IT ALL STARTS WITH A VISION

U60 BIKE
SERVICE MANUAL

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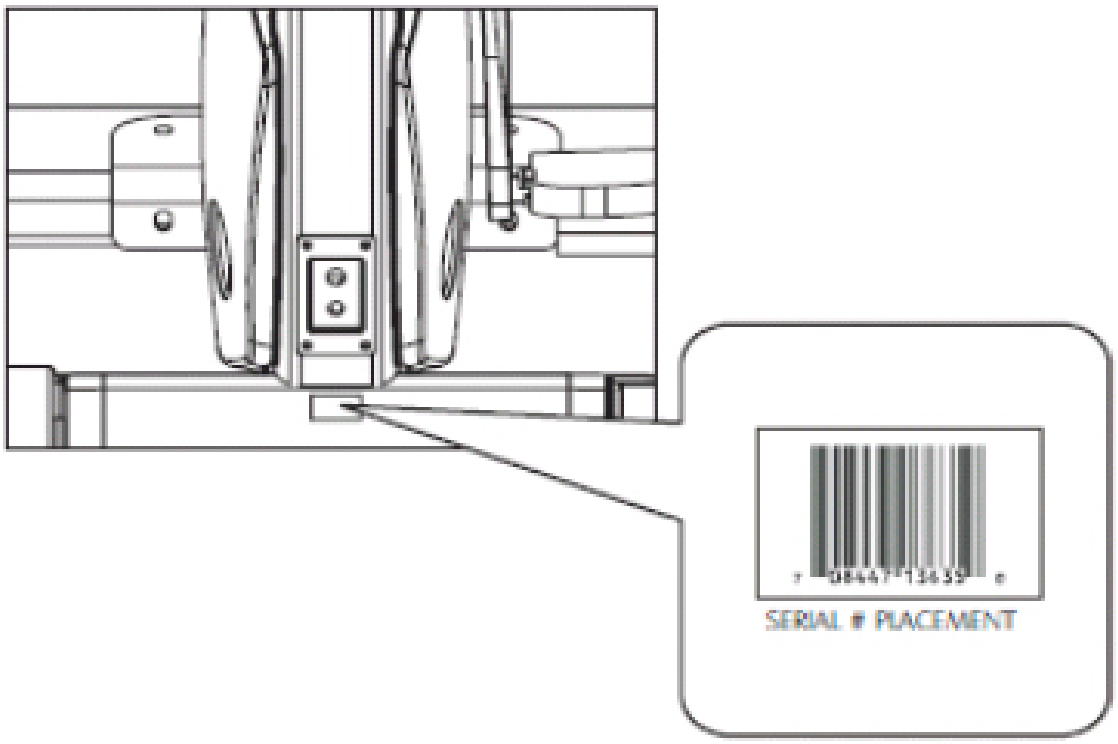
CHAPTER 1: SERIAL NUMBER LOCATION

1.1 SERIAL NUMBER LOCATION



CHAPTER 2: IMPORTANT SAFETY INSTRUCTIONS

2.1 BEFORE GETTING STARTED

The Vision Fitness U60 Bike is intended for commercial use. To ensure your safety and protect the equipment, read all instructions before operating the bike.

CHOOSING A SITE

The site should be well lit and well ventilated. Locate the Vision Fitness U60 Bike on a structurally solid and flat surface. The bike should have a clearance of 20" on one side and behind the unit, and 12" on the other side from the wall or other equipment. This zone is to allow easy access to the bike and gives the user an easy exit path from the machine. If the site has a heavy plush carpet, to protect the carpeting and machinery, you should place a rigid plastic base under the unit.

Please do not place the Vision Fitness U60 Bike in an area of high humidity, such as the vicinity of a steam room, indoor pool, or sauna. Exposure to intensive water vapor or chlorine could adversely affect the electronics, as well as other parts of the machine.

MOVING THE BIKE

Your Vision Fitness U60 bike has transport wheels included for ease of mobility. To move your Upright Bike, firmly grasp the rear of the frame assembly, or the rear of the seat rail. Carefully lift and roll on the transport wheels. You can also firmly grasp the handlebars and carefully tip the bike towards you and roll on the transport wheels.

CAUTION:

Vision Fitness bikes are well built and heavy, use care and additional help if necessary. This bike can weigh up to 160 lbs.

CHAPTER 2: IMPORTANT SAFETY INSTRUCTIONS

2.2 READ AND SAVE THESE INSTRUCTIONS

To ensure your safety and protect the equipment, read all instructions before operating the Vision Fitness U60 Bike.

To ensure proper use of the Vision Fitness U60 Bike, make sure that all users read this manual. Remind the users that before undertaking any fitness program, they should obtain complete physical examinations from their physicians. If, at any time while exercising, the user experiences dizziness, pain, or shortness of breath, nausea or feels faint, he or she must stop immediately.

*** This bike is only to be used for its intended purpose described in this manual. Do not use attachments that have not been recommended by Vision Fitness.**

*** Never drop or insert objects into any opening. Keep hands away from moving parts. If the item cannot be reached, contact a Vision Fitness authorized dealer for assistance.**

*** Never operate the unit if it is damaged, not working properly, when it has been dropped, or has been dropped in water.**

*** Keep hands and feet clear at all times from moving parts to avoid injury.**

*** Do not use this product outdoors, near swimming pools or in areas of high humidity.**

*** Do not operate where aerosol (spray) products are being used or when oxygen is being administered.**

*** Do not use this product in bare feet. Do not wear shoes with heels, leather soles, cleats, or spikes while exercising.**

*** Do not remove the side covers. Service should only be done by an authorized service technician.**

*** Close supervision is necessary when used near children, invalids, or disabled people.**

*** When the bike is in use, young children and pets should be kept at least 3 meters / 10 feet away.**

*** Assemble and operate the bike on a solid, level surface.**

*** Never face backward while using the Vision Fitness U60 Bike.**

*** Use the stationary handlebars when mounting or dismounting the bike.**

*** Do not wear clothing that might catch on any moving parts of this bike.**

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

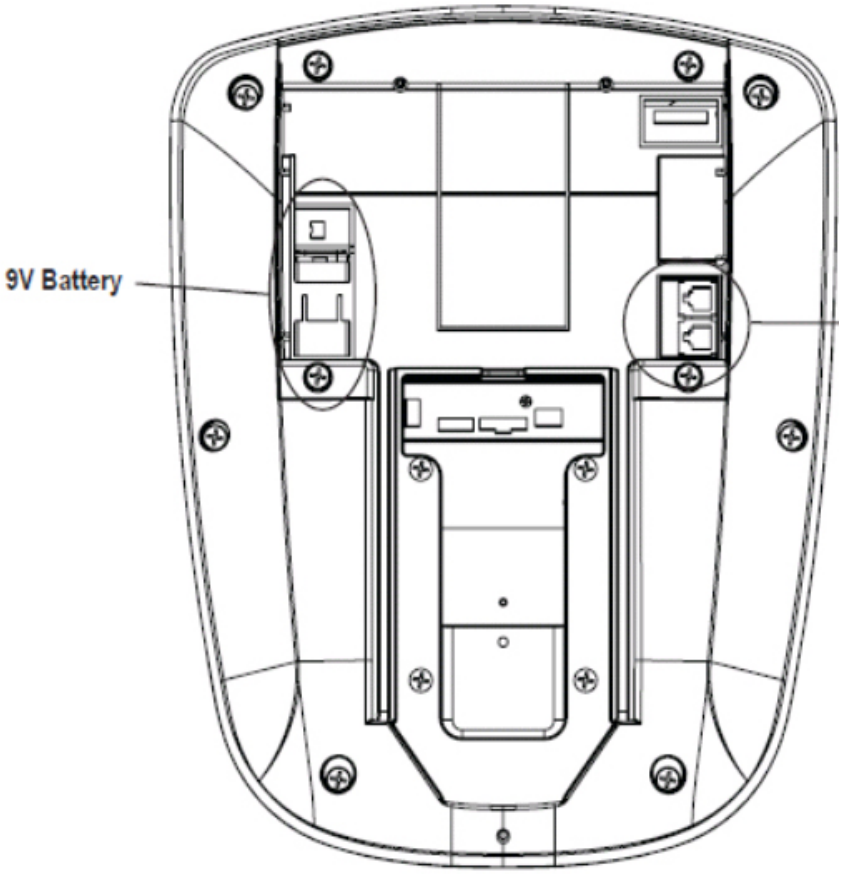
CAUTION! Any changes or modifications to this equipment could void the product warranty.

2.3 ELECTRICAL REQUIREMENTS

SELF POWERED FEATURES:

The Vision Fitness U60 Bike is a self-powered unit, requiring no external power source. When a user pedals at a speed above 20 revolutions per minute, the power is generated to allow the bike to function properly. Because of this self-generating feature, the console feedback will fade away when you cease pedaling. The console does use a 9 volt battery as a backup to save your feedback information for 30 seconds from the time you stop pedaling. If you resume pedaling within the 30 seconds, the information will reappear. If the information does not appear within the 30 seconds, your battery may need to be plugged in or replaced.

BATTERY - The battery is located on the backside of the console and is enclosed by a removable cover.



CHAPTER 3: PREVENTATIVE MAINTENANCE

3.1 RECOMMENDED CLEANING TIPS

Preventative maintenance and daily cleaning will prolong the life and look of your Vision Fitness U60 Bike

Please read and follow these tips.

- Position the equipment away from direct sunlight. The intense UV light can cause discoloration on plastics.
- Locate your equipment in an area with cool temperatures and low humidity.
- Clean with a soft 100% cotton cloth.
- Clean with soap and water or other non-ammonia based all purpose cleaners.
- Wipe pedals, console, heart rate grips, and the handlebar clean after each use.
- Do not pour liquids directly onto your equipment. This can cause damage to the equipment and in some cases electrocution.
- Adjust leveling feet when equipment wobbles or rocks.
- Maintain a clean area around the equipment, free from dust and dirt.

3.2 CHECK FOR DAMAGED PARTS

DO NOT use any equipment that is damaged or has worn or broken parts. Use only replacement parts supplied by Vision Fitness.

MAINTAIN LABELS AND NAMEPLATES. Do not remove labels for any reason. They contain important information. If unreadable or missing, contact Vision Fitness for a replacement at 800-335-4348 or www.visionfitness.com.

MAINTAIN ALL EQUIPMENT. Preventative maintenance is the key to smoothly operating equipment. Equipment needs to be inspected at regular intervals. Defective components must be kept out of use until they are repaired. Ensure that any person(s) making adjustments or performing maintenance or repair of any kind is qualified to do so.

3.3 CARE AND MAINTENANCE INSTRUCTIONS

In order to maximize life span, and minimize down time, all Vision Fitness equipment requires regular cleaning, and maintenance items performed on a scheduled basis. This section contains detailed instructions on how to perform these items and the frequency of which they should be done. 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
* Lint free cleaning cloths
* Teflon based spray lubricant such as "Super Lube" or other Vision Fitness approved products.
* Mild water soluble detergent such as "Simple Green" or other Vision Fitness approved products
* Vacuum cleaner with an extendable hose and crevasse tool attachment.

DAILY MAINTENANCE ITEMS

1) Look and listen for loose fasteners, unusual noises, and any other indications that the equipment may be in need of service.

2) Clean the bike before and after each use, including:
   a. Use a damp, soft cloth with water or mild liquid detergent to clean all exposed surfaces. DO NOT use ammonia, chlorine, or any acid based cleaners.
   b. Keep the console display free of fingerprints and salt build up caused by sweat.
   c. Frequently vacuum the floor beneath the unit to prevent the accumulation of dust and dirt which can affect the smooth operation of the unit.

MONTHLY MAINTENANCE ITEMS

1) Inspect the console, seat, pedals, and shrouds for damage.

2) Tighten the pedals onto their respective cranks using a 15 mm wrench.

3) Adjust leveling feet if equipment rocks or wobbles.

4) Inspect the grooves on the pedals for dust or dirt. Clean if necessary.

QUARTERLY MAINTENANCE ITEMS

1) Inspect the console mounting bolts for tightness, tighten if necessary.

2) Inspect the console, handrails, and handlebar for damage.

3) Remove the side covers and inspect the grooves on the belts and pulleys for dust or dirt. Clean if necessary (Figures A-C).

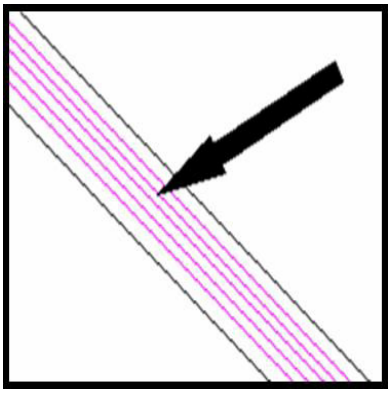


FIGURE A

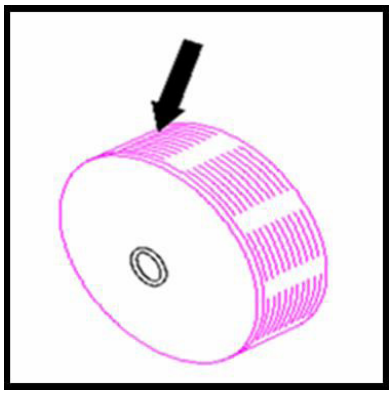


FIGURE B

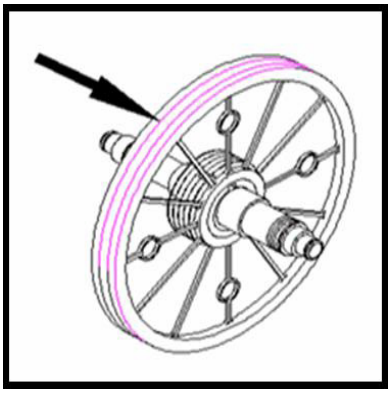
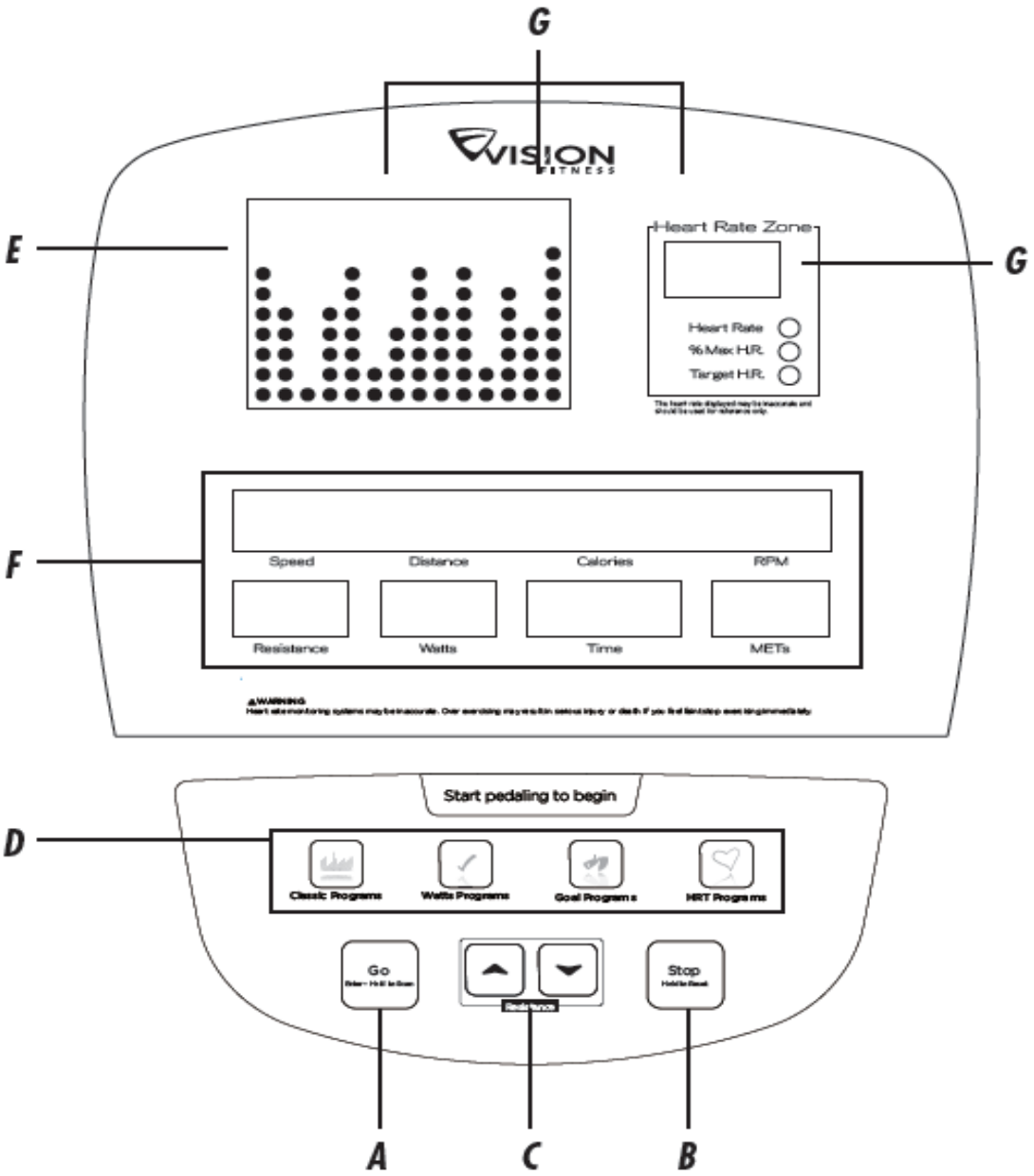


FIGURE C

CHAPTER 4: CONSOLE OVERLAY AND WORKOUT DESCRIPTION

4.1 CONSOLE DESCRIPTION



A. Go / Enter / Hold to Scan - Press the GO key to begin a Manual workout immediately without setting individual information. All feedback information will be calculated using default settings. ENTER - This key is used to approve each piece of information used during setup. HOLD TO SCAN - If you need to change the display view, you can do so by holding down this key for 3 seconds.

B. Stop / Hold to Rest - Press the STOP key to stop your program at any time. RESET - If you need to reset the console during workout, press and hold the reset key for 3 seconds.

C. Arrow Keys - These keys are used to change the values in setup mode prior to a workout. During a workout these keys are used to change the resistance and target heart rate.

D. Program Keys - These keys provide quick access to the user's favorite workout. Press the arrow keys to select on of the workouts.

