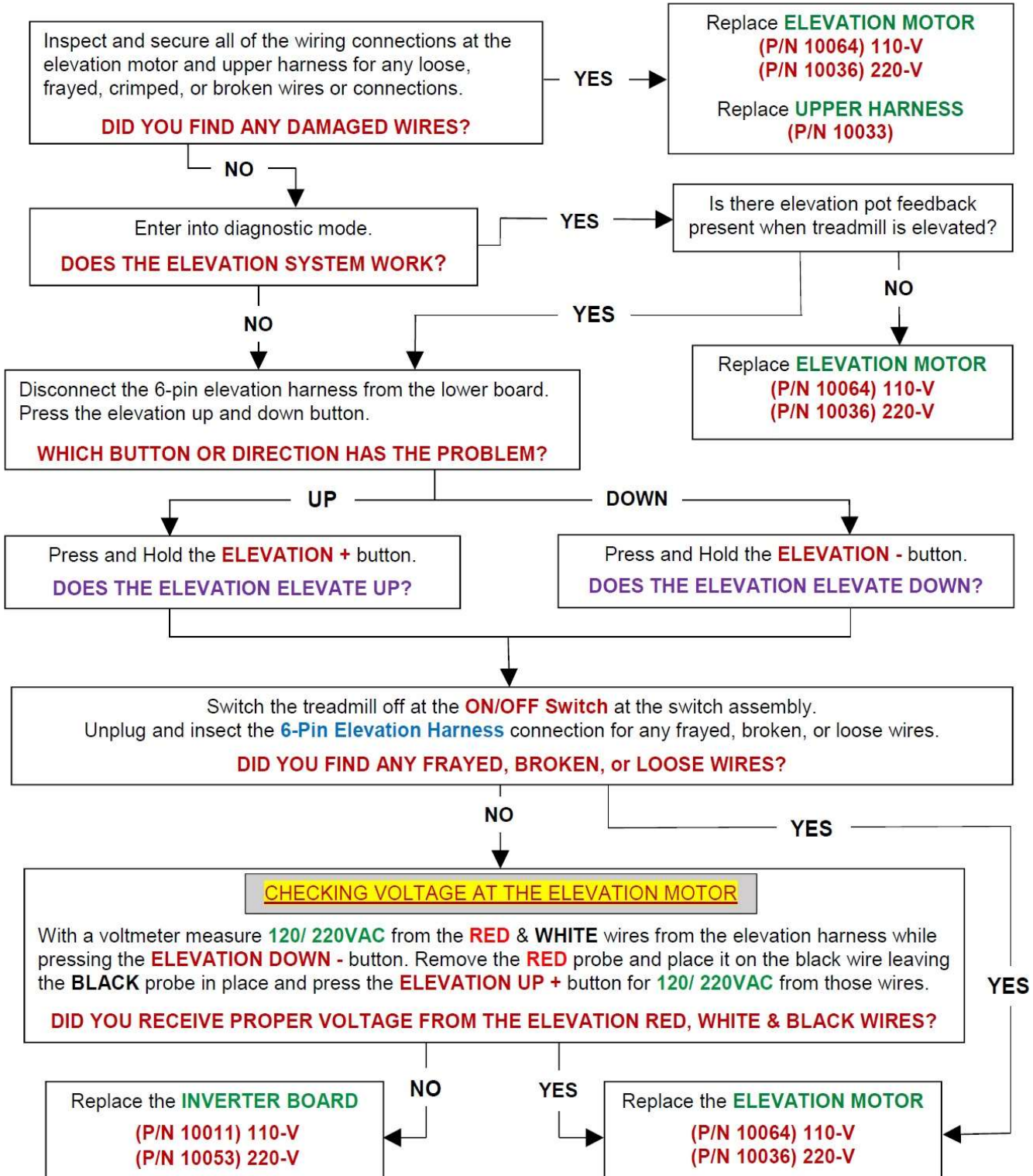
## No Power to the Upper Console - 9" Series

