IT ALL STARTS WITH A VISION

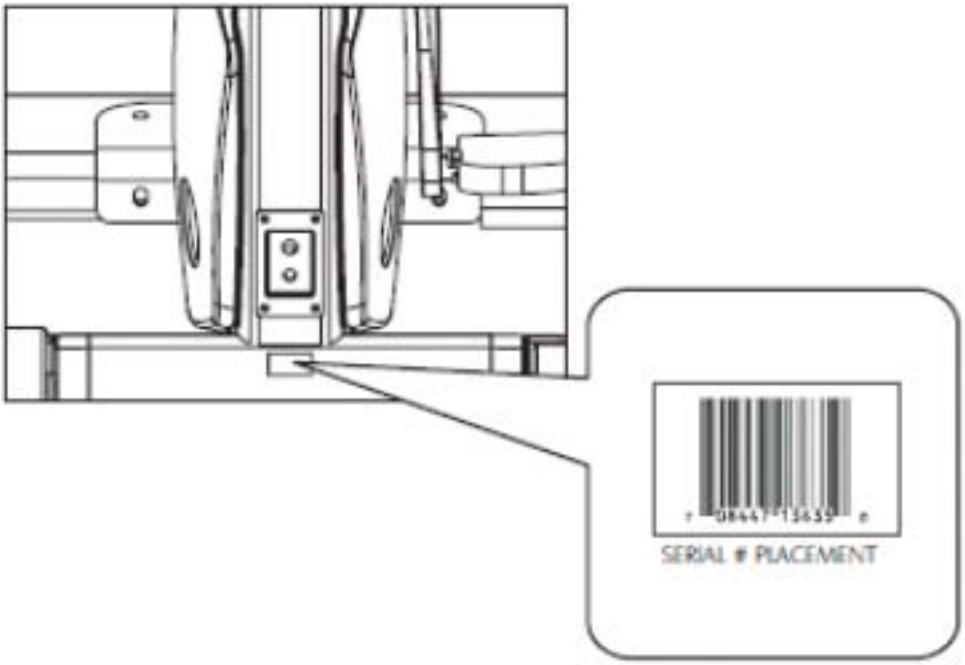
S70 SUSPENSION ELLIPTICAL
SERVICE MANUAL

TABLE OF CONTENTS

TABLE OF CONTENTS

CHAPTER 1: SERIAL NUMBER LOCATION

1.1 SERIAL NUMBER LOCATION



CHAPTER 2: IMPORTANT SAFETY INSTRUCTIONS

2.1 BEFORE GETTING STARTED

The Vision Fitness S70 Suspension Elliptical is intended for commercial use. To ensure your safety and protect the equipment, read all instructions before operating the Suspension Elliptical.

CHOOSING A SITE

The site should be well lit and well ventilated. Locate the Vision Fitness S70 Suspension Elliptical on a structurally solid and flat surface. The Suspension Elliptical should have a clearance of 20" behind the unit, and 12" on either side from the wall or other equipment. This zone is to allow easy access to the Suspension Elliptical 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.

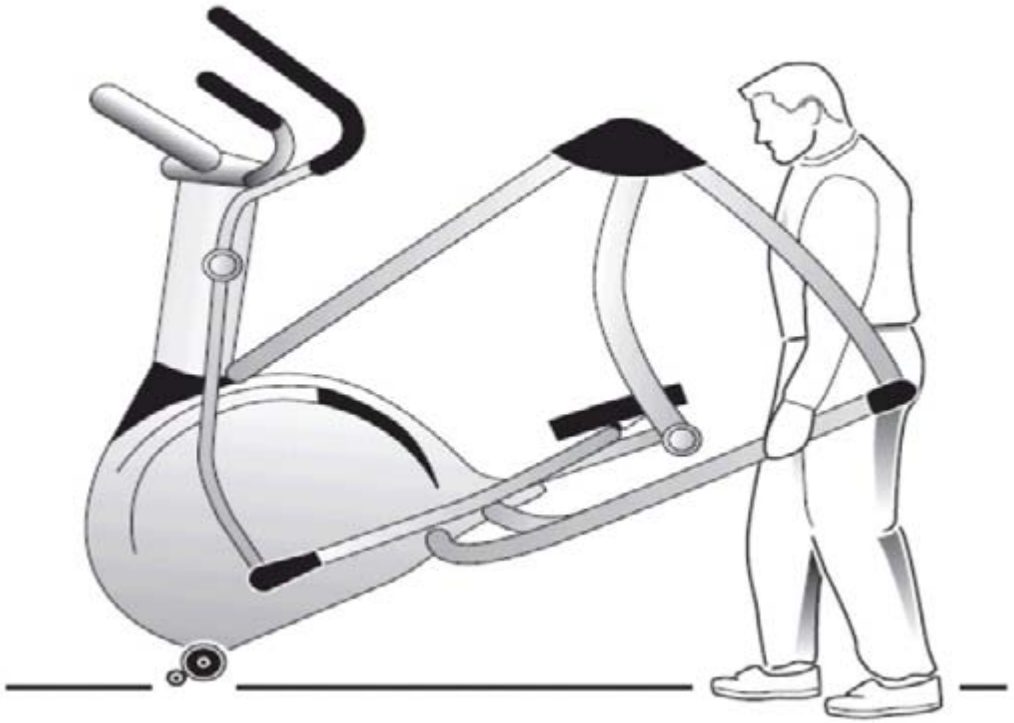
Please do not place the Vision Fitness S70 Suspension Elliptical in an area of high humidity, such as the vicinity of a steam room, indoor pool, or sauna. Exposure to intensive water vapor or chlorine could adversely affect the electronics, as well as other parts of the machine.

MOVING THE SUSPENSION ELLIPTICAL

Your Vision Fitness S70 Suspension Elliptical has transport wheels included for ease of mobility. To move your Suspension Elliptical, firmly grasp the rear of the frame assembly. Carefully lift and roll on the transport wheels.

CAUTION:

Vision Fitness Suspension Ellipticals are well built and heavy, use care and additional help if necessary. This Suspension Elliptical can weigh up to 340 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 S70 Suspension Elliptical.

To ensure proper use of the Vision Fitness S70 Suspension Elliptical, 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 Suspension Elliptical 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 Suspension Elliptical is in use, young children and pets should be kept at least 3 meters / 10 feet away.**

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

*** Never face backward while using the Vision Fitness S70 Suspension Elliptical.**

*** Use the stationary handlebars when mounting or dismounting the Suspension Elliptical.**

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

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

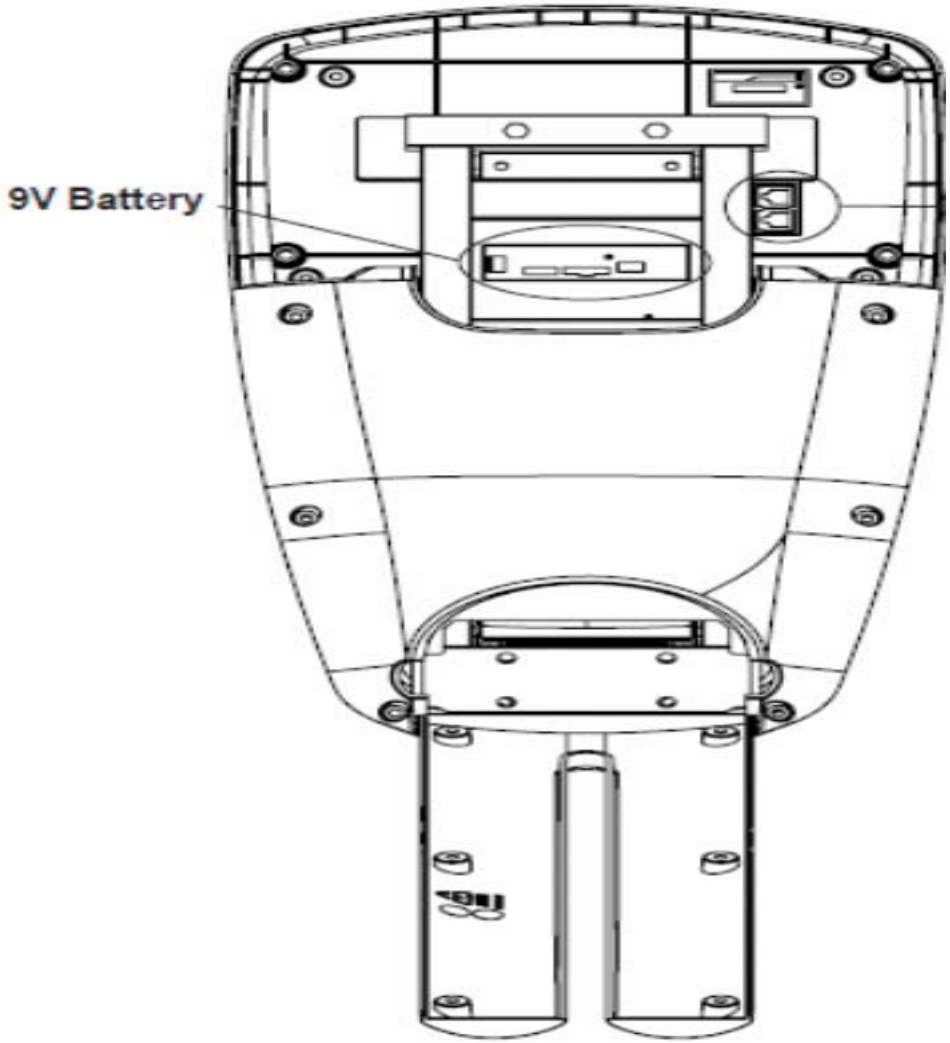
CAUTION! Any changes or modifications to this equipment could void the product warranty.

2.3 ELECTRICAL REQUIREMENTS

SELF POWERED FEATURES:

The Vision Fitness S70 Suspension Elliptical is a self-powered unit, requiring no external power source. When a user strides at a speed above 20 strides per minute, the power is generated to allow the Suspension Elliptical to function properly. Because of this self-generating feature, the console feedback will fade away when you cease striding. The console does use a 9 volt battery as a backup to save your feedback information for 30 seconds from the time you stop striding. If you resume striding 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 S70 Suspension Elliptical

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, arms, console, heart rate grips, and the handlebars 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, or if it seems to twist more freely in one direction than another.
- 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 (the shank needs to be at least 10" long due to the shroud stand offs)
* Set of Metric Wrenches (13, 15, 17, and 19 are the most common sizes needed)
* 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 Suspension Elliptical 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, grips, pedals, and shrouds for damage.

