True Fitness Service Manual

455 Pediatric Treadmill

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www.truefitness.com

Revision 9/2004

Treadmill Preventative Maintenance Checklist

- ❖ Run calibration or run a manual program and watch and listen for anything out of the ordinary.
- ❖ Perform a push off test (page T-7) to check for proper lubrication. If excessive friction is found and lubrication doesn't correct the problem perform the amp draw test (page T1-2)
- ❖ Inspect the belt surfaces, topside should still have texture for grip, bottom should be porous fabric- not glazed, smooth or hard.
- ❖ Inspect deck surface, should be free of scratches, abrasions or blistering.
- ❖ Listen for excessive bearing noise, from a standing position, in the front and rear roller and motor.
- ❖ Check for front roller/belt slippage and belt tension adjustment. Look for slippage on drive pulley.
- ❖ Inspect/ adjust tracking of belt.
- ❖ Vacuum out motor area, being careful not to damage PWM.
- ❖ Inspect drive belt for wear and cracking.
- ❖ Wipe down machine- leave it in better condition than you found it.

True Fitness Treadmill Service Manual

START

- **Symptom guide**
- **Calibration Procedures**
- **Diagnostic Procedures**
- **Test Procedures**
- **Wiring Diagrams**
- **Part Manuals**

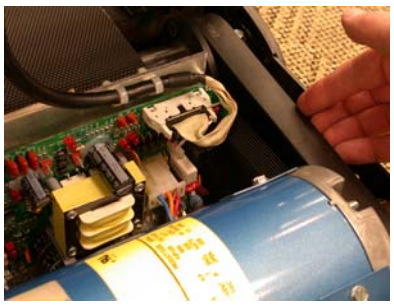
SYMPTOM GUIDE

Symptom	Probable Cause	Corrective Action	Recommended Tools
ERROR MESSAGES:			Liquid silicone single use pack Liquid Silicone Applicator. Vacuum Shop towel
S1 L LUBE	Indicates that the accumulated distance is such that the deck needs to be lubed	• Lube deck with True Fitness liquid silicone lubricant. Inspect wax bar assembly on commercial models, if worn to less that ¼ inch in thickness- replace wax bar.	
S2 C CLEAN	Indicates that the accumulated distance is such that the machine needs to be cleaned.	• Remove motor cover and vacuum dust from area. Wipe down the exposed area of the deck beside the straddle covers with a clean, dry cloth.	
S3 M MOTOR	Indicates that the accumulated time on the treadmill is such that the motor brushes need to be changed/checked.	• Check/Replace motor brushes as needed. • Reset timer.	
E5 S SPEED SENSOR	Cannot read speed sensor	• Perform Speed Sensor Test page 21	
E1 S STALL	Incline reading not changing when commanded	• See Elevation Not Functional page 9.	
E1 I INCLINE	Incline reading has changed without the incline being commanded.	• See Elevation Not Functional page 9.	
E1 R RANGE	Maximum or minimum elevation out of calibrated ranges	• See Elevation Not Functional page 9.	

Symptom	Probable Cause	Corrective Action	Recommended Tools
ERROR MESSAGES: (cont'd)			Multi-meter Phillips head screwdriver
E2 O OVERSPEED	Belt speed ramping too fast.	Perform Amp Draw Test – Page 17. Perform Belt / Deck Wear Test – Page 21.	
E2 C CALIBRATE	Micro-controller cannot adjust belt speed to target.	Calibrate Treadmill – Page 14. See appropriate Symptom Guide – pages 10-11.	
E3 E EEPROM	Software error during treadmill startup diagnostics.	Restart Treadmill, if error persists- replace control panel.	
E2 R RECALIBRATE	Treadmill has lost calibration settings.	Recalibrate Treadmill – Page 14. (If unit loses programs- replace control panel)	

