

MATRIX

**2018 C3X-02 & C5X/7X-05
FRAME
SERVICE MANUAL**

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1.1 SERIAL NUMBER LOCATION



SERIAL NUMBER LOCATION

2.1 READ AND SAVE THESE INSTRUCTIONS

This Climbmill is intended for commercial use. To ensure your safety and protect the equipment, read all instructions before operating the MATRIX Climbmill.

When using an electrical product, basic precautions should always be followed including the following:

- *An appliance should never be left unattended when plugged in. Unplug the unit from the outlet when not in use and before putting on or taking off any parts.*
- *This product must be used for its intended purpose described in this service manual. Do not use other attachments that are not recommended by the manufacturer. Attachments may cause injury.*
- *To prevent electrical shock, never drop or insert any object into any opening.*
- *Do not remove the side covers. Service should only be done by an authorized service technician.*
- *Never operate the unit with the air opening blocked. Keep the air opening clean, free of lint and hair.*
- *Never operate the unit if it has a damaged cord or plug, if it is not working properly, if it has been damaged, or immersed in water.*
- *Close supervision is necessary when the unit is used by or near children or disabled persons.*
- *Do not use outdoors.*
- *Do not operate where aerosol (spray) products are being used or when oxygen is being administered.*
- *Do not use the equipment in any way other than designed or intended by the manufacturer. It is imperative that all Matrix Fitness Systems equipment is used properly to avoid injury.*
- *Keep hands and feet clear of moving parts at all times to avoid injury.*
- *Unsupervised children must be kept away from this equipment.*
- *Do not wear loose clothing while on the equipment.*
- * *At NO time should pets or children under the age of 14 be closer to the unit than 10 feet.*
- * *At NO time should children under the age of 14 use the unit.*
- * *Children over the age of 14 or disabled persons should not use the unit without adult supervision.*
- * *Never operate the unit if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or immersed in water. Return the unit to a service center for examination and repair.*
- * *To disconnect, turn all controls to the off position, then remove plug from outlet.*
- * *Do not remove the console covers unless instructed by Customer Tech Support. Service should only be done by an authorized service technician.*
- * *This unit is not equipped with a free wheel. Step speed should be reduced in a controlled manner.*
- * *Heart rate monitoring systems may be inaccurate.*

* *Over exercising may result in serious injury or death.*

* *If you feel faint, stop exercising immediately.*

CAUTION! *If you experience chest pains, nausea, dizziness, or shortness of breath, stop exercising immediately and consult your physician before continuing.*

CAUTION! *Any changes or modifications to this equipment could void the product warranty.*

2.2 ELECTRICAL REQUIREMENTS

DEDICATED CIRCUIT AND ELECTRICAL INFO

A "Dedicated Circuit" means that each outlet you plug into should not have anything else running on that same circuit. The easiest way to verify this is to locate the main circuit breaker box, and turn off the breaker(s) one at a time. Once a breaker has been turned off, the only thing that should not have power to it are the units in question. No lamps, vending machines, fans, sound systems, or any other item should lose power when you perform this test.

Non-looped (isolated) neutral/grounding means that each circuit must have an individual neutral/ground connection coming from it, and terminating at an approved earth ground. You cannot "jumper" a single neutral/ground from one circuit to the next.

ELECTRICAL REQUIREMENTS

For your safety and to ensure good unit performance, the ground on this circuit must be non-looped (isolated). Please refer to NEC article 210-21 and 210-23. Any alterations to the standard power cord provided could void all warranties of this product.

For units with an integrated TV (3xe, 7xe and 7xi), the TV power requirements are included in the unit. An RG6 coaxial cable with 'F Type' compression fittings on each end will need to be connected to the cardio unit and the video source. Additional power requirements are not needed for the add-on digital TV.

110 UNITS

All Matrix 3x, 3xe, 5x, 7xe and 7xi 110 V ClimbMills require the use of a 100-125 V, 60 Hz and a 15 A "Dedicated Circuit", with a non-looped (isolated) neutral/ground for power. This outlet should be a NEMA 5-15R and have the same configuration as the plug. No adapter should be used with this product. These ClimbMills can be daisy-chained together with up to 4 units per 15 A dedicated circuit. Matrix daisy-chain cord adapters are sold separately.

220 UNITS

All Matrix 220 V cycles require the use of a 216-250 V, 50 Hz and a 15 A "Dedicated Circuit", with a non-looped (isolated) neutral/ground for power. These cycles can be daisy-chained together with up to 4 units per 15 A circuit. This outlet should be a NEMA 6-15R and have the same configuration as the plug. No adapter should be used with this product. Matrix daisy-chain cord adapters are sold separately.

GROUNDING INSTRUCTIONS

The unit must be grounded if connected to a power supply source. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. The unit is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances. If the user does not follow these grounding instructions, the user could void the Matrix limited warranty.

ADDITIONAL ELECTRICAL INFO

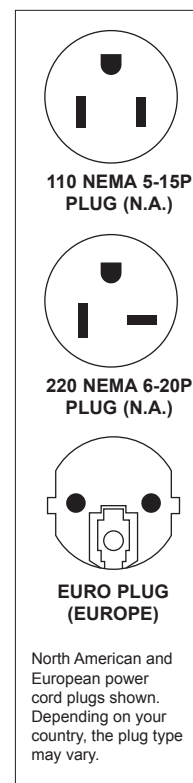
In addition to the dedicated circuit requirement, the proper gauge wire must be used from the circuit breaker box, to each outlet that will have the maximum number of units running off of it. If the distance from the circuit breaker box to each outlet, is 100 ft (30.5 m) or less, then 12 gauge wire should be used. For distances greater than 100 ft (30.5 m) from the circuit breaker box to the outlet, a 10 gauge wire should be used.

ENERGY SAVING / LOW-POWER MODE

All units are configured with the ability to enter into an energy saving / low-power mode when the unit has not been in use for a specified period of time. Additional time may be required to fully reactivate this unit once it has entered the low-power mode. This energy saving feature may be enabled or disabled from within the 'Manager Mode' or 'Engineering Mode.'

ADD-ON DIGITAL TV (3X AND 5X)

Additional power requirements are not needed for the add-on digital TV. An RG6 coaxial cable with 'F Type' compression fittings will need to be connected between the video source and each add-on digital TV unit.'



CHAPTER 2: IMPORTANT SAFETY INSTRUCTIONS

2.3 LOCATING THE UNIT

LOCATION OF THE UNIT

Place the unit on a level and stable surface away from direct sunlight. The intense UV light can cause discoloration on the plastics. Locate your unit in an area with cool temperatures and low humidity. Please leave a clear zone behind the unit that is at least 24" (610 mm). This zone must be clear of any obstruction and provide the user a clear exit path from the machine. Do not place the unit in any area that will block any vent or air openings. The unit should not be located in a garage, covered patio, near water or outdoors

LEVELING THE UNIT

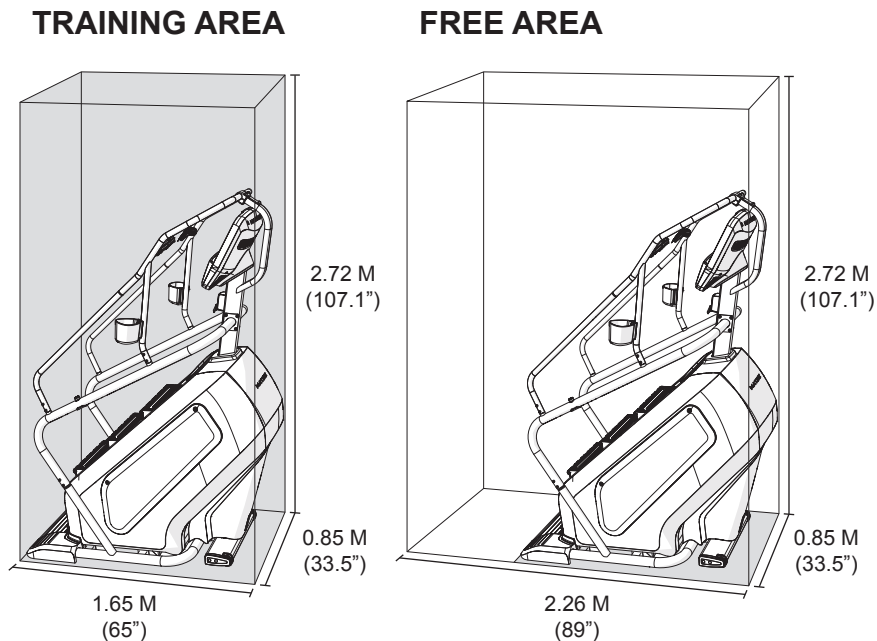
Locate a level, stable surface to position the equipment. The equipment has levelers located below the bottom step. To access the levelers, remove the end caps (C3X, C3XE) or CONTROL ZONE (C5X, C7XE and C7XI). CAUTION: There is an electrical plug located under the CONTROL ZONE and will need to be unplugged before the cover can be completely removed. Use an allen wrench to level the unit. Once stable, replace parts as they were removed.

A carpenter's level is recommended.

NOTE: There are only two levelers on the equipment.

HEIGHT REQUIREMENTS

The ClimbMill adds 30 - 38" (76 - 96.5cm) to a users height. For example, a 6' (183cm) tall user will be 8'6" - 9' 2" (259.5 - 279.5cm) off the floor.



CHAPTER 3: PREVENTATIVE MAINTENANCE

3.1 RECOMMENDED CLEANING TIPS

In order to maximize life span, and minimize down time, all Matrix Fitness Equipment requires regularly scheduled cleaning.

YOU WILL NEED:

- Mild dish soap and water mixture in a spray bottle (10:1 water to soap ratio).
- Lint free 100% cotton cleaning cloths or Micro fiber cleaning cloths.
- Vacuum / Shop Vac with extendable hose and soft brush attachment.
- Super Lube Multi Purpose Synthetic Lubricant with Syncolon® (PTFE) Aerosol - www.super-lube.com/sythetic-aerosol-spray-ezp-46.html.
- Corrosion Block (available from Matrix - part # ZMS4001374).

DAILY or as needed:

1. Empty the dust tray under the stairs and under the unit (Figure A). If you need to move the unit, unplug it first.

WEEKLY:

1. With a clean dry 100% lint free cloth and water / soap mixture, wipe down the entire frame including the stairs so it is free of dust, dirt, and sweat.
2. With a clean dry 100% lint free cloth and water / soap mixture, wipe down the entire console area including the hand grips and hand rails.

MONTHLY:

1. Vacuum under and around the Climb Mill. If you need to move the unit, unplug it first. Make sure to reset the casters after moving the unit back into position to stabilize the unit.

QUARTERLY:

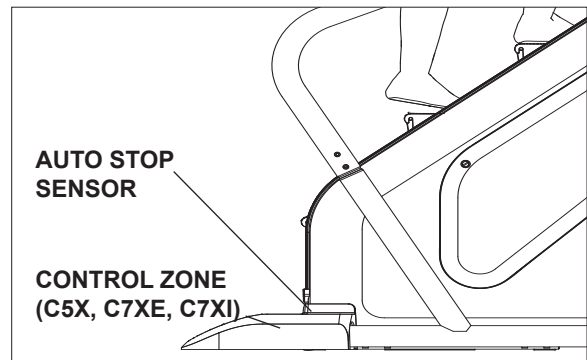
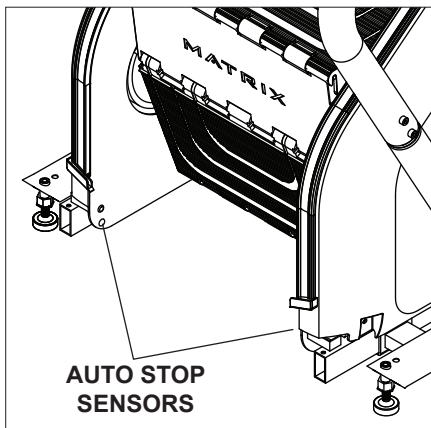
1. Remove the side access panels and vacuum out the inside of the unit (Figure B).
2. Unplug the Climbmill and clean the AUTO STOP SENSORS (located under the bottom step) / Control Zone sensor with a cotton swab and rubbing alcohol.



FIGURE A



FIGURE B



3.2 CARE AND MAINTENANCE INSTRUCTION

In order to maximize life span, and minimize down time, all MATRIX equipment requires regular cleaning, and maintenance items performed on a scheduled basis. This section contains detailed instructions on how to perform these items, the frequency of which they should be done, and a check list to sign off each time service is completed for a specific machine. Some basic tools and supplies will be necessary to perform these tasks which include (but may not be limited to):

- * Metric Allen wrenches
- * #2 Phillips head screwdriver
- * Adjustable wrench
- * Teflon based spray lubricant such as "Super Lube", or other Matrix approved product

You may periodically see addendums to this document, as the Matrix Technical Support Team identifies items that require specific attention, the latest version will always be available on the Matrix website, www.matrixfitness.com

DAILY MAINTENANCE ITEMS

1. Attempt to wobble the unit from side to side and front to back. Level the unit if needed (See Section 10.4).

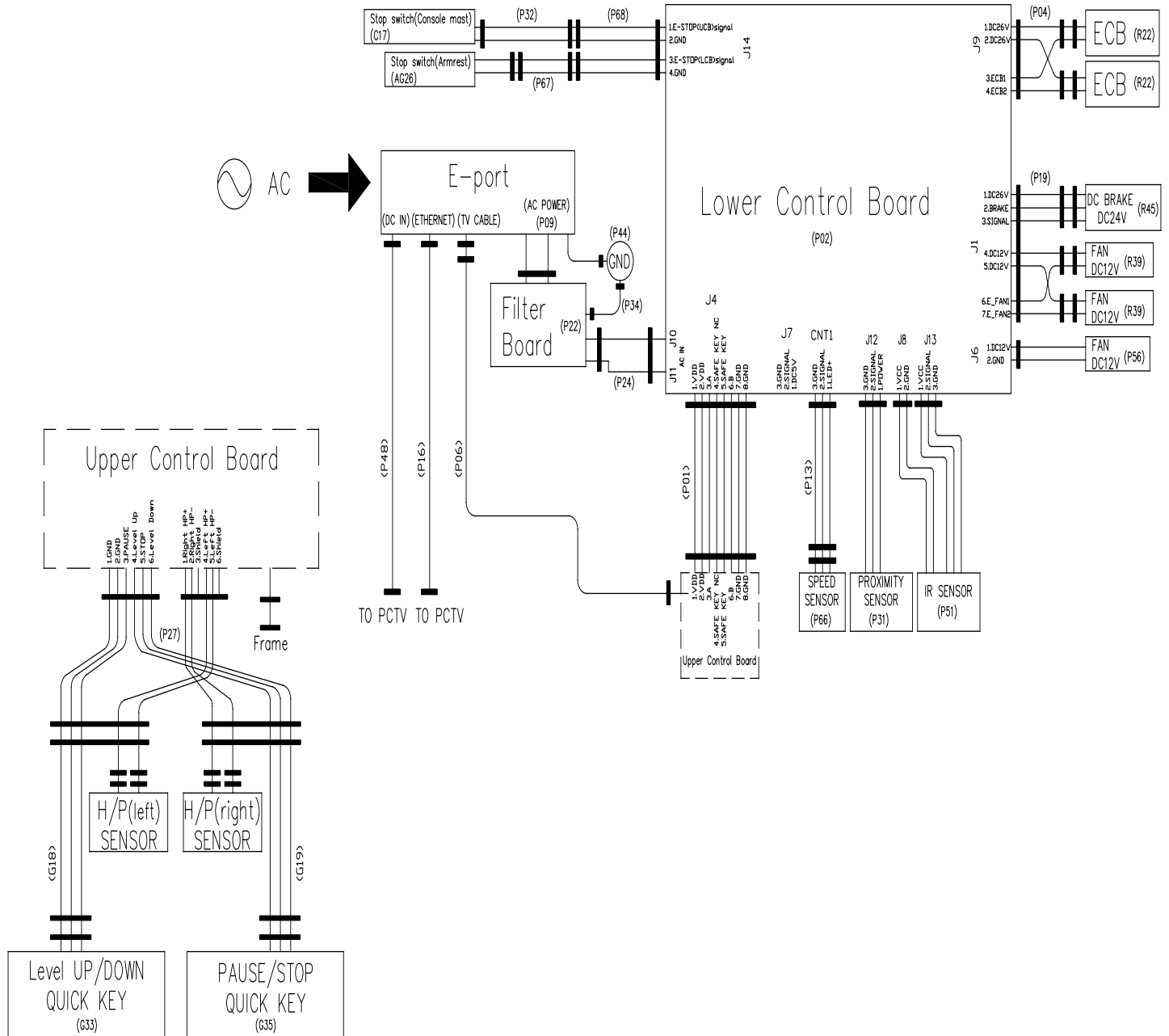
QUARTERLY MAINTENANCE ITEMS

1. Check all connecting joint areas for tightness of fastened assemblies.
2. Check step motion and stability to ensure the Climbmill does not rock or wobble.
3. Remove the maintenance covers and check the brake for function.
4. Remove the maintenance cover and check the fans for function. Also clean and remove any debris from the digital speed sensor.
5. Remove the maintenance cover and check the chains for damage, alignment and proper tension.
6. Clean sprockets of old grease and re-apply a lithium-based grease to sprocket teeth.
7. On units with a Control Zone (C5X/C7XE/C7XI), check to ensure the CZ is working properly by walking on the unit, then stepping on the CZ. The unit should stop similar to an emergency stop on a treadmill.
8. On units with two emergency stop buttons, check to ensure the emergency stop buttons are working properly by walking on the unit, then pressing on the emergency stop button. The unit should stop.
9. Unplug the Climbmill and clean the AUTO STOP SENSORS (located under the bottom step) with a cotton swab and rubbing alcohol.

MAINTENANCE SCHEDULE	
ACTION	FREQUENCY
Unplug the unit. Clean entire machine using water and a mild soap or other Matrix approved solution (cleaning agents should be alcohol and ammonia free).	DAILY
Check step motion and stability to ensure the Climbmill does not rock or wobble.	QUARTERLY
Check all connecting joint areas for tightness of bolt assemblies.	QUARTERLY
Ensure that there is little, or no free play at all joint assemblies once bolts have been tightened. Installation of washer kits may be required if free play does not come out from tightening bolts.	QUARTERLY
Unplug the Climbmill and remove the access panel. Clean sprockets of old grease and re-apply a lithium-based grease to sprocket teeth.	QUARTERLY
Unplug the Climbmill and clean the AUTO STOP SENSORS (located under the bottom step) and IR sensor windows on Control Zone with a cotton swab and rubbing alcohol.	QUARTERLY

4.1 ELECTRICAL DIAGRAMS - CONTINUED

C3x-02-F

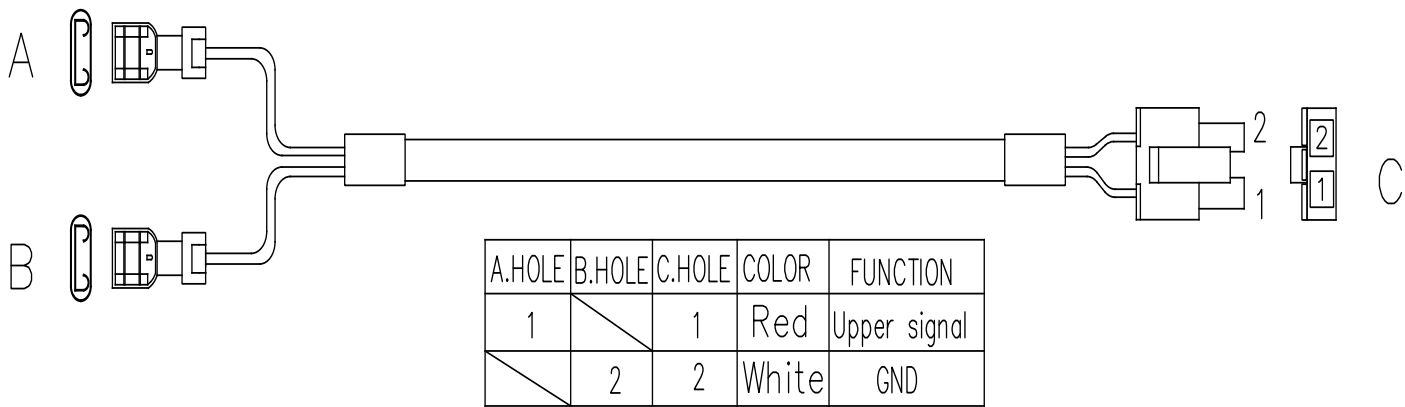


The diagram illustrates the electrical connections for a control system. Key components and their connections include:

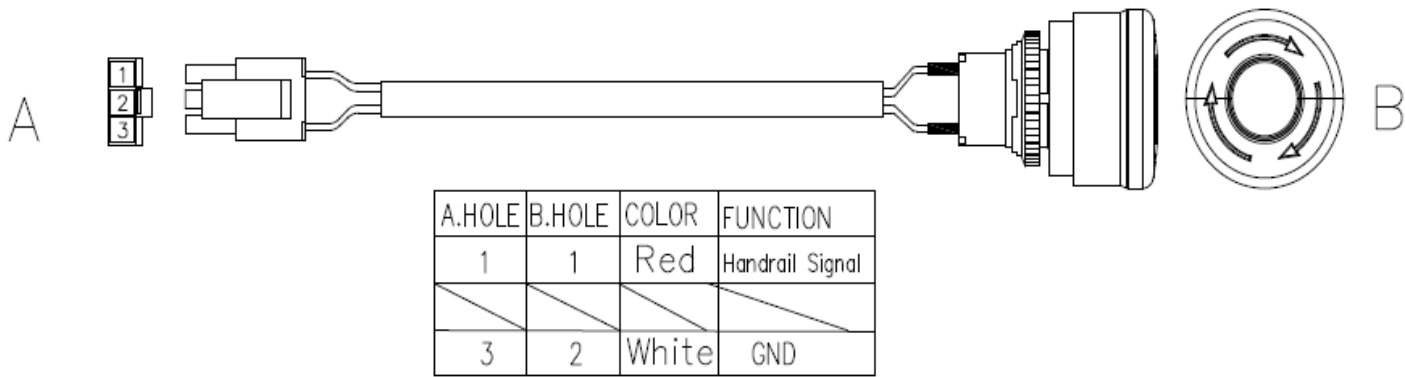
- AC Power:** An AC source is connected to the E-port (AC POWER P09).
- E-port:** Provides (DC IN) (ETHERNET) (TV CABLE) connections. It is connected to the Filter Board (P22) and the Lower Control Board (P02).
- Filter Board (P22):** Connected to the E-port and the Lower Control Board. It includes a ground connection (P34) and a terminal block (P24).
- Lower Control Board (P02):** The central control unit, connected to various sensors and actuators.
 - Sensors:** SPEED SENSOR (P66), PROXIMITY SENSOR (P31), and IR SENSOR (P51).
 - Actuators:** DC BRAKE DC24V (R45), FAN DC12V (R39), and FAN DC12V (P56).
 - Control Board:** Connected to the Lower Control Board via a TREAD SET; back(3 IR) connection. It includes a Control Board, Receive (P12) and a Control Board, Transmit (P08).
- Other Components:**
 - Stop switch(Console mast) (C17):** Connected to the Lower Control Board (P68) and the Filter Board (P32).
 - Stop switch(Armrest) (AC26):** Connected to the Lower Control Board (P67) and the Filter Board (P32).
 - ECB (R22):** Two ECB units connected to the Lower Control Board (P04).
 - DC12V:** Two DC12V sources connected to the Lower Control Board (P19).
 - DC24V:** A DC24V source connected to the Lower Control Board (P19).
 - DC12V:** A DC12V source connected to the Lower Control Board (P19).
 - DC12V:** A DC12V source connected to the Lower Control Board (P19).
 - DC12V:** A DC12V source connected to the Lower Control Board (P19).