2) Adjust leveling feet if equipment rocks or wobbles.

3) Inspect the hardware on the frame for tightness. Tighten if necessary.

QUARTERLY MAINTENANCE ITEMS

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

2) Inspect the console, grips, 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).

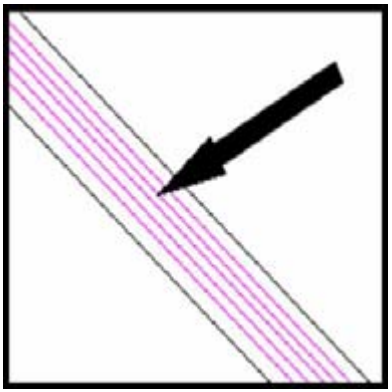


FIGURE A

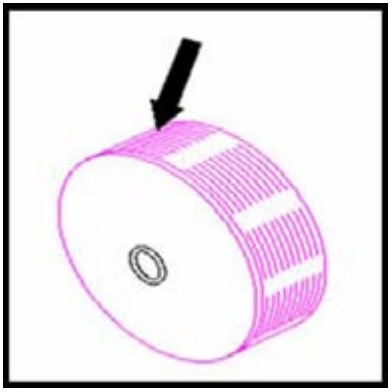


FIGURE B

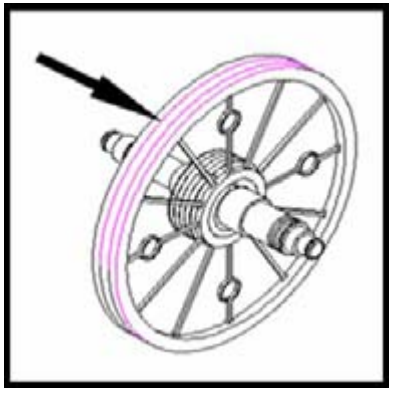
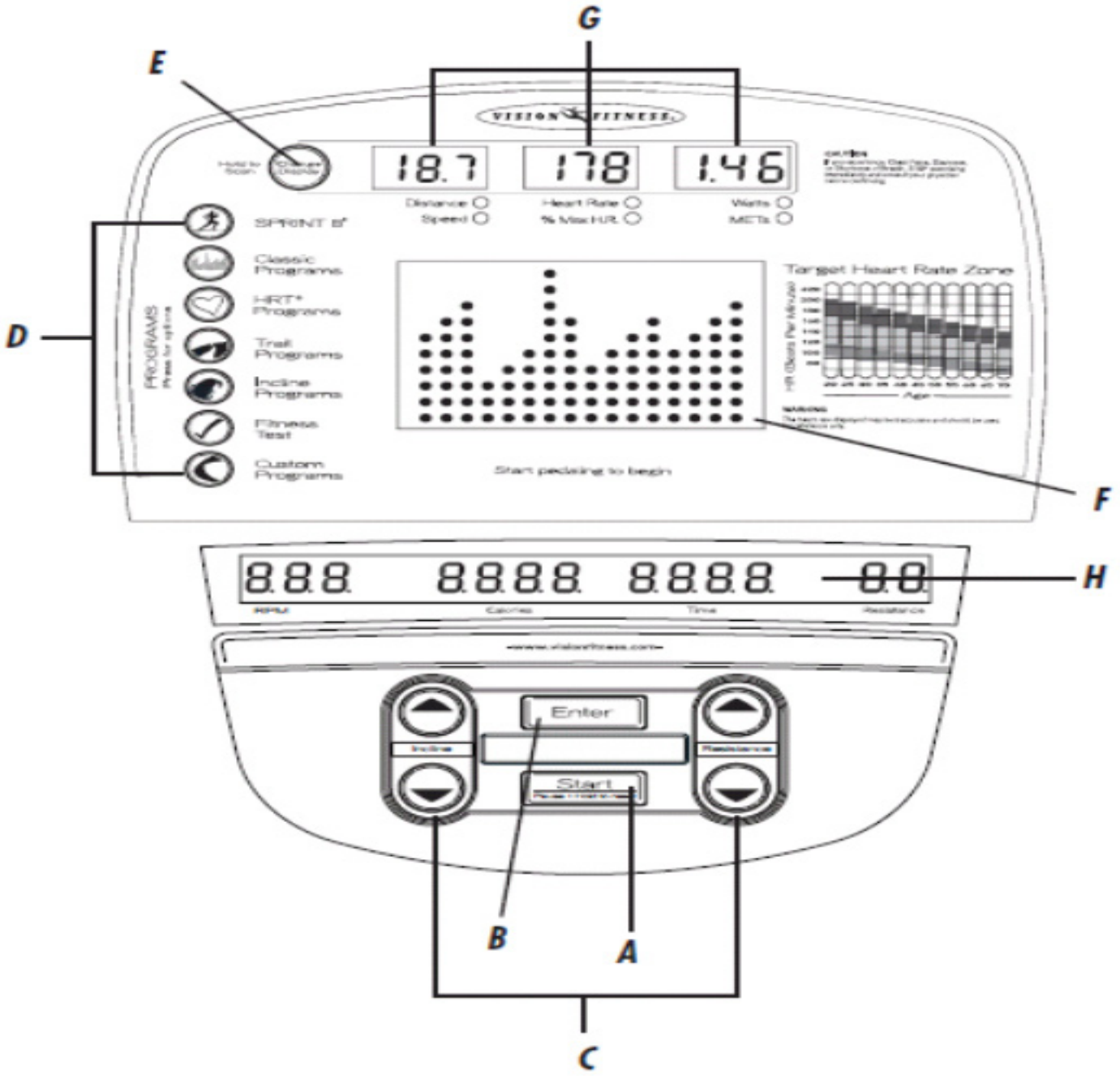


FIGURE C

CHAPTER 4: CONSOLE OVERLAY AND WORKOUT DESCRIPTION

4.1 CONSOLE DESCRIPTION



CONSOLE DISPLAY DESCRIPTIONS

A. START / HOLD TO RESET - Press the START key to begin a Manual workout immediately without having to set individual information. When the program begins, you have the ability to adjust resistance levels with the UP or DOWN ARROW keys. Feedback information will be calculated using the default settings.

PAUSE - If you need to pause your program during a workout, pressing the START key will pause your program for 30 seconds. Pressing START again will return you to your workout.

RESET - If you need to reset the console during your workout, you can do so by holding down the START key for 3 seconds or until the display resets.

B. ENTER - This key is used after entering each piece of information in setup such as age, weight, or level.

C. UP / DOWN ARROWS - These keys are used to change values in setup mode prior to your workout. During your workout, they are used to change workout levels. In HRT programs, they are used to change your target heart rate.

D. PROGRAM BUTTONS - These keys provide quick access to your favorite workouts. Press the PROGRAM keys repeatedly or use the UP or DOWN ARROW keys to select one of the multiple workouts.

E. CHANGE DISPLAY / HOLD TO SCAN - Press this key to change the display information. Press and hold the key to scan automatically between the two display options.

F. PROFILE DISPLAY - This window provides a dot matrix profile of the workout segments you are about to complete, as well as those you have already completed, and level of resistance for each segment.

G. FEEDBACK WINDOWS - These windows provide step-by-step instructions in the setup mode, instructions, feedback, and motivational messages during your workout.

SPEED - The pedaling speed in miles or kilometers per hour.

DISTANCE - The total distance traveled in miles or kilometers since the start of your workout.

WATTS - A measurement of workload. One watt is equal to six kilogram meters per minute.

INCLINE - The level of incline. There are 20 levels that represent a 23% grade change.

METS - A measurement of oxygen consumption. One MET equals the approximate amount of oxygen consumed per minute by a person at rest.

HEART RATE / HRT FEEDBACK WINDOW - This window provides feedback on your current heart rate and the percent of your predicted maximum heart rate. It also includes your target heart rate when using one of the HRT programs.

NOTE - At the end of your workout, the totals will be displayed as an average of your total workout time. The only exceptions are distance and calories which are program totals.

H. MESSAGE WINDOW - This window provides step-by-step instructions in the setup mode, instructions, feedback and motivational messages during your workout.

TIME - The time elapsed or the time remaining in your workout.

RPM - The pedal rate or revolutions per minute (RPM).