Symptom	Probable Cause	Corrective Action	Recommended Tools
NO BELT MOVEMENT	**Treadmill in need of calibration.**	• Run calibration. **(page 14)**	Multi-meter PWM / Motor test cables
		--------	
	Missing command to PWM.	• Is PWM light blinking/ illuminated when fast button is pushed? **NO**- Check continuity on wire harness, if harness has continuity breaks replace the harness. If harness has continuity- replace the upper panel. Refer to wiring harness diagram for your model. **YES-** move on to next step, wire harness and control panel are OK.	**Note:** All trouble shooting should be performed in calibration mode. Page 16

	Missing/incorrect voltage to motor.	• With treadmill in calibration mode **(page 14)** • Set speed at 4 MPH • Check VDC across MTR 1 and MTR 2 with the motor leads connected to the motor the voltage should measure 10 VDC for every 1 MPH. • If voltage is missing or low- Replace PWM. • If voltage is greater than 20 VDC/MPH motor may have open windings.	
	Damaged motor.	--------	
		• With PWM LED Blinking/ Illuminated- move the tread belt with your foot to see if motor begins to move on its own. • If motor begins to move, inspect the condition of the brushes and the commutator. • If brushes are bad- replace brushes • If motor doesn't turn or has a damaged com segment- replace motor. **Continue on next page…**	

Symptom	Probable Cause	Corrective Action	Recommended Tools
NO BELT MOVEMENT (cont'd)	**Motor turns but belt does not.**	• Check belt tension. • Set belt tension to 1/8-inch deflection or correct tension can be verified by twisting the belt almost to a 90-degree position.   ---	**Note:** All trouble shooting should be performed in calibration mode. Page 14
	Belt cannot be moved manually-foreign object under belt.	• Remove foreign object. Perform the Amp Draw Test **(page 17)** to check for excessive amp draw damage	

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Symptom	Probable Cause	Corrective Action	Recommended Tools
TREADBELT STOPS DURING WORKOUT **Error Code displays:** **Go to page 3 & Page 4.**	**Loose safety key connection**	• Check safety key to ensure that it is seating properly. • Check connection sensitivity. ---	**Liquid silicone single use pack** Liquid silicone Applicator Multi-meter Socket set
	Belt movement issue	• If treadmill will not reset with cycling the power go to NO BELT MOVEMENT **(pages 5 & 6)** ---	
	Worn Deck / Belt	• Perform Belt / Deck Wear Test **(page 21).** • Perform Amp Draw Test **(page 17).** • Apply silicone. • Replace Deck and Belt. ---	**Note:** All trouble shooting should be performed in calibration mode. Page 14
	Occurs when making changes to speed or elevation	• May be related to electro static discharge. Contact Technical support for assistance. ---	
	Overloaded house circuit	• Verify the treadmill is on a dedicated circuit with at least a 15 amp breaker • Have customer supply a dedicated circuit ---	
	Continuity, connection to motor	• Reconnect or replace motor wires or connectors ---	
	Tread belt not centered or obstructed	• Tension tread belt **(page 19)** • Center tread belt • Remove obstruction	

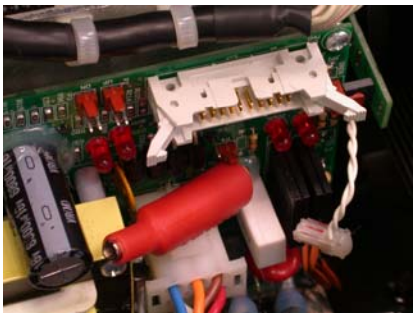
Symptom	Probable Cause	Corrective Action	Recommended Tools
HEART RATE NOT WORKING / ERRATIC READINGS	**Incorrect power source**	• Verify that the treadmill is connected to a dedicated line, 15-amp circuit, and not on an extension cord. • Move to proper outlet. • Test 110 VAC outlet for proper ground	Multi-meter Double sided tape Heart rate simulator
		---	
	Improper treadmill grounding	• Proper grounding is vitally important. • Ensure that the pedestal wire harness ground lead is secure	**Note:** All trouble shooting should be performed in calibration mode. Page 14

	Improper heart rate receiver mount	• Ensure that the HR receiver is not touching metal and is mounted with the wires in a vertical position with the blue receiver facing the runner 	

	Defective Chest Strap	• Does the receiver pick up a signal from the HR simulator? • If yes, replace chest strap	

	Defective receiver	• Does the heart rate LED on the control panel blink? If not then replace the receiver.	