4.1 ELECTRICAL DIAGRAMS - CONTINUED

P32 - SAFETY SWITCH WIRE

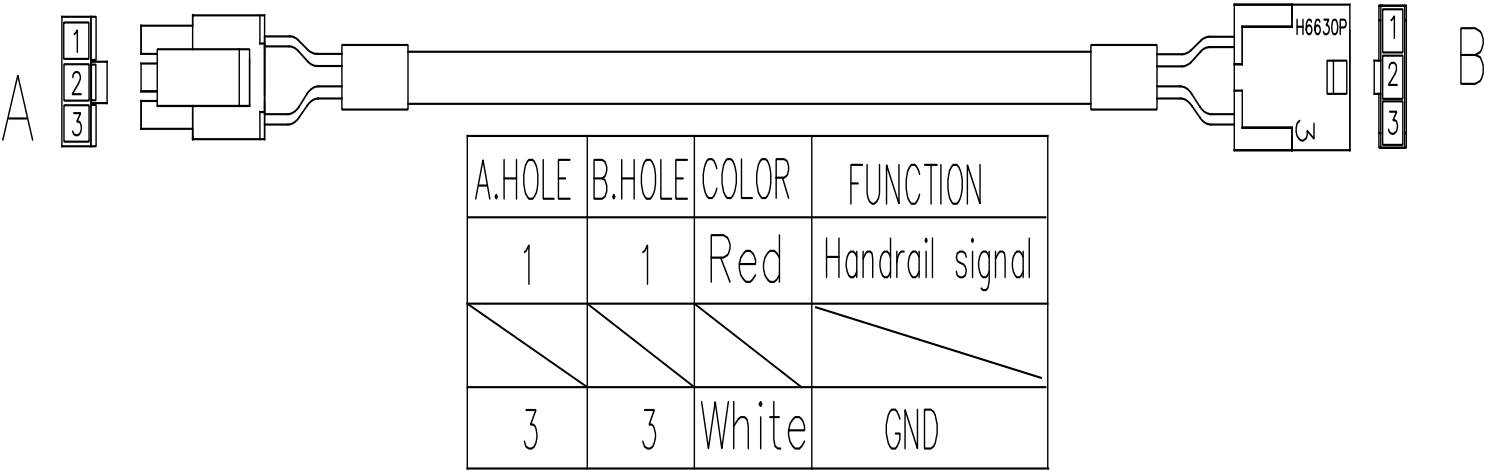


AG26 - SAFETY SWITCH SET

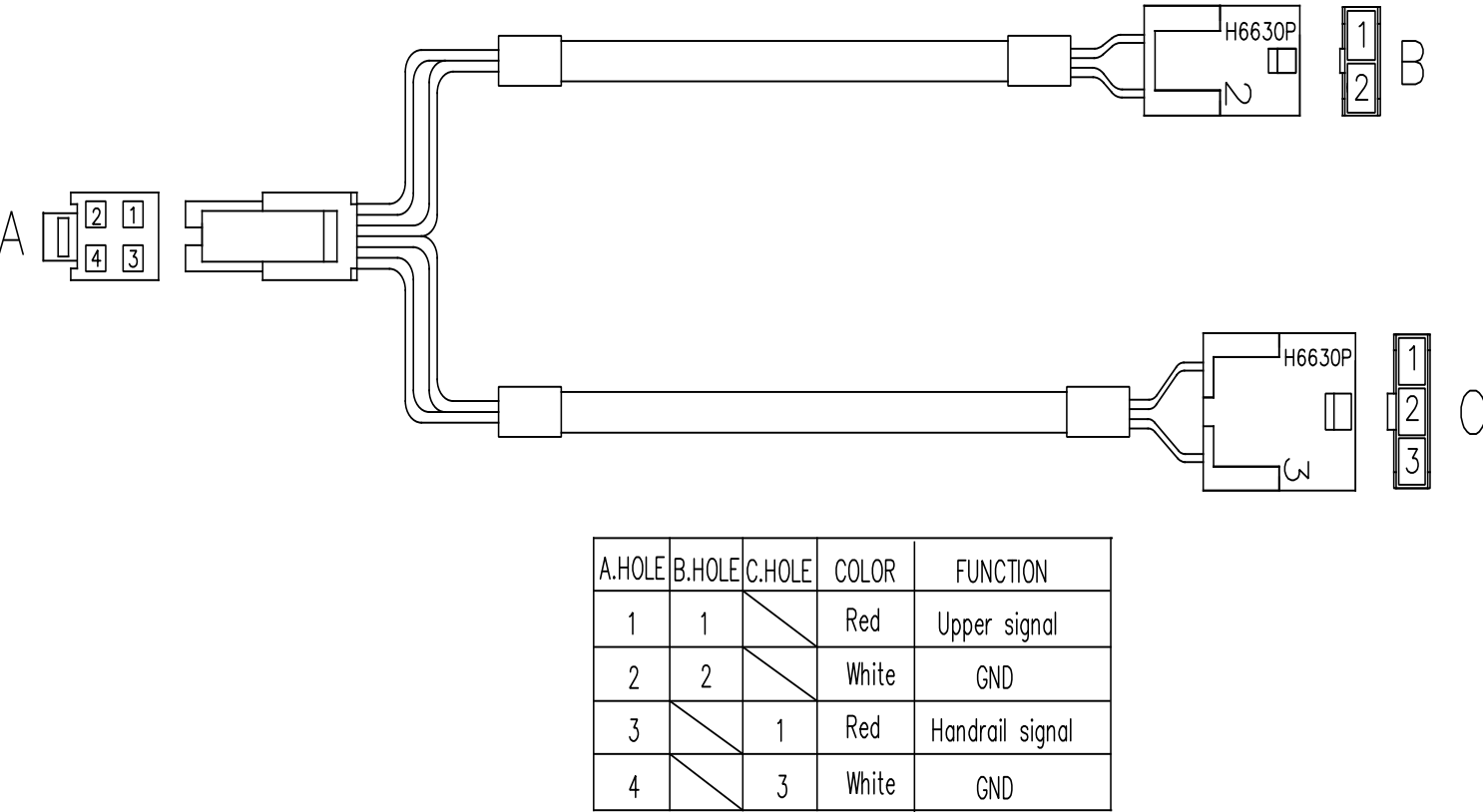


4.1 ELECTRICAL DIAGRAMS - CONTINUED

P67 - SAFE SWITCH EXTENSION WIRE

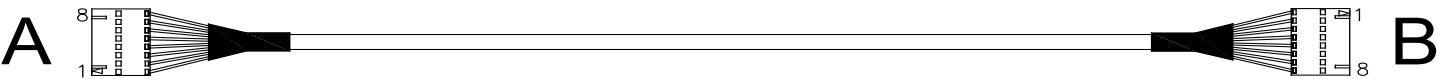


P68 - SAFE SWITCH EXTENSION WIRE



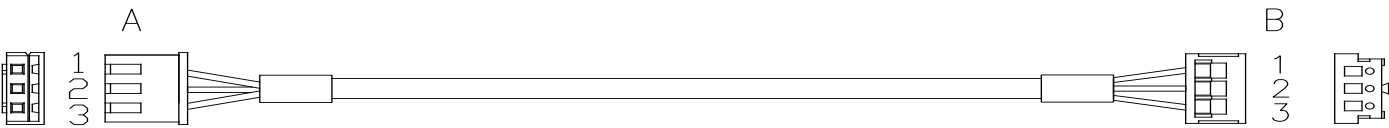
4.1 ELECTRICAL DIAGRAMS - CONTINUED

P01 - DIGITAL COMMUNICATION WIRE



A.HOLE	B.HOLE	FUNCTION
1	1	VDD
2	2	VDD
3	3	A
4	4	SAFE KEY NC
5	5	SAFE KEY
6	6	B
7	7	GND
8	8	GND

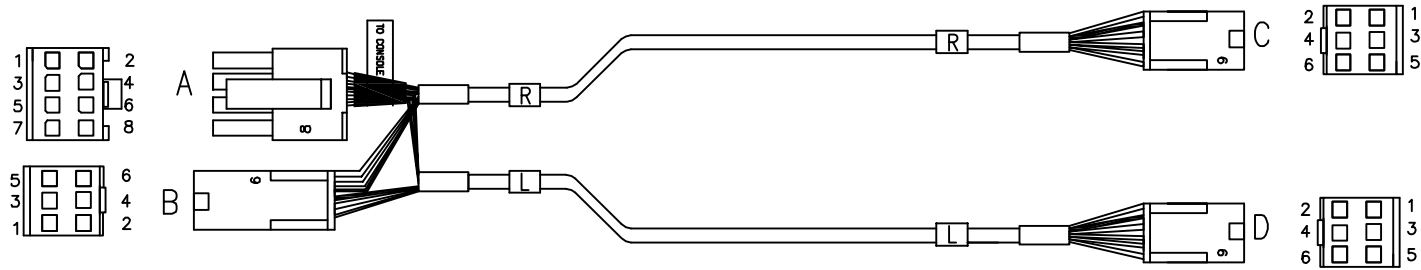
P13- SPEED SENSOR EXTENSION WIRE



A: HOLE	B: HOLE	COLOR	FUNCTION
1	1	RED	LED+
2	2	WHITE	SIGNAL
3	3	BLACK	GND

4.1 ELECTRICAL DIAGRAMS - CONTINUED

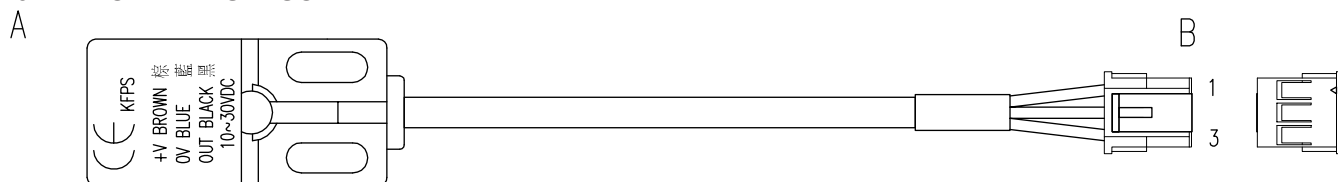
P27 - HAND PULSE WIRES



A.HOLE	B.HOLE	C.HOLE	D.HOLE	COLOR	FUNCTION
	1	4		Red	Right Hand Pulse+
	2	5		White	Right Hand Pulse-
	3	6			Shield
	4		4	Red	Left Hand Pulse+
	5		5	White	Left Hand Pulse-
	6		6		Shield
1		2			Gnd (Right)
2			2		Gnd (Left)
3		1			PAUSE
4			1		Level Up
5		3			Stop
6			3		Level Down
7					
8					

4.1 ELECTRICAL DIAGRAMS - CONTINUED

P31 - PROXIMITY SENSOR WIRE



Pin definition:

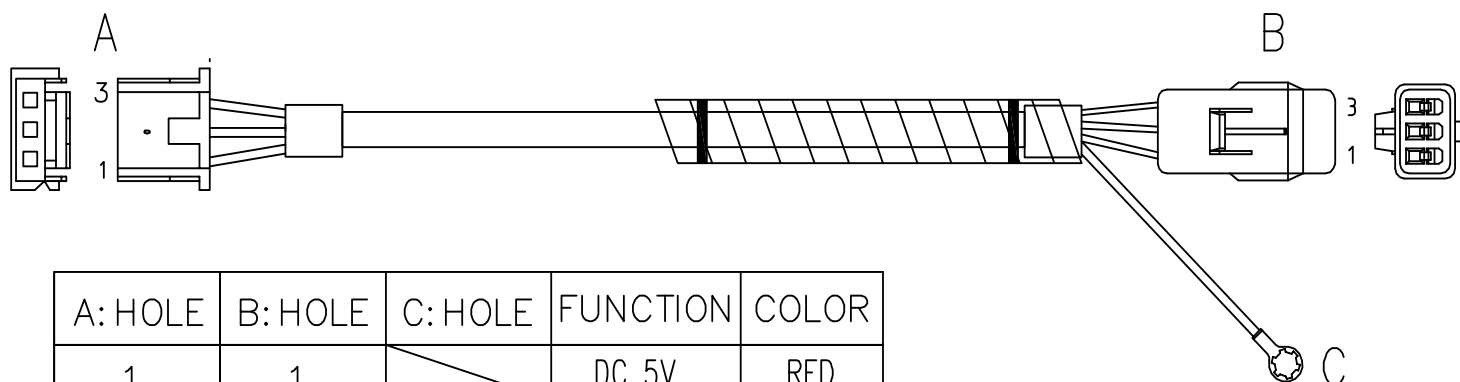
B.HOLE	FUNCTION	COLOR
1	10~30V	BROWN
2	SIGNAL	BLACK
3	GND	BLUE

P04 - ECB LOAD WIRE



A: HOLE	B: HOLE	C: HOLE	FUNCTION	COLOR
1	1		VCC	RED
2		1	VCC	WHITE
3	2		ECB1	BLACK
4		2	ECB2	GREEN

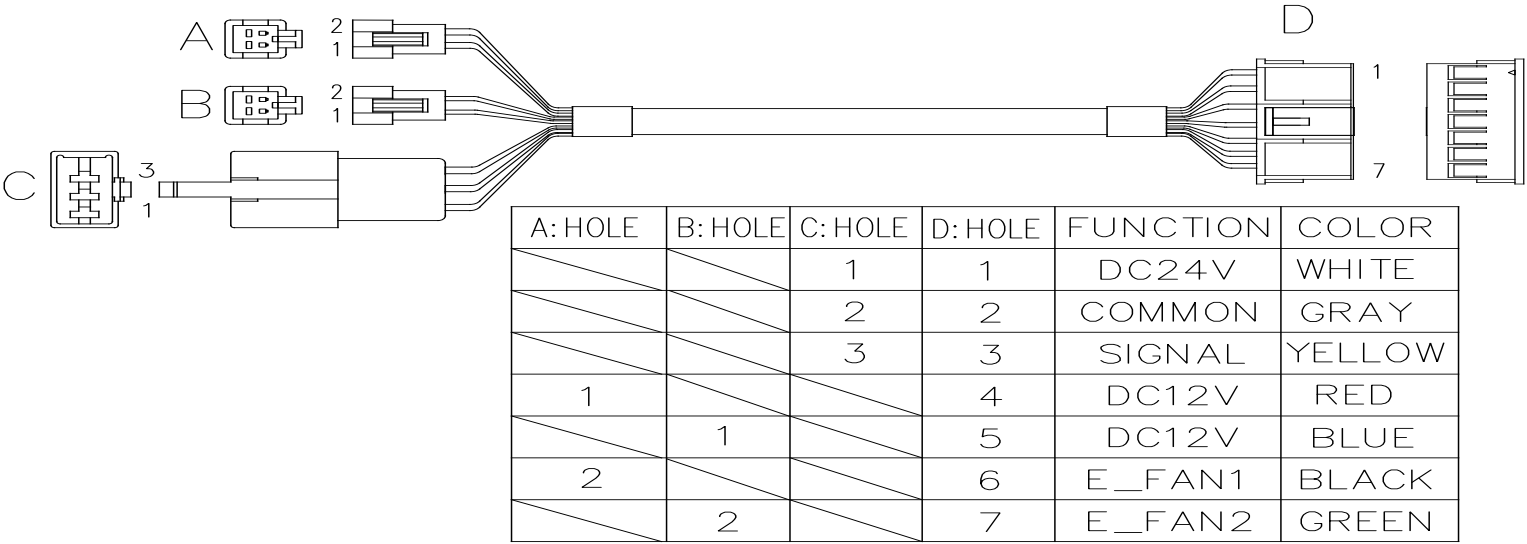
P18 - CONTROL ZONE SENSOR WIRE



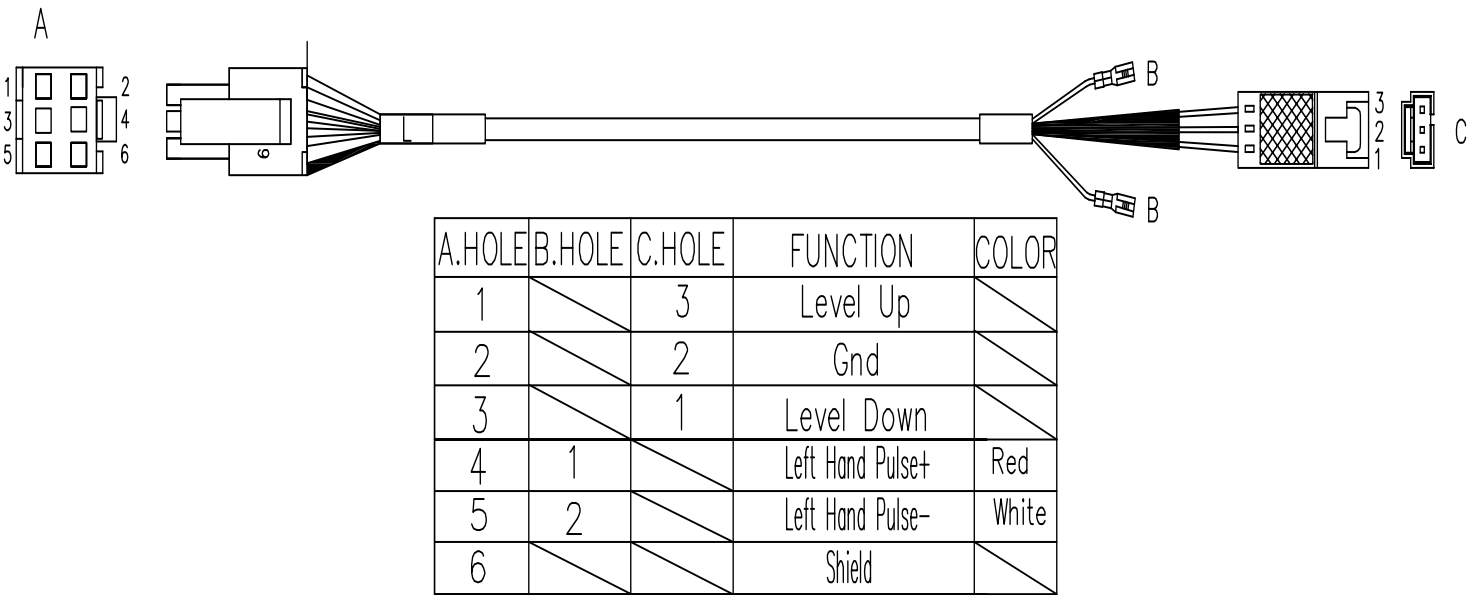
A: HOLE	B: HOLE	C: HOLE	FUNCTION	COLOR
1	1		DC 5V	RED
2	2		SIGNAL	WHITE
3	3		GND	BLACK
		1	Shield	