E. Profile Display - This window provides a DOT matrix profile of the workout segments.

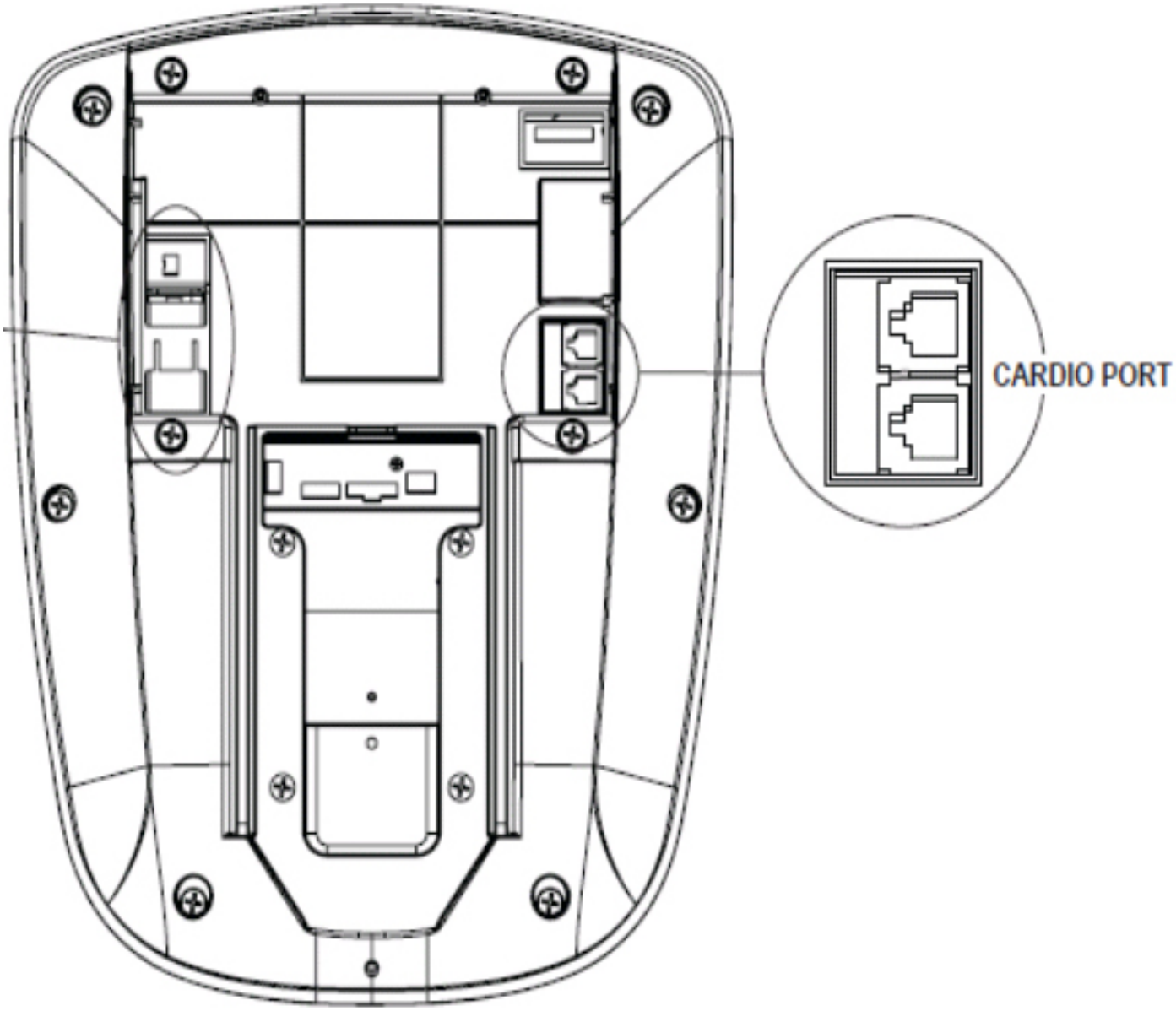
F. Message / Feedback Window - These windows provide step by step instructions in the setup mode and instructions, feedback, and motivational messages during your workout. Exercise feedback includes: speed, distance, calories, resistance level, RPM, watts, time, and METs.

G. Heart Rate / HRT Feedback Window - This window provides feedback on your current heart rate and the percent of your predicted maximum heart rate.

4.1 CONSOLE DESCRIPTION - CONTINUED

CARDIO PORT

A cardio port is located on the back of the console that is compatible to entertainment protocol such as Cardio Theater. The bottom port is the active port to use for this function.



WORKOUT OVERVIEW

CLASSICS:

MANUAL - Manual is a user controlled program in which the resistance remains as set level unless you decide to change it.

INTERVAL - Interval is an efficient workout that strengthens your cardiovascular system by alternating work intervals and recovery intervals. Be sure to challenge yourself with intense work intervals.

FAT BURN - Fat Burn is a program designed to target your stored body fat. This program is generally used at a slightly lower resistance level but runs for longer durations than other programs.

RANDOM - Random is a workout that will give you a different workout every time you workout. The resistance levels will change randomly, providing a challenging workout.

HRT PROGRAMS:

HRT WEIGHT LOSS - HRT Weight Loss is a lower intensity workout that will help your body burn a higher percentage of calories from your body's fat reserves. The user must grasp the hand pulse sensors or wear a telemetric heart rate chest strap during use. The program will automatically adjust resistance to keep you at 65% of your predicted maximum heart rate.

HRT INTERVAL - HRT Interval alternates between effort intervals of 80% and 70% of your predicted maximum heart rate. This program is designed to increase your cardiovascular fitness capacity. The user must grasp the hand pulse sensors or wear a telemetric heart rate chest strap during use.

GOAL PROGRAMS:

TIME GOAL - Allows a user to set their target workout time. This program can help users manage the time when the workout.

DISTANCE GOAL - Allows a user to choose the workout distance. This program can help users to do self-challenge.

CALORIES GOAL - Allows a user to set the calories they want to consume during a workout. This program can help users to control their calories.

WATTS PROGRAMS:

CONSTANT WATTS - Constant Watts allows you to set your target WATT output (energy output). The resistance will change automatically to keep you at your target watts.

INTERVAL WATTS - Interval Watts allows you to choose a high watts value and a low watts value. The interval program will switch between high and low watts values, making for a very intense and effective workout.

HILL WATTS - Hill Watts lets you choose four watt levels. Each watt level will change at 1 minute intervals and repeat until your preset workout time is over. Perfect for a challenging workout.

4.3 USING THE PROGRAMS

USING THE PROGRAMS

SELECTING QUICK START - The easiest way to begin exercising is to simply press the GO key (Figure A). You will begin exercising in a Manual resistance program in which you can change the resistance levels to meet your goals. Current default settings will be used to determine exercise feedback.

SELECTING A PROGRAM - Each program has its own program key (Figure B). Some programs keys have multiple programs. Press the key of the program that you would like to use. You can use the UP or DOWN ARROW keys or press the program key repeatedly to scroll through the different program options.

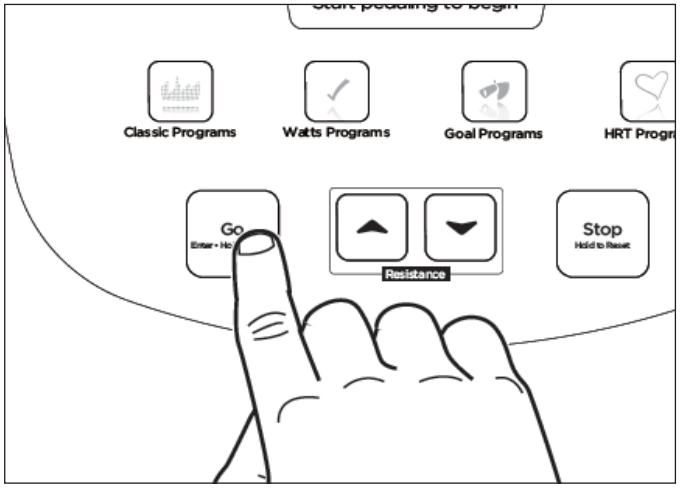


FIGURE A

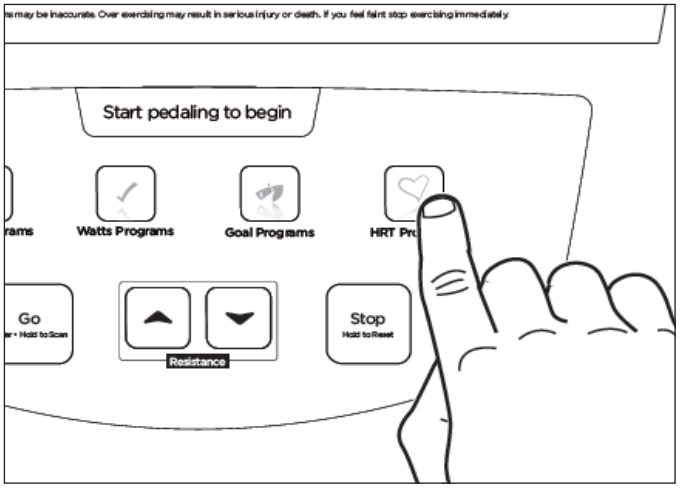


FIGURE B

ENTERING AGE - When prompted by the message center to enter your age, use the UP or DOWN ARROW keys to adjust the displayed age to the correct value (Figure C). This information is necessary for the HRT programs and will affect your % Heart Rate feedback.

ENTERING TIME - When prompted by the message center to enter your time, use the UP or DOWN ARROW keys to adjust the displayed time to a desired value (FIgure D).

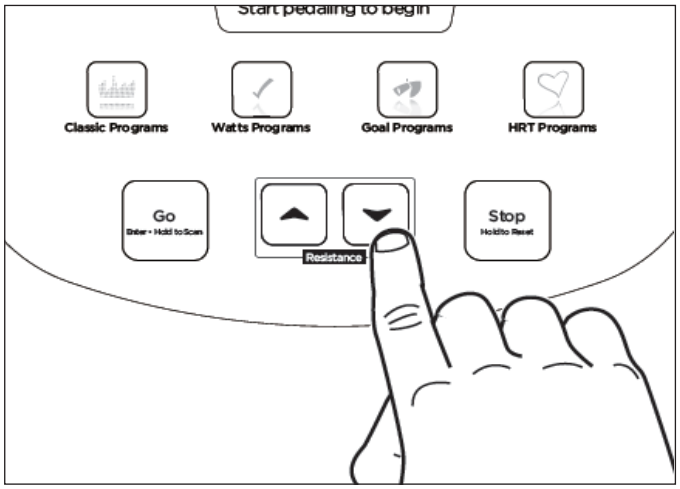


FIGURE C

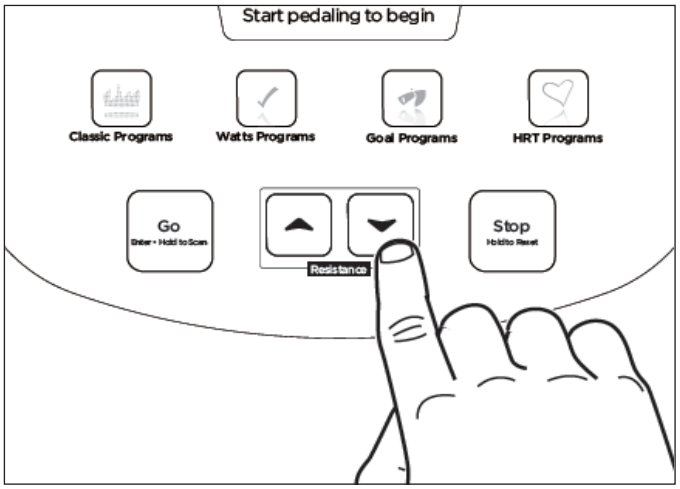


FIGURE D

USING THE PROGRAMS - Continued

ENTERING RESISTANCE - When prompted by the message center to enter level, use the UP and DOWN ARROW keys to adjust the displayed resistance level (Figure E). There are 25 levels of resistance to choose from in each program. The maximum resistance level varies by program.

ENTERING WEIGHT - When prompted by the message center to enter weight, use the UP and DOWN ARROW keys to adjust the displayed weight to equal your current body weight (Figure F). This information is necessary to give accurate exercise feedback for calorie and MET calculations.

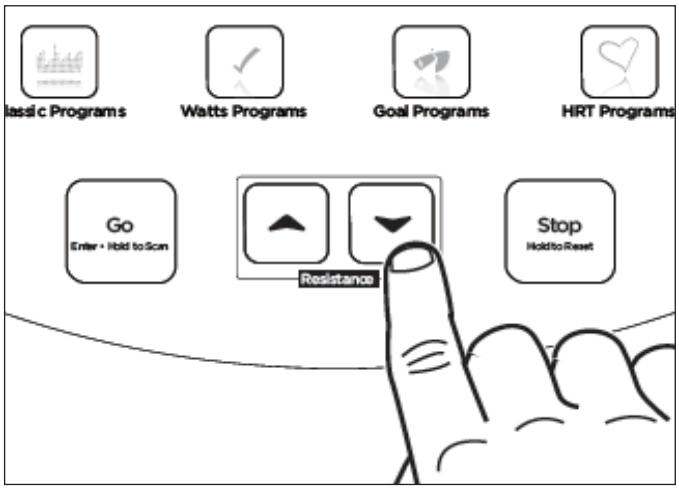


FIGURE E

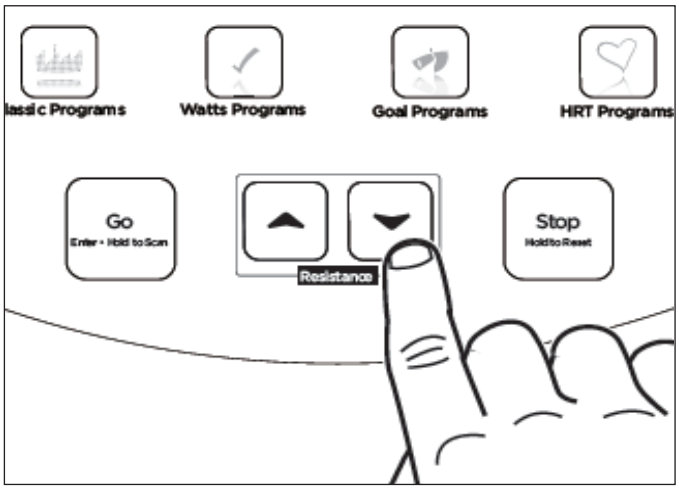


FIGURE F

This is a bike that the braking system is adjustable. The training speed and resistance settings below can be used as a test reference.

RPM	LEVEL	DISPLAY (Watt)
50	4	46
	5	53
	9	88
60	12	136
	16	176
70	17	211
	20	240

USING HEART RATE TRAINING - Heart rate training means exercising at an intensity that keeps the user in an ideal heart rate zone. A personal heart rate training zone depends on your fitness goal, such as weight loss, cardiovascular endurance, or strength building. Vision Fitness HRT programs are set up to keep you at an ideal heart rate based on your fitness goals. These programs automatically adjust resistance based on your heart rate readings.

NOTE: The contact hand pulse sensors on the bike will work for the HRT programs, but it is recommended that a telemetric heart rate chest strap or watch is used for these programs for an uninterrupted signal and ease of use.

WARNING: Heart rate monitoring systems may be inaccurate. Over exercise may result in serious injury or death. If you feel faint, stop exercising immediately.

CHAPTER 5: MANAGER MODE

5.1 USING MANAGER MODE

The Manager Mode allows the owner to customize the bike.

1) To enter Manager Mode, press and hold down the UP and DOWN RESISTANCE keys at the same time for 3-5 seconds (Figure A).

2) The display will read P1 Max Time (Figure B).

3) To scroll through the list of options in Manager Mode, use the UP and DOWN RESISTANCE keys. Each of the custom settings will show on the display.

4) To select a custom setting, press the ENTER key when the desired setting is shown.

5) To change the value of the setting, use the UP and DOWN RESISTANCE keys.

6) To confirm and save the value of the setting, press the STOP key.

7) To exit the Manager Mode, press and hold the STOP key for 3-5 seconds.