	Radio Frequency Interference	• Locate RF sources and use process of elimination. Common sources of RF interference are: Invisible fences for pets; wireless networks; cordless phones, Cell phones, radios, home security sensors, etc.	

Symptom	Probable Cause	Corrective Action	Recommended Tools
ELEVATION NOT FUNCTIONAL (E1 ERROR)	**Improper grounding / Calibration (May cause unit to drift up & down without command)**	• Test 110VAC outlet for proper grounding • If unit has not been calibrated – calibrate • Ensure that incline cables are secure on PWM	Multi-meter Alligator clip
		---	
	Unit is stuck at full incline	• Verify the lower limit switch is properly connected to the PWM • Remove the LLS wire from the PWM and short the two posts of the connector together with an alligator clip. Cycle the power. If the treadmill lowers itself then replace the lower limit switch. • Perform Incline potentiometer calibration procedure **(page 20)** • If incline nut is stripped- replace incline nut	**Note:** All trouble shooting should be performed in calibration mode. Page 14
			

	Defective Start Capacitor	• Do Up/Down command LED's light? • If No- skip to defective PWM section. • If yes- does motor hum with no movement? • If yes- check the leads to the capacitor for breaks, if no breaks- replace capacitor. • If No- replace PWM.	

	Defective PWM	• If no Up/Down LED's light check continuity on data cables. • If cables are good- replace Upper Panel. • If cables bad- Replace data cables.	

Symptom	Probable Cause	Corrective Action	Recommended Tools
SPEED FLUCTUATION E2: CAL	**Speed Fluctuation (Due to high friction)**	• Perform Push Off Test **(page 21)** • Perform Amp Draw Test **(page 17)** ---	Multi-meter Socket Set Silicone Lubrication Packet Silicone Lubrication Applicator
	Speed Fluctuation (Due to Voltage fluctuation)	• Check Line voltage for fluctuations. • Have customer take corrective action. ---	**Note: All trouble shooting should be performed in Calibration Mode: See Page 14**
	Bad Data Feedback	• Verify tach feedback accuracy through out the speed range. • If inaccurate perform speed sensor test **(page 18)** ---	
	Incorrect Speed Sensor Gap	• Verify correct Speed sensor Gap. • Gap should be equal to the thickness of (3) credit cards pressed together (approximately 1/8 to ¼ inch) ------	

Symptom	Probable Cause	Corrective Action	Recommended Tools
SPEED FLUCTUATION **S4: Sensor** **E5: Speed Sensor** **E2: Overspeed** **E3: EPROM Error**	**No Belt Movement**	• Go to page **5, 6.** --------	Multi-meter Socket Set Silicone Lubrication Packet Silicone Lubrication Applicator
	No/Intermittent Tach Feedback	• Enter Calibration mode **(page 14)** • Verify speed feedback in speed display through out the speed range. [Speed display should never show 0 mph when belt is moving] • If no tach feedback is available perform speed sensor test **(page 18)**. • Check continuity of tach feedback portion of the data cable (To identify tach feed back lines see wiring diagram section for specific model). --------	**Note:** All trouble shooting should be performed in calibration mode. Page 14
	Overspeed Error	• Check/Adjust tread belt tension **(page 20)** • Perform speed sensor test **(page 18**) If speed sensor fails adjust gap, if still fails-replace speed sensor. • Perform belt / deck wear test **(page 21)** If badly worn, replace belt and deck. • Replace PWM --------	
	E3: EPROM Error Software error during treadmill startup	• Restart unit- if error persists, replace control panel.	