4.1 ELECTRICAL DIAGRAMS - CONTINUED

P19 - POWER SENSOR WIRE

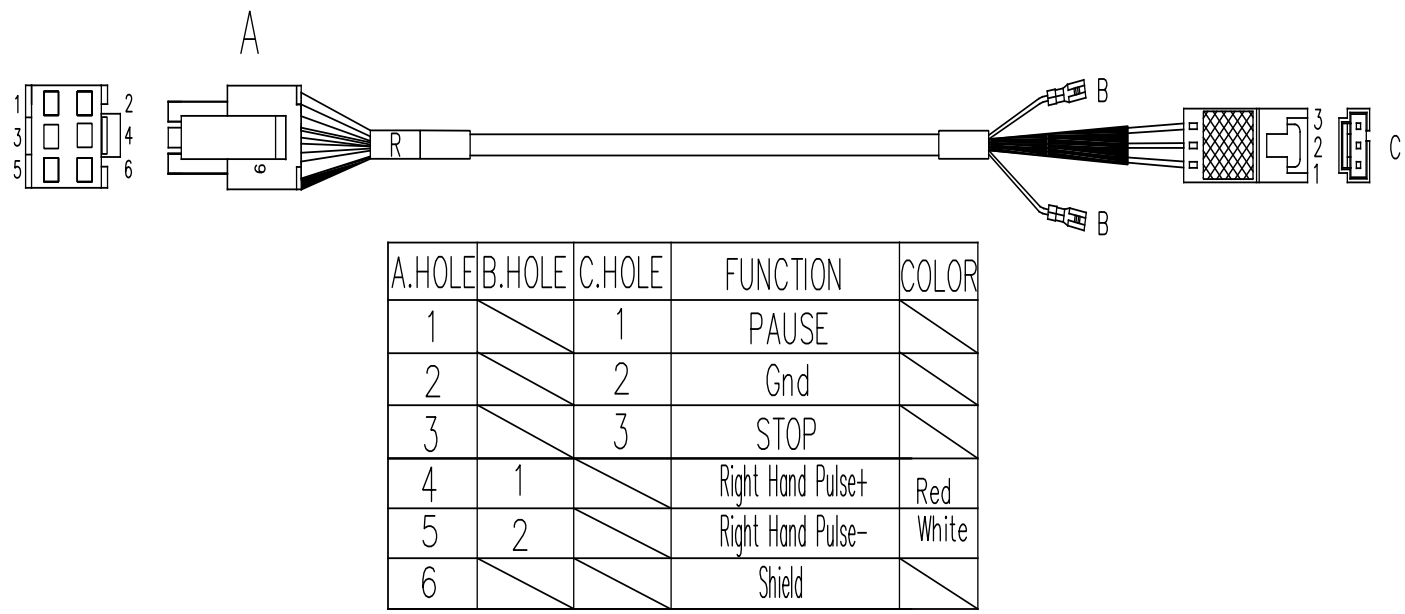


G18 - H/P CONNECT WIRE (L)

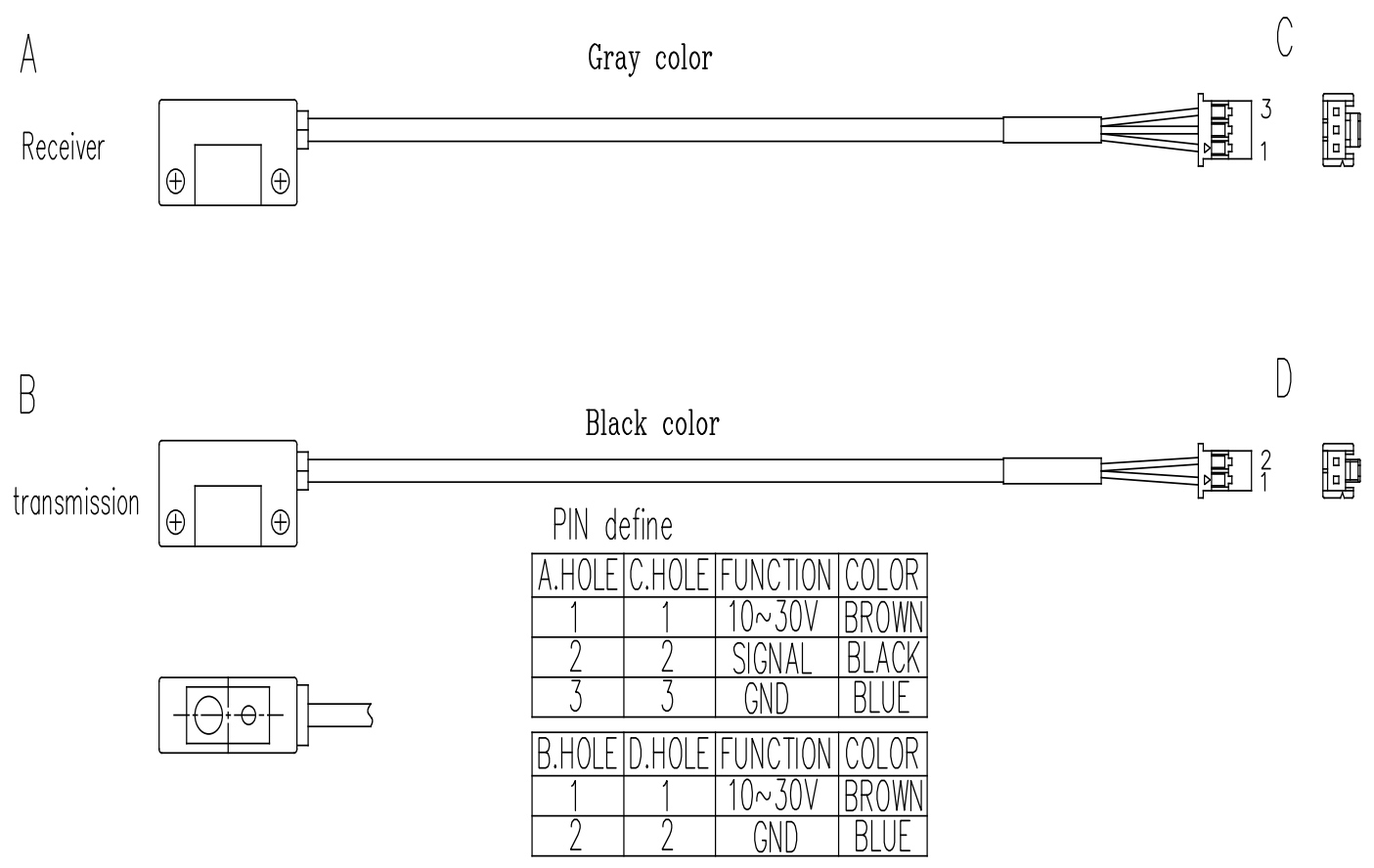


4.1 ELECTRICAL DIAGRAMS - CONTINUED

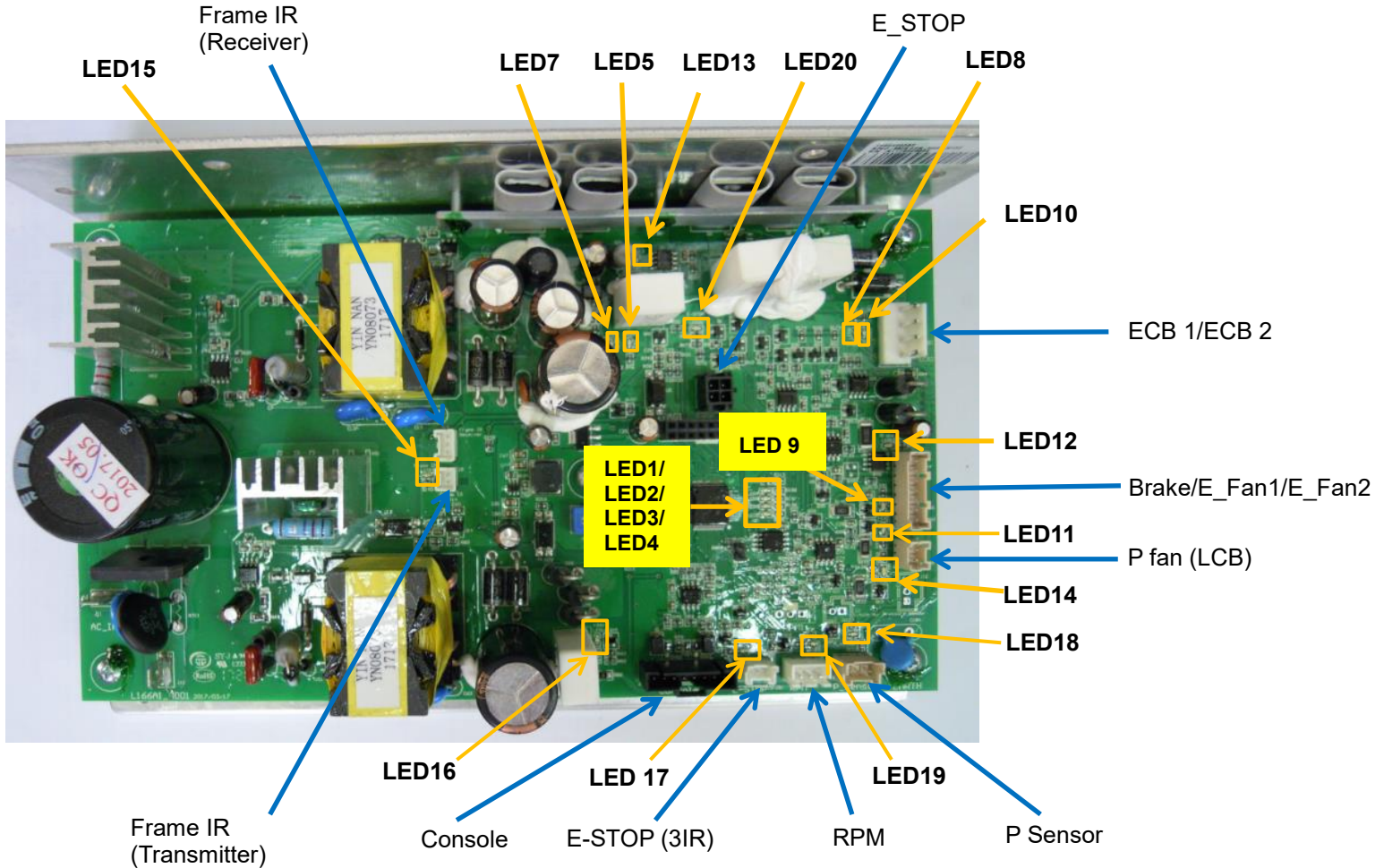
G19 - H/P CONNECT WIRE (R)



P51 - IR SENSOR WIRE



4.2 LCB ERROR INDICATORS



4.2 LCB LED STATUS INDICATORS - CONTINUED

Firmware definition

LED	DESCRIPTION	DESCRIPTION STATUS
LED1	LCB software working status	Flashing - Working OFF - Default
LED2	LCB Error status	Light - LCB with error Off - LCB without error
LED3	Safety Key action status	Light - Active Off - No active
LED4	UCB and LCB communication status	Flashing - Active Off - Abnormal

Hardware definition

LED	DESCRIPTION	DESCRIPTION STATUS
LED5	DC 24V lamp	Indicates if the voltage supply is present Light - Working Off - Not working
LED7	DC 3.3V lamp	Indicates if the voltage supply is present Light - Working Off - Not working
LED8	Electro-magnet device 2 PWM lamp	Indicates if the ECB PWM signal supply is present Light - Working Off - Not working
LED9	Electro-magnet device 1 fan lamp	Indicates if the fan power supply is present Light - Working Off - Not working
LED10	Electro-magnet device 1 PWM lamp	Indicates if the ECB PWM signal supply is present Light - Working Off - Not working
LED11	Electro-magnet device 2 fan lamp	Indicates if the fan power supply is present Light - Working Off - Not working
LED12	DC brake release lamp (manual switch)	Light - The brake is on release position Off - The brake is on lock position
LED13	DC 12V lamp	Indicates if the voltage supply is present Light - Working Off - Not working
LED14	LCB fan working lamp	Indicates if the LCB fan power supply is present Light - Working Off - Not working
LED15	Frame IR transmitter power lamp	Indicates if the Frame IR transmitter power supply is present Light - Working Off - Not working
LED16	DC 36V lamp	Indicates if the voltage supply is present Light - Working Off - Not working
LED17	3IR power lamp	Indicates if the 3IR control zone power supply is present Light - Working Off - Not working
LED18	Proximity sensor signal lamp	Flashing - Signal detected from proximity sensor
LED19	RPM signal lamp	Flashing - Detecting RPM from speed sensor
LED20	E-STOP signal lamp (only E-STOP of console mast/arm rest set)	Light - E-Stop active Off - E-Stop not active

4.3 ERROR CODE LIST

01XX: Motor Errors

CODE	CLASS	DESCRIPTION	MACHINE	SOLUTION
01AC	C	Electro magnet (ECB) over current.	C	a. On standby mode, measure the resistance on ECB1 and ECB2. Please check the ECB extension cable connection at the LCB (pins 1 & 3 for ECB1, pins 2 & 4 for ECB2), there should be between 12.8 ~ 14.2 ohms. - If the ECB resistance is out of the range, replace the ECB. - If the ECB resistance is within the range, replace the LCB. b. Check the gap of ECB1 and ECB2. There should be a gap of .5mm between the ECB and the flywheel.
01AF	C	Electro magnet (ECB) disconnected.	C	a. Check the connection of the ECB extension cable from the LCB to the ECB. b. (CS17/21/22/23/24-F): When power on machine, check to see if LED8 and LED10 on the LCB have a brief light for 3 second. (CS29/CS30-F): On the workout, check to see if LED8 and LED10 on the LCB have a brief light. - If LED8 and LED10 do not have a brief light, replace the LCB. - If LED8 and LED10 do have a brief light, check the ECB extension cable connection at the LCB (pins 1 & 3 for ECB1, pins 2 & 4 for ECB2), there should be between 12.8 ~ 14.2 ohms. - If the ECB resistance is out of the range, replace the ECB. - If the ECB resistance is within the range, replace the LCB.

02XX: LCB Errors

CODE	CLASS	DESCRIPTION	MACHINE	SOLUTION
02AB	C	Machine type error.	C	Change the machine type on the console to match the correct frame.
02A0	C	Encoder error	C	a. Check the connection of the speed sensor cable from the LCB to the speed sensor. b. Check to see if LED D35 (CS17/21/22/23/24-F)/LED19 (CS29/CS30-F) on the LCB is on when the brake is turned to the left release position. c. If it is off, move the stairs about 3 stairs and check to see if LED D35 (CS17/21/22/23/24-F)/LED19 (CS29/CS30-F) is flashing. - If not, replace the speed sensor. - If yes, adjust the speed sensor position and clean the speed sensor of any debris then re-test.
02BF	C	DC brake Over Current	C	a. Check the power extend wire connection between the brake and LCB for any damage. b. Check to see if the stairs will move when you are in the stop position. If yes, replace the brake.
02B4	C	Resistance Type Error.	C	a. Make sure machine type is set for the correct frame in console. - If yes, replace LCB. - If no, change to correct type and reboot the power.
02C0	C	DC brake in manual mode.	C	a. Check if the DC brake is in the right, lock position. Turn the brake (move to the right) if in release position. b. Replace the brake.

CHAPTER 4: TROUBLESHOOTING

4.3 ERROR CODE LIST - CONTINUED

02XX: LCB Errors - continued

CODE	CLASS	DESCRIPTION	MACHINE	SOLUTION
02C1	C	Speed tracking error	C	a. Adjust the speed sensor position and clean the speed sensor of any debris. b. Check the ECB extension cable connection at the LCB (pins 1 & 3 for ECB1, pins 2 & 4 for ECB2), there should be between 12.8 ~ 14.2 ohms, check which ECB is outside the range and replace it.
02C3	C	Frame IR sensor error	C	a. Check if there's something blocking the frame IR sensors. b. Check if the frame IR sensors (transmitter and receiver) are aligned. c. Check the connection of the frame IR transmitter cable from the LCB to the frame IR transmitter sensors. d. Replace the frame IR transmitter cable if the cable is defective.
02C4	C	Frequency error from control zone.	C	Replace the control zone transmission board or receiver board.
02C5	C	The frequency error from frame IR sensor.	C	Replace LCB set.
02C6	C	The receiver disconnected from control zone.	C	a. Check the connection of the control zone extension cable from the LCB to the control zone. b. Replace the receiver board (CS24/30-F)/control zone (CS31-F).
02C7	C	The receiver disconnected from frame IR sensor	C	a. Check the connection of the frame IR receiver cable from the LCB to the frame IR receiver sensor. b. Replace the frame IR receiver cable.
02CD	C	DC brake disconnects	C (CS29/ CS30-F)	a. Check the power extend wire connection between the brake and LCB for any damage. b. Check to see if the LED16 CS29/CS30-F) on the LCB is on when the unit is power on. - If not, replace the LCB. - If yes, replace the brake.
0249	B	LCB or ECB Fan is disconnected or overcurrent.	C	1. LCB fan a. Check the connection of the LCB fan cable from the LCB to the LCB fan. b. Check to see if LED14 on the LCB is on when the unit is power on. - If not, replace the LCB fan. - If yes, replace the LCB. 2. ECB fan a. Check the connection of the LCB fan cable from the LCB to the LCB fan. b. Check to see if LED9/11 on the LCB is on when press "Go" to start a workout. - If not, replace the ECB fan. - If yes, replace the LCB.
024B	B	Position sensor is no response	C	a. Check the connection of the position sensor cable from the LCB to the position sensor. b. Turn off the DC brake by moving the red handle downward. Rotate the stairs a least 1 complete revolution. Confirm the gap is lower than 3.5mm between the axle and proximity sensor and does not hit. c. Check to see if LED D8 (CS17/21/22/23/24-F)/LED18 (CS29/CS30-F) on the LCB is flashing when press "Go" and rotate the stairs. - If not, replace the proximity sensor. - If yes, replace the LCB.

04XX: Communication Errors

CODE	CLASS	DESCRIPTION	MACHINE	SOLUTION
04A0	C	LCB does not have communication response from UCB	Communication Errors	a. Check the connection of the console cable at both ends and perform continuity test. b. Replace LCB.
0441	B	When UCB implements a command, but the LCB/MCB cannot execute the command	Communication Errors	Enter the Engineer mode disable B Level Error, bypass CLASS A and B error code.

5.1 SIDE COVER REPLACEMENT

- 1) Turn off power and disconnect the cord from the machine.
- 2) Pull up on the Control Zone carefully (Figure A).
- 3) Unplug the wire connector from the Control Zone and remove the Control Zone from the unit (Figure B).



FIGURE A



FIGURE B

- 4) Remove the 3 screws and remove the small Matrix logo cover at the top of the stairs (Figures C & D).

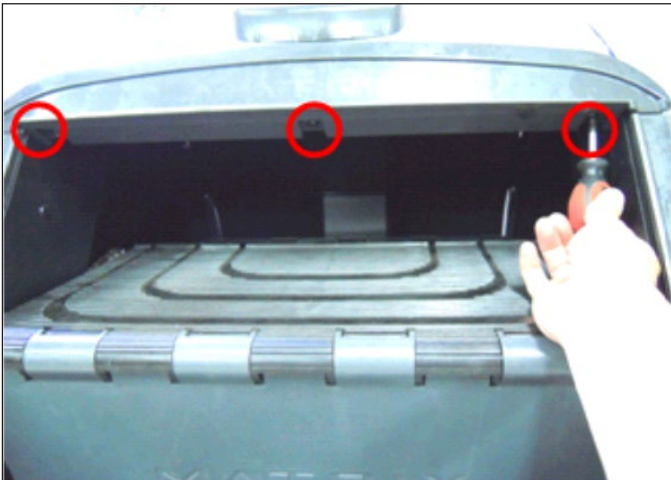


FIGURE C



FIGURE D

5.1 SIDE COVER REPLACEMENT - CONTINUED

- 5) Rotate the 2 plastic clips counter-clockwise to remove the Matrix logo cover (Figures E & F).



FIGURE E



FIGURE F

- 6) Remove the 4 screws holding the side cover to the frame and pull up on the side cover to remove it (Figures G & H).



FIGURE G



FIGURE H

- 7) Reverse Steps 1-6 to install a new side cover.

5.2 CONSOLE REPLACEMENT

- 1) Turn off power and disconnect the cord from the machine.
- 2) Remove the 5 screws that hold the console to the console mast (Figure A).
- 3) Disconnect the console cable and other wiring from the console, then remove the console (Figure B).