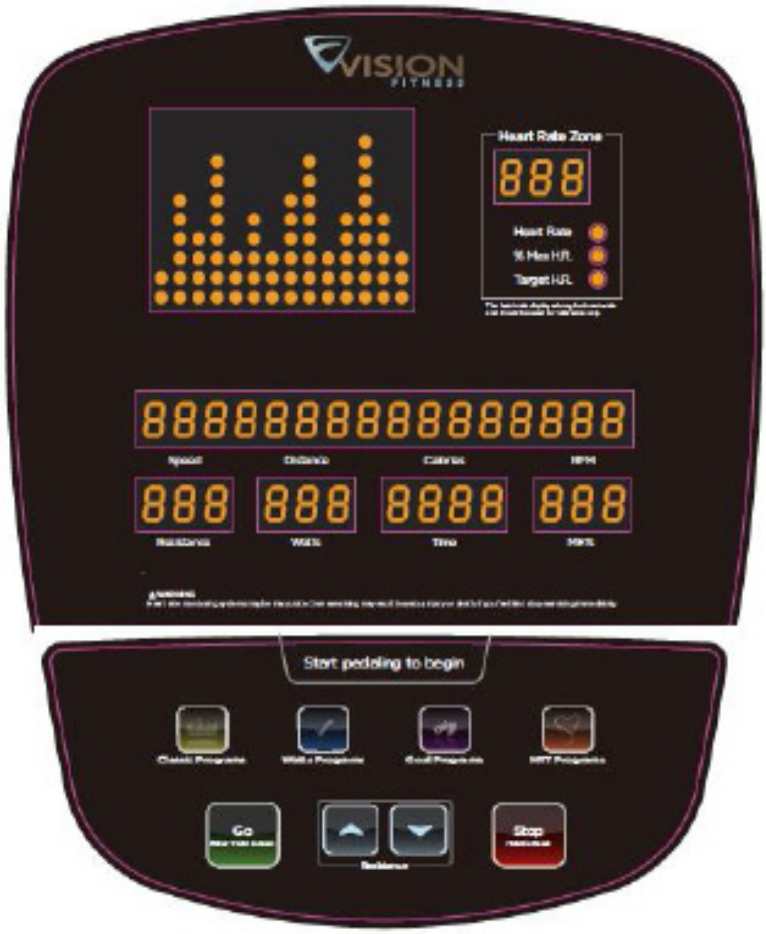


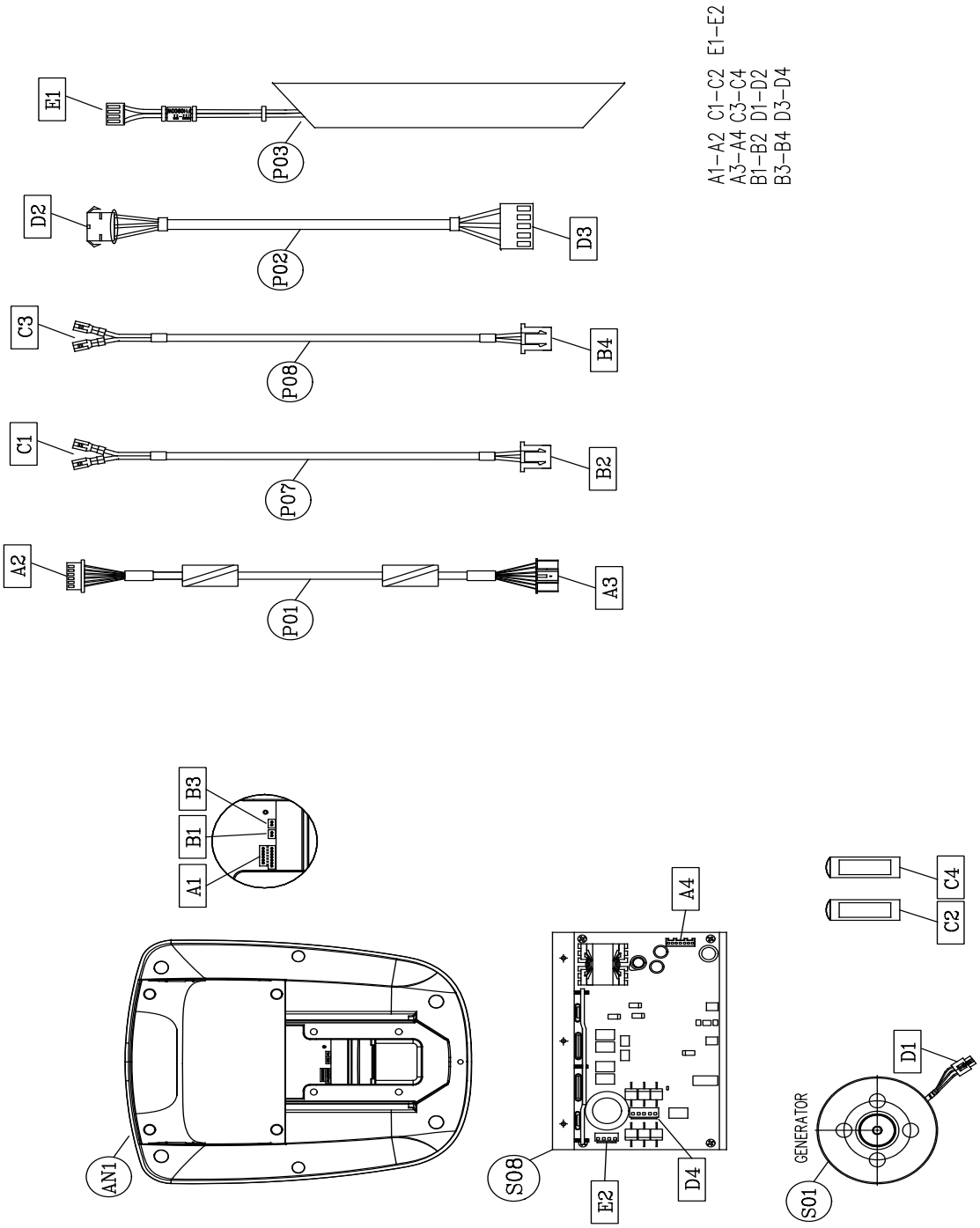
FIGURE A

FIGURE B

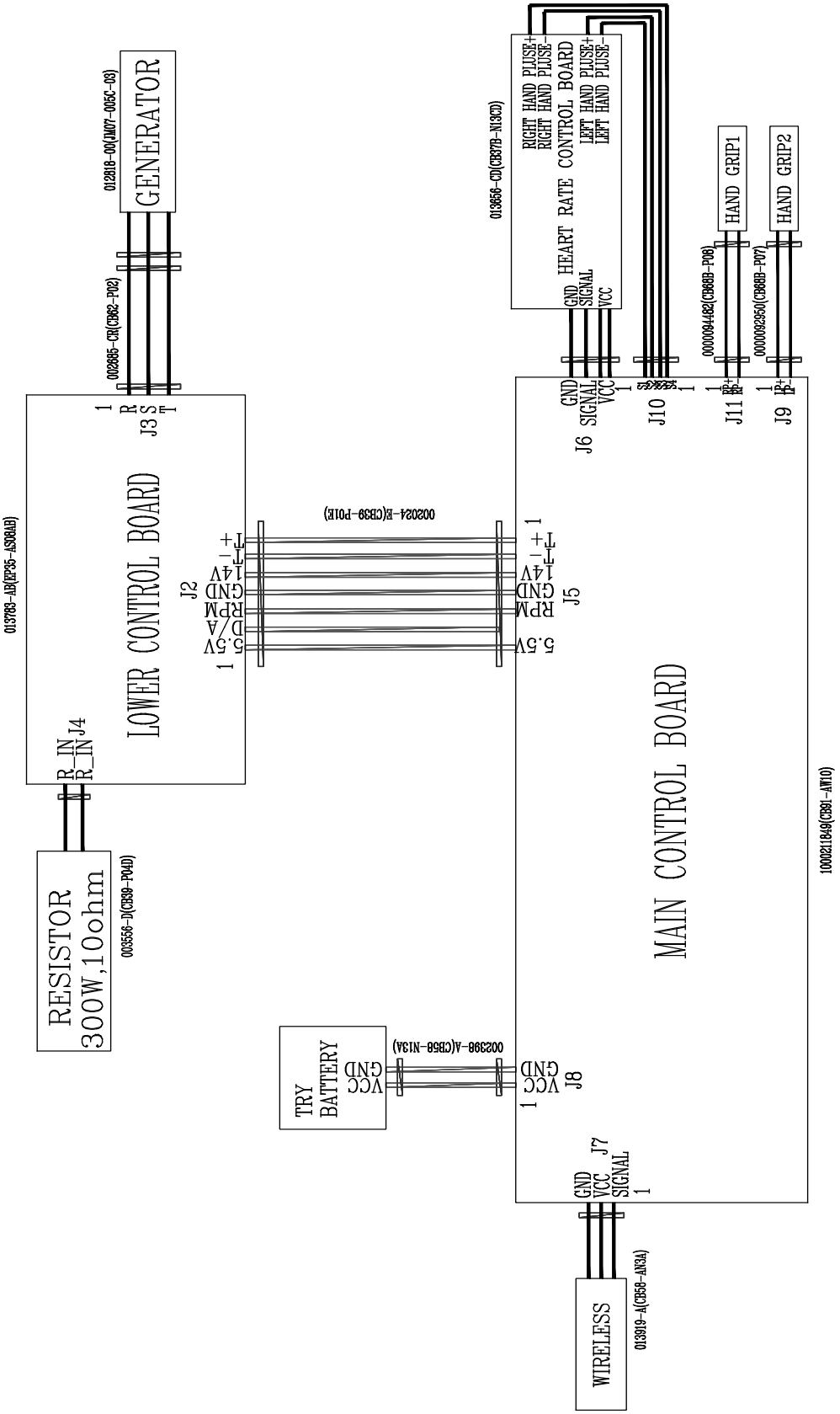
5.1 USING MANAGER MODE - CONTINUED

CUSTOM SETTINGS	DEFAULT	MINIMUM	MAXIMUM	DESCRIPTION
MAX TIME	99	20	99	Maximum workout duration.
USER TIME	30	10	99 (LIMITED TO MAX TIME SETTING)	Default start time in all programs.
DEFAULT AGE	40	10	100	Default age used for all programs.
RESISTANCE LEVEL	1	1	20	Default resistance used for all programs.
WATTS	40	40	250	Constant watts for the watts program mode.
UNIT	MILE	KM	MILE	Sets the unit to miles or kilometers.
MACHINE	BIKE	BIKE	ELLIPTICAL	Sets the Machine Type for the console to bike or elliptical.
ACCUMULATED TIME	N/A	N/A	N/A	Shows the total time on the bike in hours.
ACCUMULATED DISTANCE	N/A	N/A	N/A	Shows the total distance on the bike in miles or kilometers.
DISPLAY TEST	N/A	N/A	N/A	Used by service technicians to test the LED displays. Press the UP and DOWN RESISTANCE keys to check each set of LEDs on the display sequentially.
MACHINE TEST	N/A	N/A	N/A	Used by service technicians to test mechanical and CSafe functions. Test 1 - RPM. Test 2 - Heart Rate. Test 3 - Resistance level.
VERSION	N/A	N/A	N/A	Displays current software version.
LANGUAGE	ENGLISH			Sets the language for the console. Select between English, French, Italian, Spanish, and Portuguese.

6.1 ELECTRICAL DIAGRAMS



6.1 ELECTRICAL DIAGRAMS



6.1 ELECTRICAL DIAGRAMS

P01 - CONSOLE CABLE

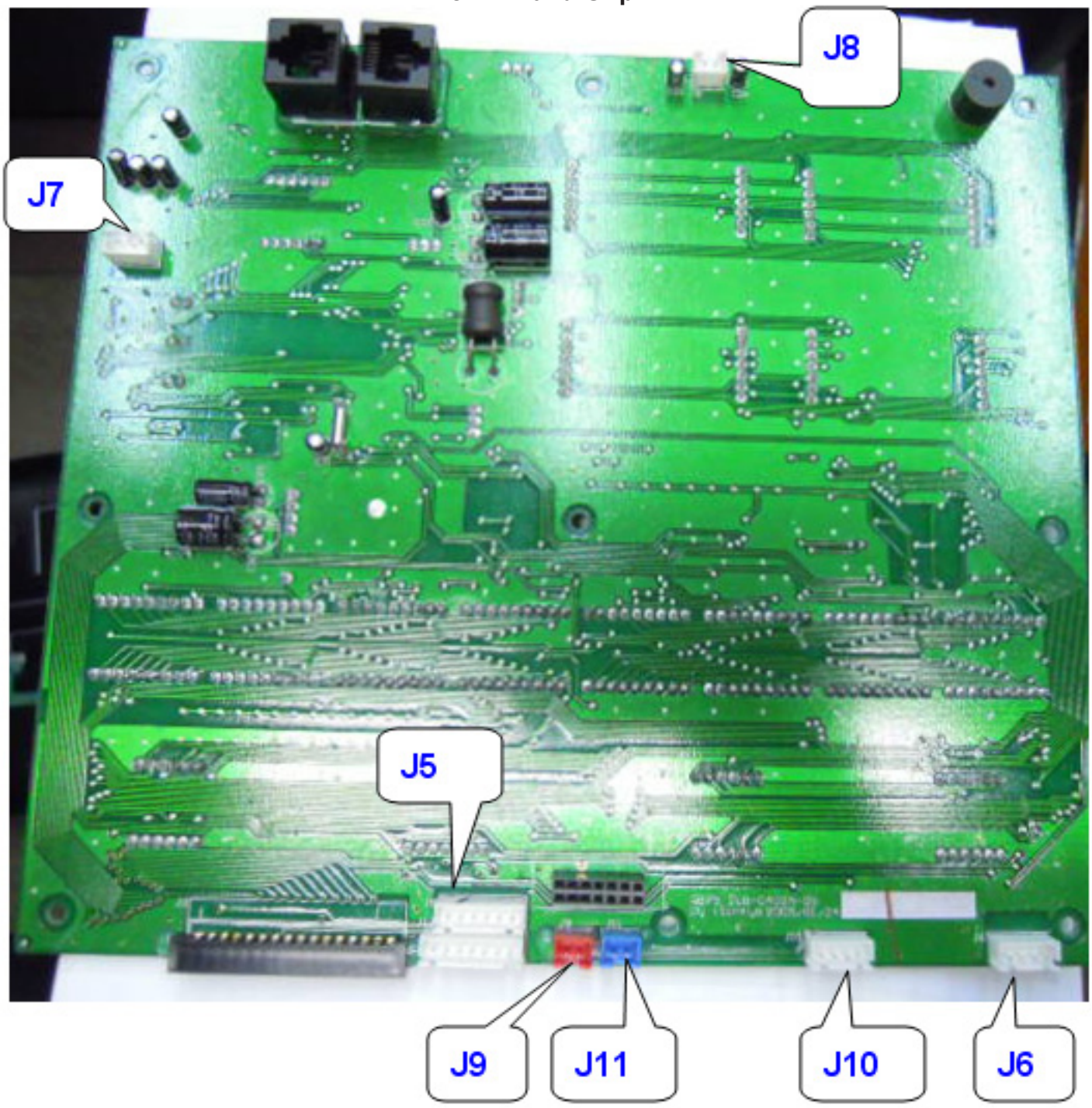
A.HOLE	B.HOLE	FUNCTION
1	1	5.5V
2	2	D/A
3	3	RPM
4	4	GND
5	5	14V
6		T−
7	6	T+

LCB WIRING INSTRUCTIONS

J2 - 7 pin terminal to the console.
J3 - 3 pin terminal to the generator.
J4 - 2 pin terminal to the power resistor.

LCB WIRING INSTRUCTIONS

J5 - Console cable wire.
J6 - Heart rate board (grips) wire.
J7 - Heart rate board (wireless).
J8 - Battery Wire.
J9 - Hand Grip 2
J10 - Heart rate board (grips).
J11 - Hand Grip 1



6.4 TROUBLESHOOTING - CONSOLE POWER ISSUES

NO DISPLAY ON THE CONSOLE OR THE DISPLAY IS DIM

POSSIBLE CAUSES:

1) The console is damaged or the console cable is not connected properly.
2) Poor connection to the terminals on the lower control board.
3) The lower control board is damaged.
4) The generator is damaged.

SOLUTION

1) Check the console cable connections at the console and lower control board.

2) Unplug the console cable at J5 on the console. Use a multi-meter set to DC voltage to check the voltage between the 1 (VCC) and 4 (Ground) pins of the console cable while pedaling.
   a. The DC voltage should be greater than 5.5 VDC (Figure A).
   b. If the voltage is greater than 5.5 VDC, replace the console.
   c. If the console does not resolve the issue, replace the console cable.

3 & 4) Unplug the generator cable from the lower control board. Use a multi-meter set to AC voltage to check the voltage between the 1 & 2, 2 & 3, and 3 & 1 pins of the generator wire while pedaling.
   a. The AC voltage should be variable depending on the RPM of the bike (should be higher voltage if pedaling faster).
   b. If the voltage is variable, replace the lower control board.
   c. If the voltage is NOT variable, replace the generator.

FIGURE A

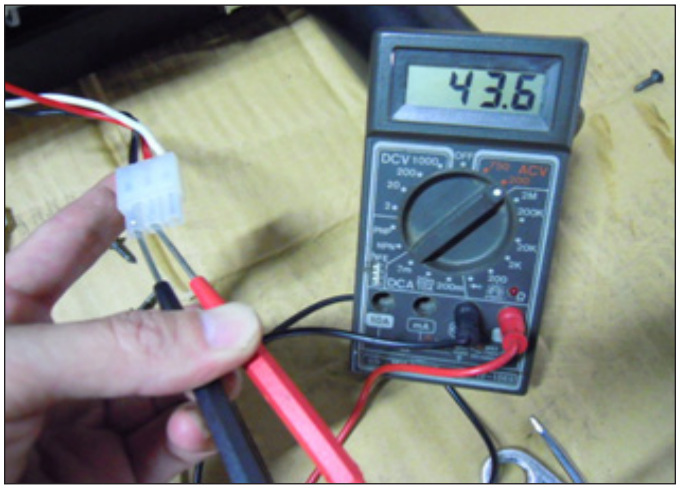


FIGURE B

6.5 TROUBLESHOOTING - NO RPM DISPLAYED

NO RPM IS DISPLAYED DURING EXERCISE

POSSIBLE CAUSES:

1) The console is damaged.
2) The console cable is not connected to the console or LCB or damaged.
3) The lower control board is damaged.
4) The generator is damaged.

SOLUTION:

1) Check the connection of the console cable at the UCB and LCB.

2) Unplug the console cable at J5 on the console. Use a multi-meter set to ohms to check the resistance of the console cable at Pin 3 at both sides of the cable. There should be a resistance reading.
   a. If a resistance reading is shown, replace the console.
   b. If no resistance reading is shown, replace the console cable.

3 & 4) Unplug the generator cable from the lower control board. Use a multi-meter set to AC voltage to check the voltage between the 1 & 2, 2 & 3, and 3 & 1 pins of the generator wire while pedaling.
   a. The AC voltage should be variable depending on the RPM of the bike (should be higher voltage if pedaling faster).
   b. If the voltage is variable, replace the lower control board.
   c. If the voltage is NOT variable, replace the generator.

FIGURE A

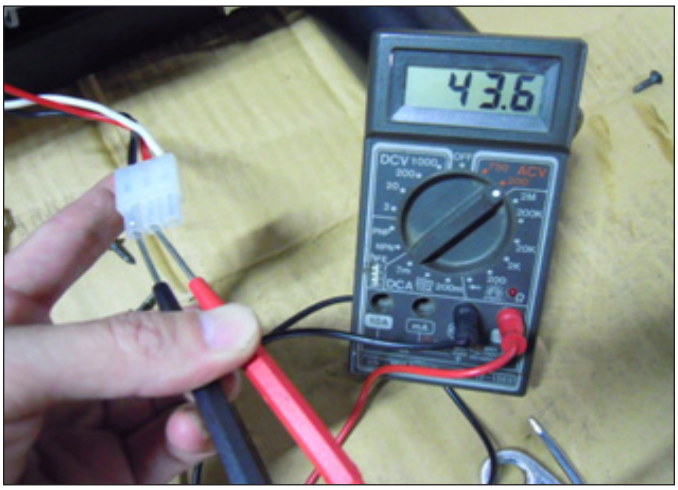


FIGURE B

6.6 TROUBLESHOOTING - KEYPAD ISSUES

ALL OR SOME OF THE FUNCTION KEYS DO NOT RESPOND

POSSIBLE CAUSES:

1) The keypad ribbon cable is not connected correctly.
2) The keypad is damaged.
3) The console is damaged.

SOLUTION

1) Check of the connection of the keypad ribbon cable at the UCB (procedure below).
   a. Remove the console from the console mast.
   b. Remove the 6 screws holding the back of the console to the front (Figure A).
   c, Inspect the keypad ribbon cable connection at the UCB (Figure B).
   d. Even if the keypad ribbon cable appears to be connected correctly, unplug and re-seat the cable, then re-test.

2) Replace the affected keypad.

3) Replace the console.

FIGURE A

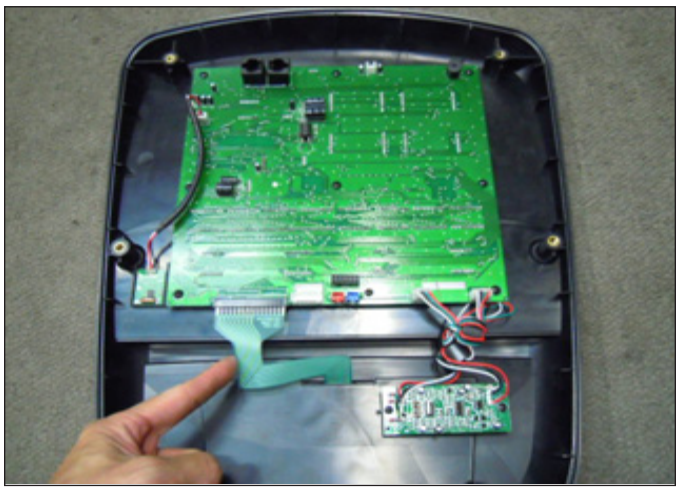


FIGURE B

HIGH OR NO RESISTANCE

POSSIBLE CAUSES:

1) The console is damaged.
2) The console cable is not connected to the console or LCB or damaged.
3) The power resistor is damaged.
4) The lower control board is damaged.
5) The generator is damaged.

SOLUTION:

1) Check the connection of the console cable at the UCB and LCB.

2) Unplug the console cable at J5 on the console. Use a multi-meter set to ohms to check the resistance of the console cable at Pin 3 at both sides of the cable. There should be a resistance reading.
   a. If no resistance reading is shown, replace the console cable.

3) Unplug the power resistor wire at the LCB, and use a multi-meter set to ohms to check the resistance across pins 1 and 4 of the resistor wire (Figure A). There should be a resistance reading.
   a. If the power resistor shows no resistance, replace the resistor.

4 & 5) Unplug the generator cable from the lower control board. Use a multi-meter set to AC voltage to check the voltage between the 1 & 2, 2 & 3, and 3 & 1 pins of the generator wire while pedaling (Figure B).
   a. The AC voltage should be variable depending on the RPM of the bike (should be higher voltage if pedaling faster).
   b. If the voltage is variable, replace the lower control board.
   c. If the voltage is NOT variable, replace the generator.