Symptom	Probable Cause	Corrective Action	Recommended Tools
NO DISPLAY	**No power at the 110 VAC outlet.**	• Check home circuit breaker. Reset as necessary. • Test for 110 VAC at outlet. • Identify if outlet is a GFI. **Note:** Some brands of GFI outlets are too sensitive for treadmill use. Call the help line if encountering GFI issues.	Allen Key set. Phillips head screwdriver. Multi-meter.
	No power to the treadmill.	--- • Check for AC light on PWM. (See diagram pages 23) • Check for 110 VAC at power cord. Replace if no power. • If Yes- Check for 110 VAC at tread power switch. Replace if no power. • If Yes-Check for 110 VAC at tread circuit breaker. Replace/ reset if necessary. • If Yes- Check for 110 VAC at PWM across AC1 & AC2. • If Yes- Replace PWM.	**Note:** All trouble shooting should be performed in calibration mode. Page 14
	No power to the control panel.	--- • Check status LED +11 VDC on PWM (See diagram pages 23). If not remove fuses and check continuity as replace as needed. • If Yes- Check wire harness connections at PWM and Control Panel. Reconnect as needed. • If Yes- Check voltage on harness at panel. Refer to wiring diagram for your machine type in wiring diagram section. If voltage is present– replace panel and recalibrate (page 14). If voltage is not present check voltage at PWM. If voltage is present at PWM replace pedestal wire harness. If 0 VDC replace PWM and recalibrate (page 14).	

Symptom	Probable Cause	Corrective Action	Recommended Tools
CIRCUIT BREAKER TRIPS	**Possible short in treadmill wiring.**	• Power off the treadmill and inspect all wiring for shorts or burned areas. • Secure all connectors.	Allen Key set Needle nose pliers Socket set Multi-meter
		---	
	Motor issues.	• Disconnect motor leads from the PWM. Power on treadmill, press start. If the breaker does not trip check the motor brushes and perform the motor test procedure **(page 19).** • Reconnect motor to the PWM, if the breaker trips- replace the motor.	**Note:** All trouble shooting should be performed in calibration mode. Page 14

	Incline motor drawing treadmill down	• Unplug incline motor. • Power on treadmill, if breaker does not trip- replace incline motor.	

	Bad PWM	• Unplug PWM, power on machine. If breaker doesn't trip- replace PWM.	

	Too much tension on belt or obstruction under belt.	• Check for correct tension adjustment **(page 20)** • Check for obstruction- remove obstruction.	

	Weakened circuit breaker or High belt/deck friction	• Perform AC Amp Draw Test **(page 17)** at circuit breaker. • If draw is less than 15 amps continuously - replace breaker. • Perform Amp Draw test **(page 17)** If Amp draw is higher than recommended try push test **(page 21)** procedure.	

Calibration Procedures

455 Calibration

Enter Calibration Mode by holding the **Up** and **Down** keys while inserting the safety key
In message center window displayed: Press Start to Calibrate
NOTE: In Calibration mode, it is possible to check if the speed sensor is reading all the front roller magnets: the Met light will light when a magnet is in front of the sensor. Speed must be less than 1 mph.

Press **Start/Reset** to begin calibration
Treadmill will elevate and speed up/slow down. Wait for belt to stop.
Message center window will display: Successful, or will indicate error area.
Remove and re-insert safety key. Check operation of treadmill.

DIAGNOSTICS

To enter diagnostic mode, press and hold the **FAST** and **SLOW** buttons while pushing in the safety key.

The control panel will show “Diagnostics”.

Press the **UP** button: Total Hours (in whole hours)

Press the **UP** button: Distance (in miles, two digits past decimal point)

Press the **UP** button: Average Speed (in mph)

Error List (This is an error log, but just a list of errors possible on the unit.)