FIGURE A

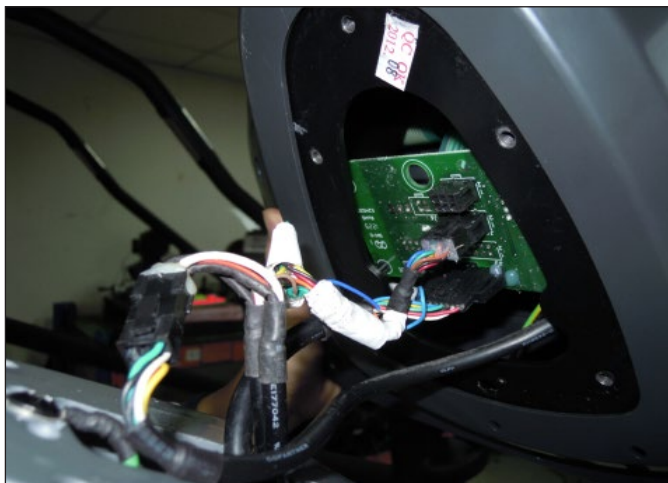


FIGURE B

- 4) Connect the wiring to the new console.
- 5) Carefully push the wires into the console and console mast until they are clear of the console / mast connection.
- 6) Attach the console to the console mast using the screws removed in Step 2.
- 7) Test the Climbmill for function as outlined in Section 5.21.

5.3 FRONT SHROUD REPLACEMENT

- 1) Turn off power and disconnect the cord from the machine. Remove all of the cables from the front cover (Figure A).
- 2) Remove the 2 screws from the front cover and remove it (Figure B).



FIGURE A

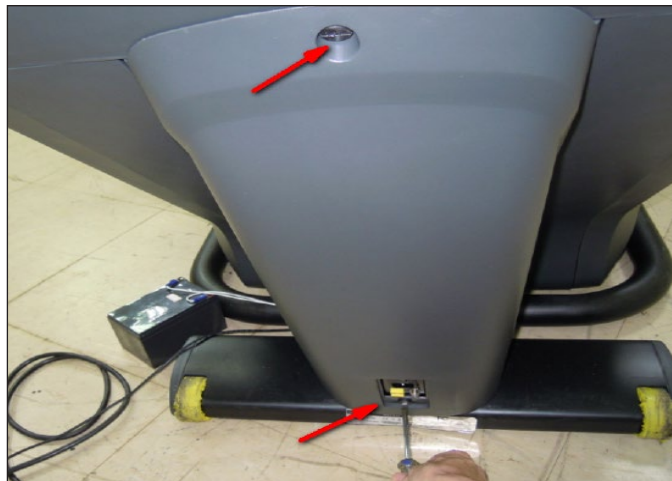


FIGURE B

- 3) Remove both side covers as outlined in Section 5.1.
- 4) Remove the console as outlined in Section 5.2. Disconnect the safety switch cable and safety switch extending cable from the console mast (Figure C).
- 5) Remove the 3 screws on each side that connect the front shroud to the frame (Figure D).

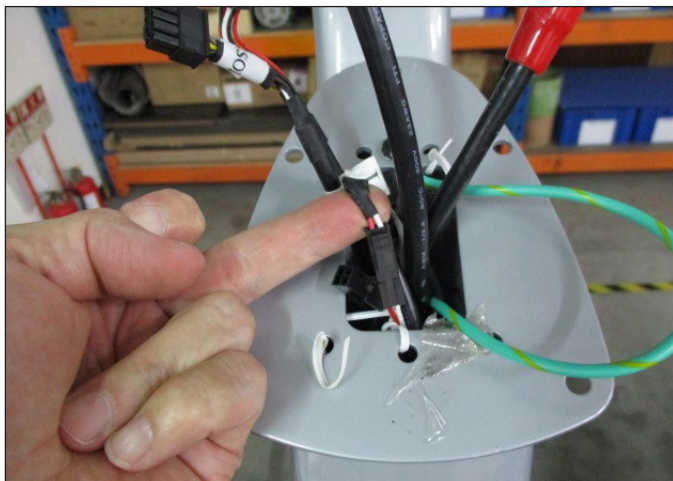


FIGURE C



FIGURE D

- 6) Remove the 5 screws that hold the upper handlebar set to the console mast (Figure E).
- 7) Disconnect the hand pulse and quick key cables on the inside of the console mast (Figure F).



FIGURE E



FIGURE F

5.3 FRONT SHROUD REPLACEMENT - CONTINUED

8) Remove the 8 screws holding the lower handlebar set to the console mast (Figure G). Disconnect the safety switch wiring between console mast and lower handlebar set.

9) Disconnect the safety switch wiring (Figure H).

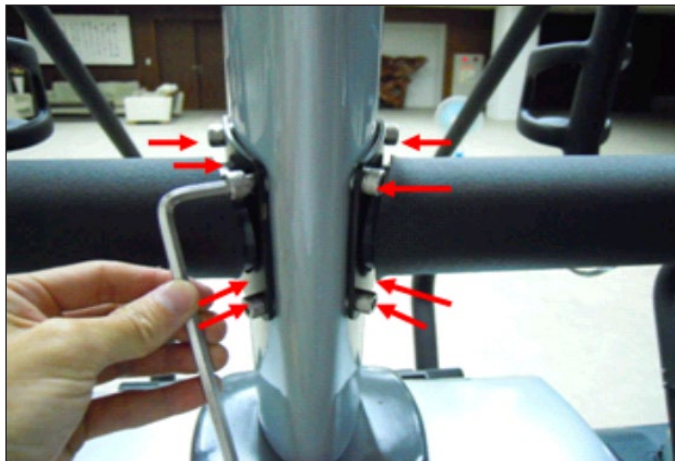


FIGURE G



FIGURE H

10) Remove the 4 screws that attach the console mast to the frame (Figure I).

11) Pull the cables out of the console mast and remove it (Figure J).

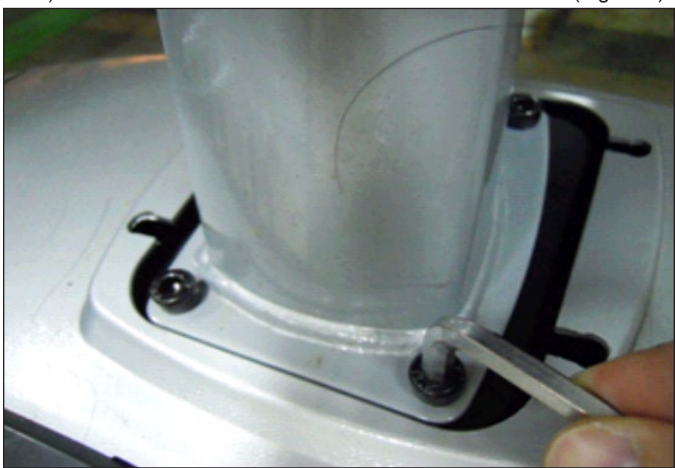


FIGURE I



FIGURE J

12) Remove the 4 screws holding the front shroud to the sides (Figure K).

13) Pull up on the front shroud and remove it (Figure L).



FIGURE K



FIGURE L

14) Reverse Steps 1-13 to install a new front shroud.

15) Test the Climbmill for function as outlined in Section 5.21

5.4 LOWER CONTROL BOARD (LCB) REPLACEMENT

- 1) Turn off power and disconnect the cord from the machine.
- 2) Remove all wiring from the front cover and remove it from the machine as outlined in Section 5.3.
- 3) Disconnect all wiring from the LCB (Figure A).
- 4) Remove the 2 screws holding the LCB to the frame and remove the LCB (Figure B).



FIGURE A

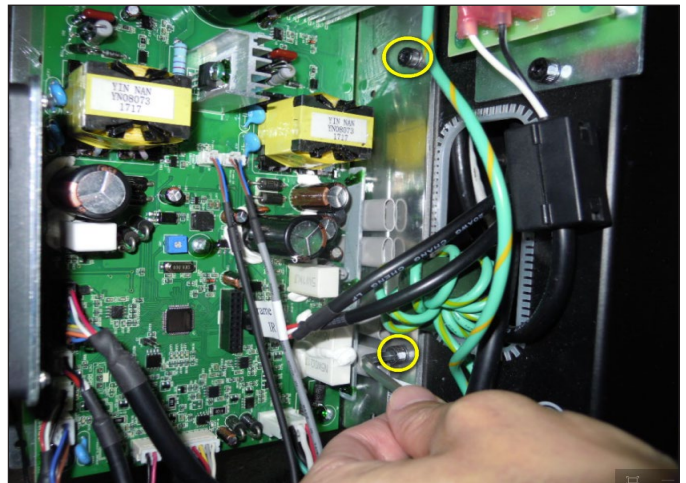


FIGURE B

- 5) Remove the 2 screws that hold the fan to the LCB and remove it (Figure C).



FIGURE C

- 6) Reverse Steps 1-5 to install a new LCB.
- 7) Test the Climbmill for function as outlined in Section 5.21.

5.5 UPPER HANDLEBAR REPLACEMENT

- 1) Turn off power and disconnect the cord from the machine.
- 2) Remove the 5 screws holding the upper handlebar set to the console mast (Figure A).
- 3) Pull out the right handlebar and hand grip cable (Figure B).



FIGURE A



FIGURE B

- 4) Disconnect the wiring that connects the right hand grip cable to the hand pulse extension wire (Figure C).
- 5) Pull out the left handlebar and hand grip cable (Figure D).

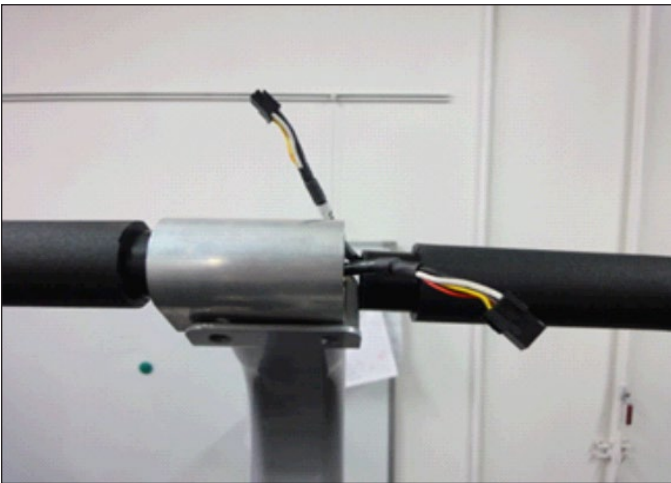


FIGURE C

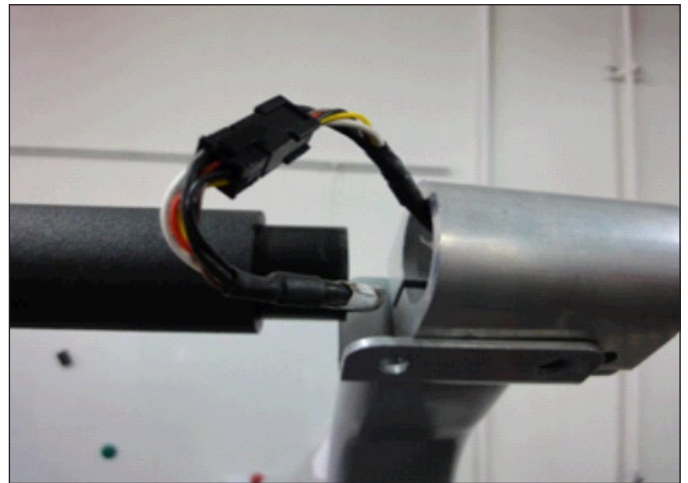


FIGURE D

5.5 UPPER HANDLEBAR REPLACEMENT SET - CONTINUED

- 6) Disconnect the wire that connects the left hand grip cable to the hand pulse extension wire (Figure E).
- 7) Remove the 2 screws on each side holding the front of the upper handlebar set to the lower handlebar set (Figure F).

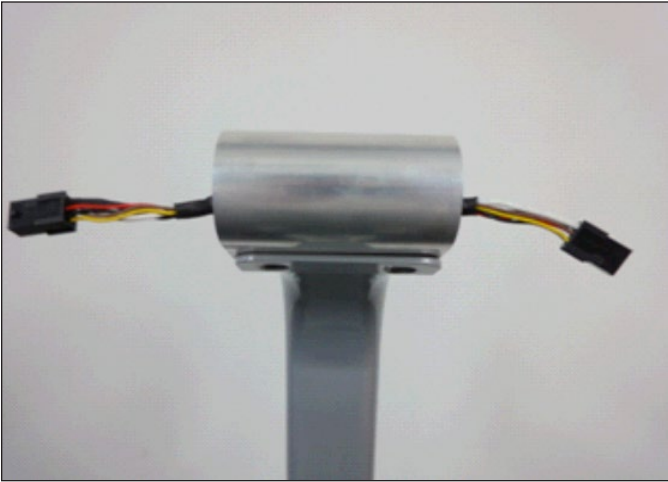


FIGURE E



FIGURE F

- 8) Remove the 2 screws on each side holding the rear of the upper handlebar set to the lower handlebar set (Figure G).



FIGURE G

- 9) Reverse Steps 1-8 to install a new upper handlebar set.
- 10) Test the Climbmill for function as outlined in Section 5.21.

5.6 SAFETY SWITCH REPLACEMENT

1. On Console Mast set

1) Turn off power and disconnect the cord from the machine. Remove the console as outlined in Section 5.2.

2) Remove the 2 screws holding the safety switch set o the console mast (Figure A).

3) Disconnect the safety switch cable and safety switch extending cable (Figure B).

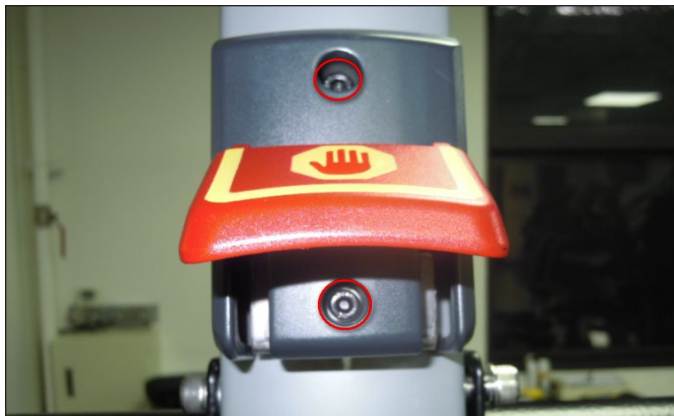


FIGURE A

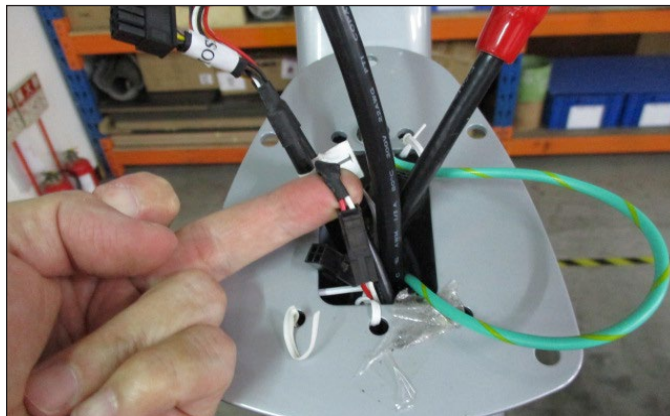


FIGURE B

4) Pull out the safety switch switch set from console mast.

5) Remove the 2 screws holding the cover to the bracket (Figure C).

6) Remove the 2 screws holding the safety switch cover to the bracket (Figure D).

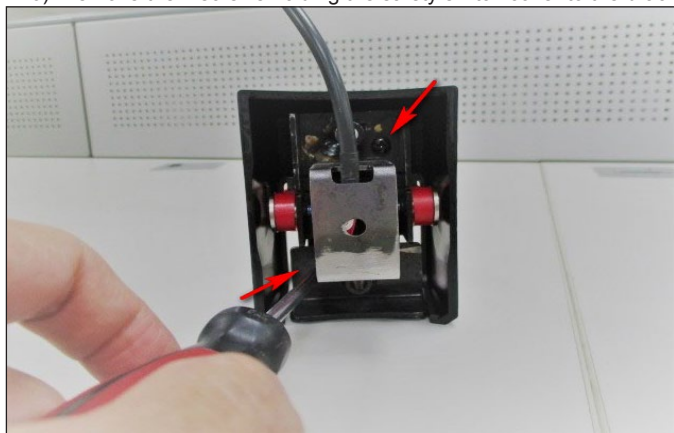


FIGURE C

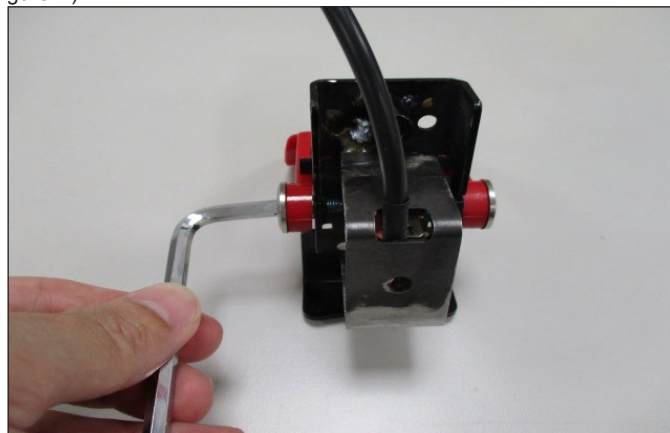


FIGURE D

7) Use a straight screwdriver to compress each end of the switch and release it from the bracket (Figure E). Disconnect the cable from the safety switch (Figure F).

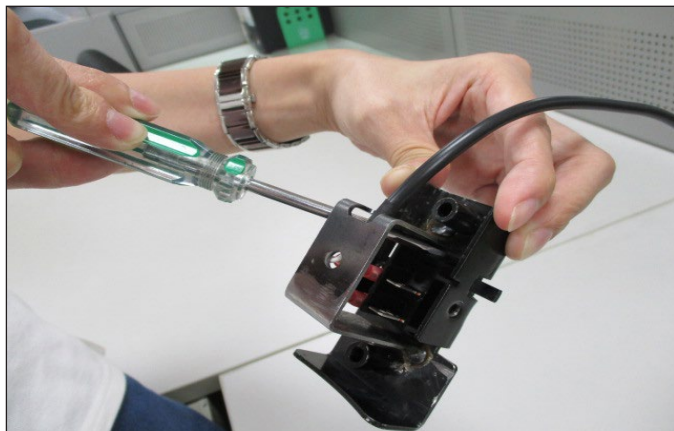


FIGURE E

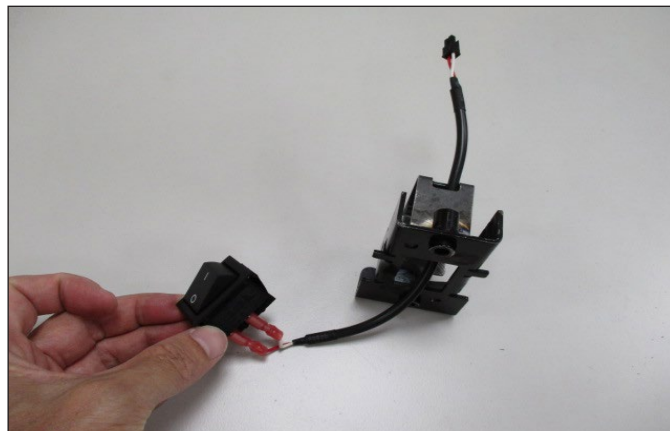


FIGURE F

8) Reverse Steps 1-7 to install a new safety switch.

9) Test the Climbmill for function as outlined in Section 5.21.

5.6 SAFETY SWITCH REPLACEMENT - CONTINUED

2. On Lower Handlebar Set

- 1) Turn off power and disconnect the cord from the machine.
- 2) Remove the 2 screws holding the safety switch cover to the lower handle set (Figure C). Pull out 2 cables from the lower handle set, then disconnect the wiring (Figure D).



FIGURE C



FIGURE D

- 3) Use a Locking Ring Wrench (part no. #1000411381) to remove the safety switch set (Figure E & F).



FIGURE E



FIGURE F

- 4) Reverse Steps 1-3 to install a new safety switch set. **Note:** When re-installing the safety switch set assembly, make sure that the projection on the switch lines up with the long hole in the lower handlebar (Figure G).
- 5) Test the Climbmill for function as outlined in Section 5.21.



FIGURE G

5.7 LOWER HANDLEBAR SET REPLACEMENT

- 1) Turn off the power and disconnect the cord from the machine.
- 2) Remove the upper handlebar set as outlined in Section 5.5.
- 3) Remove the 8 screws holding the lower handlebar set to the console mast (Figure A).
- 4) Disconnect the safety switch wiring (Figure B).
- 5) Remove the the safety switch from the lower handle set as outlined in Section 5.6.



FIGURE A



FIGURE B

- 6) Remove the 2 screws holding the lower handlebar set to the frame handlebar set, then remove the lower handlebar (Figure C).
- 7) Reverse Steps 1-6 to install a new lower handlebar set.
- 8) Test the Climbmill for function as outlined in Section 5.21.