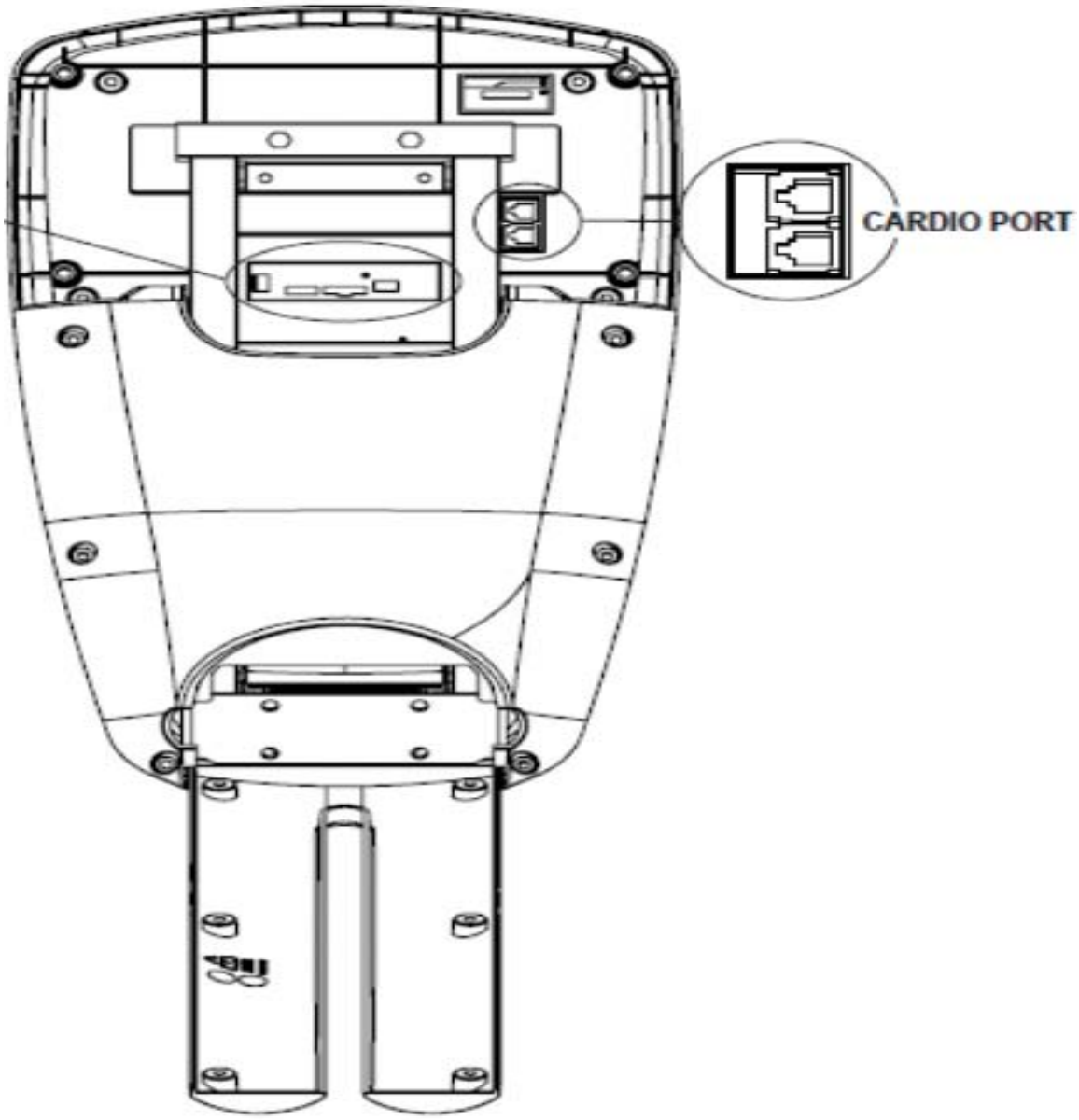
CALORIES - An estimate of calories burned since the beginning of the workout.

RESISTANCE - The current resistance level you are in.

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:

TARGET HRT - Target HRT allows you to set your target heart rate. The machine will automatically change resistance levels to keep you at your preset heart rate target. The user must grasp the hand pulse sensors or wear a telemetric heart rate chest strap during use.

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 alternated 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.

HRT HILL - HRT Hill increases your intensity level from 65% to 70% to 75% to 80% of your predicted maximum heart rate to promote cardiovascular strength and endurance.

TRAILS:

TRAIL 10K - Trail 10K is a distance based program that ends after you complete the 10K. See if you can beat your previous time!

TRAIL 15K - Trail 15K is a distance based program that ends after you complete the 15K.

TRAIL 20K - Trail 20K is a distance based program that ends after you complete the 20K.

INCLINE PROGRAMS

GLUTE BURN - Glute Burn is a challenging program designed to tone the lower half of the body. This program includes incline changes and user prompts for maximum effectiveness.

SUMMIT HIKE - Summit Hike is a variable incline program that adds variety and targets your muscles from different angles.

MOUNTAIN TREK - Mountain Trek is an incline based workout to simulate running up a mountain trail. You set your desired Incline and Resistance Level and get ready for an intense workout.

STAIR CLIMB - Stair Climb is an incline based workout that will give you a similar workout to climbing stairs. Your Quads will get a great workout. Set your desired Incline and Resistance Levels and get climbing.

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.

SPRINT 8 - Sprint 8 is an anaerobically based interval program. It is effective in recruiting fast twitch muscle fibers and improving athletic performance.

FITNESS TEST - Fitness Test is a heart rate based fitness test. The test lasts 5 minutes and is based on your V02 level and maximum heart rate achieved to provide an accurate fitness level. This is a great program to track your increase in fitness levels. The user must grasp the hand pulse sensors or wear a telemetric heart rate chest strap during use.

CUSTOM PROGRAMS - Custom 1-5 allows the user to preset up to 5 workout profiles. You have the ability to save or change the workouts whenever you wish. During initial setup, the program will function as a Manual program. Change your resistance levels as you want. At the end of the workout, the console will ask if you would like to save your workout. Press and hold ENTER to save the workout you just completed.

USING THE PROGRAMS

SELECTING QUICK START - The easiest way to begin exercising is to simply press the START 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 button (Figure B). Some programs buttons 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.

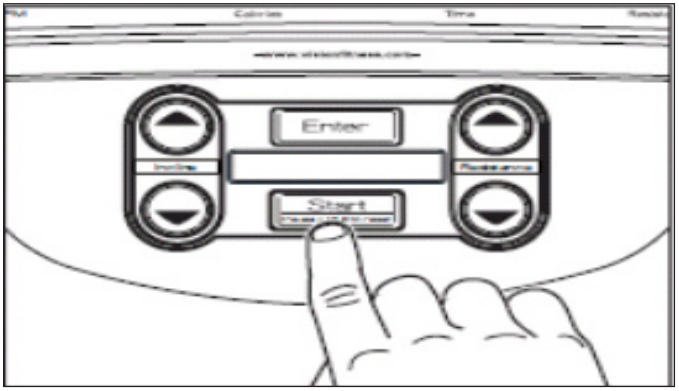


FIGURE A

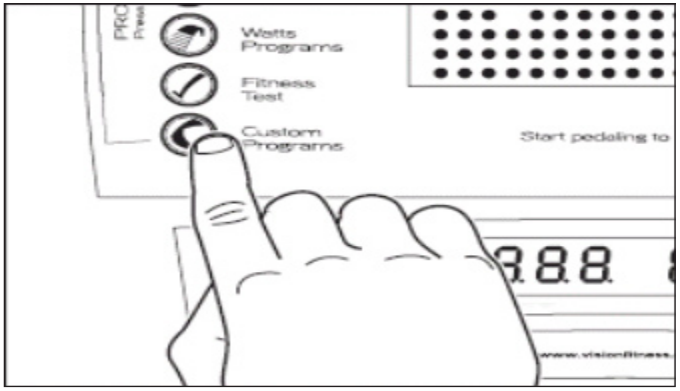


FIGURE B

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).

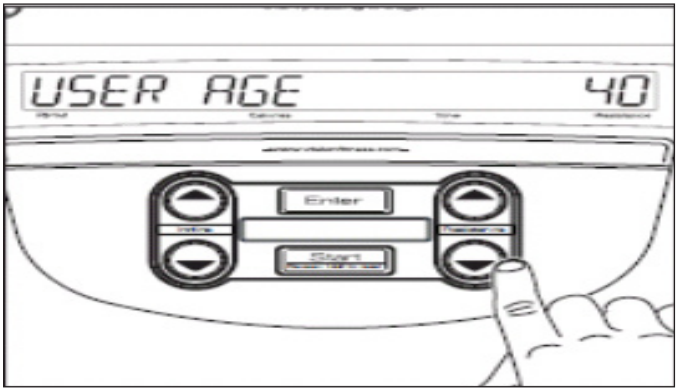


FIGURE C

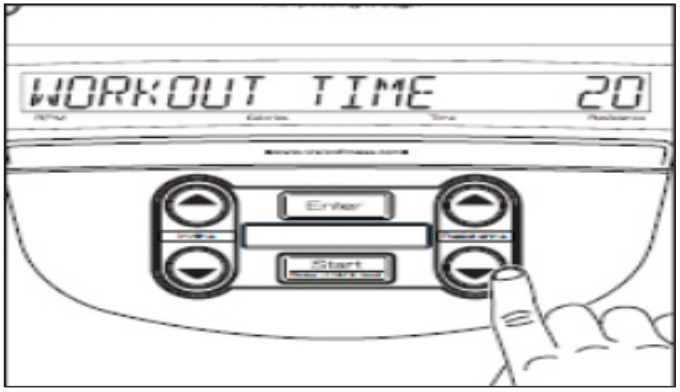


FIGURE D

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 20 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.

ENTERING WATTS - The Watts program will ask you to set the desired watt level instead of resistance levels. The Watts level will range from 40 to 250 in increments of five.

ENTERING TARGET HRT - The HRT programs will set your target heart rate in the place of resistance level. The console will display your target heart rate and give you the opportunity to adjust this value if you wish.

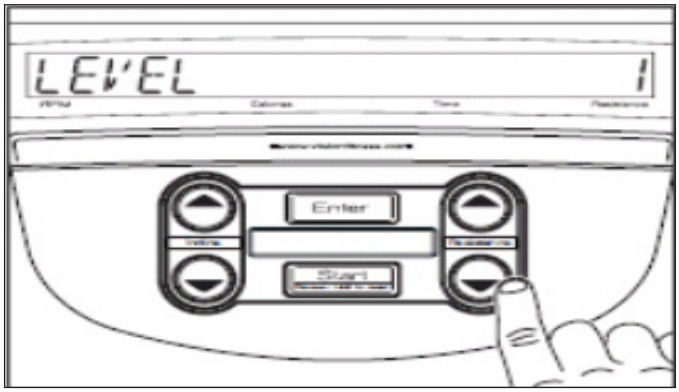


FIGURE E

FIGURE F

SPRINT 8 - The Sprint 8 program is an aerobic interval program designed to build muscle, improve speed, and naturally increase the release of Human Growth Hormone (HGH) in your body. Producing HGH through exercise and a proper diet has been shown as an effective way to burn fat and build lean muscle mass according to Phil Campbell, author of Ready, Set, GO! Synergy Fitness. Please go to Mr. Campbell's website, www.readysetgofitness.com for more details about this radical new approach to fitness.

The Sprint 8 program features intense sprint intervals followed by recovery intervals. The program includes the following phases:

1) WARM UP should gradually increase your heart rate and increase respiration and blood flow to working muscles. The warm up is controlled by the user to meet your specific needs.