S1: Lube
S2: Clean
S3: Motor
S4: Sensor
E1: Minimum
E2: Overspeed
E2: Cal
E3: EPROM

Remove Safety Key to exit Diagnostics

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TEST PROCEDURES

TEST PROCEDURES

GROUNDED OUTLET TEST

This test is very important for optimal HRC and incline operation.

Set voltmeter for Volts AC
Place 1 lead in the right side of the outlet (hot)
Place 1 lead in the ground plug
A properly grounded outlet will read 110 VAC

AMP DRAW TEST

This test is a good indicator of the wear condition of the belt and deck, and the need for lubrication. The treadmill circuit breaker will trip at 15 amps, so be sure the voltmeter you are using is rated for at least 15 amps when you are load testing the treadmill. This test can be performed either on one of the AC power cord leads or on one of the DC motor leads from the PWM to the motor. Testing the amp draw at certain speeds without load and with load will signal whether higher than normal amp draw is a result of PWM failure or increased friction from belt and deck wear.

AC AMP DRAW PROCEDURE

This procedure requires an AC clamp-on ammeter. Place the clamp around either of the power cord leads, black or white. Load test requires a person to walk on the tread belt for 5-10 minutes.

2.5 mph w/out load	2.0-2.5 AMPS AC
2.5 mph with load	2.75-3.75 AMPS AC
4.0 mph w/out load	3.5-4.0 AMPS AC
4.0 mph with load	5.0-7.0 AMPS AC

DC AMP DRAW PROCEDURE

This procedure can be performed with an ordinary voltmeter. **(Note: Be sure the voltmeter is rated to handle 15 DC amps.)** Disconnect the red motor lead from MTR1 on the PWM. Connect the voltmeter to MTR 1 on the PWM and the other voltmeter lead to the red motor lead so that the voltmeter completes the connection of the PWM to the motor.

2.5 mph w/out load	4.5-5.0 AMPS DC
2.5 mph with load	7.0-8.0 AMPS DC
4.0 mph w/out load	5.0-5.5 AMPS DC
4.0 mph with load	8.5-9.0 AMPS DC

Higher than normal amp draws without load may signal that belt tension is too tight or there is a problem in the Drive Motor or PWM. Perform the Drive Motor Test and visually check the motor brushes before replacing the PWM. Higher than normal amp draws with load after normal readings without load signal belt and deck friction which may require lubrication or replacement.

SPEED SENSOR TEST

This test is used to verify sensor operation in conditions of speed fluctuation, E2: Cal error, S4: Sensor error, E2: Overspeed error or Unsuccessful Calibration.

455 Treadmill

Set voltmeter to volts DC. Treadmill power on and speed at 0 mph
Attach voltmeter leads across outside 2 contacts at J1 on PWM
With magnet in front of sensor, 0 VDC
With no magnet in front of sensor, 5 VDC
Check the sensor on every magnet, adjust sensor until voltage shows
In calibration mode before pressing Start, the tread belt can be moved manually and the Met light will blink when a magnet is in front of the sensor.

VOLTAGE TO DRIVE MOTOR TEST

This test is used to diagnose conditions of NO Belt Movement, or Speed Fluctuations

Set voltmeter to volts DC and adjust speed on Control Panel to 4 mph
Attach red voltmeter lead to MTR1 on PWM with motor wires attached
Attach black voltmeter lead to MTR2 on PWM with motor wires attached
0 VDC signals no PWM output
166 VDC signals open circuit in motor or motor connection
Operating voltage will lay between 0 VDC and 166 VDC

NOTE: The reason that we do not narrow down PWM output voltage is that the PWM output is a pulse signal. The sampling rate of the voltmeter used will determine what output voltage the voltmeter is able to read.

TEST PROCEDURES

DRIVE MOTOR TEST

This test is used in conditions of No Belt Movement.