FIGURE C

5.8 HANDGRIP SERVICE

- 1) Turn off the power and disconnect the cord from the machine.
- 2) All items on the handlebar are removed using a Phillips screwdriver from the underside of the bar. **NOTE:** Just loosen the three screws until the "up & down" quick key covers are separately. (Figures A & B).
- 3) Once the screws are removed, lift the part carefully then disconnect any wire connections to fully remove the part. This includes the quick key cover, and heart rate grip plates (Figure B).



FIGURE A



FIGURE B

- 4) Remove the handgrip from handlebar (Figure C).



FIGURE C

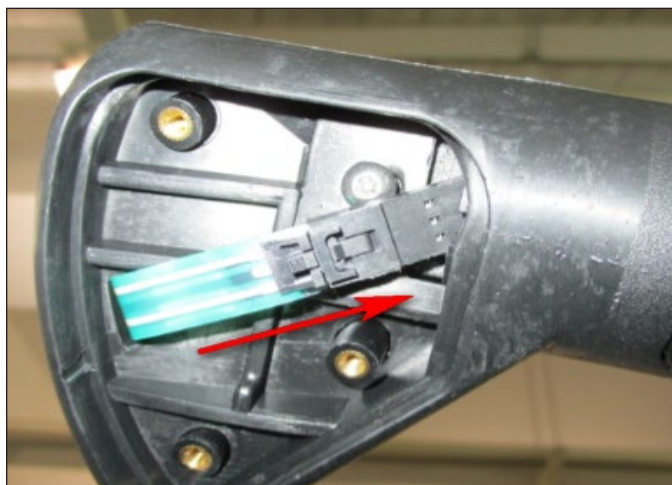


FIGURE D

- 5) Reverse Steps 1-4 to install a new handgrip. **NOTE:** Before assembling the quick key cover, push the grip cable back to handgrip first (Figure D) to prevent cable injury.
- 6) Test the Climbmill for function as outlined in Section 5.21.

5.9 STAIR REPLACEMENT

- 1) Turn off power and disconnect the cord from the machine.
- 2) Remove the side covers as outlined in Section 5.1.
- 3) Remove the front shroud as outlined in Section 5.3.
- 4) Turn the brake bar to the right to lock the stairs in place (Figure A).
- 5) Remove the X shaped clip from the long axle on the upper side of the stair needing to be replaced (Figure B).

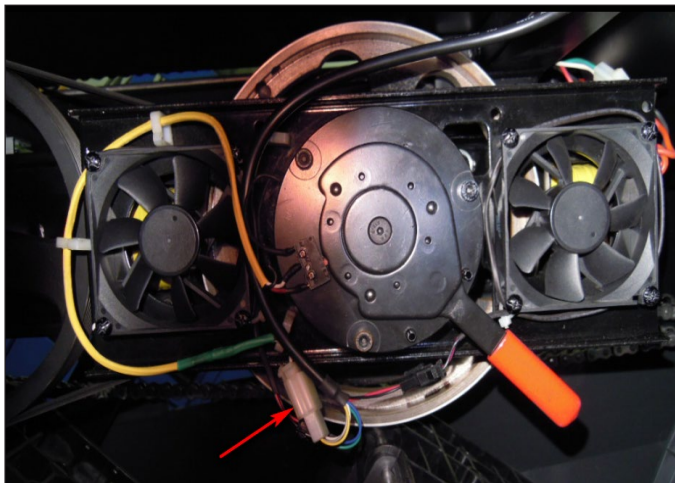


FIGURE A



FIGURE B

- 6) Pull out the axle from the opposite side where you removed the X shaped clip (Figure C). **NOTE:** 1. Pay attention to the order of the parts sequence on the axle as you remove it (Figure D). The correct parts sequence is X shaped clip > bearing > washer > chain > spacer > stair. 2. Do not reuse the X-washer retainers. Order replacements with your stair or bearing order.



FIGURE C

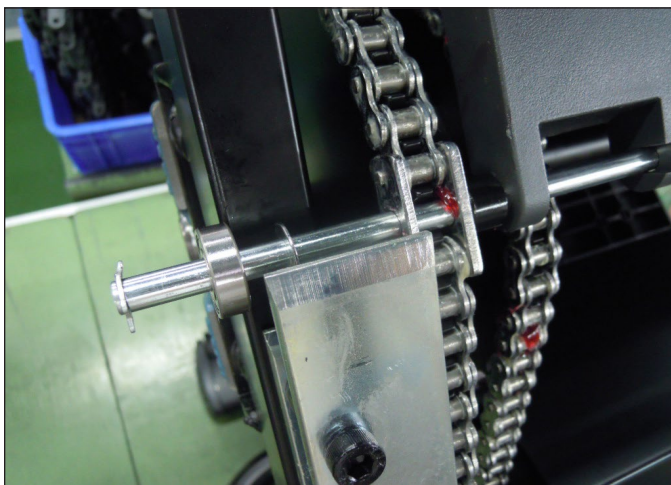


FIGURE D

5.9 STAIR REPLACEMENT - CONTINUED

- 7) Remove the axle from the lower side of the stairs needing to be replaced following the same procedure as Steps 4-6.
- 8) Remove the stair set when you have removed both axles (Figure E).
- 9) Remove the E-shaped clip from the short axle between the 2 portions of the stair set (Figure F). This will allow you to separate the 2 portions of the stair set.

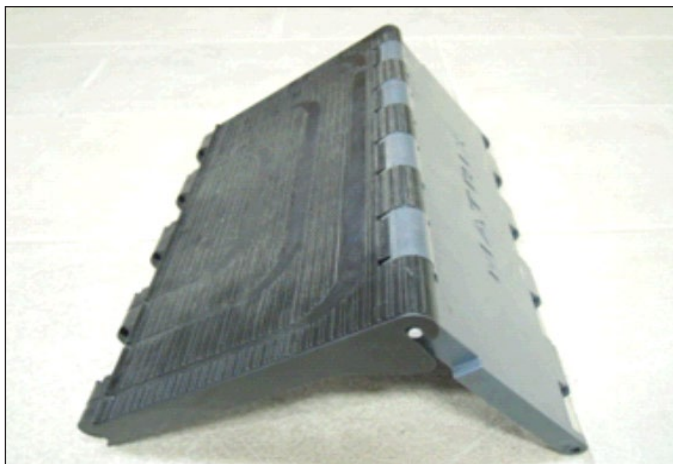


FIGURE E

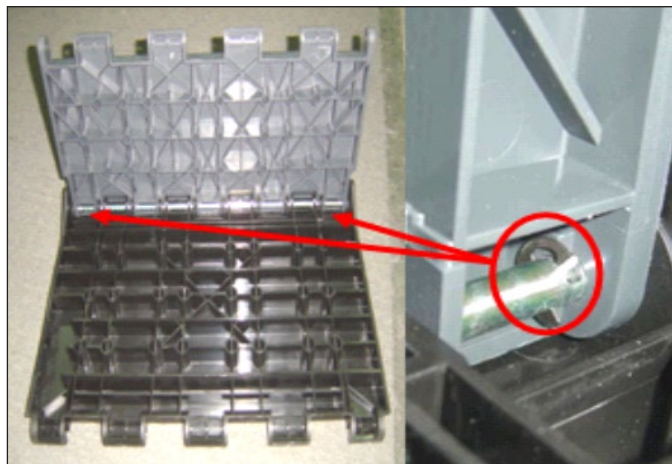


FIGURE F

- 10) Reverse Steps 1-9 to install a new stair set.
- 11) Turn the brake bar to the left to unlock the stairs once the replacement is finished.
- 12) Test the Climbmill for function as outlined in Section 5.21.

5.10 DRIVE SET REPLACEMENT

NOTE: It is recommended that 2 technicians be present when replacing or removing the drive set. While it is not necessary to remove the side covers or a set of stairs, it makes it much easier to remove the drive set if these parts are removed for accessibility.

- 1) Turn off power and disconnect the cord from the machine.
- 2) Turn the 2 plastic screws counter-clockwise and remove the Matrix logo covers on both sides of the machine.
- 3) Turn the brake lever to the right to lock the stairs (Figure A) to prevent movement that could cause injury.
- 4) Disconnect the speed sensor wire (Figure B).

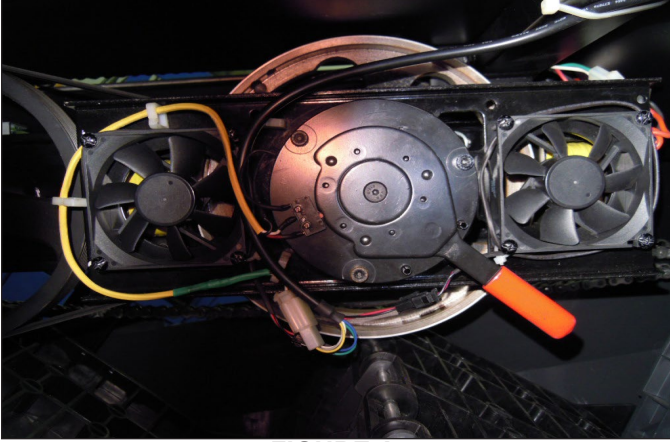


FIGURE A

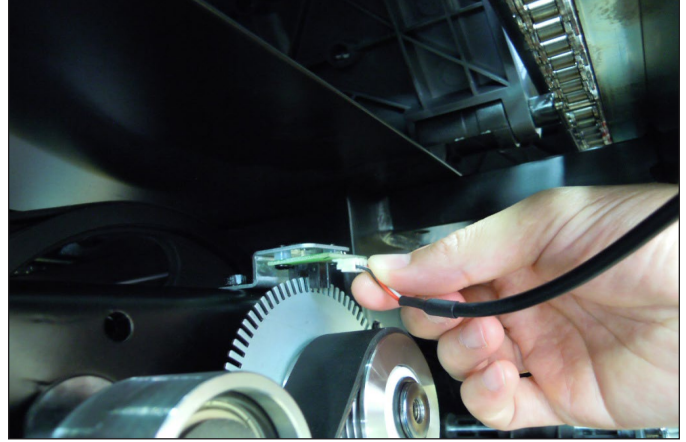


FIGURE B

- 5) Remove the nut with 17 mm ratchet wrench (Figure C). Once the screws are removed, remove the spring and fixing base (Figure D).

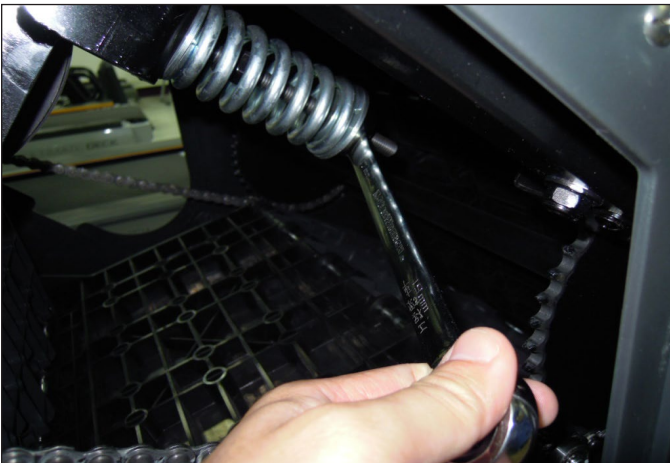


FIGURE C



FIGURE D

- 6) Disconnect the 5 wire connectors and remove brake set (Figure E). These include 2 fan wires, 2 ECB wires and a brake wire.
- 7) Remove the drive set guide screw (Figure F).

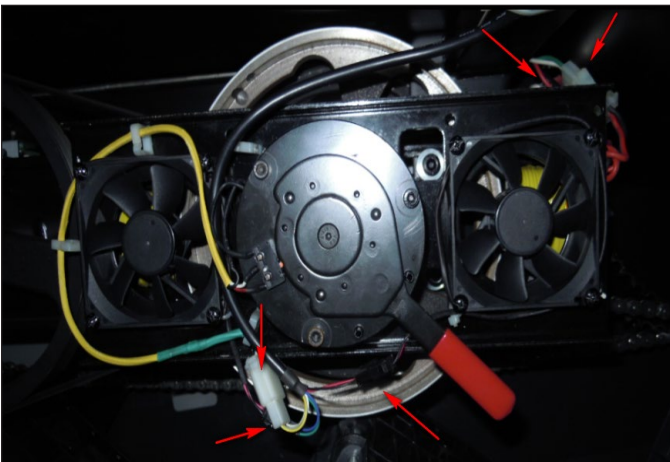


FIGURE E



FIGURE F

5.10 DRIVE SET REPLACEMENT - CONTINUED

8) Remove the 4 screws holding the drive set to the frame (Figure G). Note: Screw torque is 40 N-m / 28.9 ft-lb.

9) Remove the 1 screw holding the push shank bracket to the drive set (Figure H). **NOTE:** Screw torque is 40 N-m / 28.9 ft-lb.

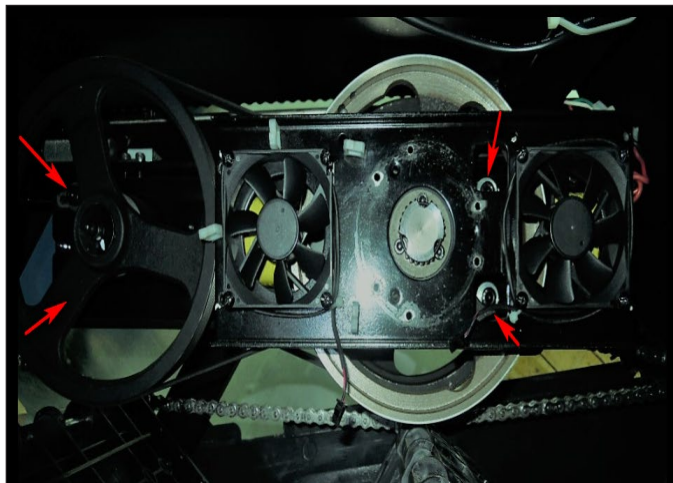


FIGURE G



FIGURE H

10) While a tech is pushing the drive set towards the front of the unit (the drive set will still be supported by the guide screw - Figure I), the other tech should remove the chain from the sprocket simultaneously (Figure J).



FIGURE I



FIGURE J

5.10 DRIVE SET REPLACEMENT - CONTINUED

11) Remove the drive set from the unit (Figure K). **NOTE:** The drive axle will need to be rotated so that the pulleys are horizontal to fit through the side covers (Figure L).

12) Reverse Steps 1-11 to install a new drive set. **NOTE:** There is a spring tension installation tool (part no. 1000412618), available to assist with installing the spring length in Step 5 to 87.5mm (Figure L). There is a installation tool (part no. 1000412619) available to assist with installing the Push Rod Connection Piece to the drive set and screw torque is 40 N-m / 28.9 ft-lb in Step 9. While tighten the bolt, hold the installation tool to align the Push Rod Connection Piece (Figure M).



FIGURE K



FIGURE L



FIGURE M

13) Test the Climbmill for function as outlined in Section 5.21.

5.11 CHAIN REPLACEMENT

- 1) Turn off the power and disconnect the cord from the machine.
- 2) Remove the side covers as outlined in Section 5.1.
- 3) Remove at least 3 sets of stairs as outlined in Section 5.9 to expose a significant portion of the chain.
- 4) Before removing the chain, measure the distance of the chain run from the middle of the front bearing seat to the middle of the rear bearing seat (Figure A). This distance should be 941mm.
- 5) If this length is not 941mm, it needs to be adjusted. Loosen the vertical bolts on the bearing seat, then adjust the length by adjusting the horizontal screw. Tighten the vertical bolts to tighten the bearing seat in place. The vertical bolts should be torqued to 60 N-m.

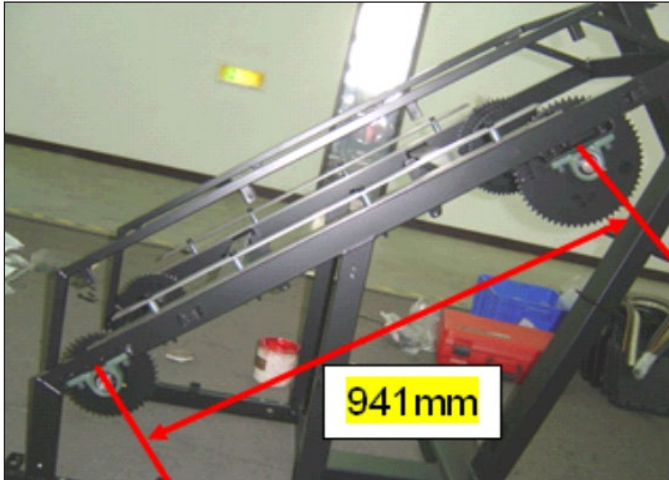


FIGURE A

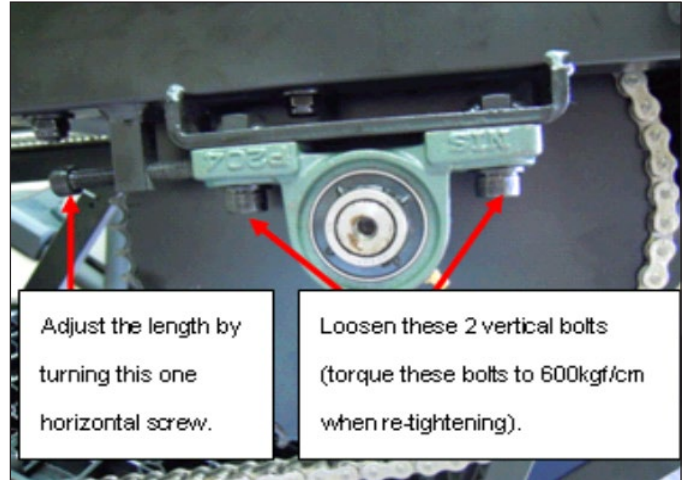


FIGURE B

- 6) Rotate the chain until a spring clip is in a convenient location and remove it (Figure C). **NOTE:** This chain link will normally be painted to make it easier to identify.
- 7) Remove the join plate on the chain (Figure D).

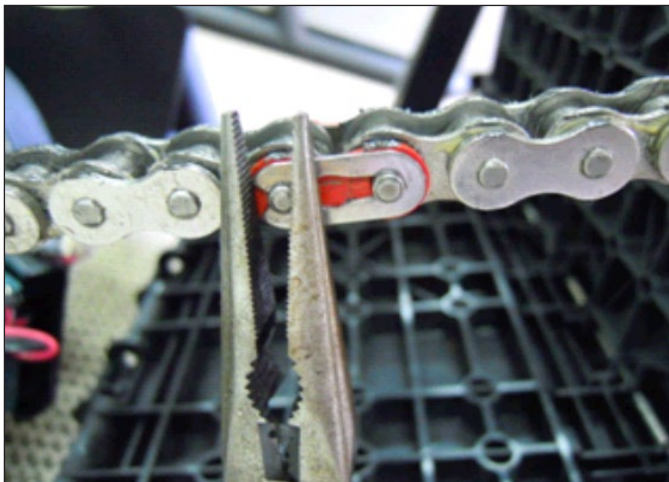


FIGURE C



FIGURE D

5.11 CHAIN REPLACEMENT - CONTINUED

- 8) Remove the 2 seal rings from where the join link was just removed (Figure E).
- 9) The chain can now be removed.

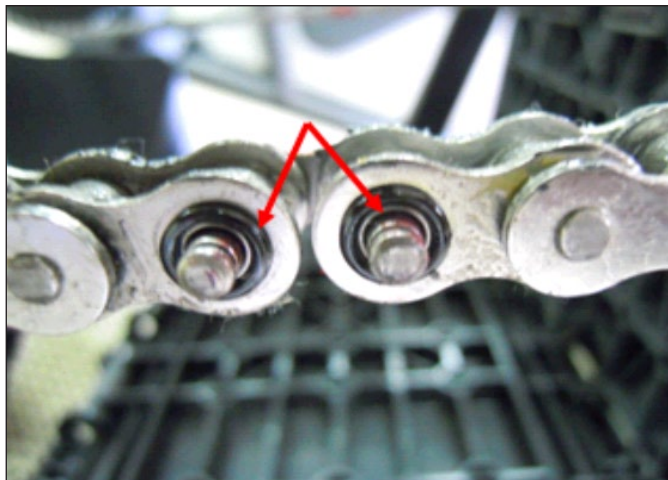


FIGURE E

- 10) Reverse Steps 1-9 to install a new chain. When installing a new chain, it is important to pay attention to the join plates. The join plates are wider than the chain itself. It is important that the side of the join plates that are flush with the rest of the chain get installed to the inside of the chain path (Figures F & G).