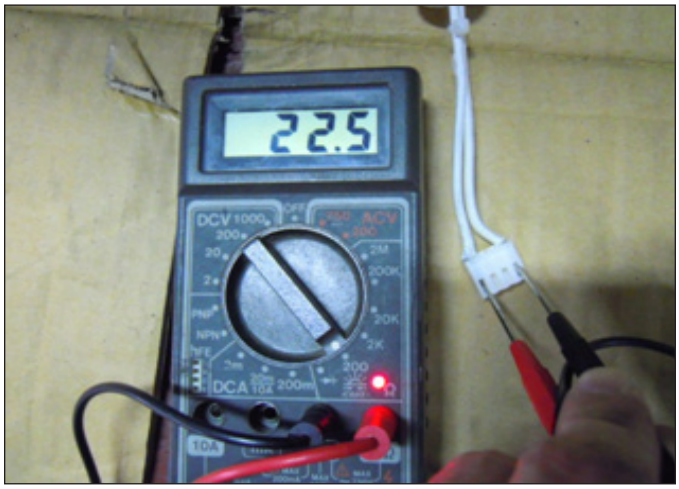


FIGURE A

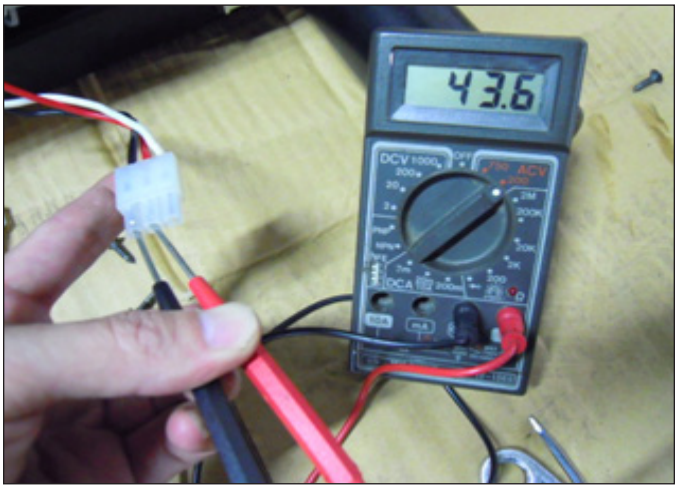


FIGURE B

6.8 TROUBLESHOOTING - PEDALS SLIPPING

SLIPPING WHILE PEDALING

POSSIBLE CAUSES

1) Check to make sure that the tension pulley pivots freely.
2) Belt tension is not enough.
3) The one way bearing in the secondary pulley axle is damaged.

SOLUTION:

1) Clean and lubricate the tension pulley as needed.

2) Remove the side covers and check the belt tensions.
   a. Tighten the drive belt as needed by moving the spring tension clip to another hole.
   b. The generator belt should be tightened to 85 lbf.

3) If the belts are tensioned correctly and they are still slipping, the one way bearing damaged. Replace the drive axle assembly.

6.9 TROUBLESHOOTING - NOISE ISSUES

KNOCKING OR CREAKING NOISES

POSSIBLE CAUSES:

1) The pedal is connected to the crank arm too loosely.
2) The crank or axle is damaged.
3) Belt tension is too loose, or the belt is dirty.

SOLUTION:

1) Tighten the pedal onto the crank.

2) Replace the crank or axle as needed.

3) Remove the side covers and check the belt tension.
   a. Tighten the drive belt as needed by moving the spring tension clip to another hole.
   b. The generator belt should be tightened to 85 lbf.
   c. Clean the belts. If they are work or will not clean, replace the belts as needed.

6.10 TROUBLESHOOTING - HEART RATE ISSUES

HEART RATE DOES NOT WORK

POSSIBLE CAUSES:

1) Not good contact between the user and HR grips or HR strap.
2) The HR strap is at a low battery status.
3) The HR strap is damaged.
4) The HR grips are damaged.
5) The HR board in the console is damaged.

SOLUTION:

1) Re-center the HR strap on user's chest as shown in Figure A.

2) Replace the battery in the HR Strap.

3) Wet the user's hand, then reestablish contact with the HR grip.

4) Replace the HR strap.

5) Replace the HR grips.

6) Replace the console.

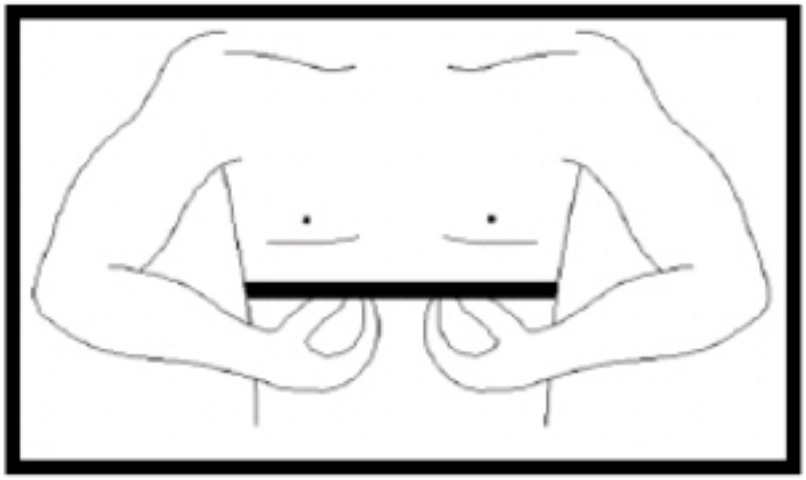


FIGURE A

7.1 CONSOLE REPLACEMENT

1) Remove the 4 screws holding the console to the console mast (Figure A).

FIGURE A

2) Disconnect the console cable and HR connections from the defective console and remove it (Figure B).

FIGURE B

3) Connect the wire connections to the new console.
4) Carefully push the wires into the console and console mast until they are clear of the console / mast connection point.
5) Attach the console to the mast using the 4 screws removed in Step 1.
6) Test the bike for function as outlined in Section 7.20.

7.2 HEART RATE HANDLEBAR REPLACEMENT

1) Remove the 4 screws holding the heart rate handlebar to the console mast being careful to support the handlebar (Figure A).

FIGURE A

2) Carefully pull the three wires out of the console mast until the connectors are showing, and then disconnect the two wires and remove the defective heart rate handlebar (Figure B).

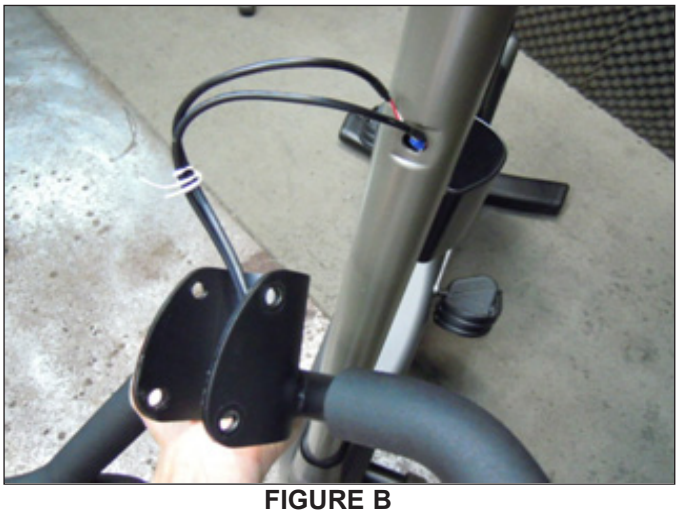


FIGURE B

3) Reverse Steps 1-2 to install a new heart rate handlebar.

7.3 HEART RATE GRIP REPLACEMENT

1) Remove the 2 screws holding the 2 halves of the heart rate grip together (Figure A).
2) Once the 2 screws are removed, pull apart the top and bottom portions of the heart rate grip (Figure B).

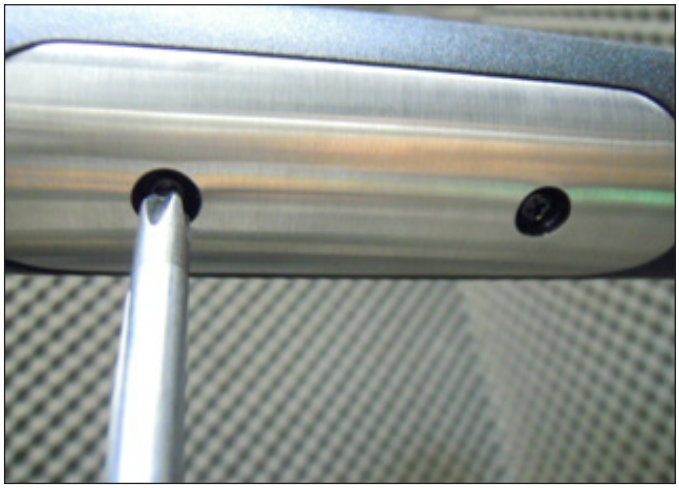


FIGURE A

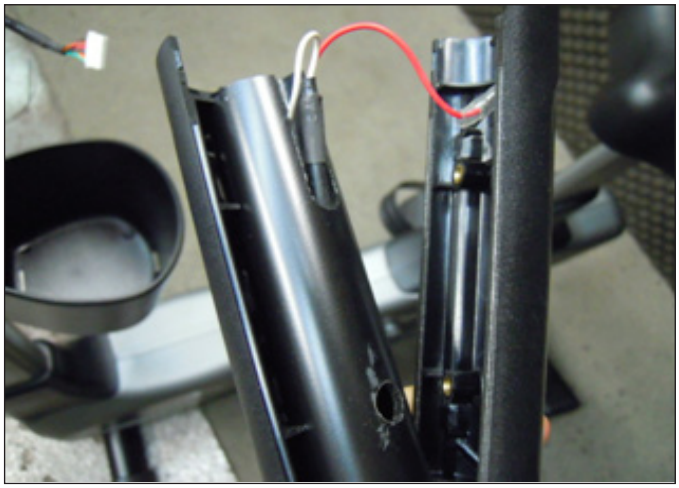


FIGURE B

3) Disconnect the heart rate plate wiring and remove the old HR grip (Figure C).
4) Reverse Steps 1-3 to install a new HR grip. ***NOTE:*** The white wire should be plugged into the bottom heart rate plate, the red wire on the top. Also make sure that the end cap gets installed (Figure D).

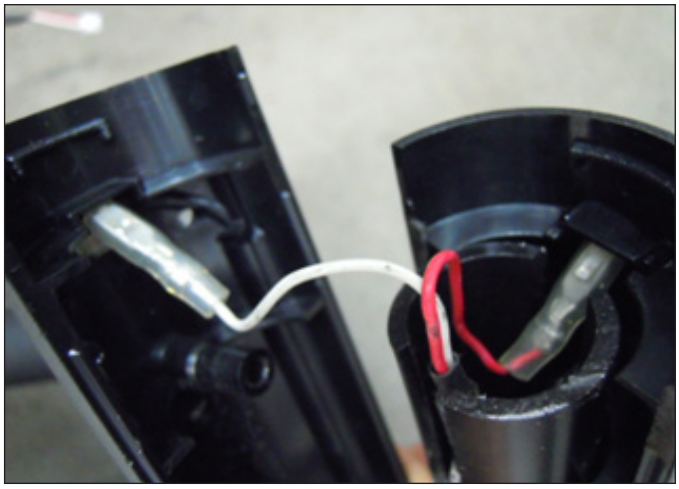


FIGURE C

FIGURE D

5) Test the bike for function as outlined in Section 7.20.

7.4 ACCESSORY TRAY REPLACEMENT

1) Remove the 2 screws holding Accessory Tray to the console mast (Figure A).

FIGURE A

2) Remove the Accessory Tray (Figure B).

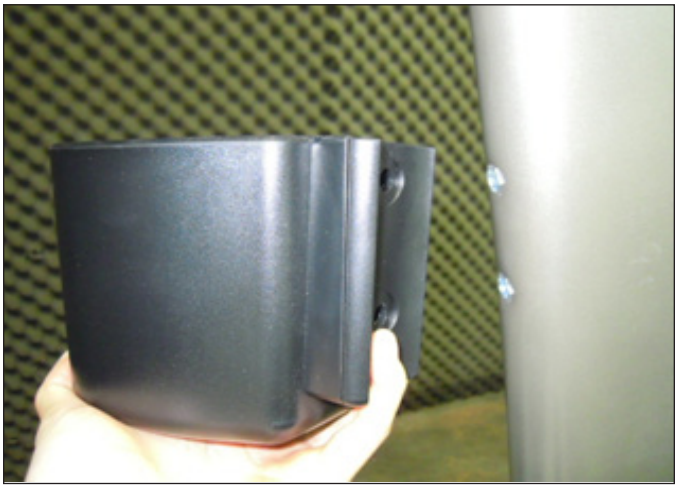


FIGURE B

3) Reverse Steps 1-2 to install a new Accessory Tray.

7.5 CONSOLE MAST REPLACEMENT

1) Remove the console as outlined in Section 7.1.
2) Remove the heart rate handlebar as outlined in Section 7.2.
3) Lift up the console mast boot (Figure A).
4) Remove the 5 screws holding the console mast to the frame (Figure B).

FIGURE A

FIGURE B

5) Pull the wires out of the bottom of the console mast and remove the mast (Figure C).

FIGURE C

6) Reverse Steps 1-5 to install a new console mast.
7) Test the bike for function as outlined in Section 7.20.

7.6 SEAT PAD REPLACEMENT

1) Remove the three screws holding the seat pad to the seat post (Figure A).

FIGURE A

2) Remove the seat pad from the seat post (Figure B).

FIGURE B

3) Reverse Steps 1-2 to install a new seat pad.

7.7 SEAT POST REPLACEMENT

1) Remove the seat adjustment pin (Figure A).
2) Pull the seat post upward until the stem comes away from the frame and remove it (Figure B).

FIGURE A

FIGURE B

3) Remove the rubber boot at the bottom of the seat post (Figure C).

FIGURE C

4) Reverse Steps 1-3 to install a new seat post.

7.8 SEAT POST INSERT REPLACEMENT

1) Remove the seat adjustment pin (Figure A).
2) Pull the seat post upward until the stem comes away from the frame and remove it (Figure B).

FIGURE A

FIGURE B

3) Remove the rubber boot at the bottom of the seat post (Figure C).
4) Grab the lip of the seat post insert and remove it from the seat post (Figure D).

FIGURE C

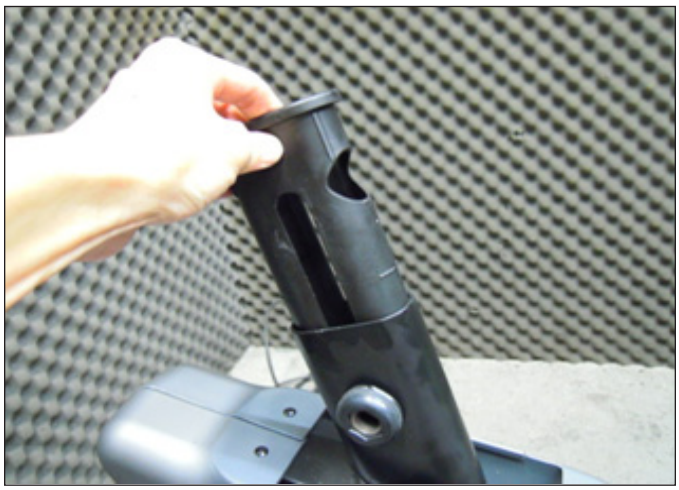


FIGURE D

4) Reverse Steps 1-3 to install a new seat post insert.

7.9 PEDAL REPLACEMENT

1) Use a 15mm pedal wrench to remove the pedal from the axle (Figure A). ***NOTE:*** The threads on the left side pedal are reversed (the pedal turns off counter clockwise).

FIGURE A

2) Remove the pedal (Figure B).

FIGURE B

3) Reverse Steps 1-2 to install a new pedal. ***NOTE:*** The pedal should be tightened onto the crank as tightly as possible. It is impossible to over-tighten the pedal.

7.10 CRANK REPLACEMENT

NOTE: A Matrix special tool is required to properly replace a crank. Order part # 022696-00 from Matrix Customer Technical Support.

1) Assemble the Matrix tool as shown in Figure A. Note that there are 2 different sides on the tool.
2) Remove the crank arm cover by turning it counter clockwise (Figure B).

FIGURE A

FIGURE B

3) Attach side #1 of the tool onto the nut holding the crank (the tool acts as a socket) to the drive axle and remove the nut (Figure C).
4) Attach side #1 of the tool into the tool and use a wrench to turn side #2 of the tool into the crank threads (Figure D).

FIGURE C

FIGURE D

5) Once side #2 of the tool is tight, use a wrench to turn side #1 to pull the crank off of the bike (Figures E & F).

FIGURE E

FIGURE F

6) Reverse Steps 1-3 to install a new crank.
7) Test the bike for function as outlined in Section 7.20.

7.11 SIDE COVER REPLACEMENT

1) Remove the seat adjustment pin (Figure A).
2) Pull the seat post upward until the stem comes away from the frame and remove it (Figure B).
3) Remove the rubber boot at the bottom of the seat post (Figure C).

FIGURE A

FIGURE B

FIGURE C

4) Remove the 11 screws on each side holding the side covers in place (Figures D & E).

FIGURE D

FIGURE E

5) Reverse Steps 1-4 to install a new side cover.

7.12 LOWER CONTROL BOARD REPLACEMENT

1) Remove the side covers as outlined in Section 7.11. .
2) Disconnect the 3 wires that are plugged into the lower control board (Figure A).
3) Remove the 2 screws holding the lower control board to the frame (Figure B).

FIGURE A

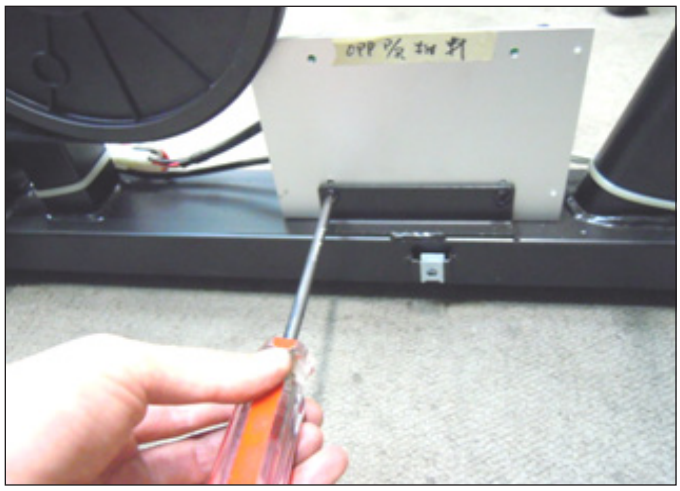


FIGURE B

4) Reverse Steps 1-3 to install a new lower control board. Figure C shows the connections at the board.

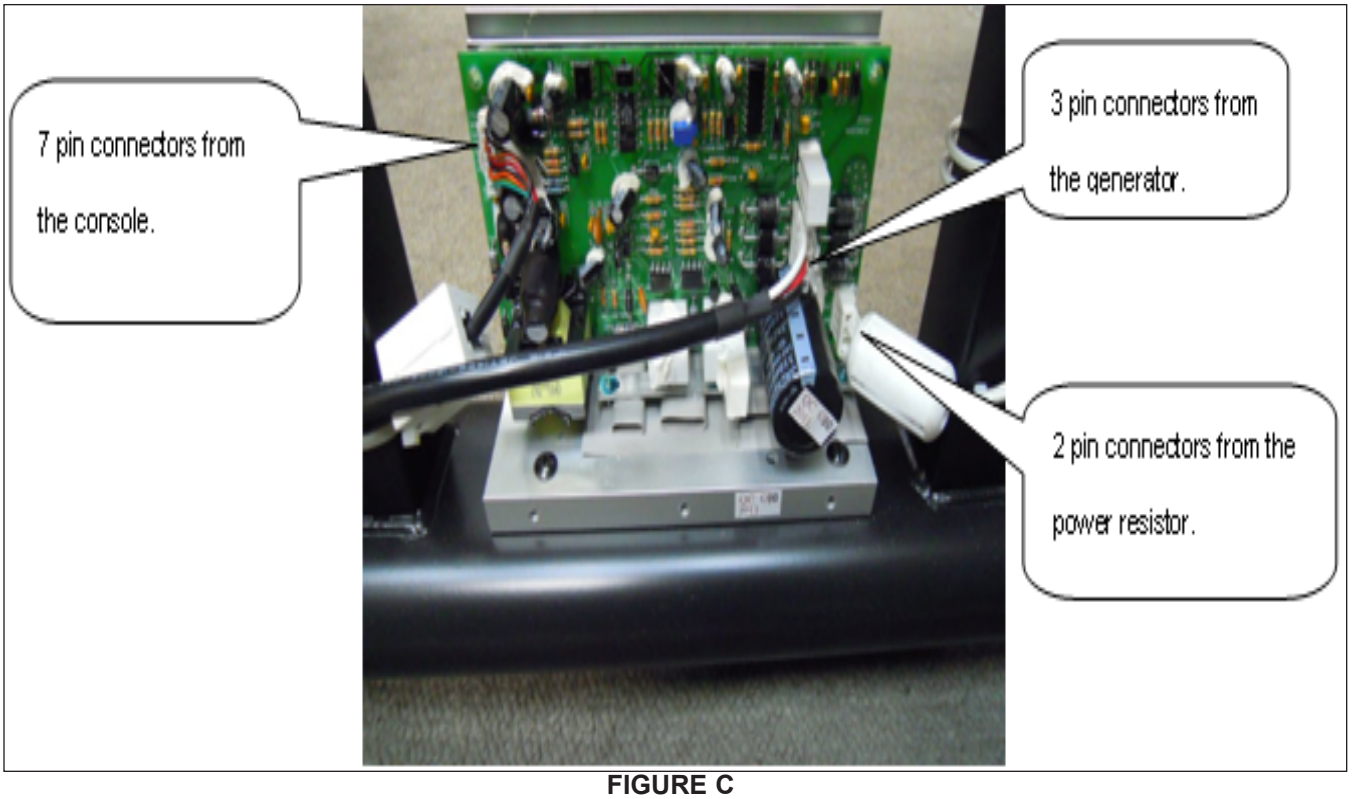


FIGURE C

5) Test the bike for function as outlined in Section 7.20.