Unplug treadmill and set voltmeter to volts DC
Disconnect motor leads from PWM
Place 1 voltmeter lead in each motor wire
Gently spin the motor flywheel and check for voltage DC
2-5 VDC means normal motor operation
0 VDC means motor malfunction

DRIVE BELT TENSION TEST

This test is used in front roller replacement and in conditions of belt slipping.

Place two fingers on top of the drive belt halfway between the front roller pulley and the drive motor pulley.
With moderate pressure push down on belt
If belt deflects down more than 1/8 “, tighten motor mounts
If belt deflects down less than 1/8 “, loosen motor mounts.
It is also possible to twist the belt; you should be able to twist the belt almost to a vertical position

TREADBELT TENSION TEST

This test will address belt slipping and is used in any roller replacement or deck replacement. Ensure that the drive belt is properly tensioned before adjusting tread belt tension. Belt and deck wear and/or lack of lubrication can cause the tread belt to show symptoms similar to loose tread belt tension- check these conditions before adjusting tread belt tension.

Turn treadmill on and adjust speed to 2 mph
Walk heavily on the belt pulling slightly against belt movement
If hesitation or slip is detected, tighten tread belt tension bolts ¼ turn
Repeat until no hesitation or slip is encountered. Check at higher speeds

Tread belt tension is too tight if the belt feels stiff to touch with no give or the belt groans against the rollers. You should be able to insert your hand between the belt and deck palm up almost to your thumb when the belt is at proper tension.

INCLINE POTENTIOMETER CALIBRATION TEST

This test can correct E1: Minimum conditions and aid in diagnosis of incline problems with finding zero or target incline.

455:
Set voltmeter to Ohms (Ω) with treadmill unplugged from wall
Place 1 voltmeter lead on pin 3 (Blue) and 1 lead on pin 2 (Orange)
Check for 800 Ohms

455: In calibration mode before pressing Start, the Distance window displays the incline number. With the treadmill at zero, the number should be between 160 and 180. 0 often indicates a wire harness misconnection or failure of signal to panel.
As the unit inclines during calibration, watch the numbers in the Distance window, if they do not increase by at least 60 from the zero value, an E1: Minimum error will result. Then the zero value may need to be reset to a lower value.

If incline potentiometer needs adjustment, remove swivel pins and use Up and Down keys to make adjustment. (See diagram on T-6)

VOLTAGE TO INCLINE MOTOR TEST

This test is utilized in conditions of No Incline Movement, Incline Fluctuation, or E1: Minimum.

Set voltmeter to AC volts. To access incline plug, PWM screws may need to be removed.
Place voltmeter leads across White and Black while pushing UP button
10 VAC indicates normal PWM output, 0 VAC signals no output
Place voltmeter leads across Red and White while pushing Down button
110 VAC indicates normal PWM output, 0 VAC signals no output

TEST PROCEDURES

Belt / Deck Wear Test

This is a simple physical test to gauge the general level of friction present between the deck and belt.

1. While the treadmill is not running, inspect the condition of the underside of the tread belt. The fabric should be soft and porous. If the belt appears glazed- replace the belt.
2. While the treadmill is not running, slide your hand under the belt and feel the surface of the deck. The deck should feel smooth with no abrasions or scratches.
   If any abrasions or scratches are found- replace the deck.

Push Off Test

Place the machine in Calibration mode, elevate to the highest elevation- speed should be set to 0. Stand on the tread belt positioning yourself close to the console; push off with moderate force. The elevation combined with your weight and the force of the push should cause the belt to carry you all the way to the end of the machine***.** If the test does not carry you to the end of the machine lubricate the belt using True Fitness liquid silicone. After lubricating the belt/deck perform the push off test again. If it does not pass the test after lubricating replace the belt and deck