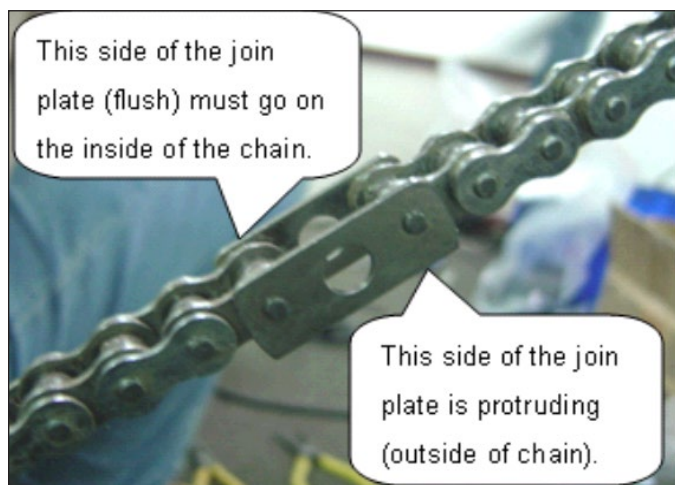


FIGURE F

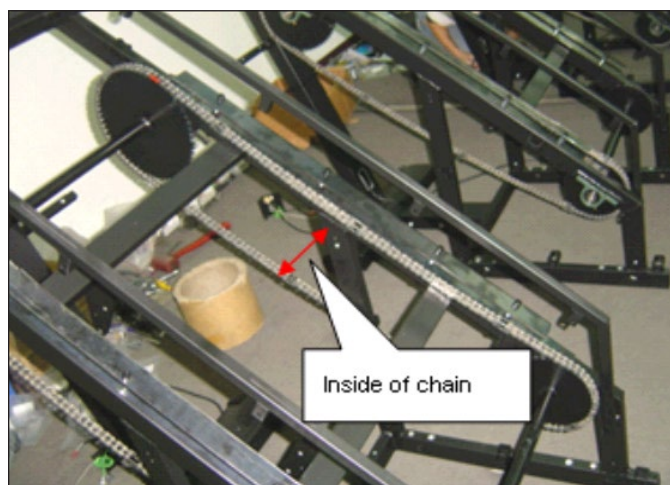


FIGURE G

- 11) Test the Climbmill for function as outlined in Section 5.21.

5.12 BRAKE REPLACEMENT

NOTE: BEFORE REMOVING THE BRAKE AND FAN PLATE, BLOCK THE STAIRS FROM ROTATING (place a block under the bottom stair) TO PREVENT INJURY.

- 1) Turn off the power and disconnect the cord from the machine.
- 2) Remove the Matrix logo covers from each side of the machine.
- 3) Turn the brake lever to the right to lock the stairs and prevent movement that could cause injury.
- 4) Disconnect the brake wire connection (Figure A).
- 5) Remove the 3 screws holding the brake to the drive set (Figure B) and remove the assembly (Figure C). **NOTE: Reinstall and torque brake screws to 4.9 N-m / 3.6 ft-lb.**

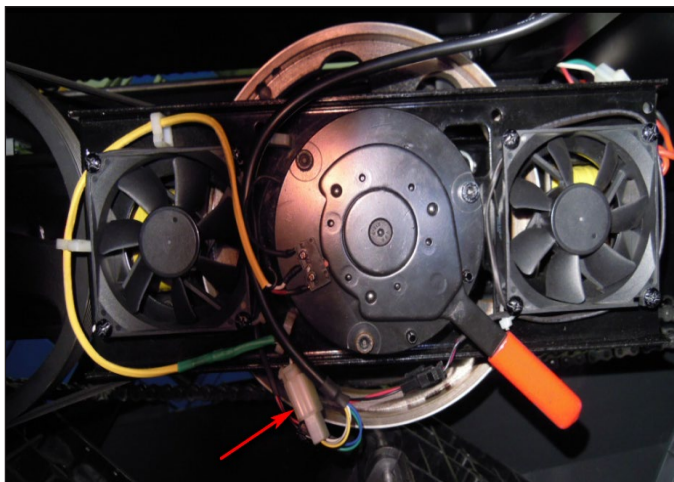


FIGURE A

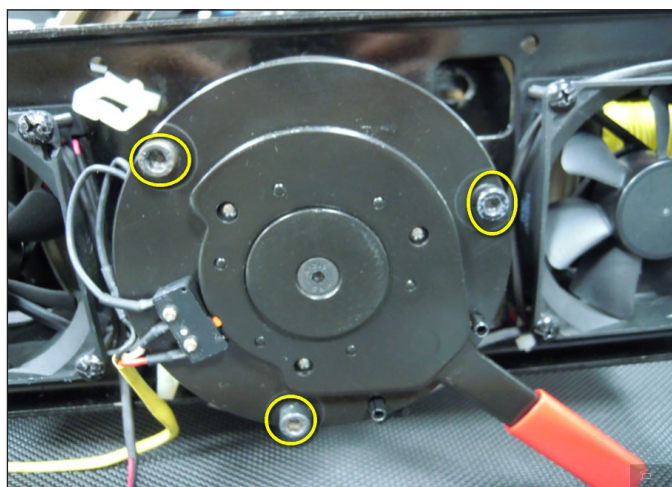


FIGURE B



FIGURE C

- 6) Reverse Steps 1-5 to install a new brake.
- 7) Test the Climbmill for function as outlined in Section 5.21.

5.13 FAN REPLACEMENT

NOTE: BEFORE REMOVING THE FAN, BLOCK THE STAIRS FROM ROTATING (place a block under the bottom stair) TO PREVENT INJURY.

- 1) Turn off the power and disconnect the cord from the machine.
- 2) Remove the Matrix logo covers from each side of the machine.
- 3) Turn the brake lever to the right to lock the stairs and prevent movement that could cause injury.
- 4) Disconnect the both fan wire connections and remove cable ties holding the fan and fan wire to the plate (Figure A).
- 5) Remove the 4 screws holding the fan to the drive set (Figure B) and remove the assembly. **NOTE: Reinstall and torque fan screws to 10 N-m / 7.2 ft-lb.**

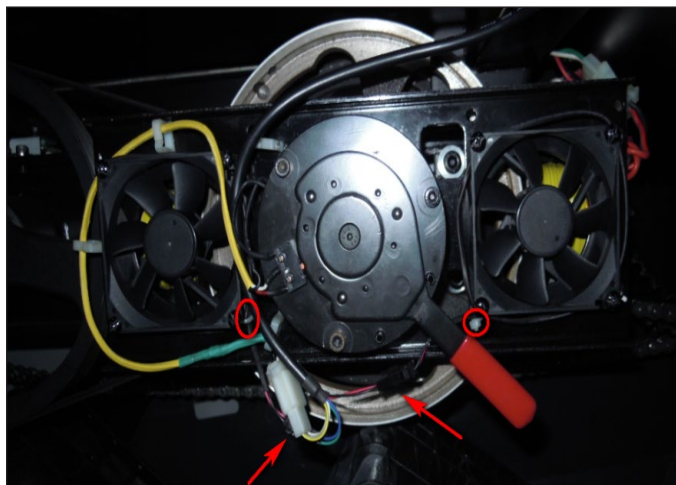


FIGURE A

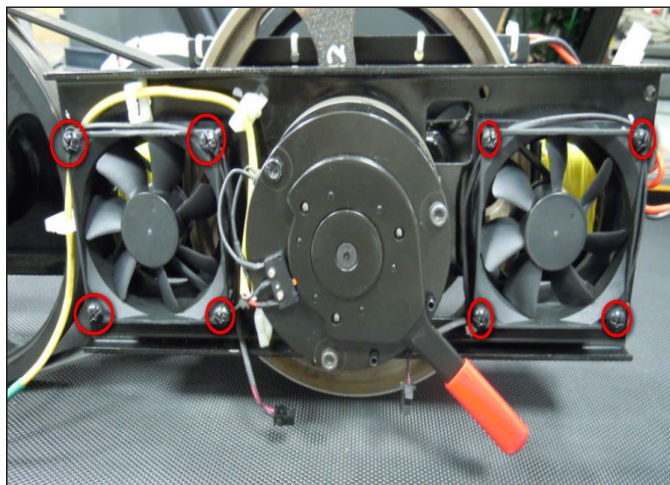


FIGURE B

- 6) Reverse Steps 1-5 to install a new fan.
- 7) Test the Climbmill for function as outlined in Section 5.21.

5.14 ECB BELT REPLACEMENT

- 1) Turn off power and disconnect the cord from the machine.
- 2) Rotate the 2 plastic clips counter-clockwise to remove the Matrix logo cover (Figures A & B).



FIGURE A



FIGURE B

- 3) Turn the brake to the right to lock the stairs.
- 4) Disconnect the brake and both fan wire connections (Figure C).
- 5) Remove the 4 screws holding the brake and fan plate to the drive set (Figure D) and remove the assembly. **NOTE: BEFORE REMOVING THE BRAKE AND FAN PLATE, BLOCK THE STAIRS FROM ROTATING (place a block under the bottom stair) TO PREVENT INJURY. Reinstall and torque brake screws to 4.9 N-m / 3.6 ft-lb. Reinstall and torque fan screws to 10 N-m / 7.2 ft-lb.**

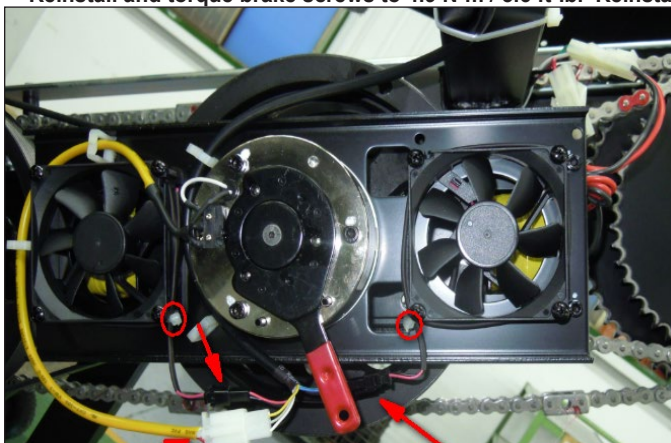


FIGURE C

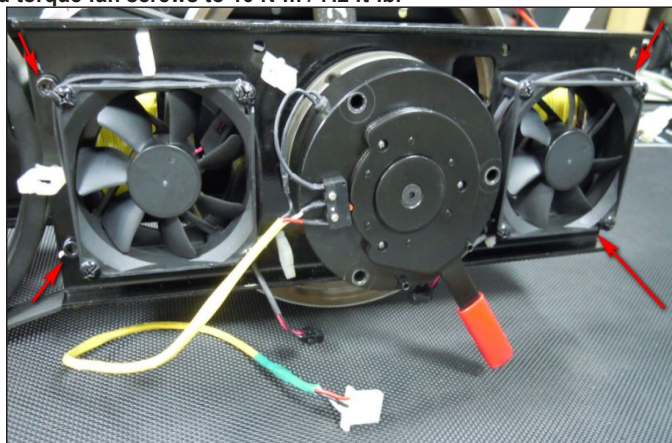


FIGURE D

- 6) Remove the old ECB belt.
- 7) Install a new ECB belt. **NOTE:** There is a belt installation tool available to assist with installing the Flexonic belt (Figure E - part # 0000093787). After installation, rotate the belt at least 3 full revolutions to insure the belt is centered.



FIGURE E

- 8) Reverse Steps 1-5 to re-assemble the unit.
- 9) Test the Climbmill for function as outlined in Section 5.21.

5.15 DRIVE BELT REPLACEMENT

- 1) Turn off power and disconnect the cord from the machine.
- 2) Remove the drive set as outlined in Section 5.10.
- 3) Loosen the belt tension nut (Figure A) and screw (Figure B) until there is enough slack in the drive belt to remove it (Figure C).
- 4) Use a straight edge to make sure that the pulley and encoder pulley are in a straight line (Figure D). If the belt is not on line, try to adjust the pulley and encoder pulley. The belt is flexonic, so belt tension is not critical.



FIGURE A

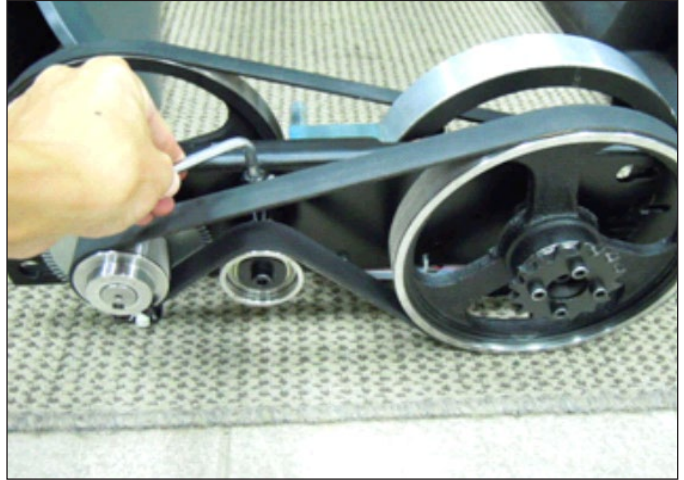


FIGURE B

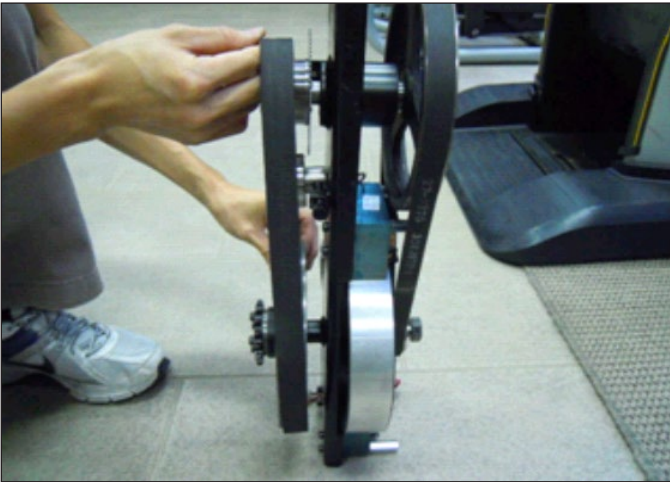


FIGURE C

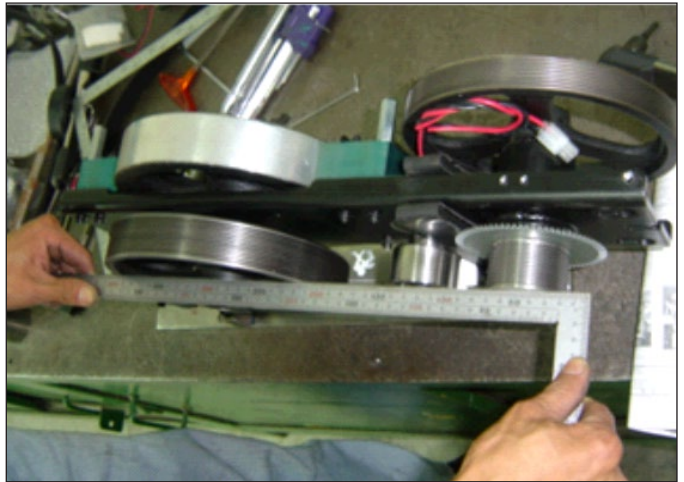


FIGURE D

- 5) Reverse Steps 1-4 to install a new drive belt. **NOTE:** Torque the nut removed in Step 3 to 60 N-m.
- 6) Test the Climbmill for function as outlined in Section 5.21.

5.16 ECB REPLACEMENT

- 1) Turn off power and disconnect the cord from the machine.
- 2) Follow the steps outlined in Section 4.2 (01AF troubleshooting) to test the new ECB before installing it.
- 3) Remove the drive set as outlined in Section 5.10.
- 4) Disconnect the ECB, brake and both fan wire connections (Figure A). **NOTE: BEFORE REMOVING THE BRAKE AND FAN PLATE, BLOCK THE STAIRS FROM ROTATING (place a block under the bottom stair) TO PREVENT INJURY. Reinstall and torque brake screws to 4.9 N-m / 3.6 ft-lb.**
- 5) Remove the 4 screws holding the brake and fan plate to the drive set (Figure B) and remove the assembly. **NOTE: Reinstall and torque fan screws to 10 N-m / 7.2 ft-lb.**

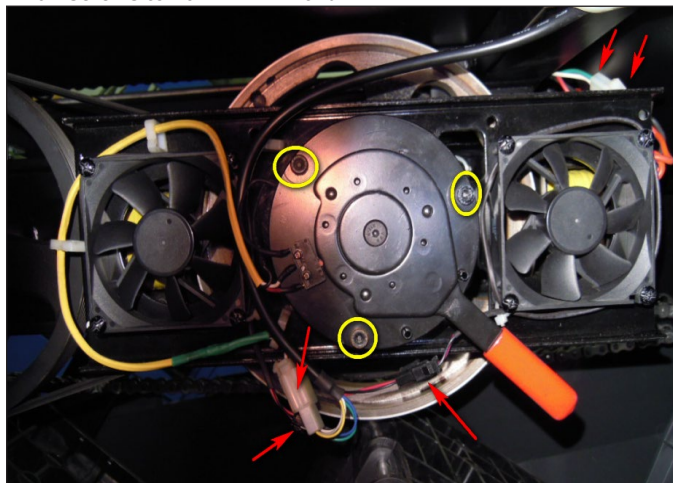


FIGURE A

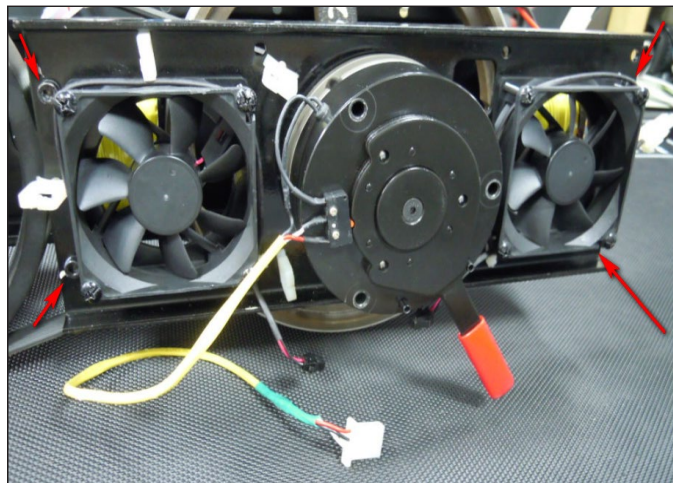


FIGURE B

- 6) Remove the cable ties holding the ECB wiring to the drive set (Figure C).
- 7) Loosen 2 screws to remove the nut standoffs off the ECB (Figure D). **NOTE: Nut standoffs torque is 9.8 Nm / 7.2 ft-lb.**

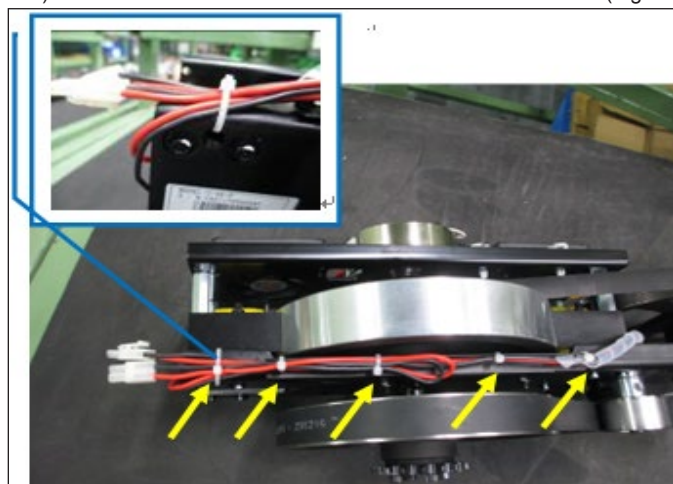


FIGURE C

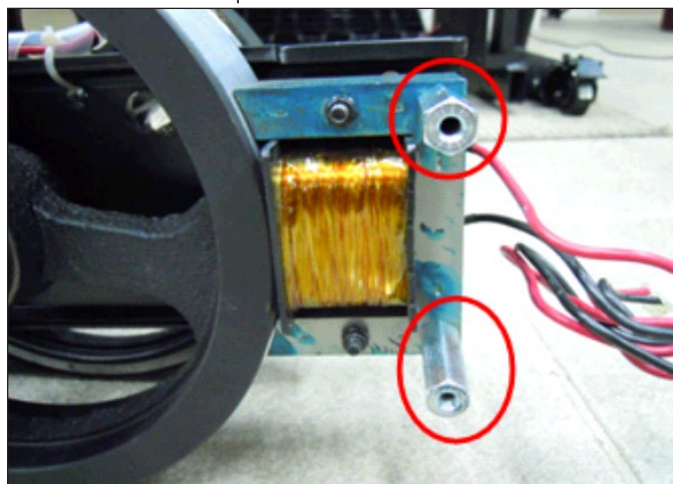


FIGURE D

5.16 ECB REPLACEMENT - CONTINUED

8) Loosen the remaining 2 screws to remove the 2 regular nuts (Figure E). Then remove the ECB. **NOTE:** Screws torque is 9.8 Nm / 7.2 ft-lb.

9) There should be 4 screws & ferrules remaining to mount the new ECB (Figure F).