2) INTERVAL TRAINING starts immediately after the warm up with a 30 second sprint interval. Seven recovery intervals of one minute and 30 seconds will alternate with the eight 30 second sprint intervals. The message display will prompt you to increase your pedal rate during the sprint interval and decrease pedal rate during the recovery interval. A difference of 30 to 50 RPM between interval and recovery interval is recommended.

3) COOL DOWN helps return your body's systems to resting levels. Less demand is placed on your heart during recovery if an appropriate cool down is used following the exercise.

Due to the fact that Sprint 8 is a specialized program, total workout time is not displayed during the program. The interval time is displayed in the time window instead. It takes only 20 minutes to complete the Sprint 8 workout.

CHAPTER 5: ENGINEERING MODE

5.1 ENGINEERING MODE

The Engineering Mode allows the club owner to customize the Suspension Elliptical for the club.

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

2) The console will beep 3 times and enter into the Engineering Mode menu.

3) To scroll through the list of options in Engineering Mode, use either set of UP and DOWN ARROW 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 either set of UP and DOWN ARROW keys.

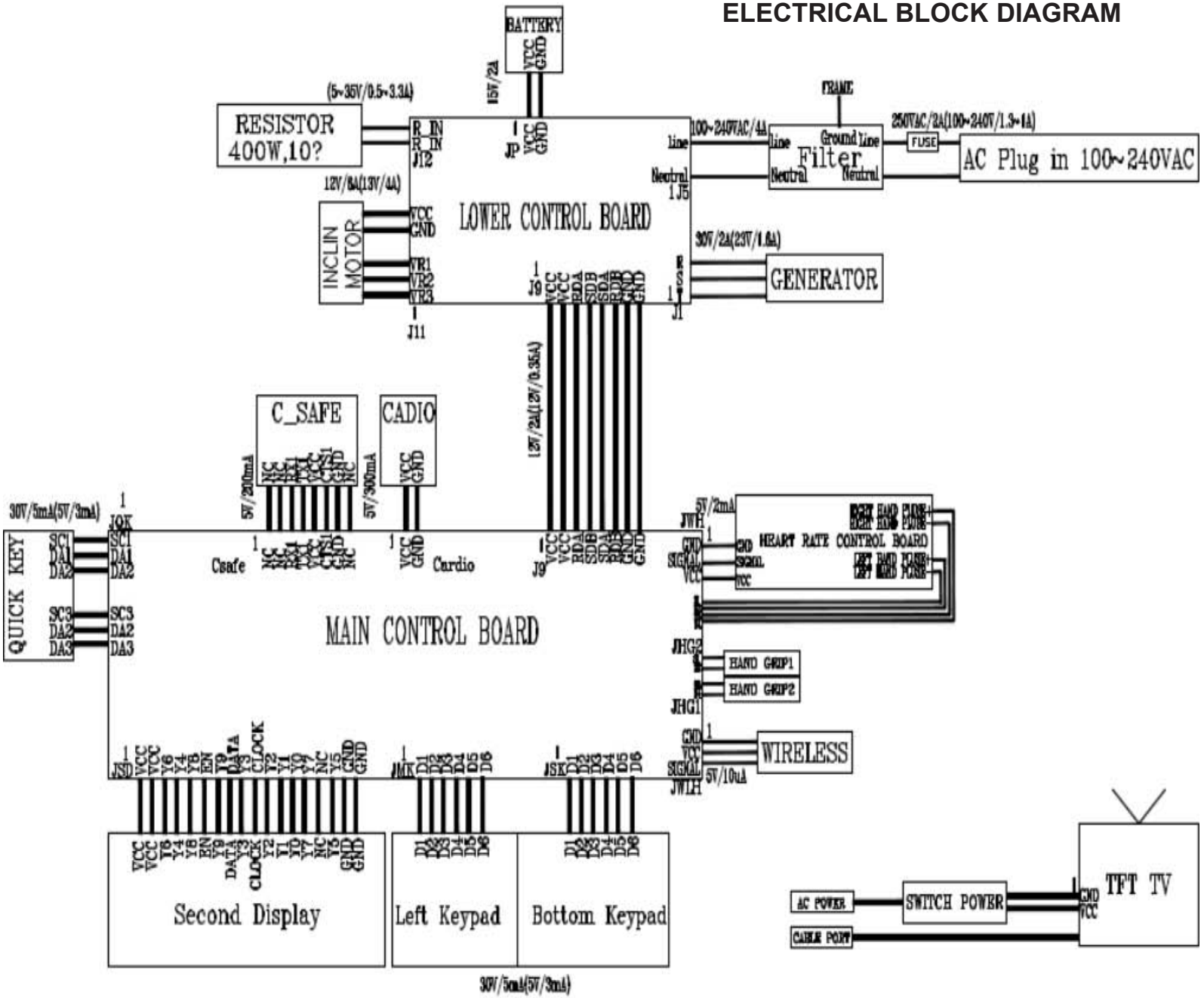
6) To confirm and save the value of the setting, press and hold ENTER for 3 seconds.

7) To back out of a setting or to exit the Engineering Mode, press and hold START for 3 seconds.

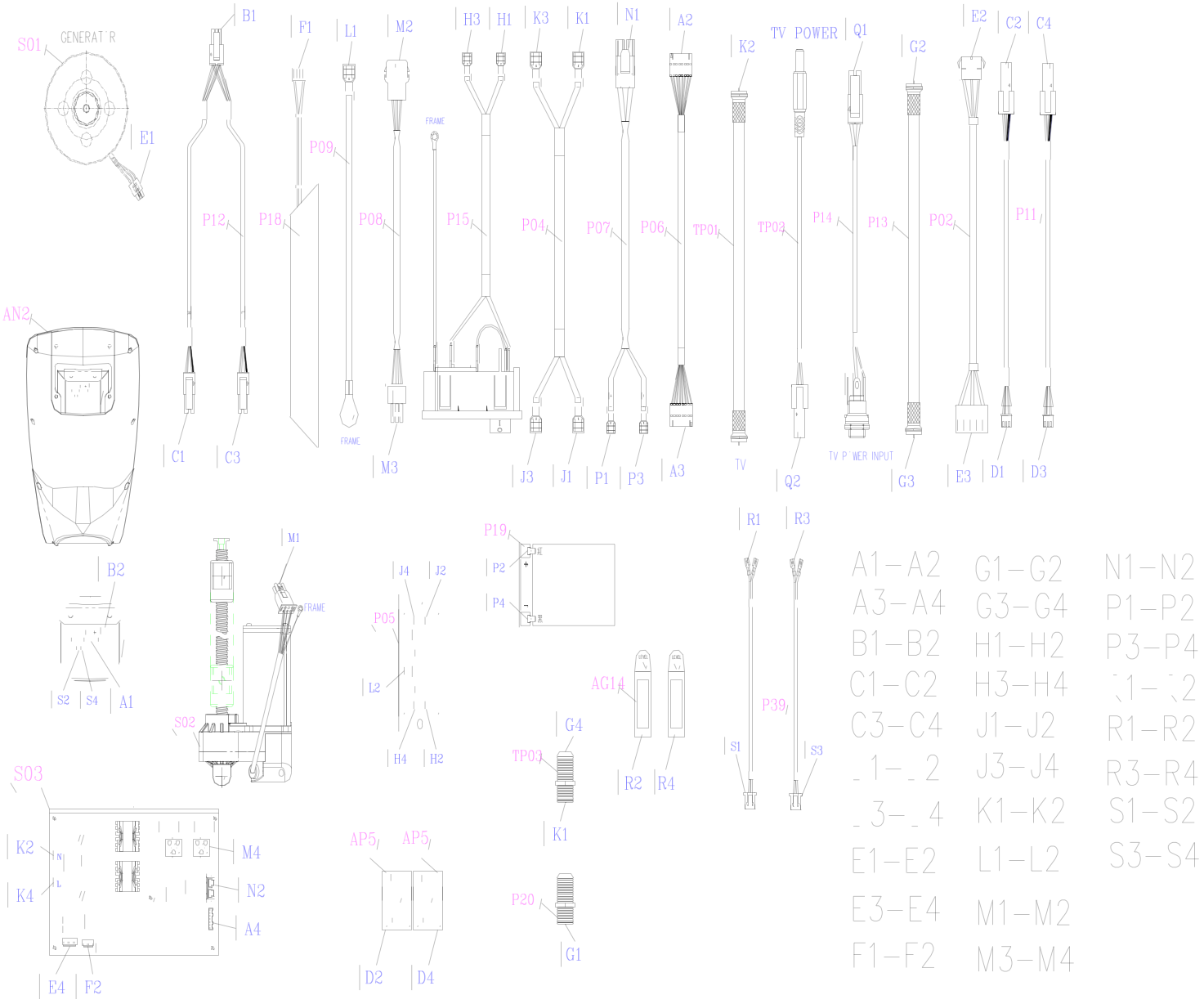
CUSTOM SETTINGS	DEFAULT	MINIMUM	MAXIMUM	DESCRIPTION
MAX TIME	99	5	99	Maximum workout duration.
USER TIME	60	5	99 (LIMITED TO MAX TIME SETTING)	Default start time in all programs.
DEFAULT AGE	40	10	100	Default age used for all programs.
DEFAULT WEIGHT	150	80	400	Default weight used for all programs.
DEFAULT LEVEL	1	1	20	Default level used for all programs.
DEFAULT GENDER	MALE	FEMALE	MALE	Default gender used for all programs.
UNIT	MILE	KM	UNIT	Sets the unit to miles or kilometers.
MACHINE	ELLIPTICAL	BIKE	ELLIPTICAL	Sets the machine to Bike or Elliptical mode.
ACCUMULATED TIME	-	-	-	Shows the total time on the Suspension Elliptical in hours.
ACCUMULATED DISTANCE	-	-	-	Shows the total distance on the Suspension Elliptical in miles or kilometers.
DISPLAY TEST	-	-	-	Used by service technicians to test the LED displays.
MACHINE TEST	-	-	-	Used by service technicians to test mechanical and CSafe functions.
KEYPAD TEST	-	-	-	Test to ensure that all buttons are functioning properly.
VERSION	-	-	-	Displays current software version.
LANGUAGE	-	-	-	Sets the language that the prompts use in the instruction center.
INCLINE CAL	-	-	-	Calibrates the incline of the unit.
INCLINE HOMING	ON	OFF	ON	Enables or disables the automatic reset of incline after a workout.