7.13 DRIVE BELT REPLACEMENT

1) Remove the right front side cover as outlined in Section 7.11.
2) Pull up on the tension assembly and walk the belt off of the idler pulley (Figure A).
3) Remove the drive belt (Figure B).

FIGURE A

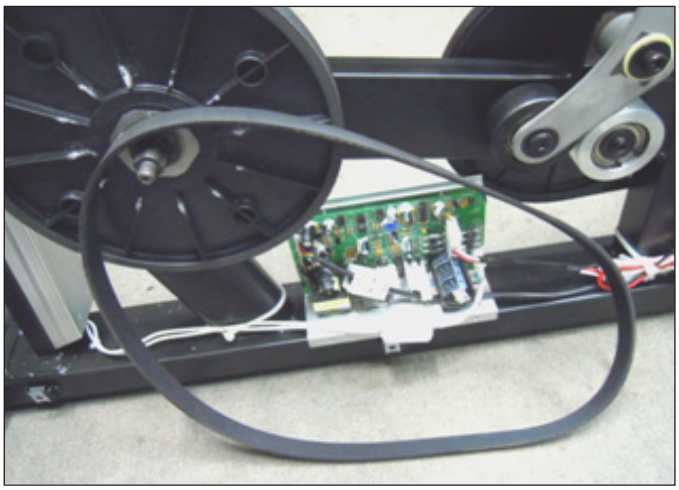


FIGURE B

4) Reverse Steps 1-3 to install a new drive belt. ***NOTE:*** Be sure to attach the tension spring so that enough tension is put onto the drive belt. Multiple holes are available for the lower spring attachment (Figure C).

FIGURE C

5) Test the bike for function as outlined in Section 7.20.

7.14 TENSION ASSEMBLY REPLACEMENT

1) Remove the front side covers as outlined in Section 7.11.
2) The tension assembly is held to the frame by one bolt and nut (Figures A & B).

FIGURE A

FIGURE B

3) Remove the tension assembly spring (Figure C).
4) Remove the bolt and nut holding the tension assembly to the frame and remove it (Figure D).

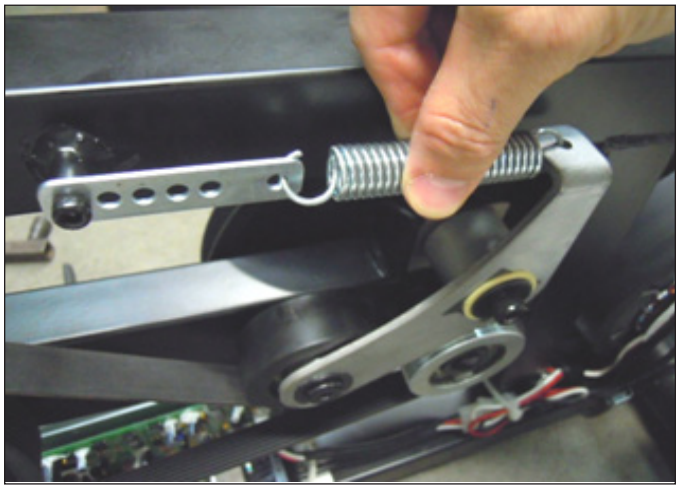


FIGURE C

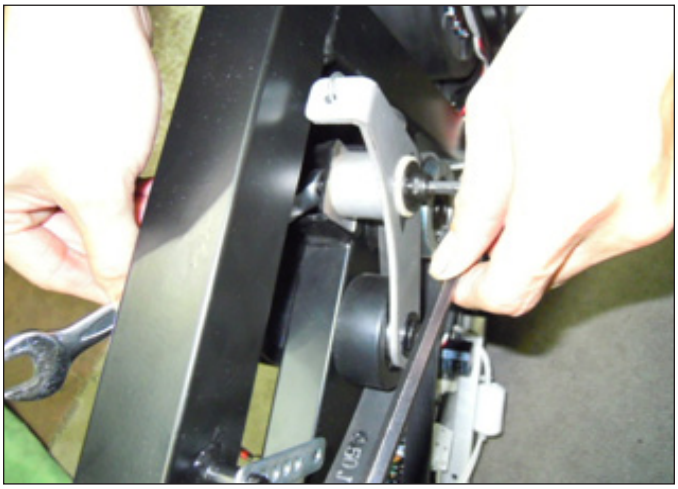


FIGURE D

5) Reverse Steps 1-4 to install a new tension assembly. ***NOTE:*** Torque the bolt removed in Step 4 to 30 N-m.
6) Test the bike for function as outlined in Section 7.20.

7.15 GENERATOR BELT REPLACEMENT

1) Remove both front side covers as outlined in Section 7.11.
2) Remove the cable ties holding the generator cable to the frame (Figure A).
3) Remove the nut on each side of the frame holding the generator in place (Figure B).

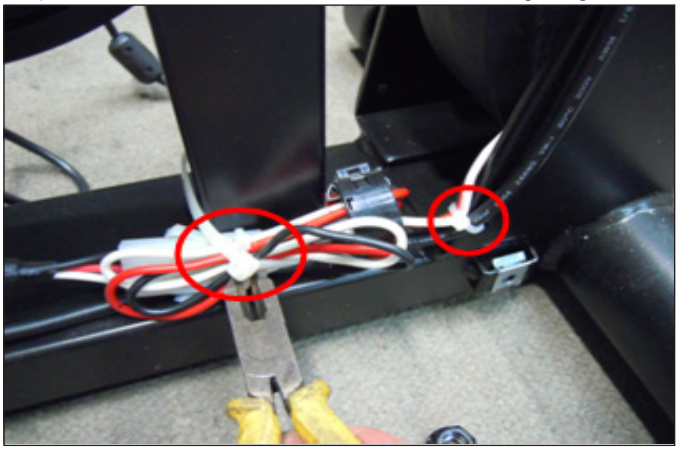


FIGURE A

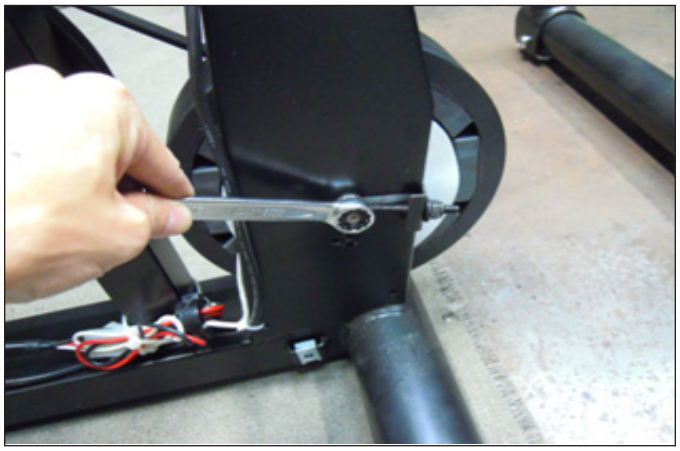


FIGURE B

4) Remove the nut on each side putting tension on the generator belt (Figure C).
5) Remove the screw on the right side of the frame that holds the generator disc in place (Figure D).

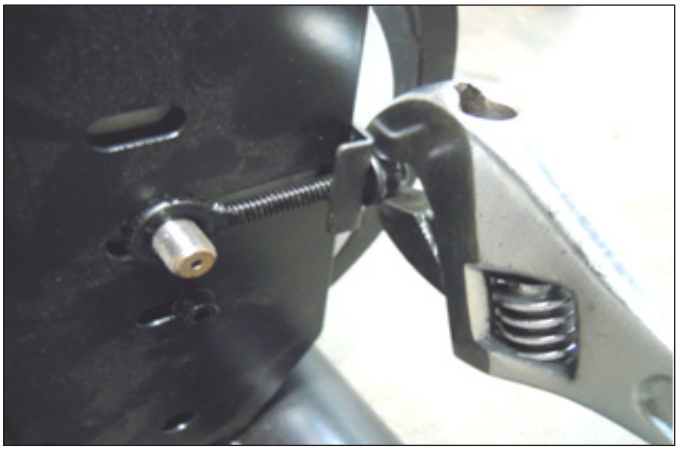


FIGURE C

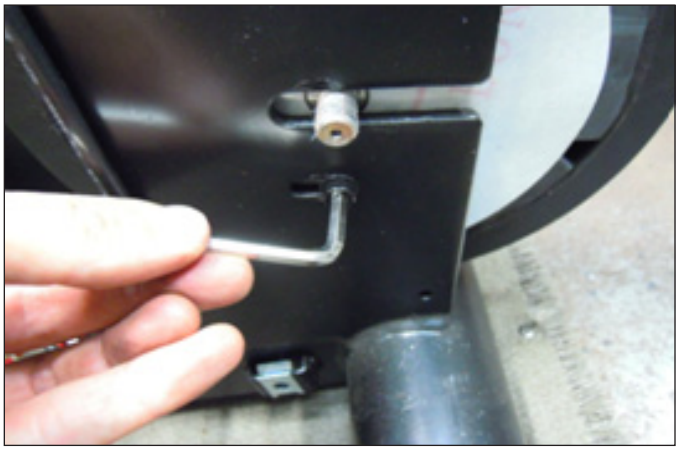


FIGURE D

6) Walk the generator belt off of the secondary pulley (Figure E).
7) Pull the generator out of the frame towards the front of the unit and remove the generator belt (Figure F).

FIGURE E

FIGURE F

8) Reverse Steps 1-7 to install a new generator belt. ***NOTE:*** Re-tension the new generator belt to 80 lbs. Replace any cable ties removed during replacement.
9) Test the bike for function as outlined in Section 7.20.

7.16 GENERATOR REPLACEMENT

1) Remove both front side covers as outlined in Section 7.11.
2) Remove the cable ties holding the generator cable to the frame (Figure A).
3) Remove the nut on each side of the frame holding the generator in place (Figure B).

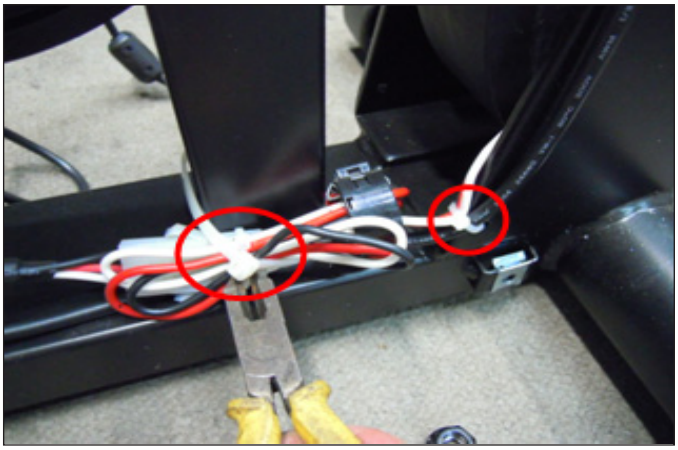


FIGURE A

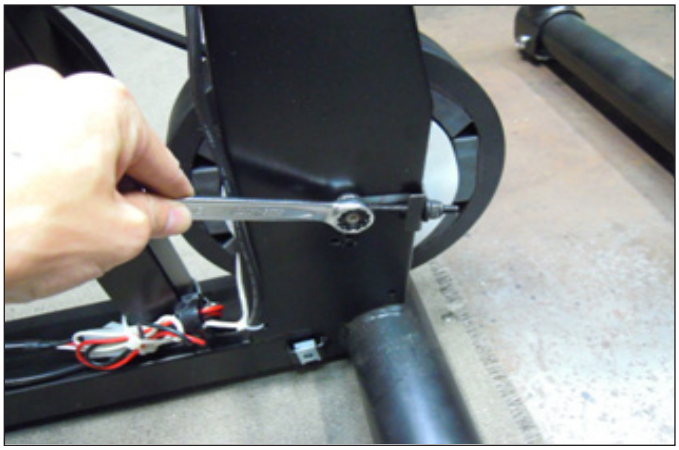


FIGURE B

4) Remove the nut on each side putting tension on the generator belt (Figure C).
5) Remove the screw on the right side of the frame that holds the generator disc in place (Figure D).

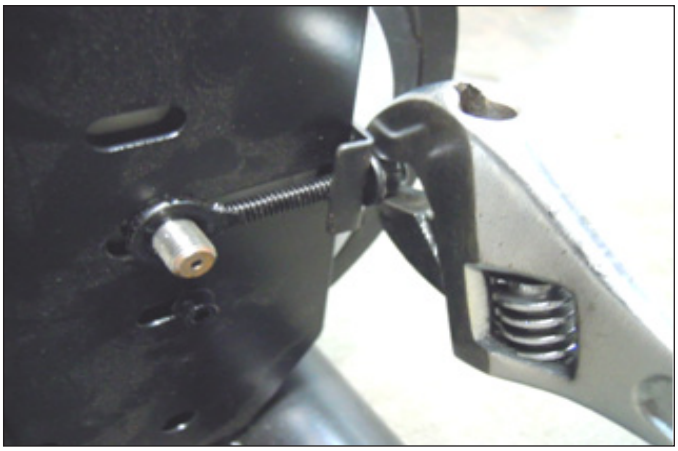


FIGURE C

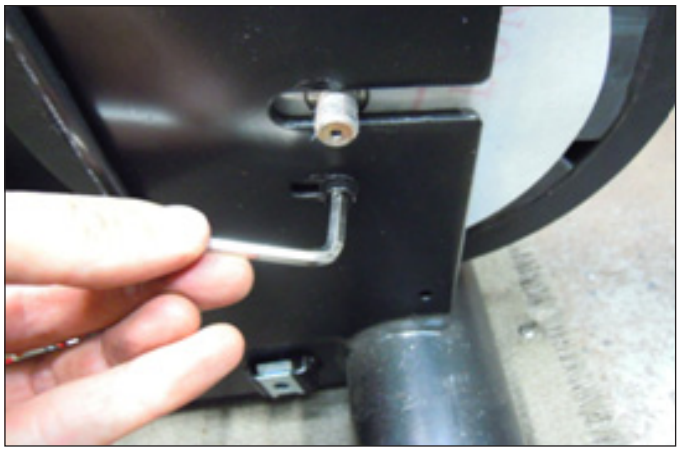


FIGURE D

6) Walk the generator belt off of the secondary pulley (Figure E).
7) Pull the generator out of the frame towards the front of the unit and remove the generator belt (Figure F).

FIGURE E

FIGURE F

8) Reverse Steps 1-7 to install a new generator. ***NOTE:*** Re-tension the new generator belt to 80 lbf. Replace any cable ties removed during replacement.
9) Test the bike for function as outlined in Section 7.20.

7.17 DRIVE AXLE SET REPLACEMENT

1) Remove both front side covers as outlined in Section 7.11.
2) Pull up on the tension assembly and remove the drive belt as outlined in Section 7.13.
3) Remove the snap ring on the left side of the unit holding the drive axle bearing into the frame (Figures A & B).

FIGURE A

FIGURE B

4) Use a hammer to hit the drive axle shaft until it is loose in the frame, then remove it (Figures C & D). ***NOTE:*** If the drive axle will be re-used, be sure to protect the drive axle shaft by installing a nut on the shaft prior to knocking it loose from the frame (Figure E).

FIGURE C

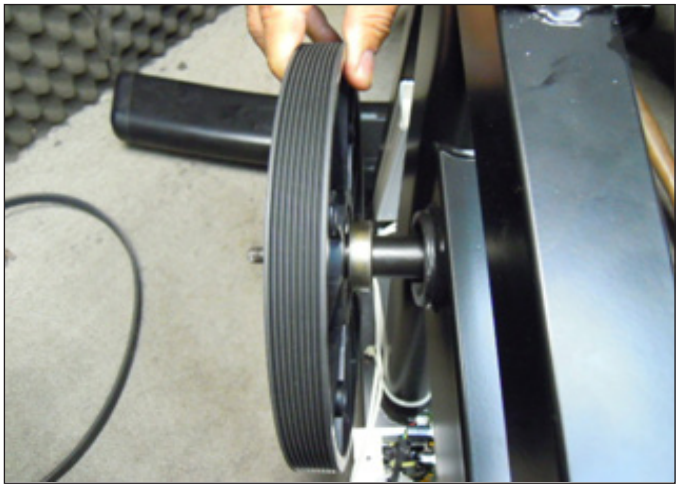


FIGURE D

FIGURE E

7.17 DRIVE AXLE SET REPLACEMENT - CONTINUED

5) Use a hammer and punch to hit the remaining bearing until it is loose in the frame, then remove it (Figures F & G). ***NOTE:*** The bearing cannot be re-used after being removed.

FIGURE F

FIGURE G

6) Clean the inside of the housing frame on both sides.
7) Apply Loctite 603 to both sides of the housing frame (Figure H & I).

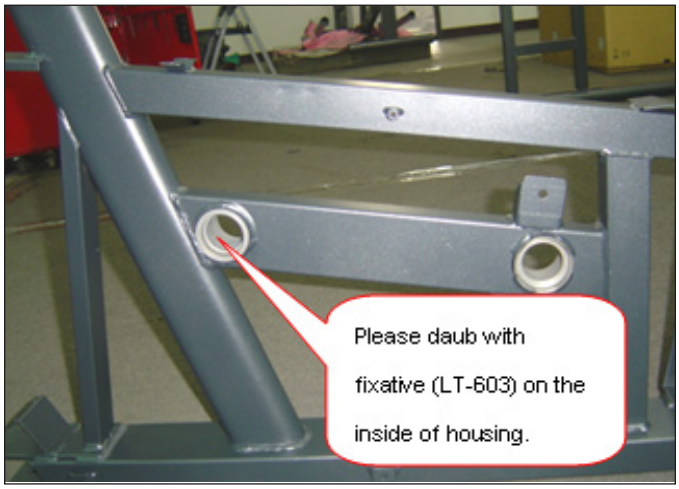


FIGURE H

FIGURE I

8) Mount the bearing into the housing. If possible, wait 30 minutes for the bearing to adhere to the frame.
9) Use a mallet to install the new drive axle set from the right side.
10) Reverse Steps 1-5 to complete the installation of the new drive axle set.
11) Test the bike for function as outlined in Section 7.20.

7.18 SECONDARY (PULLEY) AXLE SET REPLACEMENT

1) Remove both front side covers as outlined in Section 7.16.
2) Remove the tension assembly spring (Figure A).
3) Pull up on the tension assembly and remove the drive belt (Figure B).