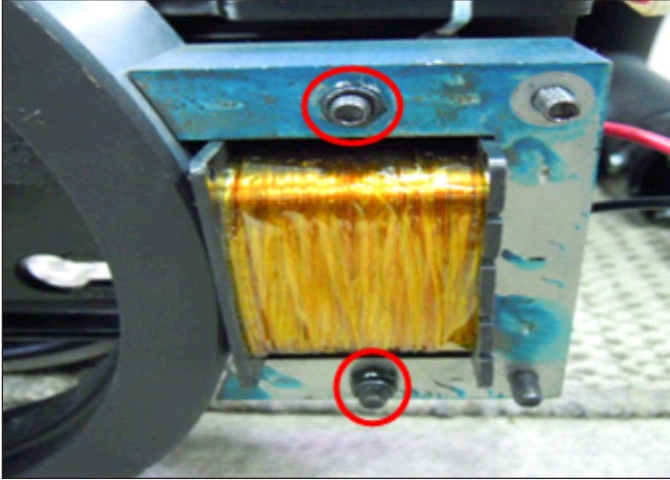


FIGURE E

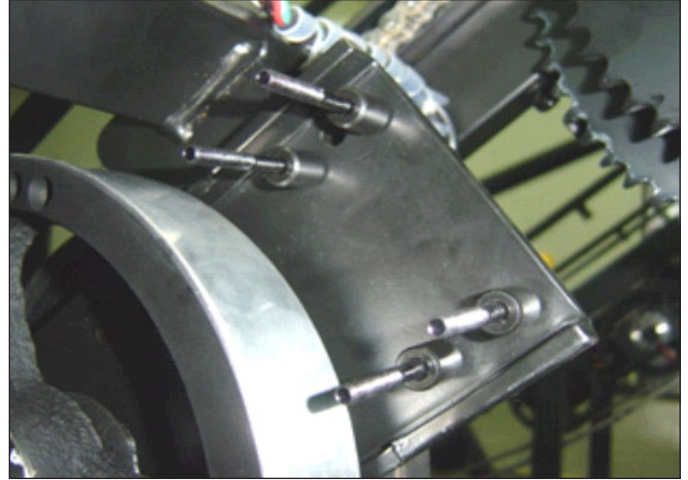


FIGURE F

10) Install a new ECB onto the 4 screws / ferrules.

11) Before tightening the nuts, use a piece of fabric or other material that is approximately 0.5mm thick to adjust the gap between the flywheel and the ECB (Figure G). **NOTE:** Once the ECB is in the correct position, torque the 4 ECB screws to 10 N-m.

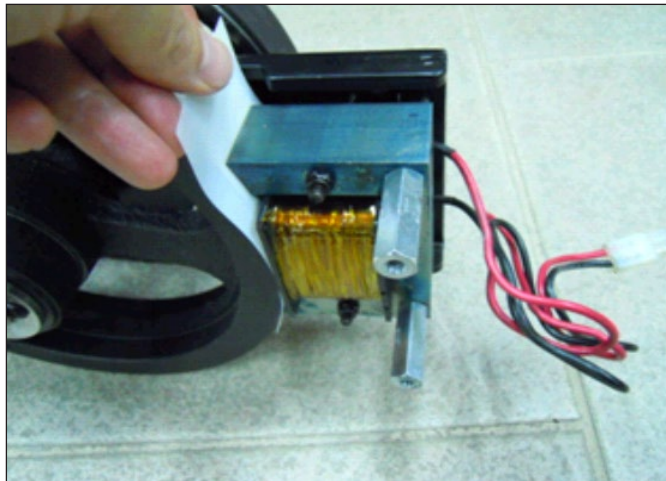


FIGURE G

12) Reverse Steps 1-9 to hook up the ECB and re-assemble the unit.

13) Test the Climbmill for function as outlined in Section 5.21.

5.17 SPEED SENSOR REPLACEMENT

- 1) Turn off power and disconnect the cord from the machine.
- 2) Rotate the 2 plastic clips counter-clockwise to remove the left side Matrix logo cover.
- 3) Disconnect the speed sensor wire (Figure A). **NOTE:** Do not pull the socket downwards to disconnect as it will damage the connector.
- 4) Remove the 2 screws holding the speed sensor plate to the drive set (Figure B), and remove the speed sensor and plate. **NOTE:** Screws torque is 9.8 Nm / 7.2 ft-lb.

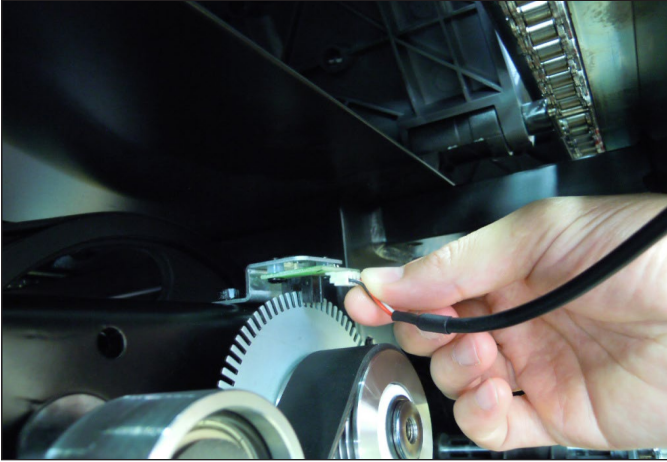


FIGURE A

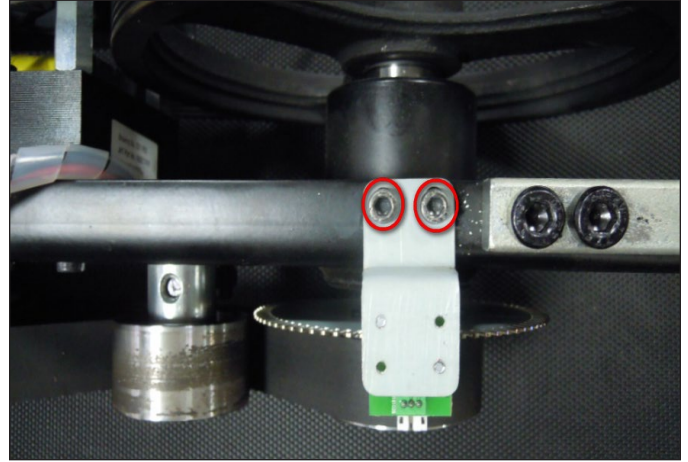


FIGURE B

- 5) Remove 2 screws holding the speed sensor to the speed sensor plate (Figure C), then remove the speed sensor.

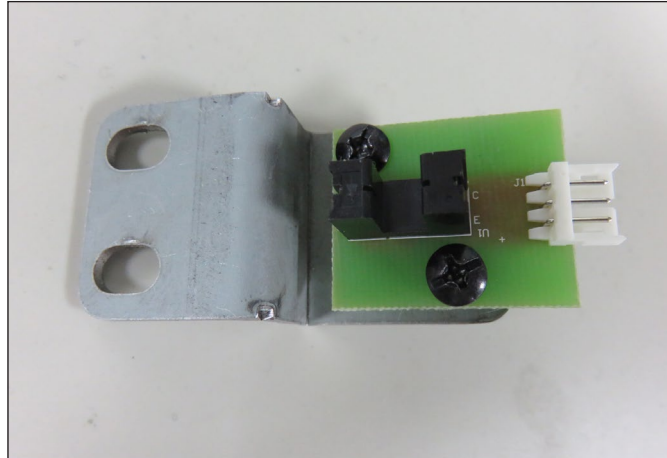


FIGURE C

- 6) Reverse Steps 1-5 to install a new speed sensor. **NOTE:** Install the speed sensor so that the encoder has a distance of 1.5mm from the optic disk on each side (Figures D & E).

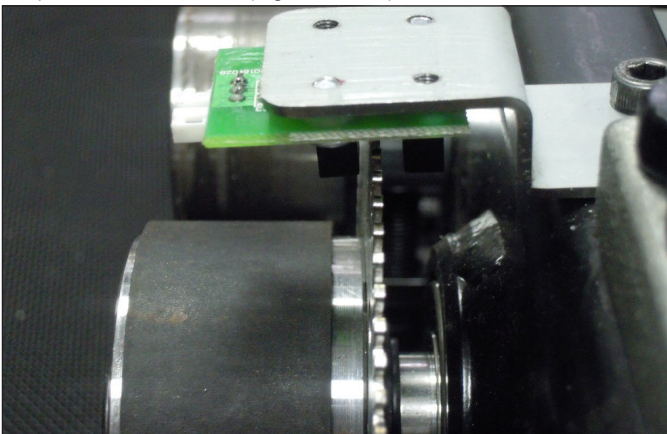


FIGURE D

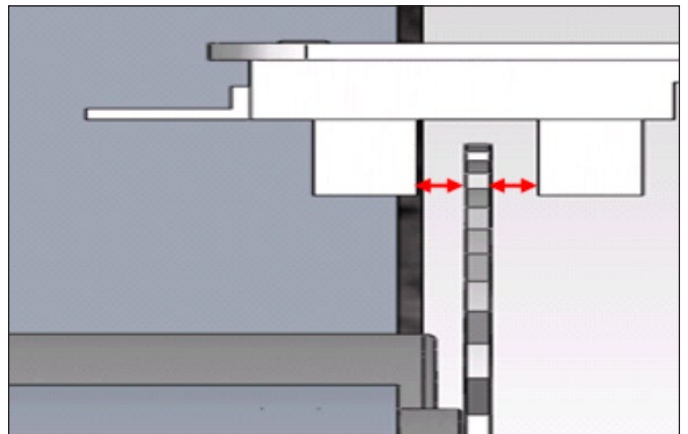


FIGURE E

5.18 CONTROL ZONE SENSOR REPLACEMENT (C5X/C7XE/C7XI)

- 1) Turn off power and disconnect the cord from the machine.
- 2) Pull up on the Control Zone carefully (Figure A).
- 3) Unplug the wire from the Control Zone and remove the Control Zone from the unit (Figure B).



FIGURE A



FIGURE B

- 4) Unplug the wire connector and remove the 4 screws to disassemble the receiver board set from the Control Zone (Figure D) and then remove the 2 screws to disassemble the Control Zone sensor board (Figure E & F).
- 5) Reverse Steps 1-4 to install a new Control Zone sensor board.
- 6) Test the Climbmill function as outlined in Section 5.21.

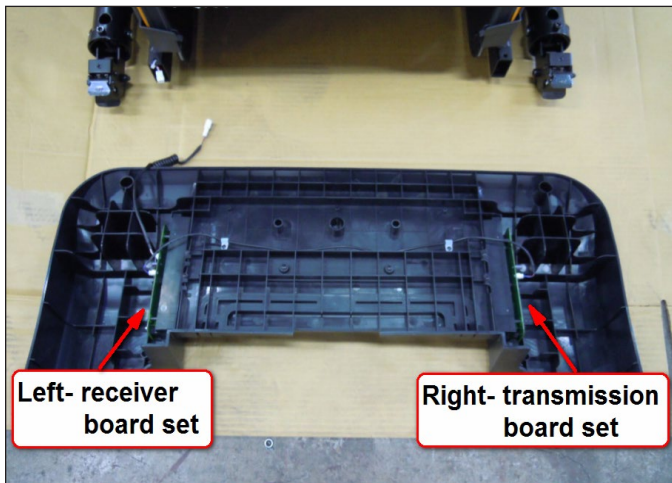


FIGURE C

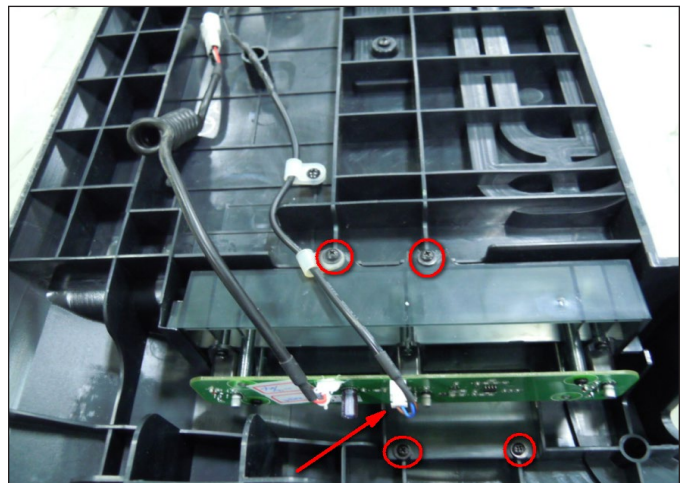


FIGURE D

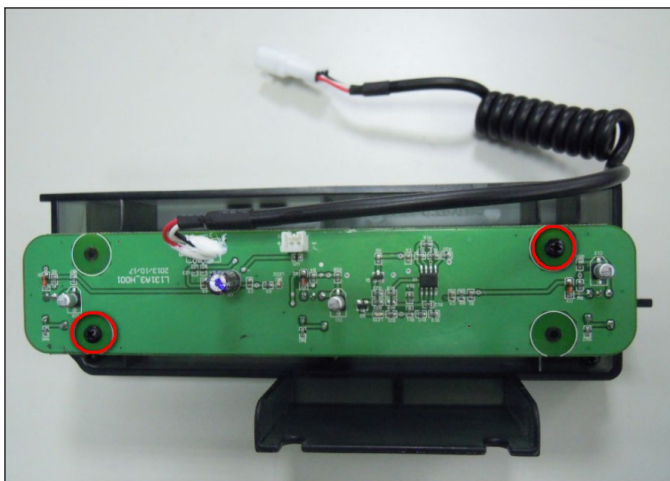


FIGURE E

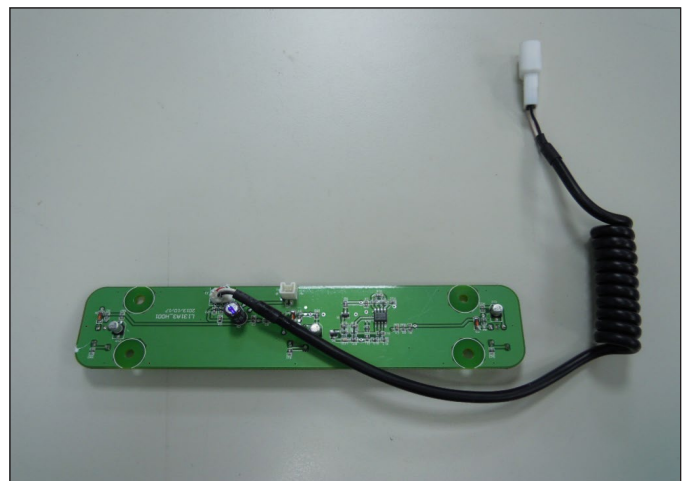


FIGURE F

5.19 PROXIMITY SENSOR REPLACEMENT

- 1) Turn off power and disconnect the cord from the machine.
- 2) Rotate the 2 plastic clips counter-clockwise to remove the left side Matrix logo cover.
- 3) Remove the proximity sensor cable from the LCB, and cut any wire ties holding the cable to the frame (Figure A).
- 4) Remove the 2 screws holding the proximity sensor to the frame (Figure B), and remove the proximity sensor.



FIGURE A

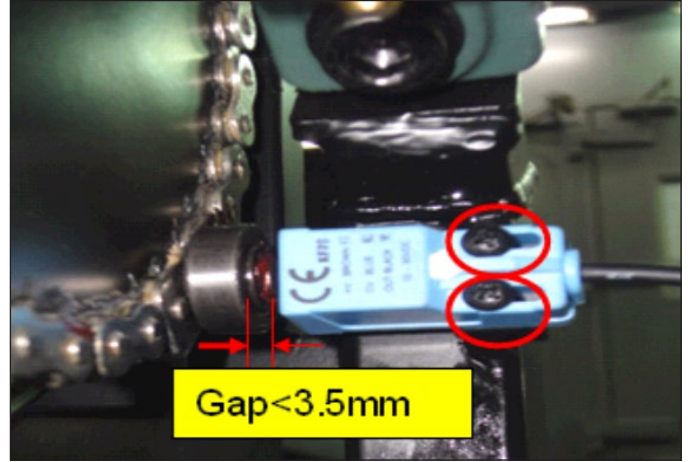


FIGURE B

- 5) Reverse Steps 1-4 to install a new proximity sensor. **NOTE:** The proximity sensor should be installed so that there is a gap of less than 3.5mm between the sensor and the axle (Figure B).
- 6) Once the proximity sensor is installed, rotate the stairs at least 2 complete revolutions to make sure the sensor does not hit. **NOTE:** The sensor has a signal LED located near the mounting screws. The sensor should be mounted close enough to trigger this LED.
- 7) Test the Climbmill for function as outlined in Section 5.21.

5.20 IR SENSOR REPLACEMENT

- 1) Turn off the power and disconnect the cord from the machine.
- 2) Remove the Matrix logo covers from each side of the machine.
- 3) Remove the front cover (Figure A).
- 4) Remove the Control Zone as outlined in Section 5.18.
- 5) Remove the IR sensor cable from the LCB, and cut any wire ties holding the cable to the frame (Figure B).



FIGURE A

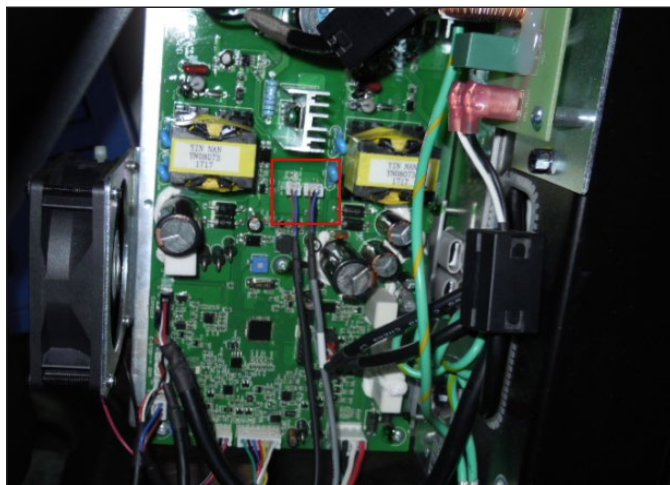


FIGURE B

- 6) Remove the plugs from each side of the machine (Figure C) and separate the side covers.
- 7) Remove the 2 screws holding the IR sensor to the frame (Figure D).



FIGURE C

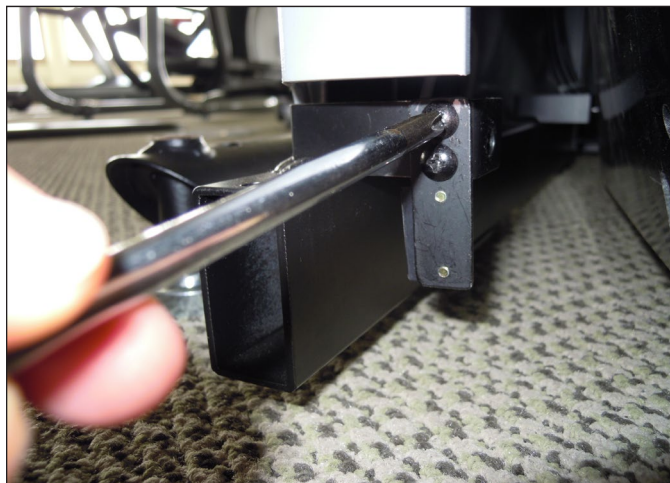


FIGURE D

5.20 IR SENSOR REPLACEMENT - CONTINUED

- 8) Remove the IR sensor with plate from frame (Figure E).
- 9) Remove the 2 screws holding the IR sensor to the plate (Figure F) and remove the IR sensor.

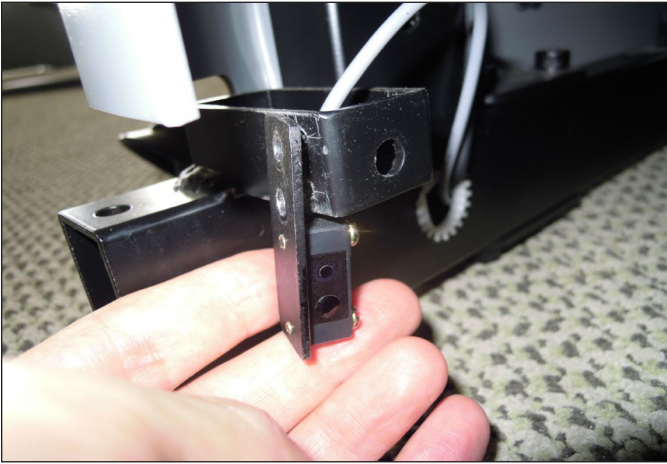


FIGURE E



FIGURE F

- 10) Reverse Steps 1-9 to install a new IR sensor. **NOTE:** When re-installing the IR sensor, make sure that the IR sensor with black wire is on the left (transmission) and the other IR sensor with gray wire is on the right (receiver).
- 11) Once the IR sensor is installed, Press the green GO key and begin using the machine. Put your foot in the middle of the IR sensors (transmission & receiver) to test whether the sensors are working enough to stop machine (Figure G). **NOTE:** The sensor has an eye. The eyes of two sensors should be mounted facing each other so that interrupting their path will stop the machine (Figure H). Remove the Control Zone first before you start the IR sensor tests.