6.1 ELECTRICAL DIAGRAMS

ELECTRICAL BLOCK DIAGRAM

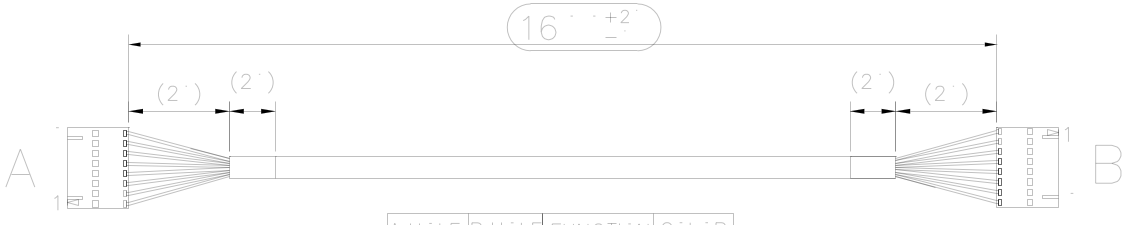


6.1 ELECTRICAL DIAGRAMS



6.1 ELECTRICAL DIAGRAMS

P06 - CONSOLE CABLE



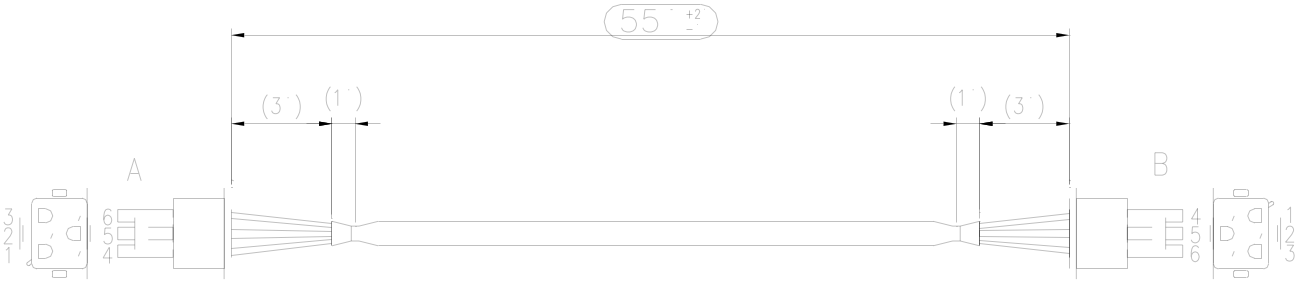
M LEX,5 -57-94 (PITCH 2.54mm)
Terminal:M LEX,16- 2- 7

A.H LE	B.H LE	FUNCTI N	C L R
1	1	12V	紅
2	2	12V	
3	3	R_A	
4	4	N/C	
5	5	N/C	
6	6	R_B	
7	7	GN_	黑
		GN_	

M LEX,5 -57-94 (PITCH 2.54mm)
Terminal:M LEX,16- 2- 7

6.1 ELECTRICAL DIAGRAMS

P08 - INCLINE MOTOR WIRE

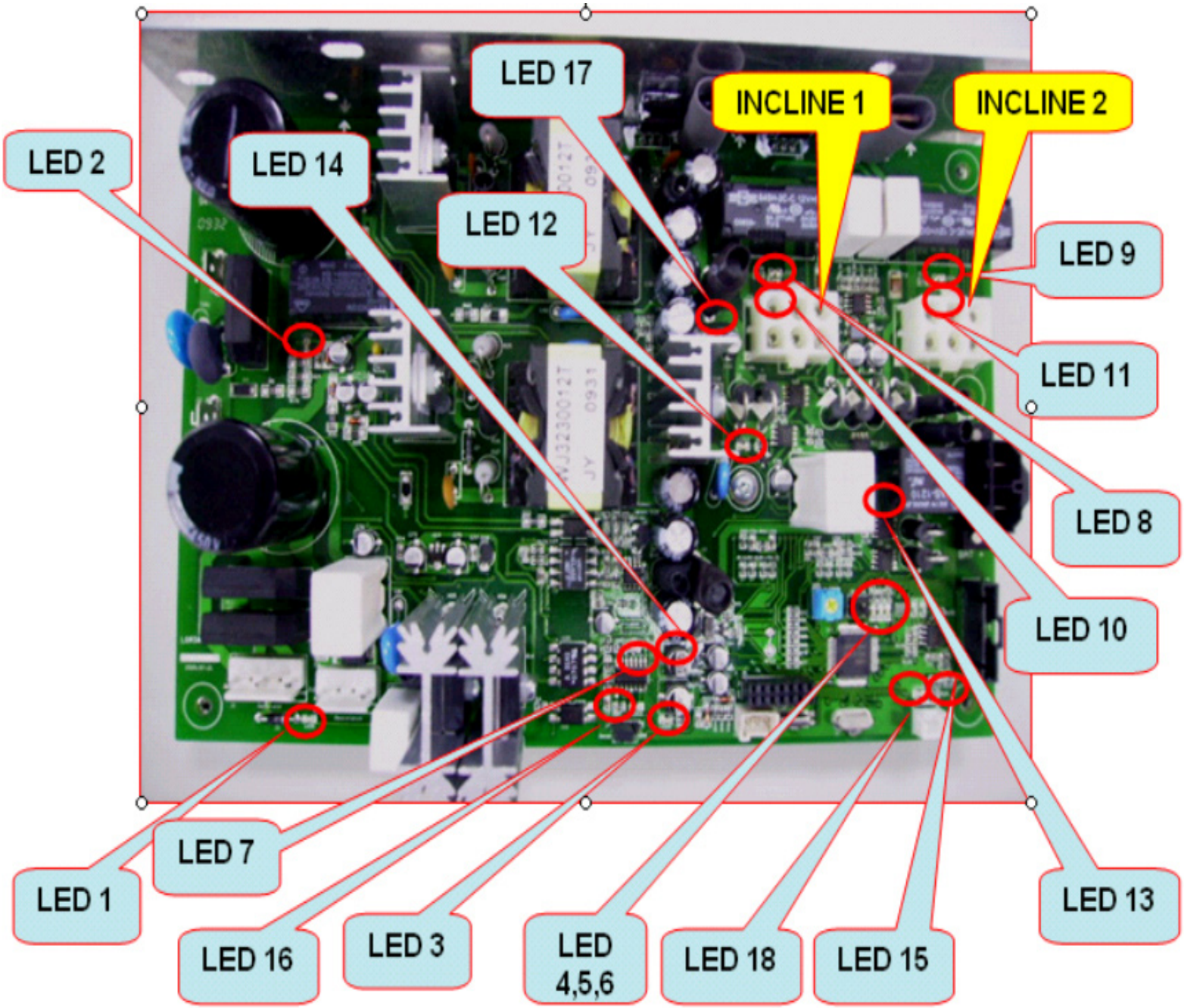


M*LEX, *5*-*4-1*6*
(PITCH6.35mm)

A:H*LE	B:H*LE	C:H*LE	FUNCTI*N
1	1		VCC
2	2		A_C
3	3		GN_
4	4		M*T*R+(R)
5	5		NC
6	6		M*T*R-(B)

M*LEX, *5*-*4-1*6*
(PITCH6.35mm)

6.2 LOWER CONTROL BOARD LEDS



6.2 LOWER CONTROL BOARD LEDS - CONTINUED

LED #	Color	Descriptions	LED #	Color	Descriptions
LED 1	Red	Generator RPM	LED 10	Green	Incline 1 Down
LED 2	Red	AC Plug In	LED 11	Red	Incline 2 Down
LED 3	Green	Vcc (5V)	LED 12	Yellow	Charging (PWM)
LED 4	Red	Status Indicator (see below)	LED 13	Red	40 HR Discharging
LED 5	Red	Status Indicator (see below)	LED 14	Green	12V/6A Main Power
LED 6	Red	Status Indicator (see below)	LED 15	Green	Console Power
LED 7	Yellow	PWM-Resistance	LED 16	Red	E_RPM-Extra Power
LED 8	Green	Incline 1 Up	LED 17	Green	15V/8A Charge Power Source
LED 9	Red	Incline 2 Up	LED 18	Red	Fan

LED 4		LED 5		LED 6	
Pulses per Second	Description	Pulses per Second	Description	Pulses per Second	Description
2 times	Self power system	2 times	Class B Error	2 times	Class C Error
1 time	AC Plug In System	1 time	Burn In	.5 times	Burn In
		.5 times	Class A Error	BRIGHT	No Resistance Offset

6.3 ERROR MESSAGES ON THE CONSOLE

CODE	CLASS	DESCRIPTION	SOLUTION
0x0140	B	When the UCB implements an incline command, incline has no response for 3 seconds.	Replace the incline motor.
0x0142	B	When the difference between the incline position and the position indicated is greater than 3% for 3 seconds.	Run an auto calibration. Replace the incline motor.
0x0441	B	When the UCB implements a command, the LCB does not receive this command.	Upgrade the LCB software. Replace the LCB.
0x01A1	C	Incline calibration error. When the calibration time is too long or calibration distance is too short.	Replace the incline motor.
0x01A7	C	Incline has a short circuit (over 7 Amps) or the current is over 5 Amps for over 1 second.	Replace the incline motor.
0x01AC	C	Power resistor has a short circuit (over 4 Amps), or the current is over 3.7 Amps for 1 second.	Check the connection of the power resistor. Replace the power resistor.
0x02AB	C	Machine type error.	Set the machine type to elliptical.
0x02B3	C	Resistance type error.	Replace the LCB.
0x04A0	C	When the LCB has no message to return to the UCB within 3 seconds.	Check the console cable connections. Replace the UCB or LCB.
0x0201	A	LCB battery voltage low.	Replace the battery.
0x0248	B	Battery disconnected or has failed.	Replace the battery.
0x01A0	C	Incline motor is not functioning.	Check the connection of the incline motor. Replace the incline motor.

SLIPPING WHILE PEDALING

POSSIBLE CAUSES

1) Belt tension is not enough.

SOLUTION:

1) Remove the right front side cover and check the drive belt tension. Tighten the drive belt to a 150 - 160 Hz vibration frequency as measured on the longest strand of the belt.