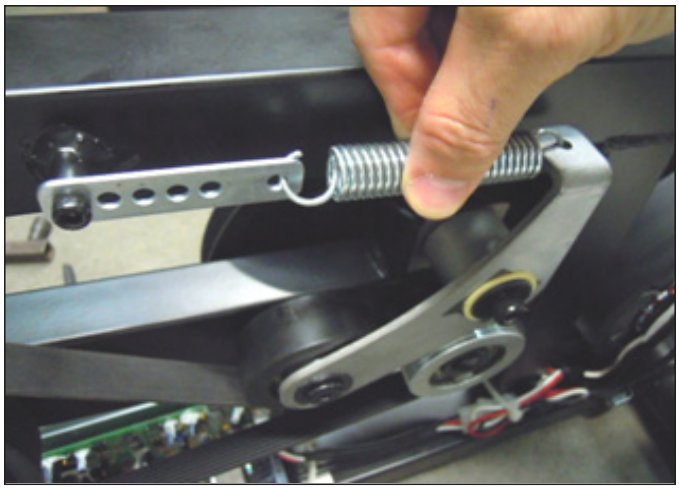


FIGURE A

FIGURE B

4) Walk the generator belt off of the secondary pulley (Figure C).
5) Remove the screw holding the clutch pulley onto the frame (Figures D & E).

FIGURE C

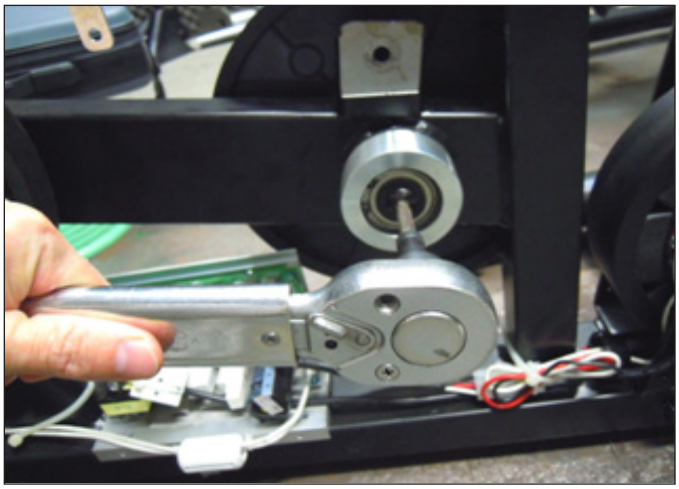


FIGURE D

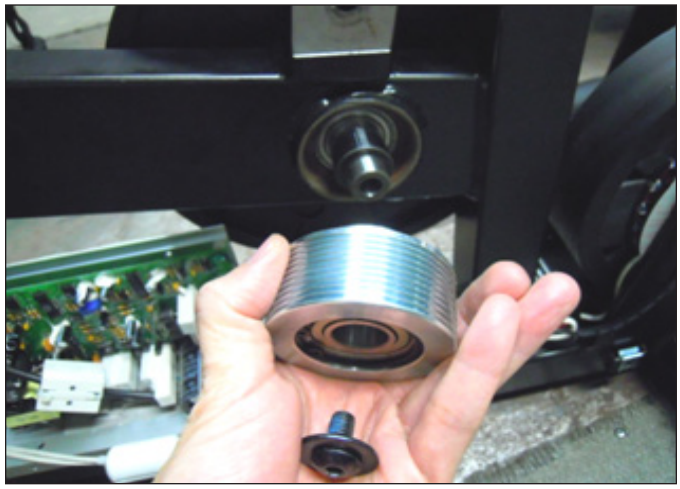


FIGURE E

7.18 SECONDARY (PULLEY) AXLE SET REPLACEMENT - CONTINUED

6) Turn the secondary pulley until each of the 3 screws through the frame are exposed (Figures E - G).
7) Re-install the screw removed in Step 5 (the screw will protect the drive axle shaft - Figure H).

FIGURE E

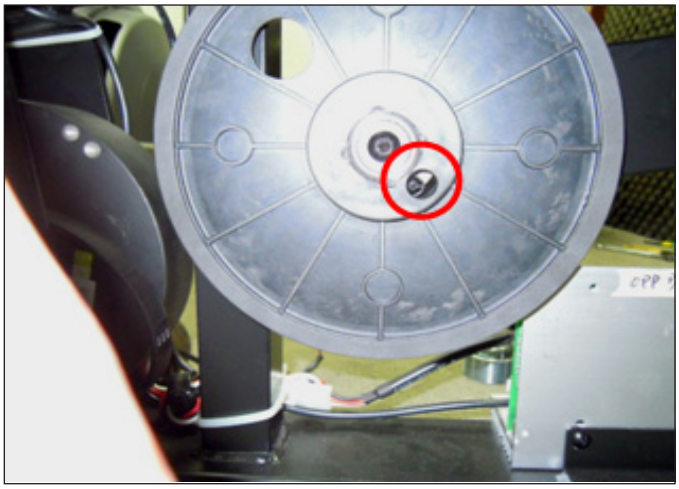


FIGURE F

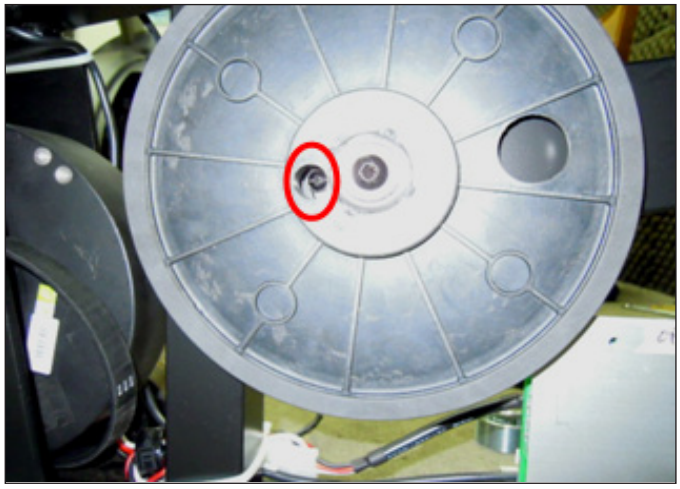


FIGURE G

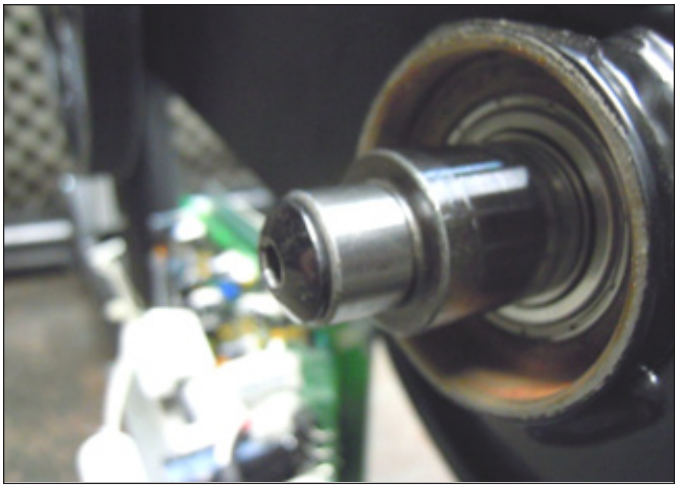


FIGURE H

8) Use a mallet to hit the screw until the secondary axle set is loose in the frame, then remove it (Figure I).
9) Reverse Steps 1-8 to install a new secondary axle set. ***NOTE:*** Apply Loctite 603 to the housing frame prior to installing the bearings (Figure J). Torque the screw removed in Step 5 to 20 N-m.

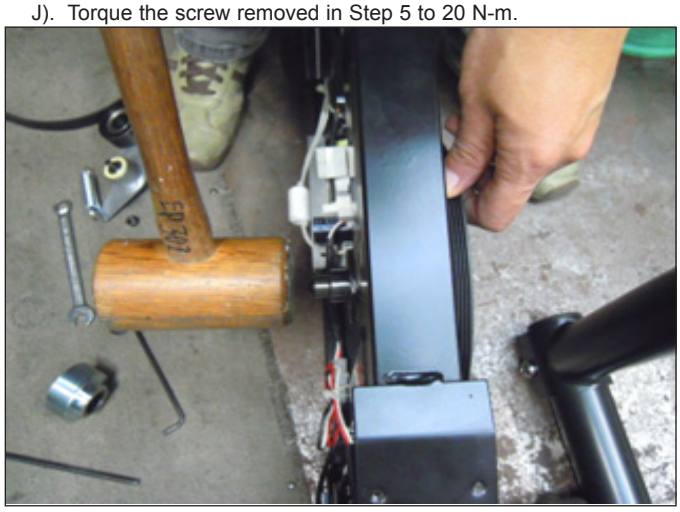


FIGURE I

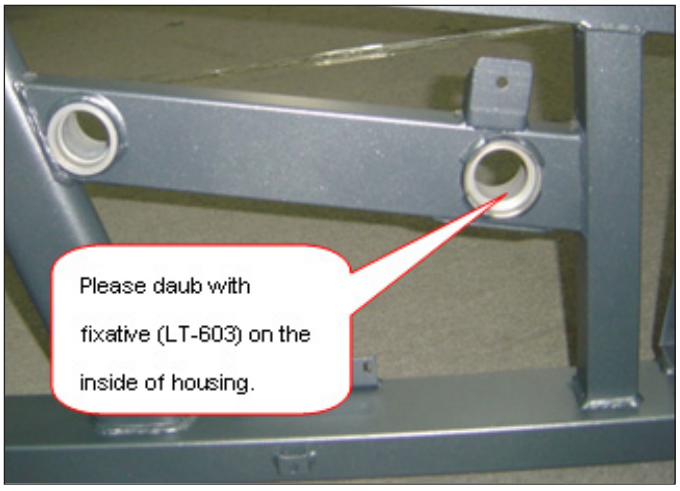


FIGURE J

10) Test the bike for function as outlined in Section 7.20.

7.19 REAR STABILIZER REPLACEMENT

1) Lean the bike to one side and remove the 4 screws holding the rear stabilizer to the frame (Figure A).

FIGURE A

2) Remove the rear stabilizer (Figure B).

FIGURE B

3) Reverse Steps 1-2 to install a new rear stabilizer.

7.20 TESTING THE BIKE

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) Without hitting start or entering any program modes, sit on the bike and hold the handlebars while pedaling to simulate exercising. While moving, listen for any odd noises or squeaks.

2) After stopping movement, press the START button and begin pedaling.

3) Grasp the hand grips to check for proper heart rate response.

4) Press the level up and down buttons on the console to make sure resistance is fully functional.

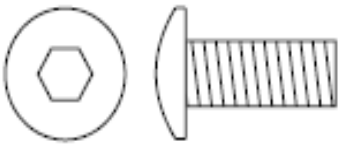
5) If everything functions properly, stop pedaling and the unit will reset to normal operation within 30 seconds.

8.1 UNPACKING THE BIKE

The Vision Fitness U60 Bike is carefully inspected before shipment, so it should arrive in good operating condition. Vision Fitness ships the bike in the following pieces:

ORANGE BAG

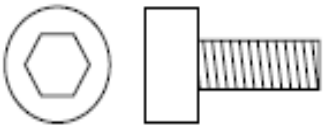
M8x65L Bolt
Quantity: 2



M8 x 20L Bolt
Quantity: 2

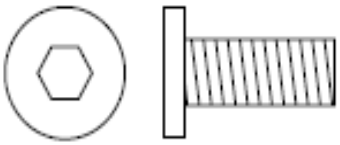
M8 Lock Washer
Quantity: 4

BLUE BAG



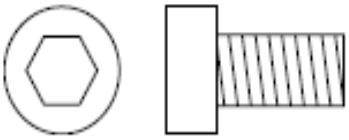
M5 x 12L Bolt
Quantity: 4

PINK BAG



M8 x 20L Bolt
Quantity: 4

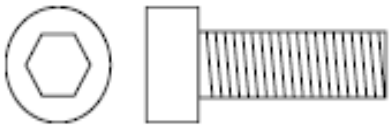
BLUE BAG



M8 x 16L Bolt
Quantity: 5

M8 Lock Washer
Quantity: 5

YELLOW BAG



M8 x 25L Bolt
Quantity: 2

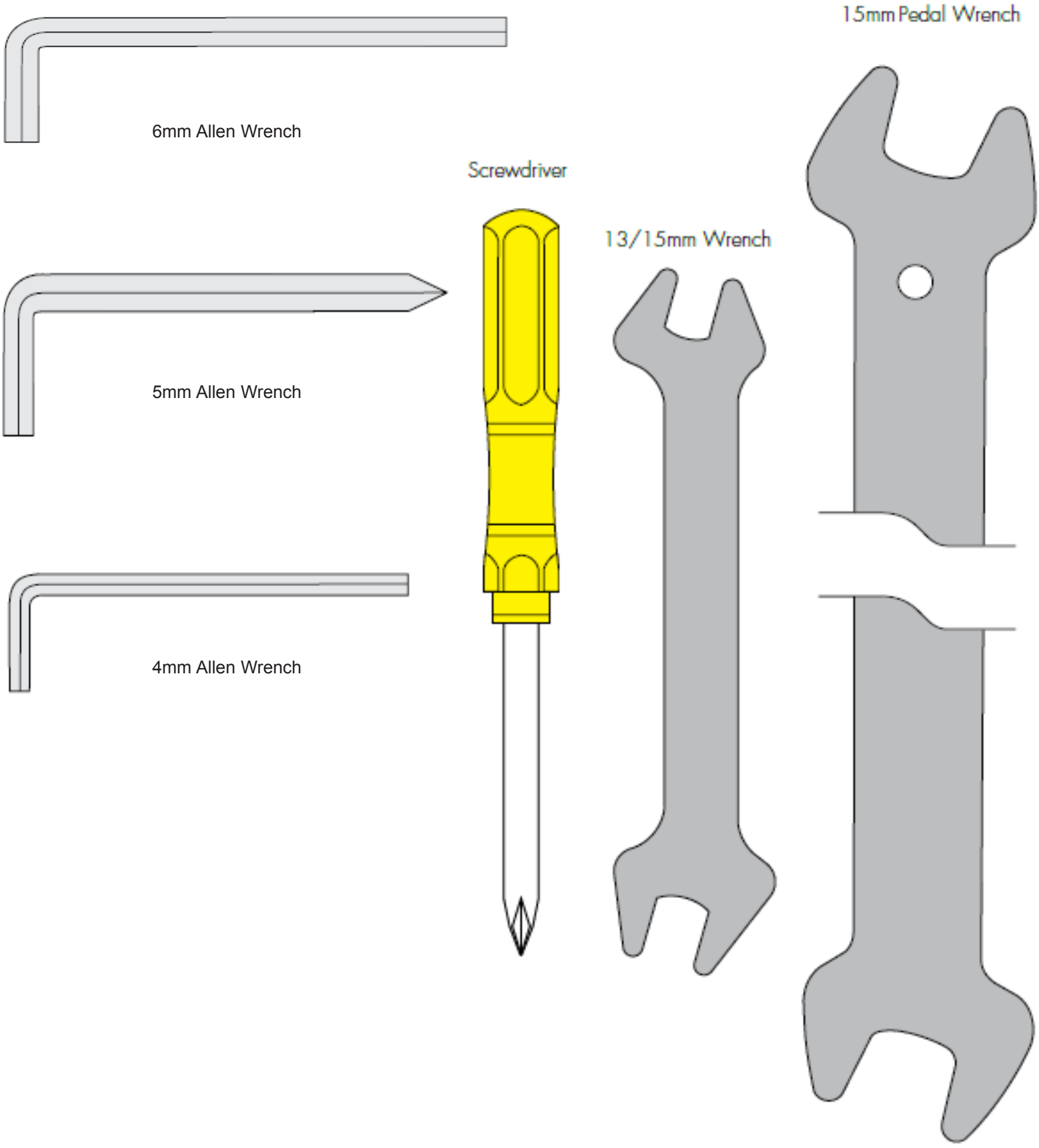
PARTS BOX

Console Mast Boot
Accessory Tray
Water Bottle
Water Bottle Plastic Base
Color-coded Hardware Bags
Owner's Guide
Assembly Guide
Warranty Card
Pedals / Straps

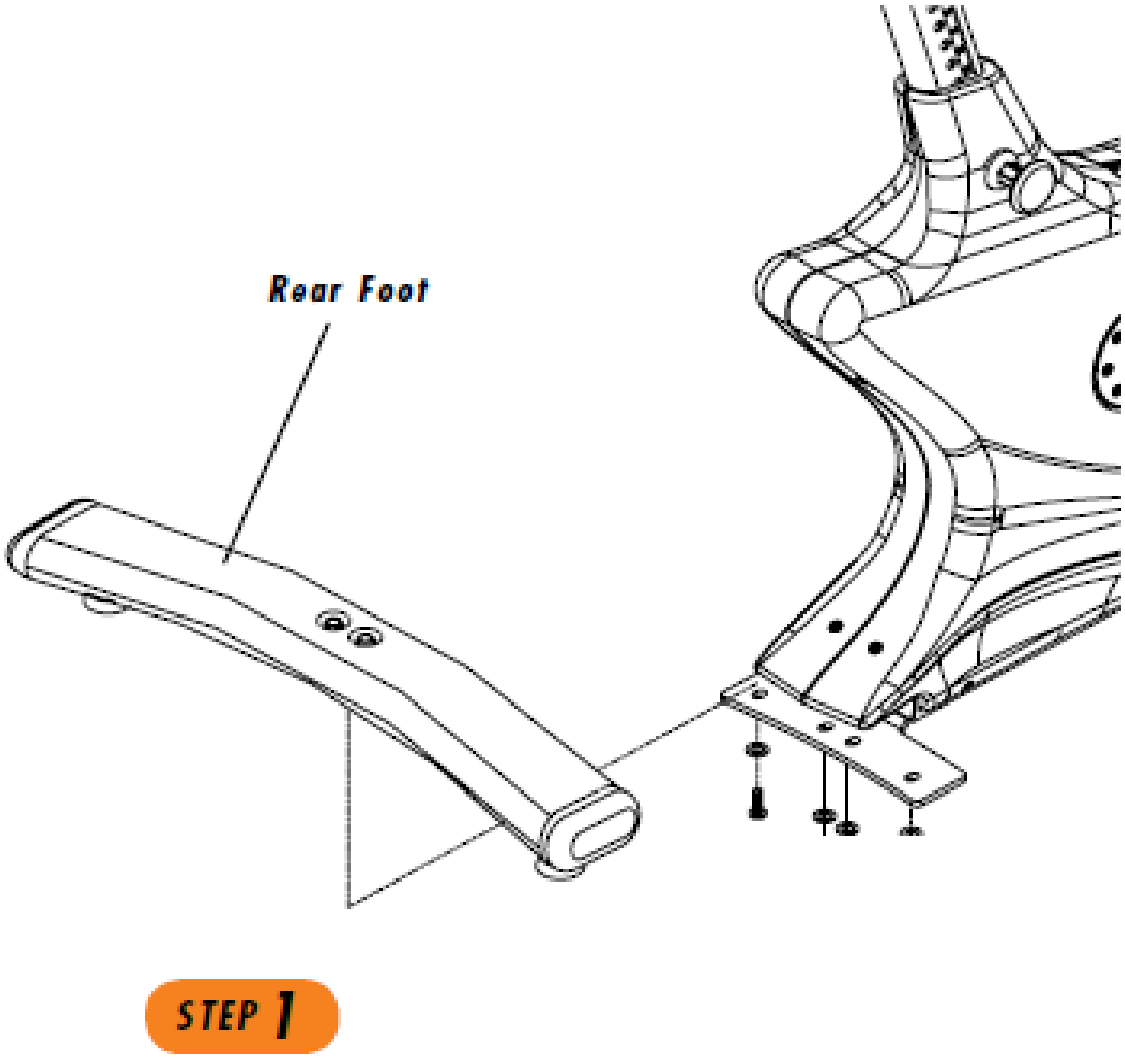
NOTE: If these parts are missing from the package, please contact Vision Fitness at 1-800-335-4348.