FIGURE G

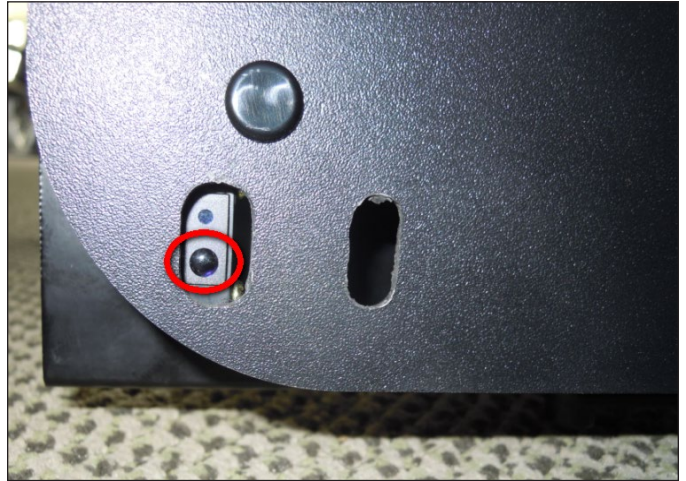


FIGURE H

- 12) Test the Climbmill for function as outlined in Section 5.21.

5.21 TESTING THE CLIMBMILL

ONCE THE UNIT OR REPLACEMENT PART IS FULLY INSTALLED AND ASSEMBLED AND PROPERLY PLACED ON THE FLOOR, USE THE FOLLOWING INSTRUCTIONS TO TEST THE MACHINE:

- 1) To enter Engineering Mode, input the serial number of the console. Also set the Machine Type and verify that the Date and Time are correct.
- 2) Press the green GO key and begin using the machine. Stand on the machine and hold the handlebars while initiating movement to simulate exercising. While moving listen for any odd noises or squeaks.
- 3) Grasp the hand grips to check for proper heart rate response.
- 4) Press the LEVEL UP  and LEVEL DOWN  keys on the frame to make sure resistance is fully functional.
- 5) Try stepping off the unit to make sure the proximity sensor is fully functional. Also test the STOP key on the grips, emergency stop on the console mast/lower right side handlebar, IR sensor and the Control Zone (C5x/C7xe/C7xi) for function. .

6.1 CLIMBMILL SPECIFICATIONS

PRODUCT SPECIFICATIONS

	C7xi Climbmill	C7xe Climbmill	C5x Climbmill	C3xe Climbmill	C3x Climbmill
Max User Weight	182 kg / 400 lbs				
Product Weight	158 kg / 348 lbs			155 kg / 335 lbs	155 kg / 335 lbs
Shipping Weight	167 kg / 368 lbs			167 kg / 368 lbs	167 kg / 368 lbs
Overall Dimensions (L x W x H)*	165 x 85 x 212 cm / 65" x 33.5" x 83.5"				
* Ensure a minimum clearance width of 0.6 meters (24") for access to and passage around MATRIX equipment. Please note, 0.91 meters (36") is the ADA recommended clearance width for individuals in wheelchairs.					

6.2 ASSEMBLY HARDWARE

TOOLS REQUIRED:

- ☐ 6mm Allen Wrench
- ☐ 5mm Allen Wrench

PARTS INCLUDED:

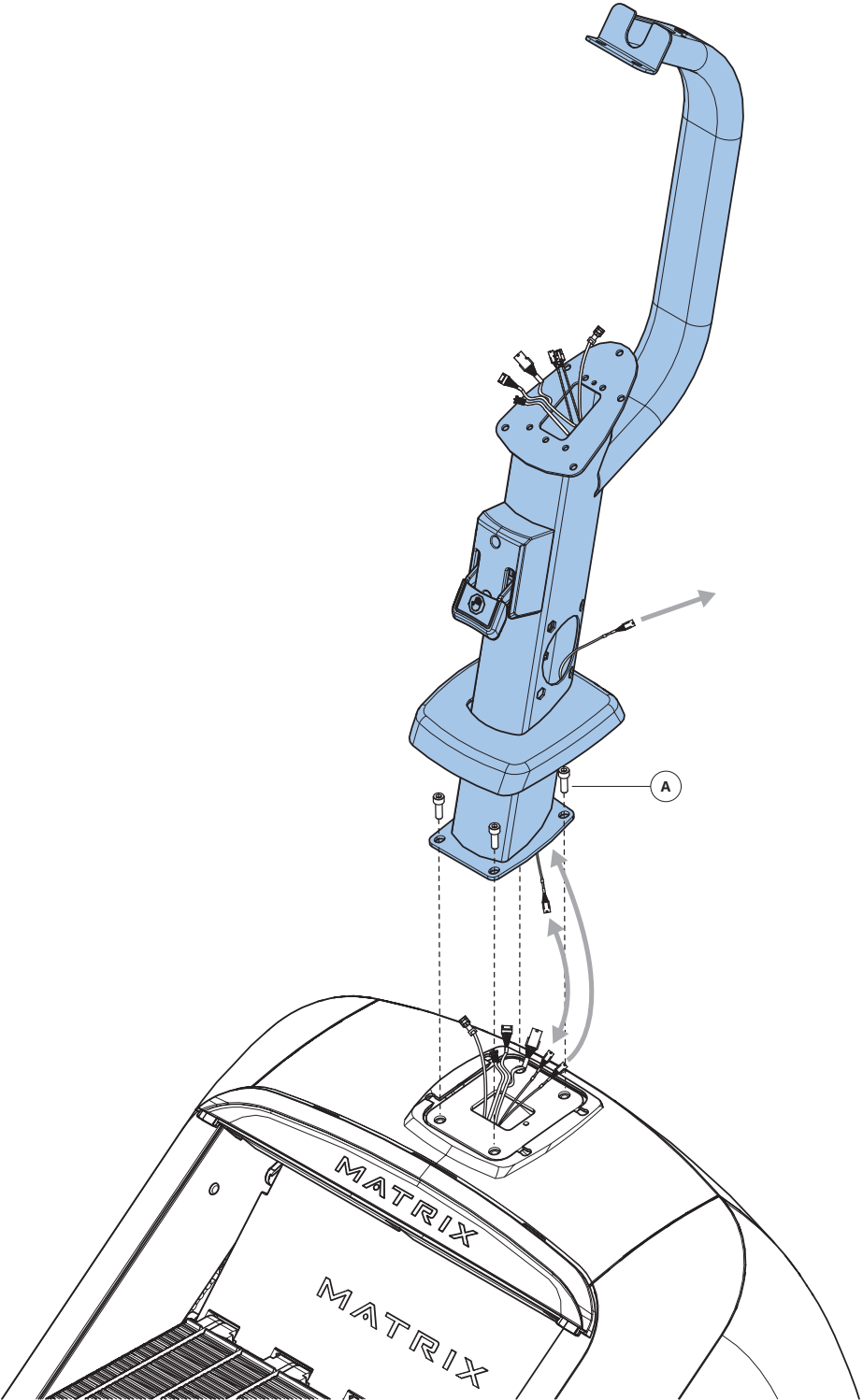
- ☐ 1 Main Frame
- ☐ 1 Console Mast
- ☐ 2 Upper Handlebars
- ☐ 2 Lower Handlebars
- ☐ 2 Bottle Holders
- ☐ 1 Sweat Collector Tray (C7xi, C7xe, C5x only)
- ☐ 1 Control Zone (C7xi, C7xe, C5x only)
- ☐ 2 End Caps (C3x, C3xe only)
- ☐ 1 Power Cord
- ☐ 1 Hardware Kit

Console sold separately

6.3 CLIMBMILL ASSEMBLY STEPS

STEP 1

Black Hardware Bag		
	Description	Qty
A	Bolt	4

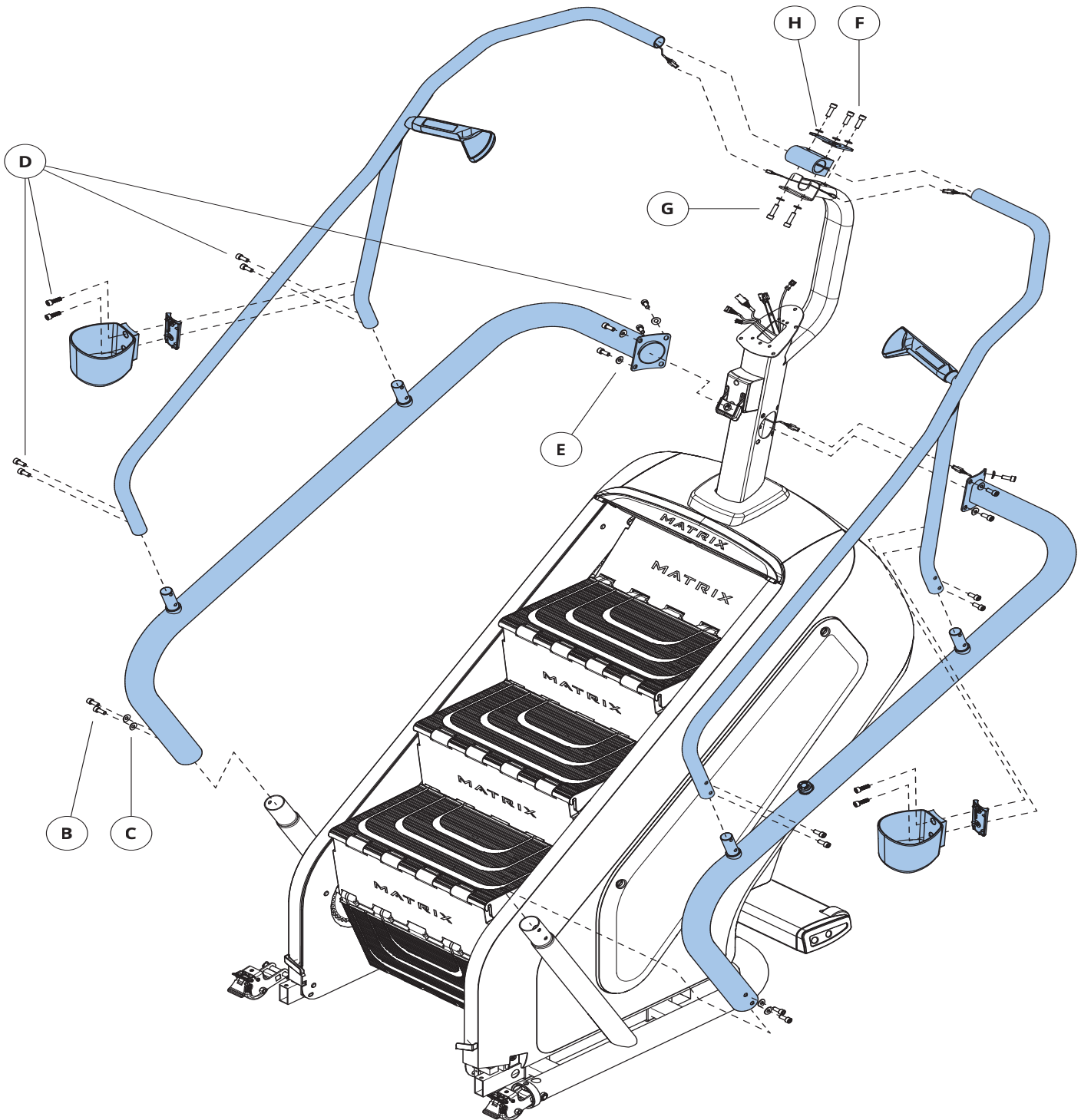


6.3 CLIMBMILL ASSEMBLY STEPS - CONTINUED

STEP 2

Blue Hardware Bag		
	Description	Qty
B	Bolt (16 mm)	4
C	Curved	4
D	Bolt (20 mm)	20
	Flat Washer	
E	Washer	8

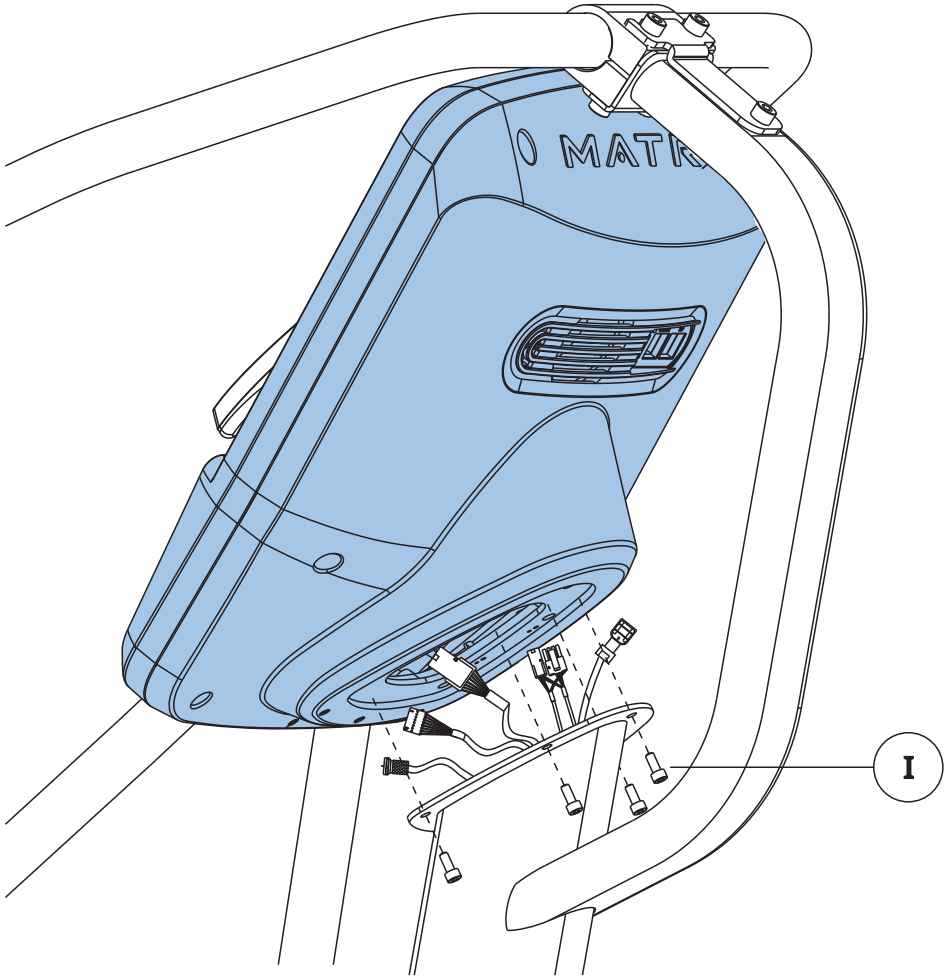
Green Hardware Bag		
	Description	Qty
F	Bolt (16 mm)	3
G	Bolt (35 mm)	2
H	Flat Washer	5



6.3 CLIMBMILL ASSEMBLY STEPS - CONTINUED

STEP 3

Pre-Installed Hardware		
	Description	Qty
I	Bolt	5



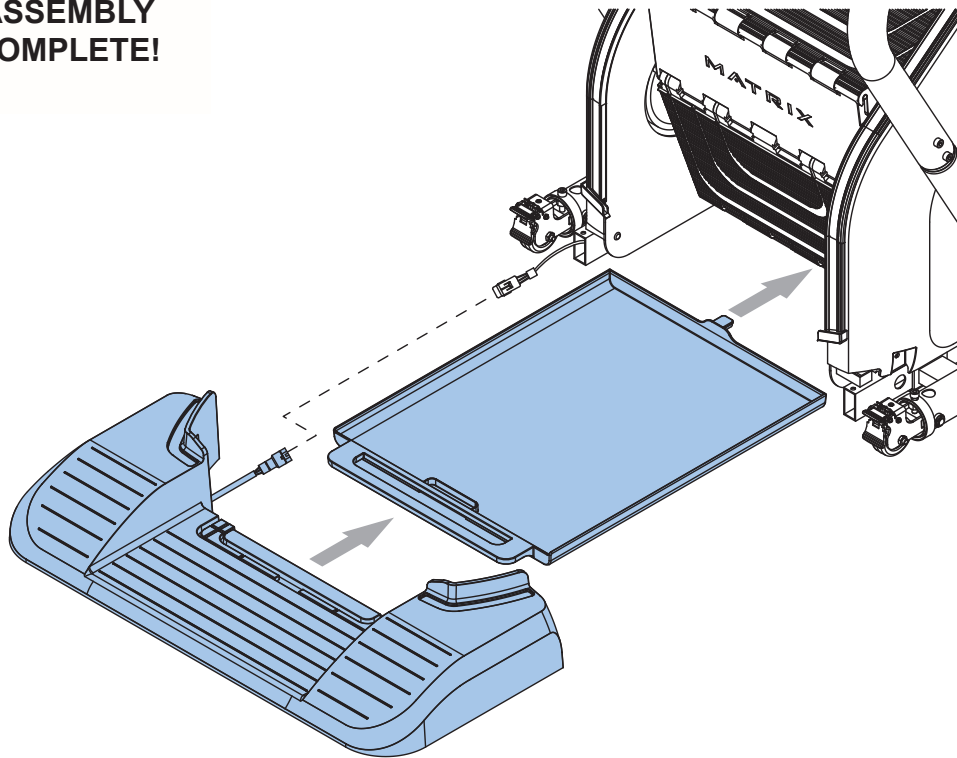
6.3 CLIMBMILL ASSEMBLY STEPS - CONTINUED

STEP 4

C7xi
C7xe
C5x

1. Connect the wires from the frame to the Base Step.
2. Lift the Control Zone over the caster wheels. Push down firmly on both sides until it seats firmly.
3. Slide the Sweat Collector Tray under the Climbmill, latching the handle to the base.

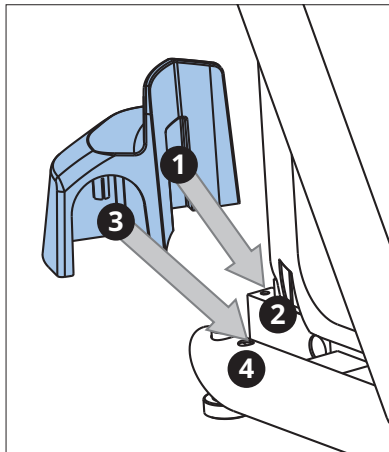
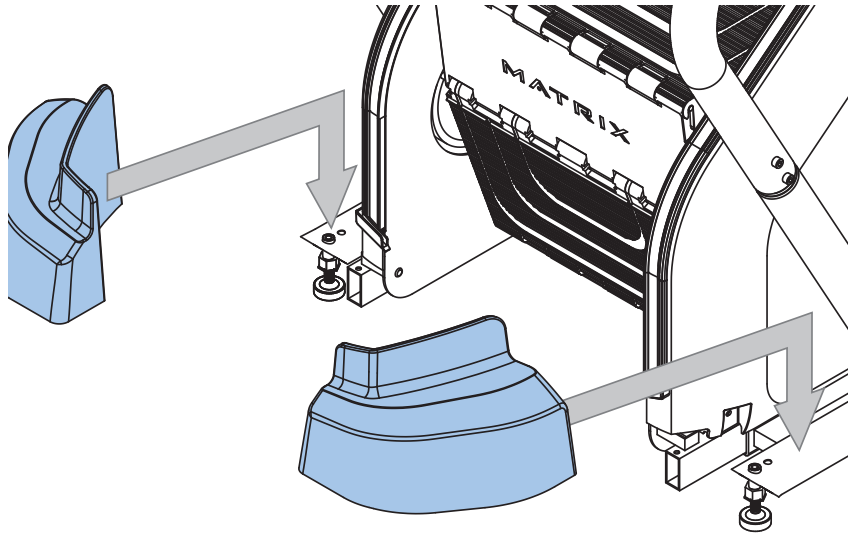
**ASSEMBLY
COMPLETE!**



6.3 CLIMBMILL ASSEMBLY STEPS - CONTINUED

STEP 4

C3x
C3xe



To attach end caps, slide (1) over (2) and then slide (3) into (4).

**ASSEMBLY
COMPLETE!**

6.4 STABILIZING THE CLIMBMILL

A. STABILIZING THE MATRIX C5X/7X/7XE-F CLIMBMILL

The Matrix Climbmill should be level for optimum use. Locate a level, stable surface to position the equipment. The equipment has leveling transport wheels located under the "Control Zone" cover (Figure A). To access, grab the left and right sides of the cover and lift off. **CAUTION:** There is an electrical plug located under the cover that will need to be unplugged before the cover can be completely removed. With the "Control Zone" cover removed, adjust the transport wheels until the equipment is stable and lock the wheels into place. Once stable, plug the electrical connection back together and place the "Control Zone" cover back into place.



FIGURE A

B. STABILIZING THE MATRIX C3X-F CLIMBMILL

The Matrix Climbmill should be level for optimum use. Locate a level, stable surface to position the equipment. The equipment has leveling transport wheels located under the rear side covers (Figure A). To access, grab the left and right side covers and lift off. Adjust the leveling feet (Figure B) until the equipment is stable and lock the wheels into place. Once stable, move the covers back into place.



FIGURE A



FIGURE B

7.1 DOCUMENT UPDATE HISTORY

Document Update History			
Version	Date	Brief Description of Update	Made by
1	2018/3/14	Released Service Manual	Eric Chen

NOTES



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REV. 01

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