**NOTE: USE THIS FOR DIAGNOSING PST & CT7 CONSOLE**  
**Error Code: No power to the upper console**



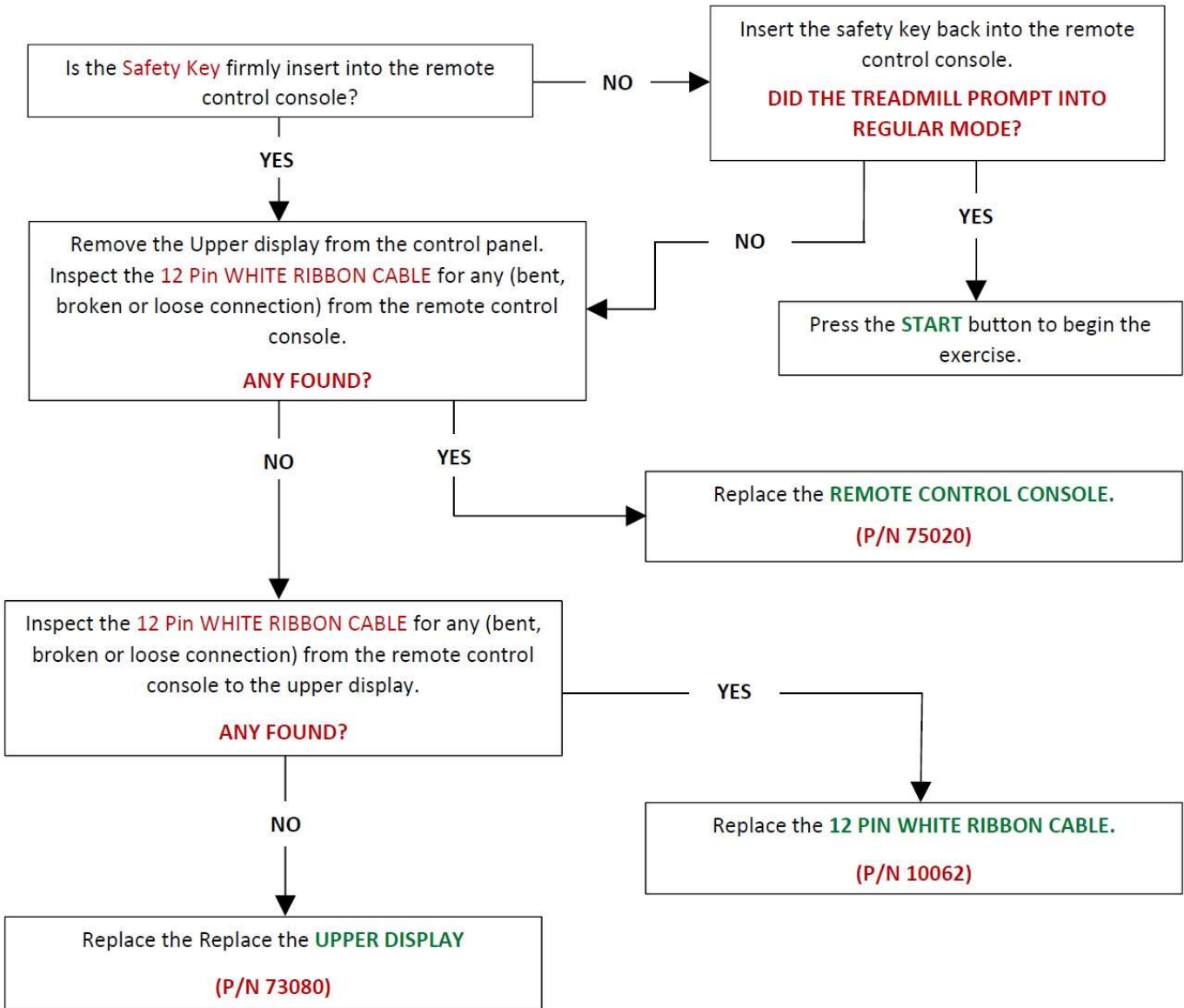
## PO Error - 9" Series

**NOTE: USE THIS FOR DIAGNOSING PST & CT7 DISPLAY**  
**Error Code: "PO" Error Code/ Elevation Calibration Failure**



## Safety Key Error - 9" Series

**NOTE: USE THIS FOR DIAGNOSING PST & CT7 CONSOLE**  
**Error Code: Center Display reads REPLACE SAFETY KEY**



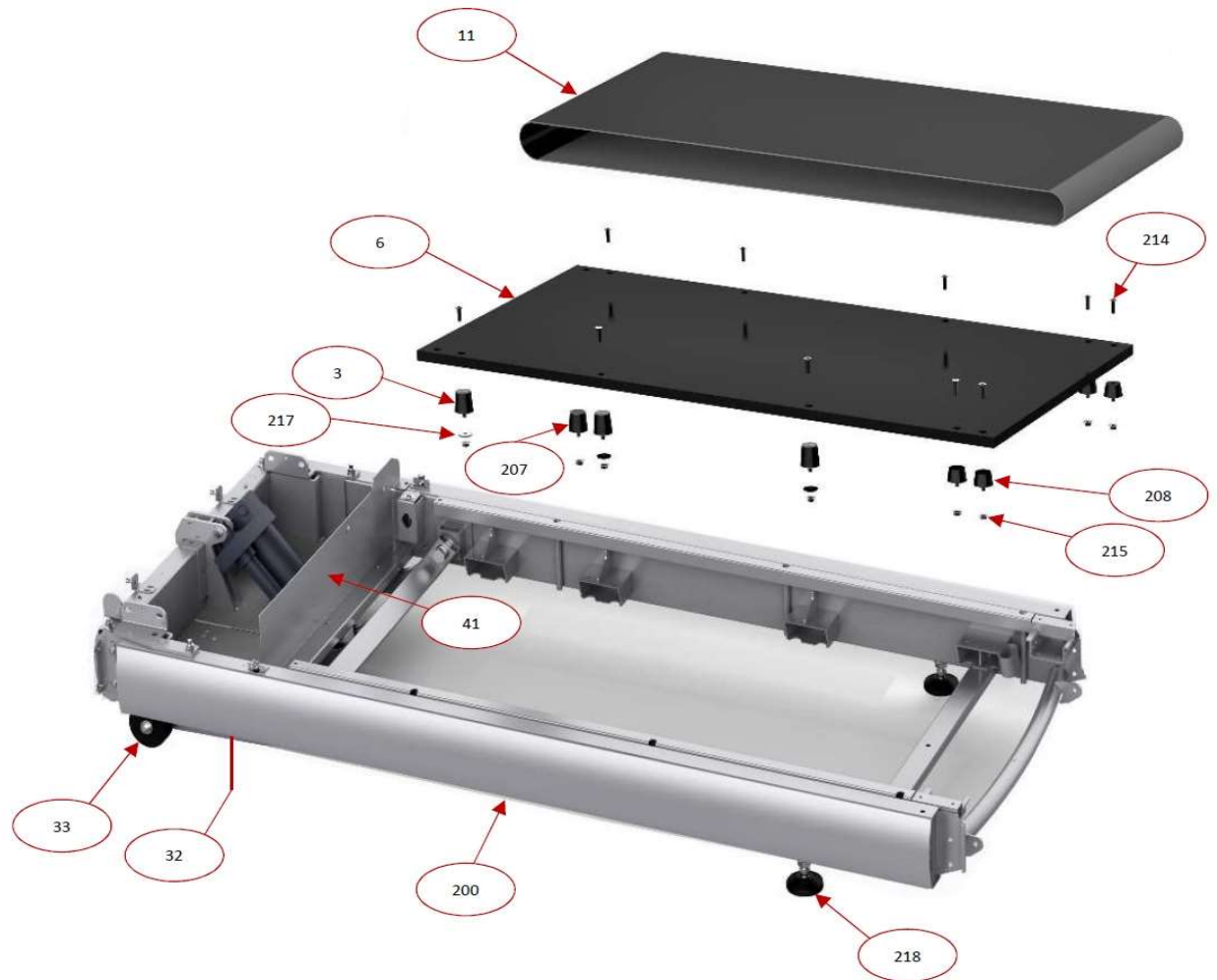
## Endurance Diagnostic Flow Chart:

<u>ERROR CODE</u>	<u>DESCRIPTION</u>	<u>DIAGNOSIS</u>	<u>SOLUTION</u>
<u><b>ER01</b></u> <u>Communication Failure</u>	Loss of communication from the upper board to the inverter board.	Check Upper Harness for loose wires or connection.	1). <u>Replace Upper Harness</u> 2). <u>Replace Display Board.</u> 3). <u>Replace Inverter Board.</u>
<u><b>ER02</b></u> <u>Incline Motor Error</u>	Loss of elevation calibration from the elevation motor to the upper display board.	No elevation during use. Check for loose wires or connection. Run Auto Calibration mode.	1). <u>Replace Elevation Motor.</u> 2). <u>Replace Upper Harness.</u> 3). <u>Replace Upper Console.</u> 4). <u>Replace Inverter Board.</u>
<u><b>ER03</b></u> <u>Safety Key Error</u>	Loss of the safety key signal from the remote control console to the upper console.	Check to see if the safety key engaged properly into the remote control console.	1). <u>Replace Remote Console.</u> 2). <u>Replace Ribbon Cable.</u> 3). <u>Replace Upper Console.</u>
<u><b>ER04</b></u> <u>Over Current Error</u>	Upon start up the AC motor runs faster than the inverter board programmed speed.	Check wiring connection. Perform an amp draw on the belt and deck to see if they are worn.	1). <u>Replace Inverter Board.</u> 2). <u>Replace AC Drive Motor.</u> 3). <u>Replace Treadbelt &amp; Deck.</u>
<u><b>ER05</b></u> <u>AC Motor Voltage Failure</u>	When the Inverter board monitors the AC motor is either not getting enough or too much voltage.	The inverter board or the AC drive motor has malfunctioned.	1). <u>Replace Inverter Board.</u> 2). <u>Replace AC Drive Motor.</u> 3). <u>Replace Treadbelt &amp; Deck.</u>
<u><b>ER06</b></u> <u>AC Motor Overload Error</u>	This error code indicates that the AC Motor's Thermal Sensor fails.	This error code occurs when there is a high friction on the belt causing the Thermal Sensor to pop on the inverter board.	1). <u>Replace Inverter Board.</u> 2). <u>Replace AC Drive Motor.</u> 3). <u>Replace Treadbelt &amp; Deck.</u>

## L10 Bed - Exploded View

### L10 BED EXPLODED VIEW

View #	Part Description	Part Number
3	Impact Absorber (Blue) (Tall Threaded Top)	10025
6	Deck, L10	10024
11	Treadbelt, 10	10023
32	Elevation Leg Assembly, L10	10060
33	Elevation Wheel, L10	10040
41	Dust Guard, L10	10067
200	Bed Frame Assembly, L10	10010
207	Impact Absorber (Short Blue) (No Threads)	10089
208	Impact Absorber (Black) (Short Threaded Top)	10026
214	Screw Absorber (M8x35 Hex Drive)	10078
215	Nut, M8 Keys (Lock Washer Attached)	10079
217	Flat Washer, Absorber (M8 Fender Washer)	10080
218	Foot/ Leveling, L10	10043