*** Note:** Residential treadmills may only carry about ¾ of the distance of the deck due to higher tension on the belt.

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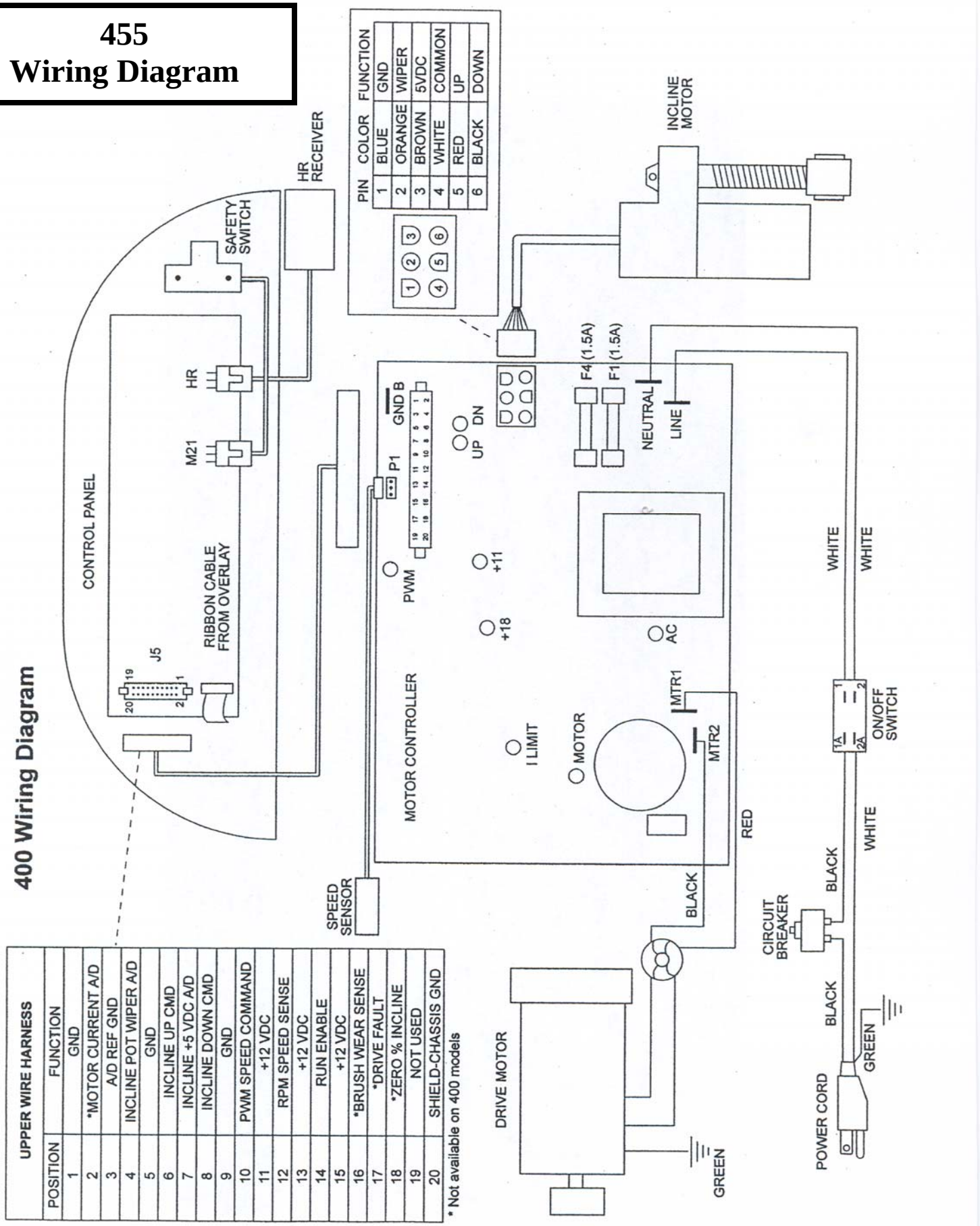
Wiring Diagram