KNOCKING OR CREAKING NOISES

POSSIBLE CAUSES:

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

SOLUTION:

1) Check for loose bolts in all areas.

2) Open the shrouds and clean and tighten the belts.

3) Check for worn bearings in all areas.

6.6 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.

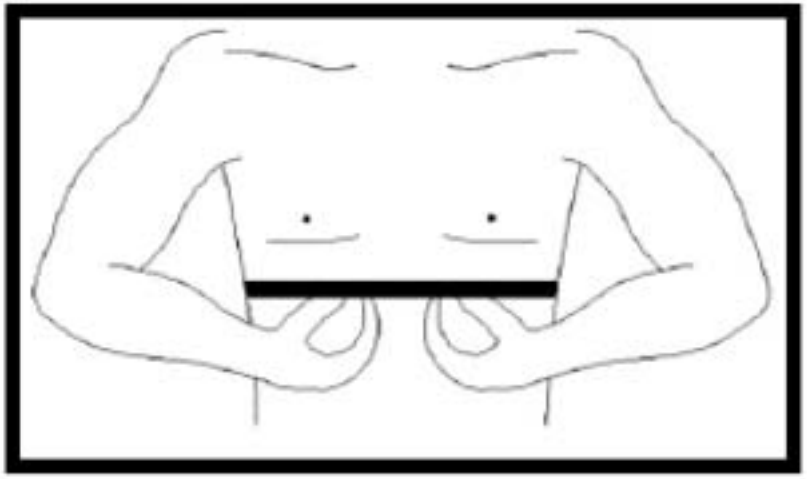


FIGURE A

7.1 UPPER REAR CONSOLE COVER REPLACEMENT

1) Remove the 4 screws holding the upper rear console cover to the console (Figure A).

FIGURE A

2) Remove the upper rear console cover (Figure B).

FIGURE B

3) Reverse Steps 1-2 to install a new upper rear console cover.

7.2 CONSOLE REPLACEMENT

1) Remove the upper rear console cover as outlined in Section 7.1.
2) Remove the 4 screws holding the console to the console frame (Figure A).
3) Disconnect the 4 wire connections at the back of the console (Figure B).

FIGURE A

FIGURE B

4) The lower portion of the console is held on by 2 snap fittings. Carefully pry the lower portion of the console away from the console frame to release the LH and RH snaps. Once the snaps are released, the console can be removed (Figure C).
5) Reverse Steps 1-4 to install a new console. ***NOTE:*** There are 2 wires that are included in the console cable that are not used unless a TV is installed, a 4 pin wire and a coax cable (Figure D).

FIGURE C

FIGURE D

6) Test the suspension elliptical for function as outlined in Section 7.24.

7.3 CUP HOLDER REPLACEMENT

1) Remove the plastic covers inside of the cup holder (Figures A & B).

FIGURE A

FIGURE B

2) Remove the 2 screws holding the cup holder to the front console cover (Figure C).
3) Remove the cup holder (Figure D).

FIGURE C

FIGURE D

4) Reverse Steps 1-3 to install a new cup holder.

7.4 LOWER REAR CONSOLE COVER REPLACEMENT

1) Remove the upper rear console cover as outlined in Section 7.1.
2) Remove the console as outlined in Section 7.2.
3) Remove the 6 screws holding the lower rear console cover to the front console cover (Figure A).

FIGURE A

4) Remove the lower rear console cover (Figure B).

FIGURE B

5) Reverse Steps 1-4 to install a new lower rear console cover.

7.5 FRONT CONSOLE COVER REPLACEMENT

1) Remove the upper rear console cover as outlined in Section 7.1.
2) Remove the console as outlined in Section 7.2.
3) Remove the cup holder as outlined in Section 7.3.
4) Remove the lower rear console cover as outlined in Section 7.4.
5) Remove the 6 screws holding the front console cover to the console frame (Figures A & B).

FIGURE A

FIGURE B

6) Remove the front console cover (Figure C).

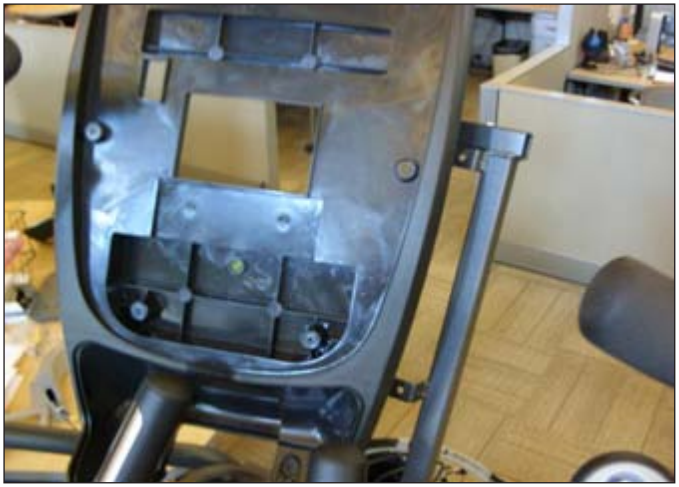


FIGURE C

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

7.6 CONSOLE FRAME REPLACEMENT

1) Remove the upper rear console cover as outlined in Section 7.1.
2) Remove the console as outlined in Section 7.2.
3) Remove the cup holder as outlined in Section 7.3.
4) Remove the lower rear console cover as outlined in Section 7.4.
5) Remove the front console cover as outlined in Section 7.5.
6) Remove the 4 screws holding the console frame to the console mast (Figure A).

FIGURE A

7) Remove the console frame (Figure B).

FIGURE B

8) Reverse Steps 1-7 to install a new console frame. See Section 7.24 for bolt torque specifications.

7.7 SLOTTED CONSOLE MAST COVER REMOVAL

1) Start pedaling and hit the START key. Move the incline into top position and then stop pedaling. Once the unit times out, the incline will begin to reset, press any key to stop the incline reset (leaving the incline in the top position). It is also possible to stop the incline by reaching in and unplugging the incline motor wire at the lower board. This will make it much easier to move the console mast boot so that it does not interfere with component removal.
2) Remove the upper rear console cover as outlined in Section 7.1.
3) Remove the console as outlined in Section 7.2.
4) Remove the cup holder as outlined in Section 7.3.
5) Remove the lower rear console cover as outlined in Section 7.4.
6) Remove the front console cover as outlined in Section 7.5.
7) Remove the console frame as outlined in Section 7.6.
8) Remove the 6 screws holding the slotted console mast cover to the console (Figure A).
9) Remove the slotted console mast cover (Figure B).

FIGURE A

FIGURE B

10) Reverse Steps 1-9 to install a new slotted console mast cover.

7.8 DUAL ACTION HANDLEBAR REPLACEMENT

1) Remove the screw holding the plastic cover over the dual action handlebar and link arm connection and remove the cover (Figures A & B).

FIGURE A

FIGURE B

2) Remove the bolt / nut holding the bottom of the dual action handlebar to the link arm (Figure C).
3) Remove the link arm from the U shaped bracket at the bottom of the dual action handlebar (Figure D).

FIGURE C

FIGURE D

7.8 DUAL ACTION HANDLEBAR REPLACEMENT - CONTINUED

4) Remove the 2 screws holding on the rotational housing end cap (Figure E).
5) Remove the rotational housing end cap (Figure F).

FIGURE E

FIGURE F

6) Disconnect the wire connection exposed when the rotational housing end cap is removed (Figure G).
7) Remove the 4 screws holding the dual action handlebar to the rotational housing and remove the handlebar (Figure H).

FIGURE G

FIGURE H

8) Reverse Steps 1-7 to install a new dual action handlebar. See Section 7.24 for bolt torque specifications.
9) Test the suspension elliptical for function as outlined in Section 7.24.

7.9 FRONT CONSOLE MAST COVER REPLACEMENT

1) Start pedaling and hit the START key. Move the incline into top position and then stop pedaling. Once the unit times out, the incline will begin to reset, press any key to stop the incline reset (leaving the incline in the top position). It is also possible to stop the incline by reaching in and unplugging the incline motor wire at the lower board. This will make it much easier to move the console mast boot so that it does not interfere with component removal.
2) Remove the upper rear console cover as outlined in Section 7.1.
3) Remove the console as outlined in Section 7.2.
4) Remove the cup holder as outlined in Section 7.3.
5) Remove the lower rear console cover as outlined in Section 7.4.
6) Remove the front console cover as outlined in Section 7.5.
7) Remove the console frame as outlined in Section 7.6.
8) Remove the slotted console mast cover as outlined in Section 7.7.
9) Remove both of the dual action handlebars as outlined in Section 7.8.
10) Remove the 8 screws holding the front console mast cover to the console mast (Figure A).

FIGURE A

11) Remove the 2 screws covering the incline motor connection bracket and remove the cover (Figures B & C).

FIGURE B

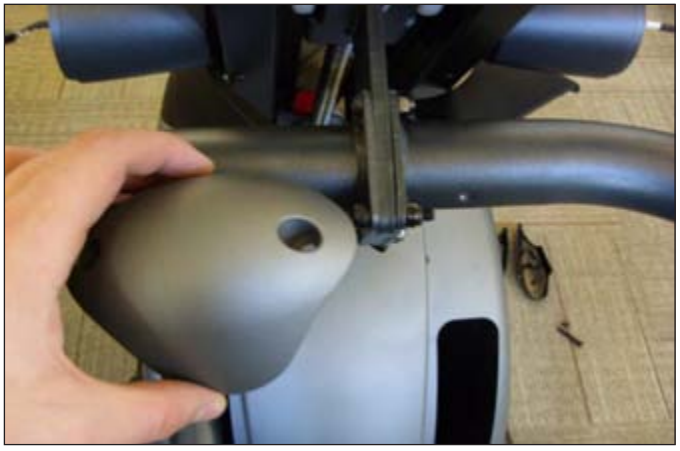


FIGURE C

7.9 FRONT CONSOLE MAST COVER REPLACEMENT - CONTINUED

12) Remove the 4 bolts / nuts attaching the horizontal incline arms to the incline motor connection bracket (Figure D).
13) Move the ends of the horizontal incline arms so that they rest on the shroud (Figure E).