8.2 ASSEMBLY TOOLS

TOOLS REQUIRED FOR ASSEMBLY



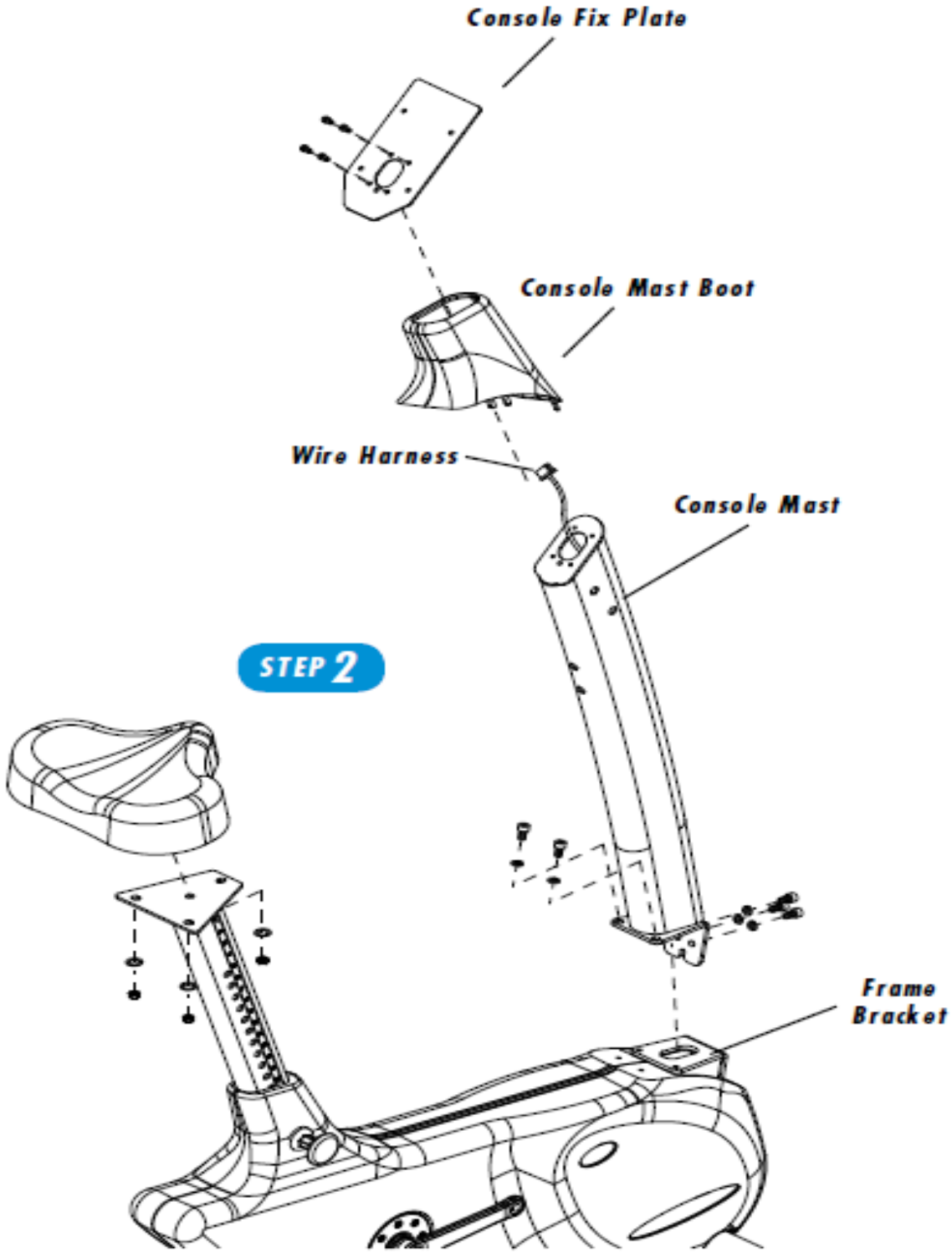
8.3 ASSEMBLY INSTRUCTIONS



STEP 1 - ORANGE BAG

1) Install the rear foot with four lock washers (M8), two inside bolts (M8 x 65L), and two outside bolts (M8 x 20L). Tighten with the 5mm L-Shaped Allen Wrench.

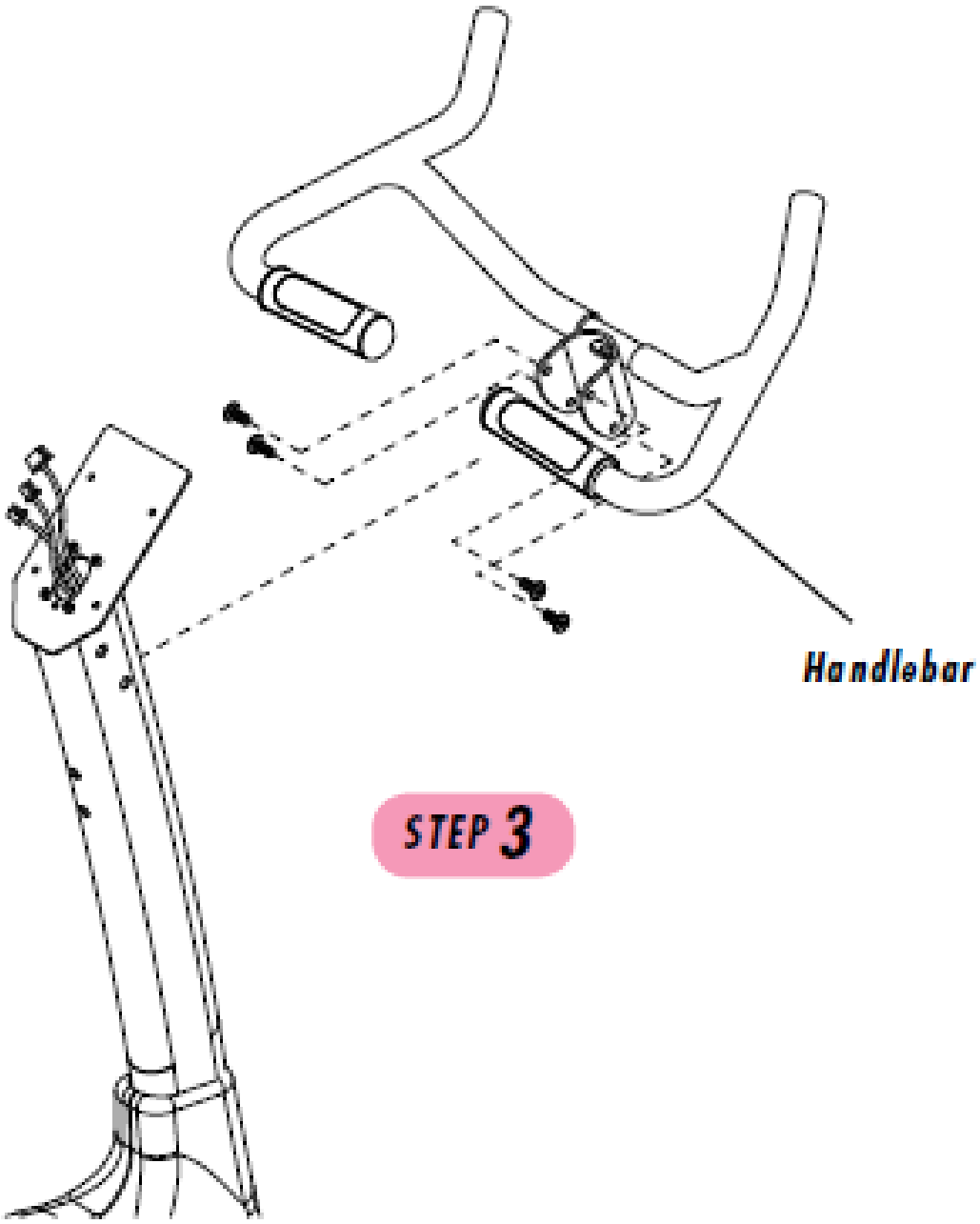
8.3 ASSEMBLY INSTRUCTIONS - CONTINUED



STEP 2 - BLUE BAG

1) Put the wire through the console mast, then use five bolts (M8 x 16L) and lock washers (M8) to fix the console mast onto the frame bracket with the 6mm L-Shaped Wrench.
2) Put the console mast boot onto the console mast.
3) Assemble the console mast fix plate onto the console mast with four bolts (M5 x 12L) and tighten using the 4mm L-Shaped Wrench.
4) Remove the three M8 bolts and lock washers from the seat pad (should already be installed in the pad). Mount the seat pad to the seat post and attach with the bolts and washers and tighten them with the 13mm Wrench.

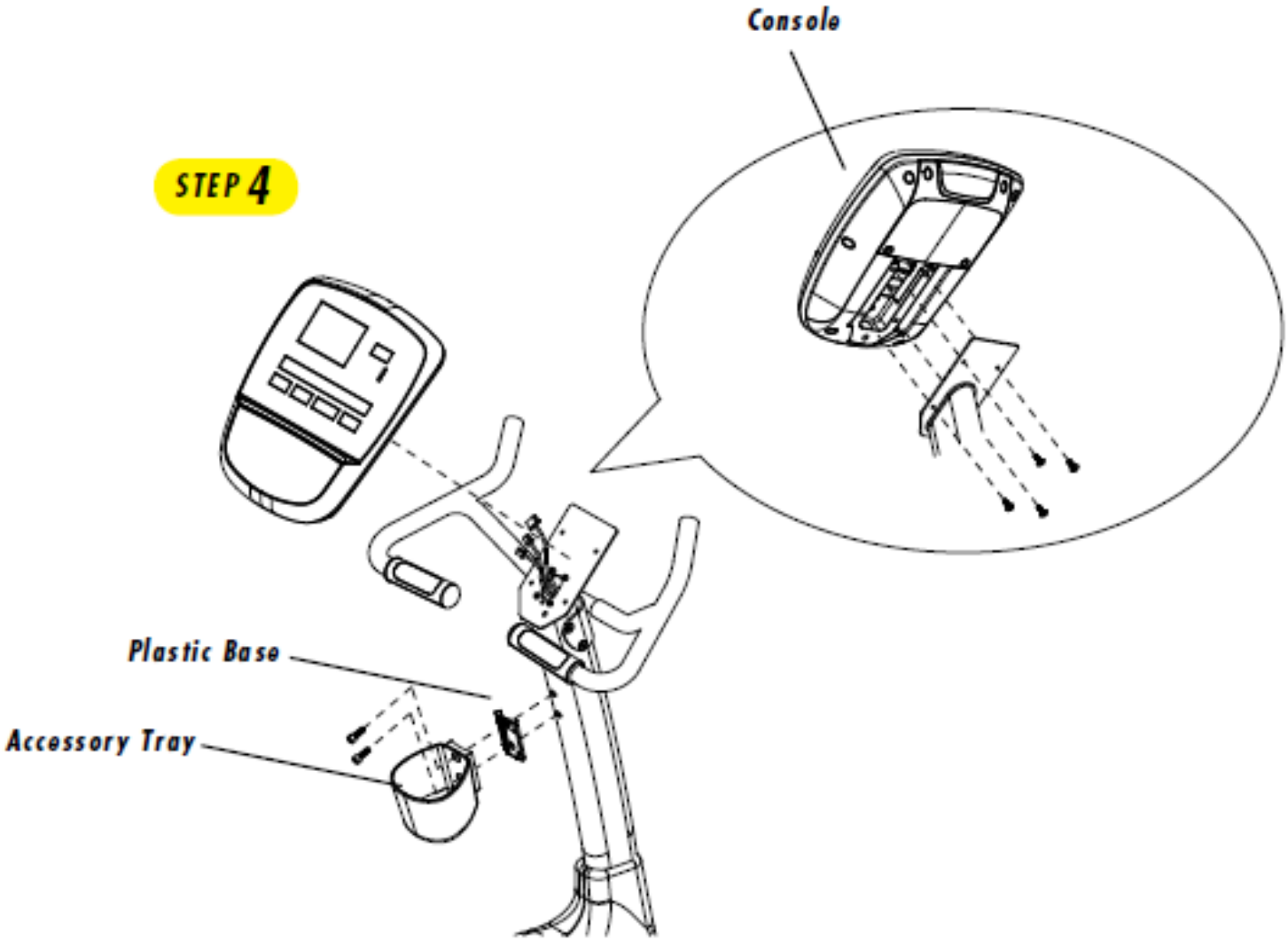
8.3 ASSEMBLY INSTRUCTIONS - CONTINUED



STEP 3 - PINK BAG

1) Feed the heart rate wires of the handlebar through the small hole located in the front of the console mast. Pull these wires up through the hole at the top of the console mast. Attach the handlebar to the console mast using four bolts (M8 x 20L). Tighten with the 5mm L-Shaped Allen Wrench.

8.3 ASSEMBLY INSTRUCTIONS - CONTINUED

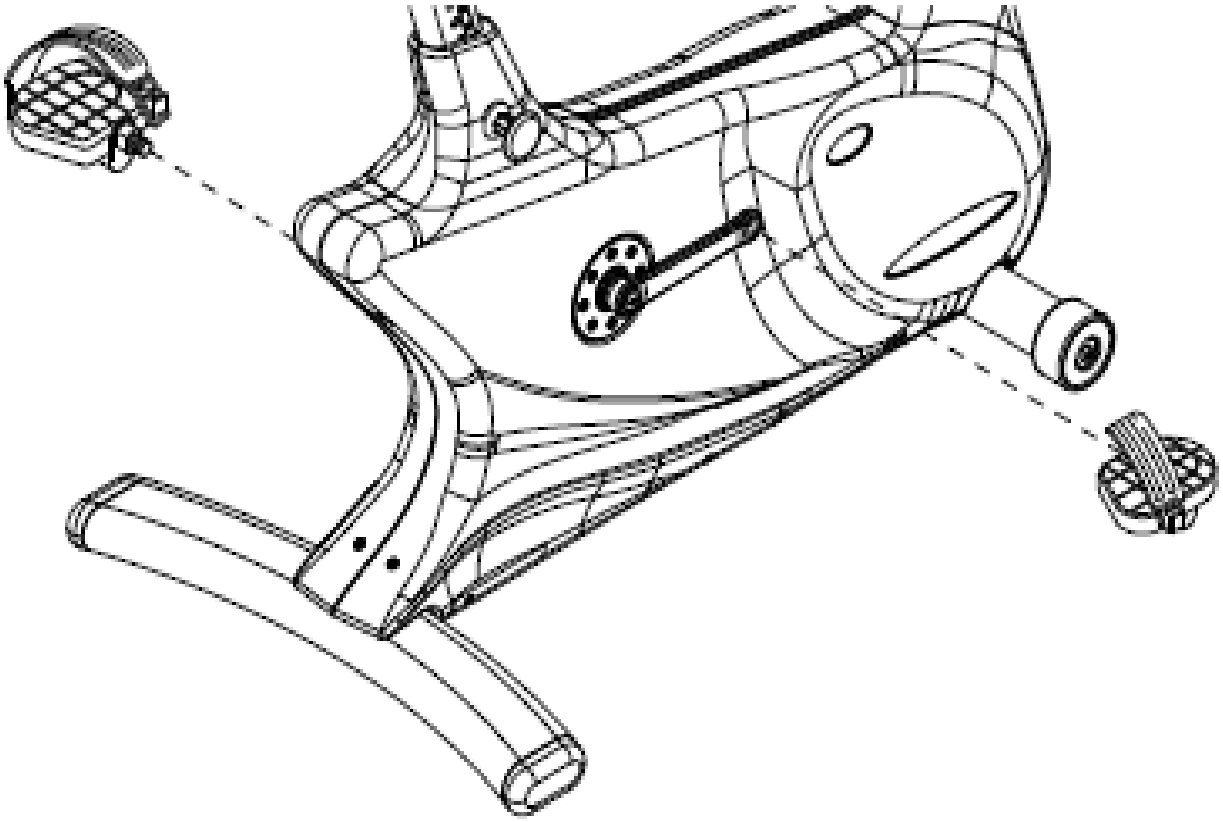


STEP 4 - YELLOW BAG

1) Remove the four mounting bolts from the back of the console and four screws holding the console back cover on with the Phillips Screwdriver. Plug in the wire harness and the two heart rate wires to the back of the console. Attach the console to the console mast with the four bolts removed earlier in this step.
2) Plug in the 9 volt battery. Re-attach the console back cover with the four screws removed previously.
3) With the Phillips Screwdriver, remove the 2 bolts located half way up the console mast. Attach the accessory tray to the console mast the two bolts. ***NOTE: Fix the accessory tray firmly to the console mast, but DO NOT over-tighten the bolts.***

8.3 ASSEMBLY INSTRUCTIONS - CONTINUED

STEP 5

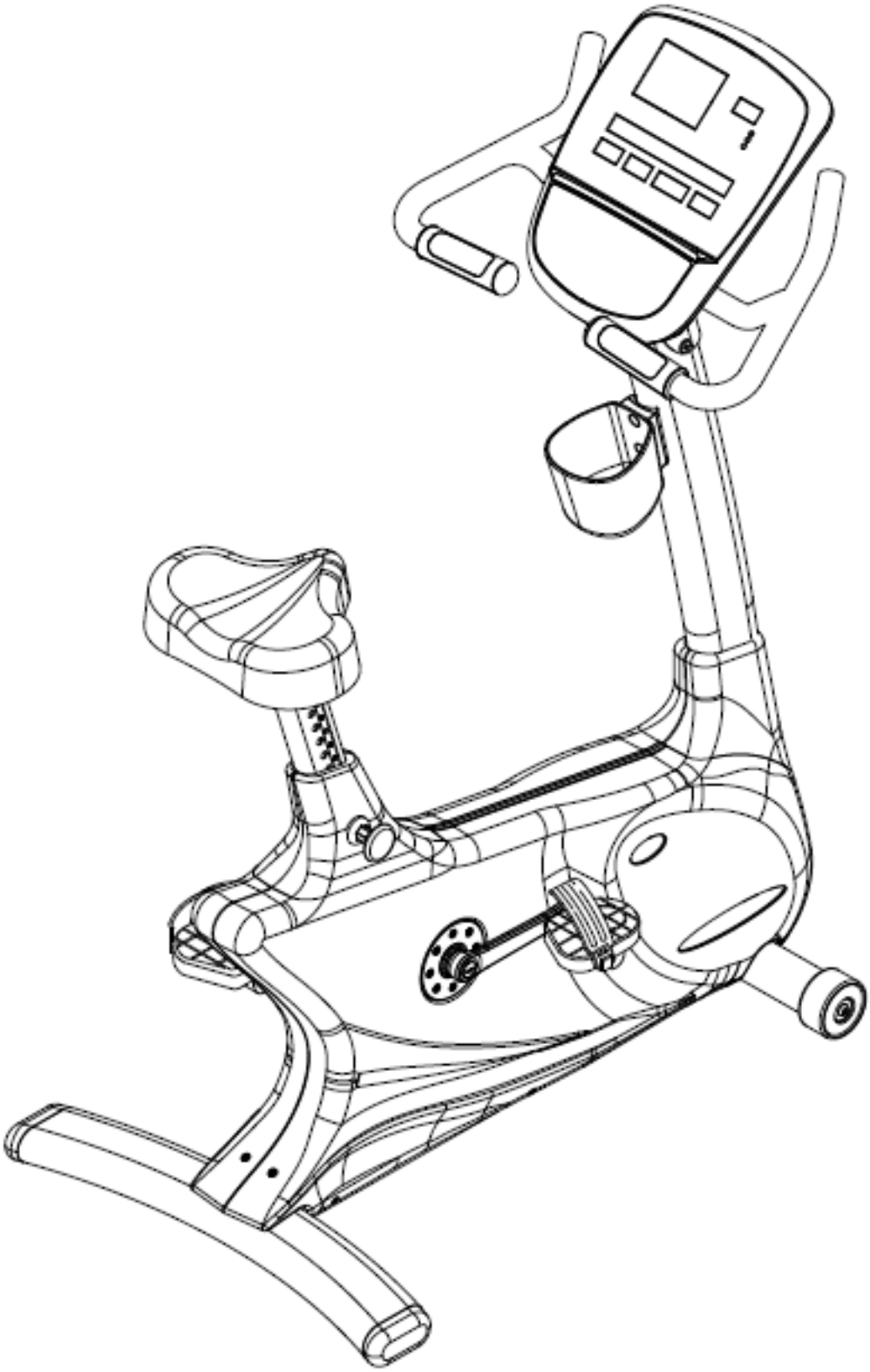


STEP 5 - PEDAL

1) Attach the pedals to the crank and tighten them using the 15mm Pedal Wrench. Tighten the pedal as tight as possible (it is impossible to over-tighten the pedal).