UPPER WIRE HARNESS	
POSITION	FUNCTION
1	GND
2	*MOTOR CURRENT A/D
3	A/D REF GND
4	INCLINE POT WIPER A/D
5	GND
6	INCLINE UP CMD
7	INCLINE +5 VDC A/D
8	INCLINE DOWN CMD
9	GND
10	PWM SPEED COMMAND
11	+12 VDC
12	RPM SPEED SENSE
13	+12 VDC
14	RUN ENABLE
15	+12 VDC
16	*BRUSH WEAR SENSE
17	*DRIVE FAULT
18	*ZERO % INCLINE
19	NOT USED
20	SHIELD-CHASSIS GND

* Not available on 400 models

455 Parts List

455 treadmil parts list

	WEIGHT	PART #	DESCRIPTION
CONTROL PANEL			
455		70242103	Control Panel Assembly
		70150000	SAFETY SWITCH ASSY.
		70177400	REMOVABLE SAFETY KEY
PWM			
ss90	3lbs.	70132500	MOTOR CONTROLLER SS90
		70013500	PWM SCREW 10-32 X 3/8
SPEED SENSOR			
(SS90 STYLE)		70243200	CIRCUIT BOARD SPEED SENSOR
		70243300	SP. SENSOR SCREW 4-40 X 1/4
DATA CABLE			
		70337800	450 HRC DATA CABLE
DRV MTR			
	44lbs.	**70325900**	3HP DRIVE MOTOR 10 MPH8 mph
DRV BELT			
		70006300	210J10 POLY-V DRIVE BELT
ELEVATION MTR			
	10lbs.	70113200	INCLINE MOTOR
(ELEVATION-		70115500	3/8 X 1 1/2 CLEVIS PIN
HARDWARE)		70116700	1/16 DIA. X 1 5/16 COTTER PIN
		70118900	TORQUE ARM SWIVEL PIN
		70183200	START CAPACITOR FOR INCLINE MOTOR
		70013500	SCREW FOR START CAPACITOR
LLS			
		70121000	LOWER LIMIT SWITCH
		70125700	LLS SCREW 10X 1/4
		70120500	LLS TO PWM WIRE
ELEVATION RACK			
	15lbs.	70281001	ELEVATION RISER SUB ASSY.
WHEEL		70176701	Molded wheels
POWER CORD			
		70253100	9 FT. POWER CORD
		70008200	STRAIN RELIEF BUSHING

ON / OFF SWITCH			
		70251100	ROCKER ON/OFF SWITCH
CIRCUIT BREAKER			
		70017200	15 AMP CIRCUIT BREAKER SWITCH
TREADBELT			
	9lbs.	70159300	17 3/4" X 107 3/4" 2 PLY TREADBELT
DECK			
	40lbs.	70157700	FLEX DECK
		70020200	DECK SCREW 10/32 X 1 1/4
FRONT ROLLER			
455 front roller	9lbs.	**70359200**	450/455 ADJ. ROLLER
REAR ROLLER			
	13lbs.	**70359000**	REAR ROLLER
		70158900	ROLLER BOLT
		70159000	5/16 INTERNAL TOOTH LOCK WASHER
STRADDLE COVERS			
		70162101	LT & RT STRADDLE COVERS
		70030900	3/8 X 1/16 X 108 FT. DBL. STICK TAPE
		70243400	BLUE TAPE 1/2 X 150 FT. ROLL
PEDESTAL			
455 pedestal		70233800	ROUND PEDESTAL WELDMENT
		70155900	PEDESTAL SCREWS
FRAME			
450/455		70255903	FRAME WELDMENT ADJ. FRONT ROLLER
		70155200	BUMPER FEET
		70020200	BUMPER FEET SCREW 10/32X1 1/4PPH
LUBRICATION			
		70348900	LUBE STICK
		70349000	SILICONE PACKET (1 APPLICATION)
Pediatric Handrails		70226501	455 Pediatric Handrails