FIGURE D

FIGURE E

14) Lift up the console mast boot and remove the 6 screws holding the bottom of the console mast to the frame (Figures F & G). When re-installing these screws, the 4 screws in Figure F should be torqued to 40 N-m and the 2 screws in Figure G should be torqued to 25 N-m.

FIGURE F

FIGURE G

15) Lift up on the console mast and slide the console mast boot down. This will allow the bottom of the front console mast cover to be pulled out and off of the unit.
16) Reverse Steps 1-15 to install a new front console mast cover. See Section 7.24 for bolt torque specifications.
17) Test the suspension elliptical for function as outlined in Section 7.24.

7.10 CONSOLE MAST REPLACEMENT

1) Start pedaling and hit the START key. Move the incline into top position and then stop pedaling. Once the unit times out, the incline will begin to reset, press any key to stop the incline reset (leaving the incline in the top position). It is also possible to stop the incline by reaching in and unplugging the incline motor wire at the lower board. This will make it much easier to move the console mast boot so that it does not interfere with component removal.
2) Remove the upper rear console cover as outlined in Section 7.1.
3) Remove the console as outlined in Section 7.2.
4) Remove the cup holder as outlined in Section 7.3.
5) Remove the lower rear console cover as outlined in Section 7.4.
6) Remove the front console cover as outlined in Section 7.5.
7) Remove the console frame as outlined in Section 7.6.
8) Remove the slotted console mast cover as outlined in Section 7.7.
9) Remove both of the dual action handlebars as outlined in Section 7.8.
10) Remove the 8 screws holding the front console mast cover to the console mast (Figure A).

FIGURE A

11) Remove the 2 screws covering the incline motor connection bracket and remove the cover (Figures B & C).

FIGURE B

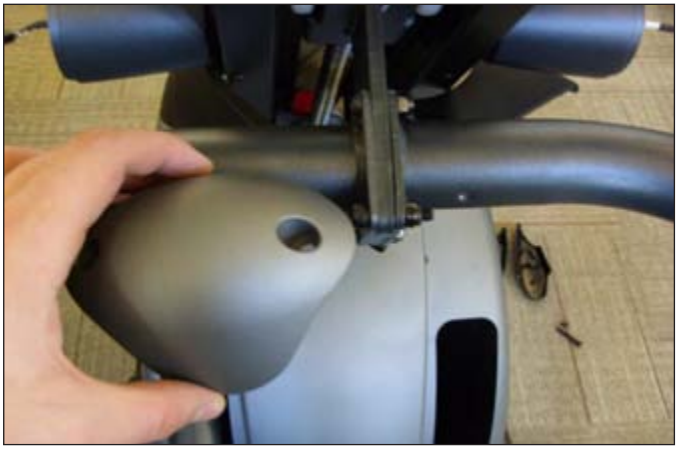


FIGURE C

7.10 CONSOLE MAST REPLACEMENT - CONTINUED

12) Remove the 4 bolts / nuts attaching the horizontal incline arms to the incline motor connection bracket (Figure D).
13) Move the ends of the horizontal incline arms so that they rest on the shroud (Figure E).

FIGURE D

FIGURE E

14) Lift up the console mast boot and remove the 6 screws holding the bottom of the console mast to the frame (Figure F). ***NOTE:*** When re-installing these screws, the 4 screws in Figure F should be torqued to 40 N-m and the 2 screws in Figure G should be torqued to 25 N-m.

FIGURE F

FIGURE G

7.10 CONSOLE MAST REPLACEMENT - CONTINUED

15) Disconnect the incline motor wire at the bottom of the console mast (Figure H).
16) Cut any wire ties holding the console cable to the console mast and pull the console wire out of the way (Figure I).

FIGURE H

FIGURE I

17) Lift up on the console mast and slide the console mast boot down and off of the mast (Figure J). This will allow the bottom of the front console mast cover to be pulled out and off of the unit.
18) Lift up on the console mast and remove it from the frame (Figure K).

FIGURE J

FIGURE K

19) Reverse Steps 1-18 to install a new console mast. See Section 7.24 for bolt torque specifications.
20) Test the suspension elliptical for function as outlined in Section 7.24.

7.11 HORIZONTAL INCLINE ARM REPLACEMENT

1) Remove the 2 screws covering the incline motor connection bracket and remove the cover (Figures A & B).

FIGURE A

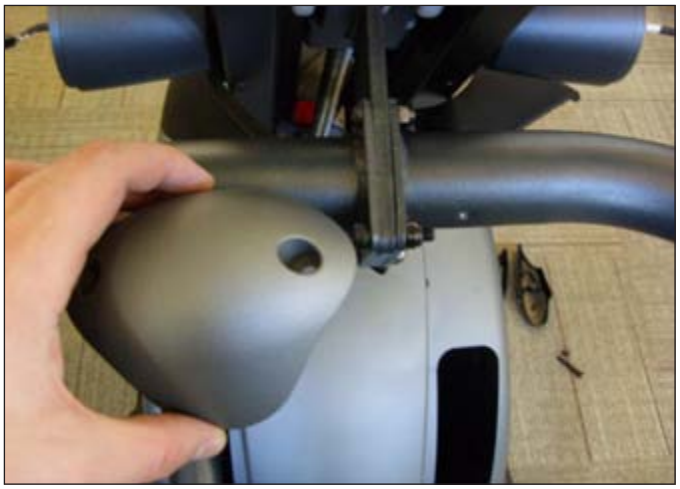


FIGURE B

2) Remove the 4 bolts / nuts attaching the horizontal incline arms to the incline motor connection bracket (Figure C).
3) Move the ends of the horizontal incline arms so that they rest on the shroud (Figure D).

FIGURE C

FIGURE D

7.11 HORIZONTAL INCLINE ARM REPLACEMENT - CONTINUED

4) Remove the 4 screws holding the plastic cover over the rear of the horizontal incline arm and remove the cover (Figures E & F).

FIGURE E

FIGURE F

5) Remove the 2 bolts attaching the horizontal incline arm to the vertical incline arm and remove the horizontal incline arm (Figures G & H).

\

FIGURE G

FIGURE H

6) Reverse Steps 1-5 to install a new horizontal incline arm. See Section 7.24 for bolt torque specifications.

7.12 SWING ARM REPLACEMENT

1) Locate the round silver cap at the junction of the swing arm and the pedal arm, and turn it counter-clockwise to remove (Figures A & B).

FIGURE A

FIGURE B

2) Remove the bolt that holds the swing arm to the pedal arm and disconnect the 2 arms (Figures C & D).

FIGURE C

FIGURE D

7.12 SWING ARM REPLACEMENT - CONTINUED

3) Remove the 4 screws holding the plastic cover over the rear of the horizontal incline arm and remove the cover (Figures E & F).

FIGURE E

FIGURE F

4) Remove the bolt and nut holding the swing arm to the vertical incline arm and remove the swing arm from the unit (Figures G & H).

FIGURE G

FIGURE H

5) Reverse Steps 1-4 to install a new swing arm. See Section 7.24 for bolt torque specifications.

7.13 LINK ARM REPLACEMENT

1) Remove the screw holding the plastic cover over the dual action handlebar and link arm connection and remove the cover (Figures A & B).

FIGURE A

FIGURE B

2) Remove the bolt / nut holding the bottom of the dual action handlebar to the link arm (Figure C).
3) Remove the link arm from the U shaped bracket at the bottom of the dual action handlebar (Figure D).

FIGURE C

FIGURE D

7.13 LINK ARM REPLACEMENT - CONTINUED

4) Remove the 3 screws and plate that hold the link arm to the pedal arm (Figure E).

FIGURE E

5) Remove the link arm from the unit (Figure F).

FIGURE F

6) Reverse Steps 1-5 to install a new link arm. See Section 7.24 for bolt torque specifications.

7.14 PEDAL REPLACEMENT

1) Pull up on the rubber foot pad. This will release the grommets that snap into the plastic portion of the pedal (Figure A).

FIGURE A

2) Remove the 4 screws that hold the plastic portion of the pedal to the link arm and remove the pedal (Figures B & C).

FIGURE B

FIGURE C

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

7.15 VERTICAL INCLINE ARM REPLACEMENT

1) Remove the 4 screws holding the plastic cover over the rear of the horizontal incline arm and remove the cover (Figures A & B).

FIGURE A

FIGURE B

2) Remove the 2 bolts attaching the horizontal incline arm to the vertical incline arm (Figure C).
3) Remove the bolt and nut holding the swing arm to the vertical incline arm (Figure D).

FIGURE C

FIGURE D

7.15 VERTICAL INCLINE ARM REPLACEMENT - CONTINUED

4) Lift up on the rubber cover at the vertical incline arm juncture with the frame. This will remove the snaps on the rubber cover from the frame.
5) Split the rubber cover and remove it from the incline arm / frame juncture (Figure E).

FIGURE E

6) Remove the bolt / nut attaching the vertical incline arm to the frame (Figure F).
7) Remove the vertical incline arm from the frame (Figure G).

FIGURE F

FIGURE G

8) Reverse Steps 1-7 to install a new vertical incline arm. See Section 7.24 for bolt torque specifications.

7.16 MIDDLE SHROUD REPLACEMENT

1) Remove the 3 screws on each side holding the middle shroud to the front shrouds (Figure A).

FIGURE A

2) Remove the middle shroud (Figure B).

FIGURE B

3) Reverse Steps 1-2 to install a new middle shroud.

7.17 FRONT SHROUD REPLACEMENT

1) Remove the middle shroud as outlined in Section 7.16.
2) Remove the 8 screws on the right front shroud and 4 screws on the left front shroud (Figure A). ***NOTE:*** One of the right front shroud screws is revealed by removing the middle shroud (Figure B).

FIGURE A

FIGURE B

3) Remove both front shrouds from the unit (Figure C).

FIGURE C

4) Reverse Steps 1-3 to install new front shrouds.

7.18 PEDAL ARM REPLACEMENT

1) Remove the middle shroud as outlined in Section 7.16.
2) Remove the front shroud as outlined in Section 7.17.
3) Remove the bolt / nut holding the pedal arm to the crank (Figure A).
4) Remove the front of the pedal arm from the crank (Figure B).