8.3 ASSEMBLY INSTRUCTIONS - CONTINUED

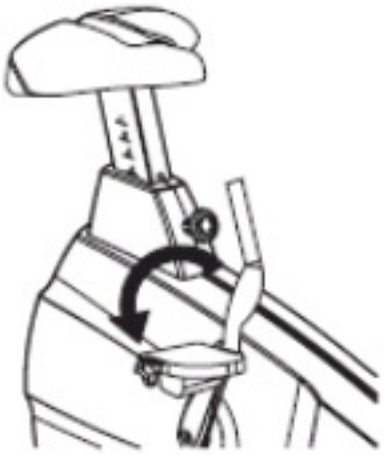
FINAL ASSEMBLY



8.4 ADJUSTING THE PEDAL STRAPS AND SEAT

ADJUSTING THE PEDAL STRAPS

The straps are designed to fit your individual foot size and should be adjusted tight enough to keep your foot from slipping. The pedals include spring loaded clips for easy adjustment. To tighten the strap, pull down the open end of the strap. To loosen the strap, push down on the top of the clip and pull the strap up. Release the clip to lock the strap in place.



ADJUSTING THE U60 SEAT

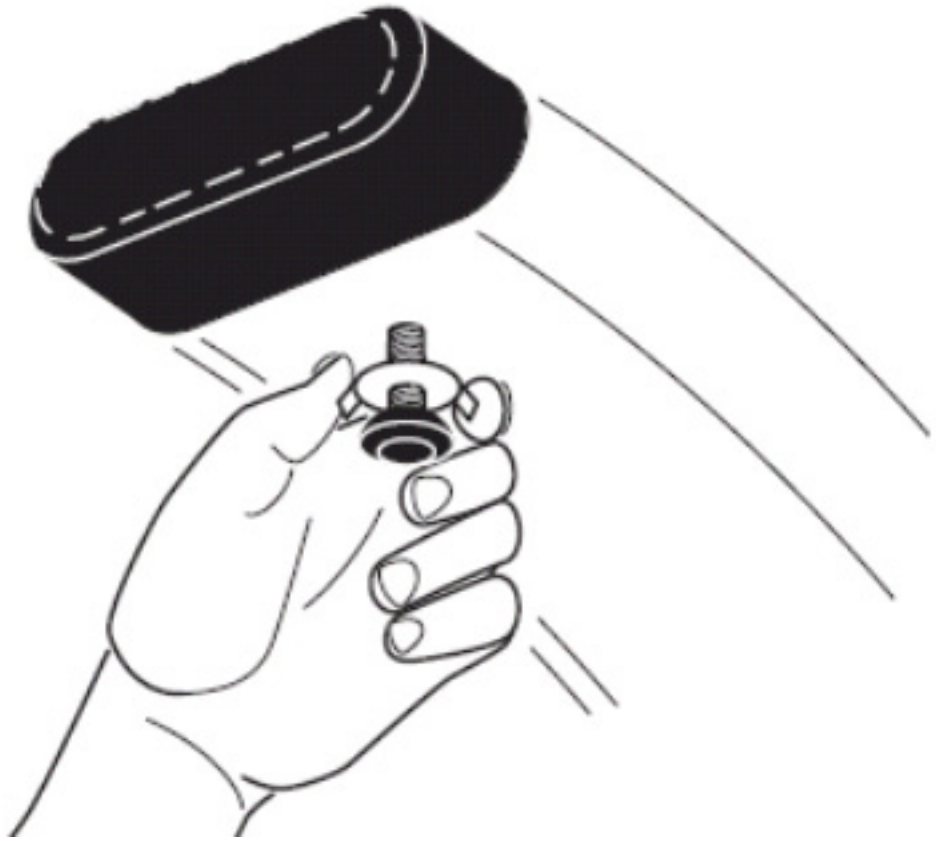
The U60 bike uses a simple pull pin adjustment knob to adjust the seat height. To adjust the seat, grab hold of the seat and pull the seat post knob out. Raise or lower the seat to its desired position and release the seat post knob. Push down on the seat to make sure that the pin is secure in the seat rail.

To determine the proper seat position, sit on the seat and position the ball of your foot on the center of the pedal. Your knee should bend slightly at the furthest pedal position. You should be able to pedal without locking your knees or shifting your weight from side to side.

8.5 LEVELING THE BIKE

STABILIZING THE VISION FITNESS U60 BIKE

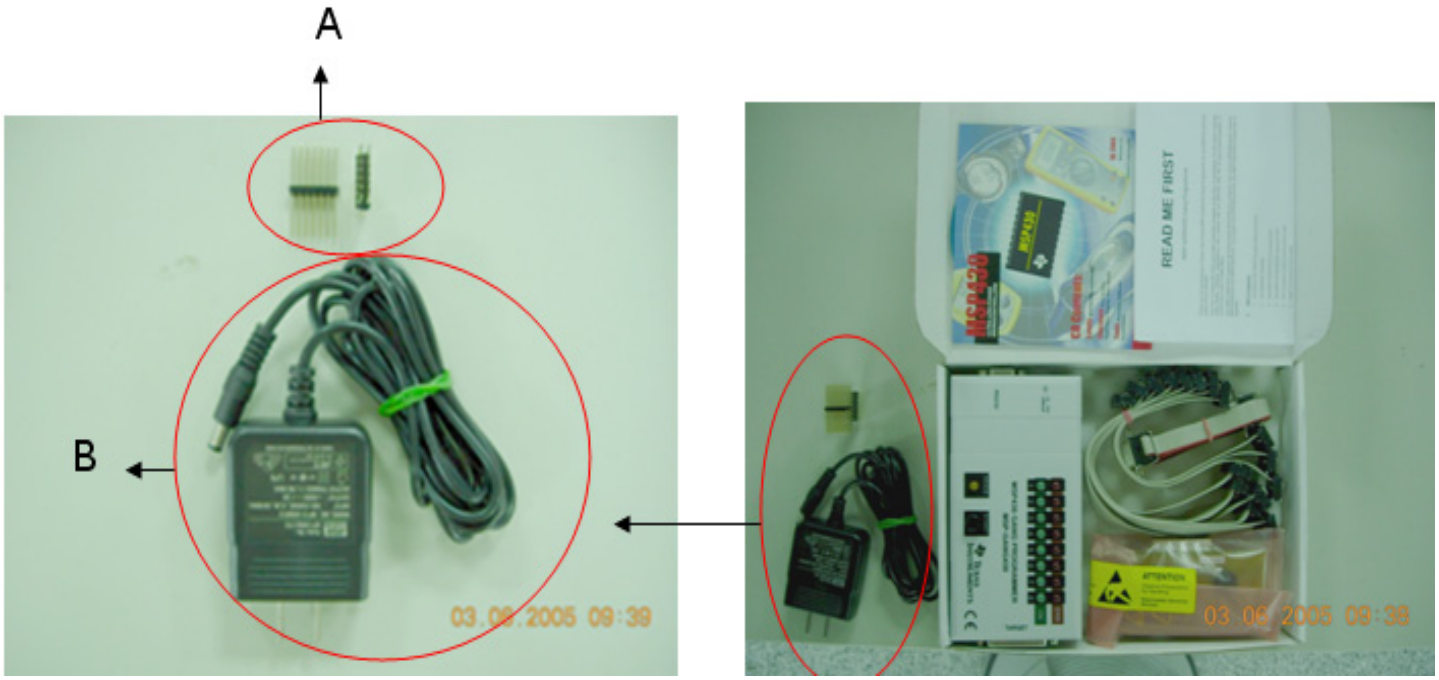
After positioning the bike in its intended location, check its stability by attempting to shake it side to side. Shaking or wobbling indicates that your bike needs to be leveled. Determine which leveler is not resting completely on the floor. Loosen the nut with one hand to allow the leveler to rotate. Rotate the left or right leveler, and repeat the adjustment as necessary until the bike is stable. Lock the adjustment by tightening the nut against the rear foot support.



9.1 SOFTWARE UPGRADE INSTRUCTIONS

PARTS NEEDED:

1. MSP-FET430 Gang Programmer
2. Part # MTOOL-039
3. Software



A: 14 Pin B: Power Supply Specification 8-15V 300MA MSP-FET430 TOOLS

1) Connect the MSP-GANG430 hardware, PC, and console as shown in Figure A.

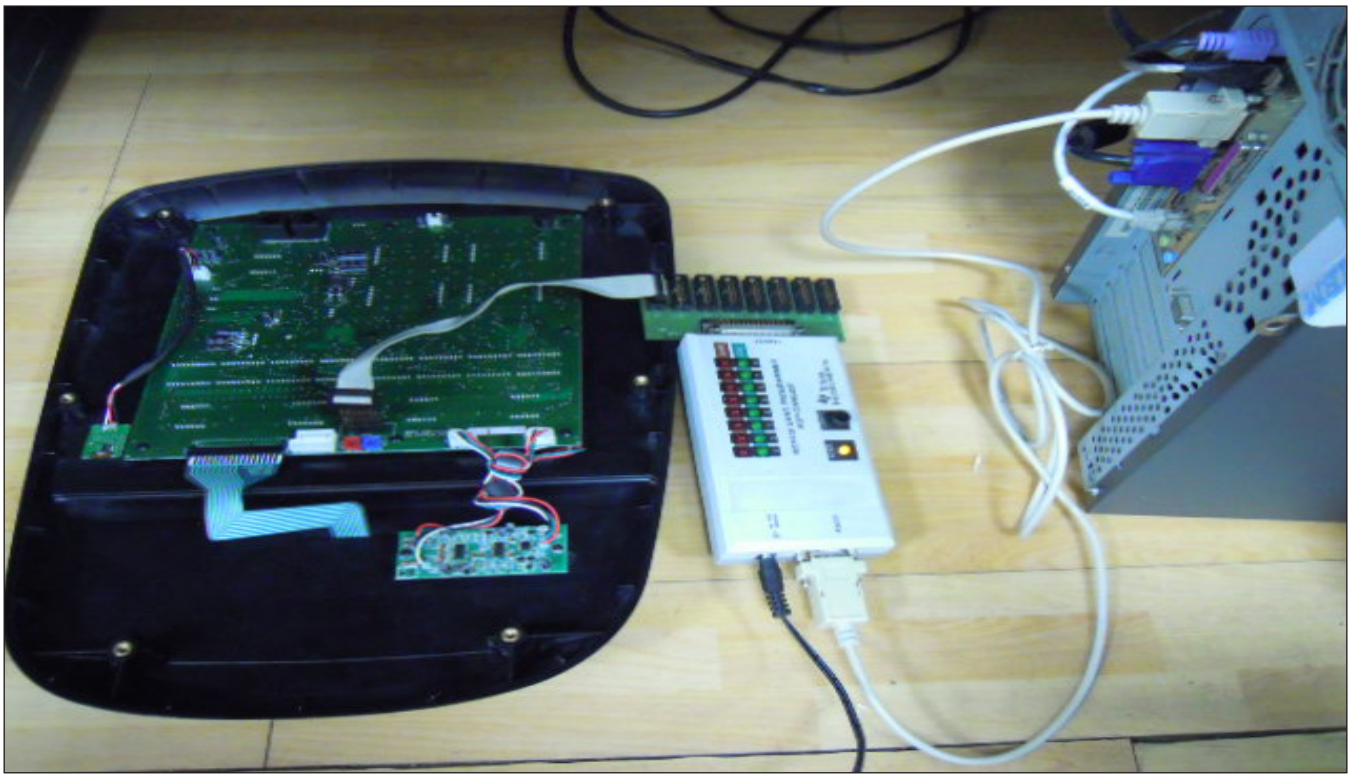


FIGURE A

9.1 SOFTWARE UPGRADE INSTRUCTIONS - CONTINUED

2) Click on the GANG430 icon located in the program group specified during installation of the software (the default group is ADT430). The MSP430 FLASH Gang Programmer GUI is shown in Figure B as displayed on the screen.

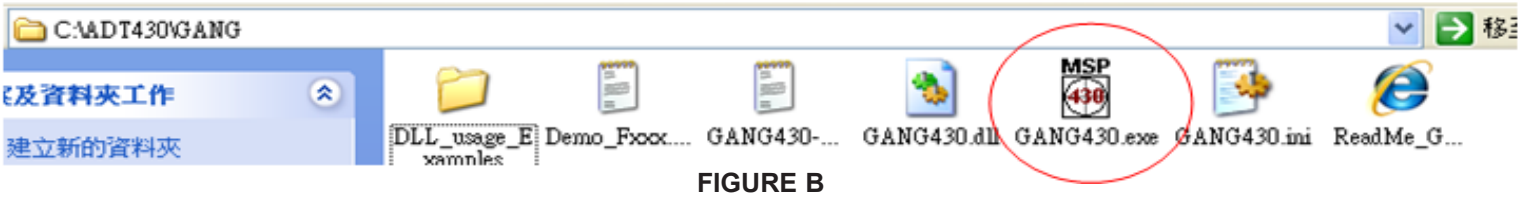


FIGURE B

The status message in the GUI displays the message "MSP-GAMG430 Gang Processor connected." If this message is not displayed, check the COM Port selection in the communication settings of the PC and the MSP-GANG430 connections.

3) Follow Steps 3.1 through 3.8 to set up the parameters as shown in Figure C.

3.1. Select the H/W Self Test function on the Maintenance Menu.

3.2. This selects the PC serial port used to communicate with the MSP-GANG430.

3.3. Select the required device using the Device Type Menu.

3.4. Select the console software file to be programmed into the MSP-GANG430 using the File Name Menu. The format that is supported for console software is TI TXT (.txt).

3.5. Use the Load Image Button to download the console software file to the MSP-GANG430 as shown in Figure A.

3.6. Select the supply voltage for the console from MSP-GANG430.

3.7. Select the options in Main Process as required.

3.8. When you install the first console, please connect MSP-GANG430 with the computer. Click on the Start button in the Main Process section to start the console install. The progress and completion of the operation are displayed in the Status section.

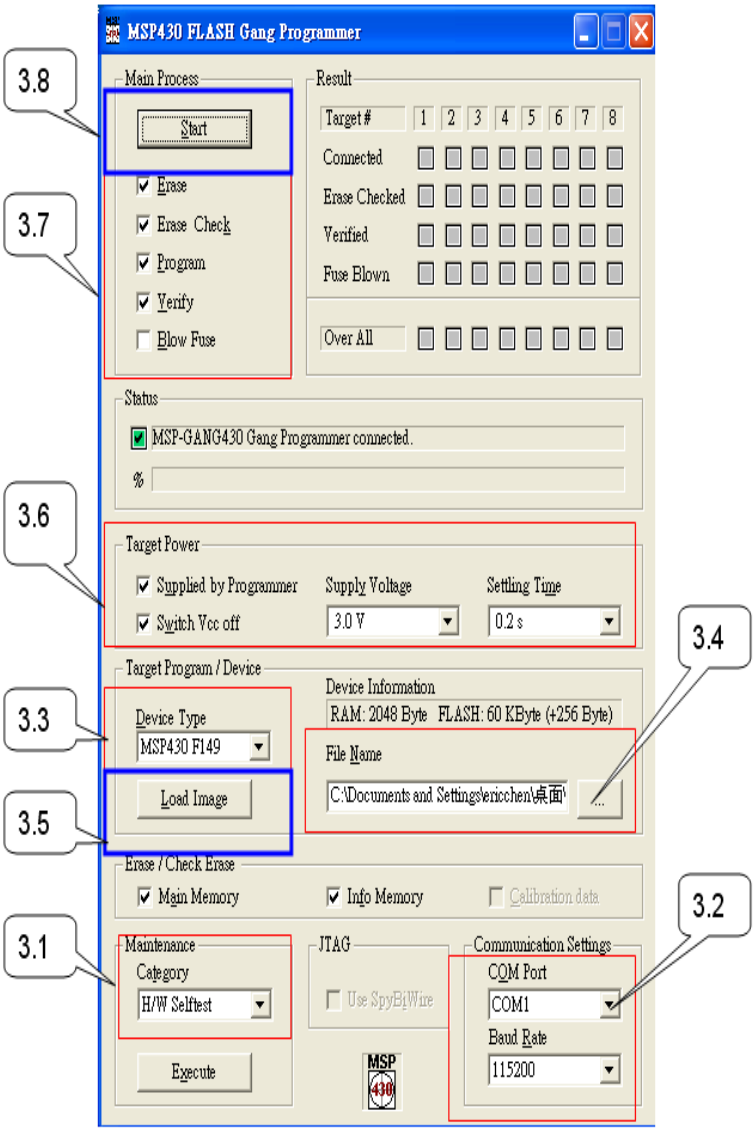


FIGURE C

9.1 SOFTWARE UPGRADE INSTRUCTIONS - CONTINUED

4) After the first console installation is finished, you can remove the RS232 cable from the PC to MSP-GANG430 as shown in Figure D. Upgrade the other consoles using MSP-GANG430 as shown in Figure E. Press the MSP430 Start button, the "MODE" LED will glitter for about 10 seconds. If the upgrade is complete, the OK green LED will light as shown in Figure F.

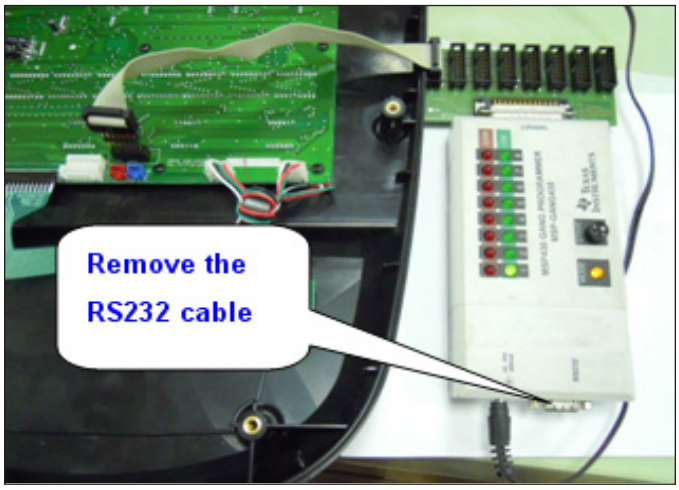


FIGURE D

FIGURE E

FIGURE F

5) Install the console to the frame. Then pedal the bike to provide power to the console. Enter into Manager Mode (see Section 5.1) to confirm that the software had been installed / upgraded correctly. Also check to make sure that the Machine Type is correct.
6) Test the bike for function as outlined in Section 7.20.

NOTES

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