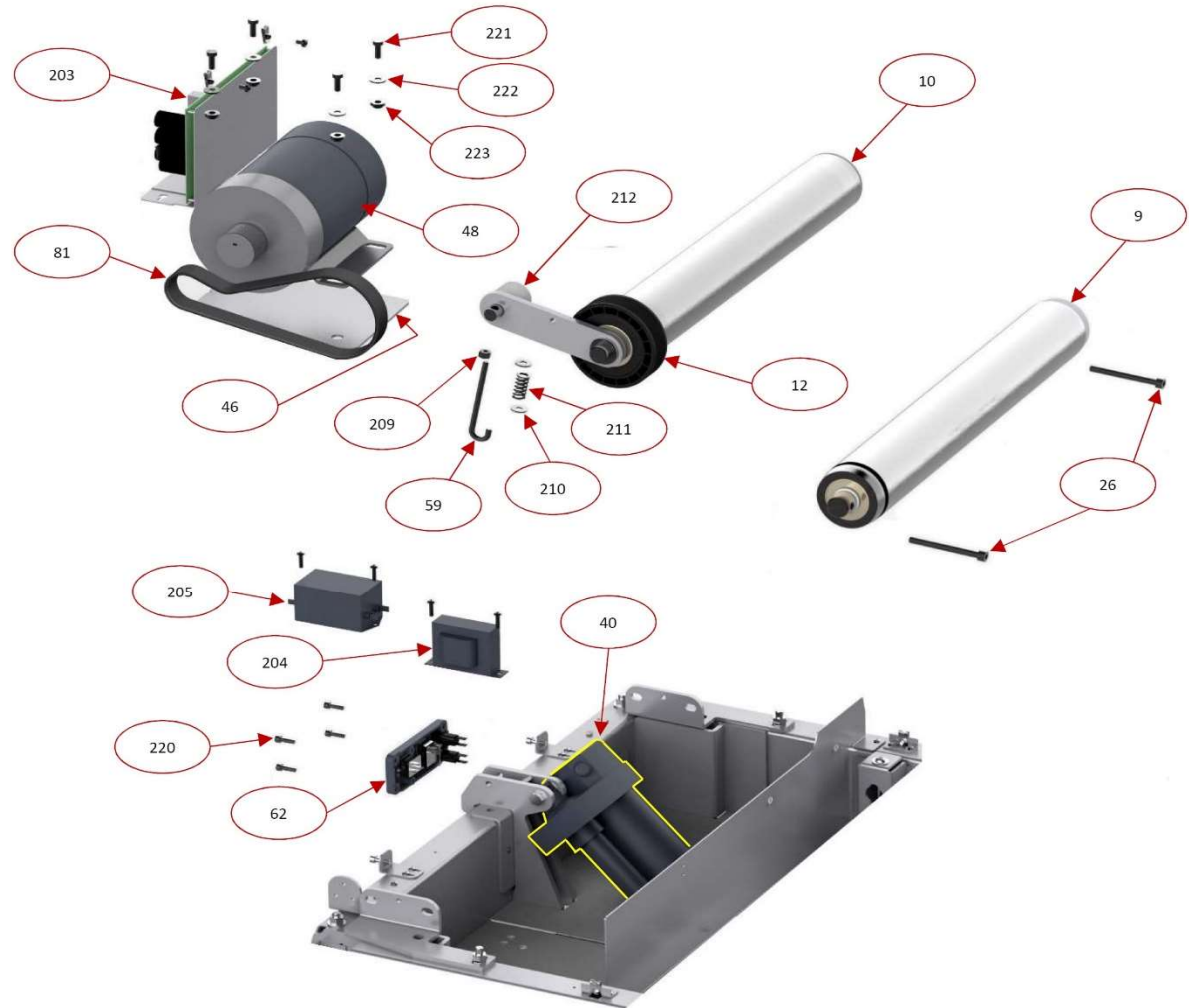




## L10 - Motors & Rollers Exploded View

### L10 MOTOR & ROLLERS EXPLODED VIEW

View #	Part Description	Part Number
9	Rear Roller, L10	10029
10	Drive Roller, L10	10028
12	Drive Roller Sheave (Pulley)	
26	Bolt, Rear Roller, L10	10039
40	Elevation Motor, L10 (110-V)	10064
	Elevation Motor, L10 (220-V)	10036
46	Base Plate, Drive Motor	10068
48	Drive Motor, AC, 110/220V	10037
59	Tension Screw, "J", L10	10069
62	Switch, Power, DBL Fuse (110-V)	10013
	Switch, Power, DBL Fuse (220-V)	10058
81	Drive Belt, L10	10030
203	Inverter Brd. Lower Board (110V)	10011
	Inverter Brd. Lower Board (220V)	10053
204	Choke, L10 (110V-220V)	10057
205	Filter, Line (110V)	10038
	Filter, Line (220V)	10012
209	Tension Screw Nut - Nylock M8	10074
210	M8 Flat Washer, Tensioning Spring	10075
211	Spring, Drive Belt Tension	10076
212	Idler Arm Pulley Assembly	10050
220	Screw, Power Switch Assembly	10082
221	Bolt, Motor Base Plate	10083
222	Flat Washer, Motor Base Plate	10084
223	Spacer, M8 Nylon	10085



## L10 UPRIGHT EXPLODED VIEW

View #	Part Description	Part Number
1	L10 Upright Assembly	10051
2	Remote Console & CHR Assembly	73030
3	Display Assembly, L10	10032
4	Handrail, Left, L10	73018
5	Handrail, Right, L10	73017
6	Bridge Assembly - Bottle Holder, L10	73031
7	L10 Base Assembly	10010
8	M5x15 Socket Head Cap Screw	M5x15_SHCS
9	M8x15 Socket Head Cap Screw	M8x15_SHCS
10	L10, Left Inside Cover	75058
	L10, Right Inside Cover	75059
17	M8 Socket Head Cap Screw	M8x10_SHCA
21	M6x15BHSS	M6x15_BHSS
22	L10, Console Bolt	M6x70_SBHSC