FIGURE A

FIGURE B

5) Remove the 3 screws and plate that hold the link arm to the pedal arm (Figure C).
6) Remove the link arm from the slot on the pedal arm (Figure D).

FIGURE C

FIGURE D

7.18 PEDAL ARM REPLACEMENT - CONTINUED

7) Locate the round silver cap at the junction of the swing arm and the pedal arm, and turn it counter-clockwise to remove (Figures E & F).

FIGURE A

FIGURE B

8) Remove the bolt that holds the swing arm to the pedal arm and disconnect the 2 arms (Figures G & H).

FIGURE C

FIGURE D

9) Reverse Steps 1-8 to install a new pedal arm. See Section 7.24 for bolt torque specifications.

7.19 LOWER CONTROL BOARD REPLACEMENT

1) Remove the middle shroud as outlined in Section 7.16.
2) Remove the front shrouds as outlined in Section 7.17.
3) Remove the screws holding the cover on the lower control board and remove the cover (Figure A).
4) Unplug the 7 wire connectors going to the lower control board.
5) Remove the 2 screws holding the lower control board to the frame and remove the lower control board (Figure B).

FIGURE A

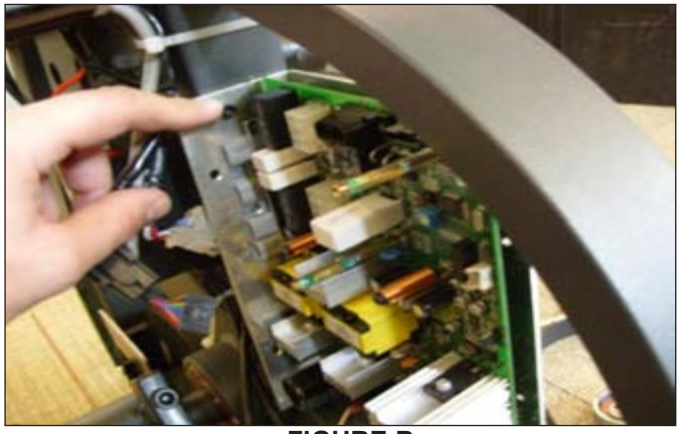


FIGURE B

6) Reverse Steps 1-5 to install a new lower control board. ***NOTE:*** Be sure to reconnect the wire connectors unplugged in Step 4 (Figure C).

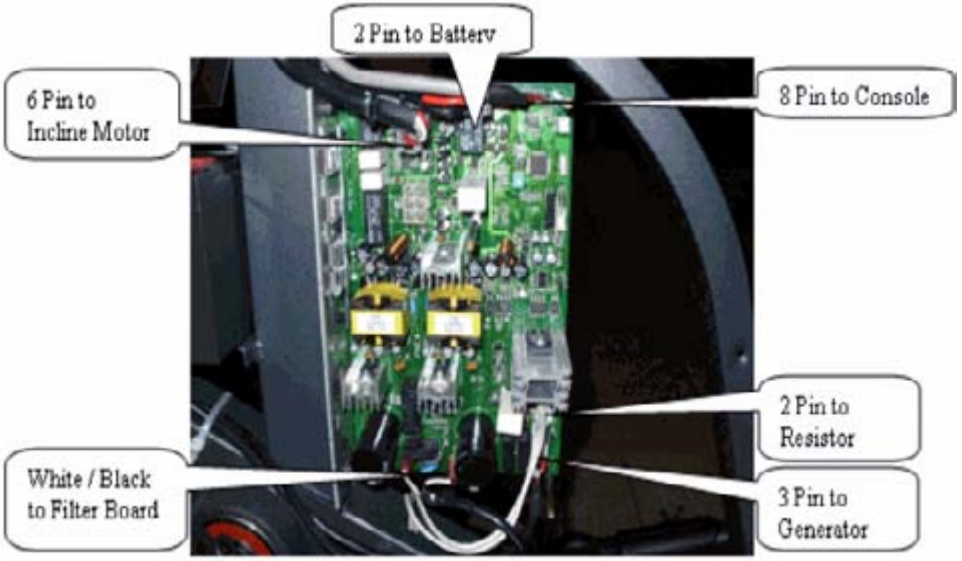


FIGURE C

7) Test the suspension elliptical for function as outlined in Section 7.24.

7.20 DRIVE BELT REPLACEMENT

1) Remove the middle shroud as outlined in Section 7.16.
2) Remove the front shrouds as outlined in Section 7.17.
3) Remove the bolt / nut holding the pedal arm to the crank (Figure A).
4) Remove the front of the pedal arm from the crank (Figure B).

FIGURE A

FIGURE B

5) Remove the screw holding the idler to the frame and remove it (Figures C & D).

FIGURE C

FIGURE D

7.20 DRIVE BELT REPLACEMENT - CONTINUED

6) Remove the drive belt from the unit (Figure E).

FIGURE E

7) Reverse Steps 1-6 to install a new drive belt. ***NOTE:*** When re-installing the idler, be sure to rotate the idler so that the proper tension is applied to the drive belt (Figure F). The drive belt should be tightened to a 150 - 160 Hz vibration frequency as measured on the longest strand of the belt. See Section 7.24 for bolt torque specifications.

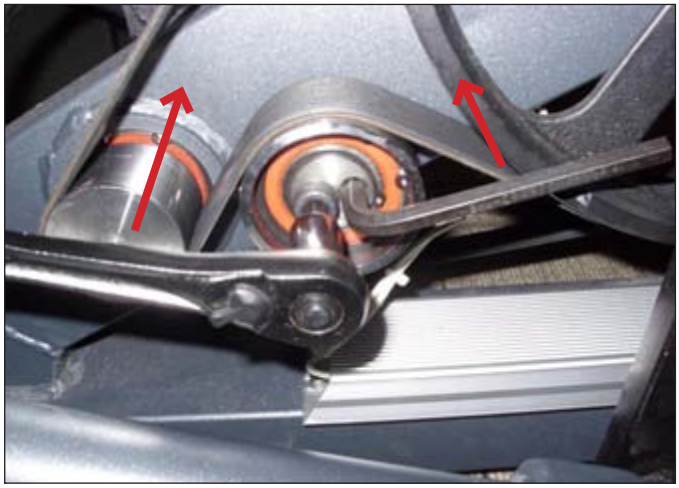


FIGURE F

8) Test the suspension elliptical as outlined in Section 7.24.

7.21 GENERATOR BELT REPLACEMENT

1) Remove the middle shroud as outlined in Section 7.16.
2) Remove the front shrouds as outlined in Section 7.17.
3) Loosen the 15mm nut holding the generator to the generator frame on each side (Figure A).
4) Remove the nut on the eye hook bolt holding the generator towards the front of the unit on each side (Figure B).

FIGURE A

FIGURE B

5) Slide the generator towards the rear of the unit and out of the generator frame. This will allow you to remove the generator belt from around the generator pulley (Figure C).

FIGURE C

6) Remove the generator belt.
7) Reverse Steps 1-6 to install a new generator belt. ***NOTE:*** Re-tighten the nuts removed in Step 4 until the generator belt is tightened to a 110 - 120 Hz vibration frequency as measured on the longest strand of the belt. See Section 7.24 for bolt torque specifications.
8) Test the suspension elliptical for function as outlined in Section 7.24.

7.22 GENERATOR REPLACEMENT

1) Remove the middle shroud as outlined in Section 7.16.
2) Remove the front shrouds as outlined in Section 7.17.
3) Loosen the 15mm nut holding the generator to the generator frame on each side (Figure A).
4) Remove the nut on the eye hook bolt holding the generator towards the front of the unit on each side (Figure B).

FIGURE A

FIGURE B

5) Unplug the generator power wire (Figure C).
6) Slide the generator towards the rear of the unit and out of the generator frame. This will allow you to remove the generator belt from around the generator pulley and to remove the generator from the generator frame (Figure D).

FIGURE C

FIGURE D

7) Reverse Steps 1-6 to install a new generator. ***NOTE:*** Re-tighten the nuts removed in Step 4 until the generator belt is tightened to a 110 - 120 Hz vibration frequency as measured on the longest strand of the belt. See Section 7.24 for bolt torque specifications.
8) Test the suspension elliptical for function as outlined in Section 7.24.

7.23 DRIVE AXLE SET REPLACEMENT

1) Remove the middle shroud as outlined in Section 7.16.
2) Remove the front shrouds as outlined in Section 7.17.
3) Remove the bolt / nut holding the pedal arm to the crank (Figure A).
4) Remove the front of the pedal arm from the crank (Figure B).

FIGURE A

FIGURE B

5) Remove the screw holding the idler to the frame and remove it (Figures C & D). The drive belt can now be removed.

FIGURE C

FIGURE D

7.23 DRIVE AXLE SET REPLACEMENT - CONTINUED

6) Remove the bolt / nut holding the crank to the drive axle set (Figure E).
7) Remove the crank from the drive axle set. ***NOTE:*** It may be necessary to use an M8 screw to loosen the crank on the drive axle prior to removal (Figures F & G).
8) Remove the E ring on the drive axle bearing (Figure H).

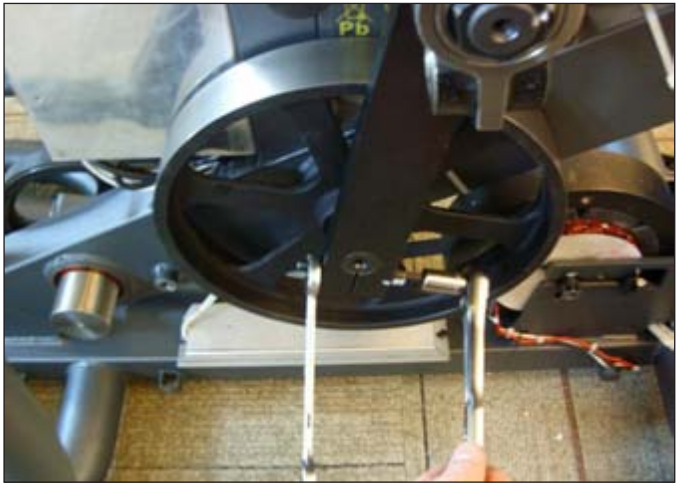


FIGURE E

FIGURE F

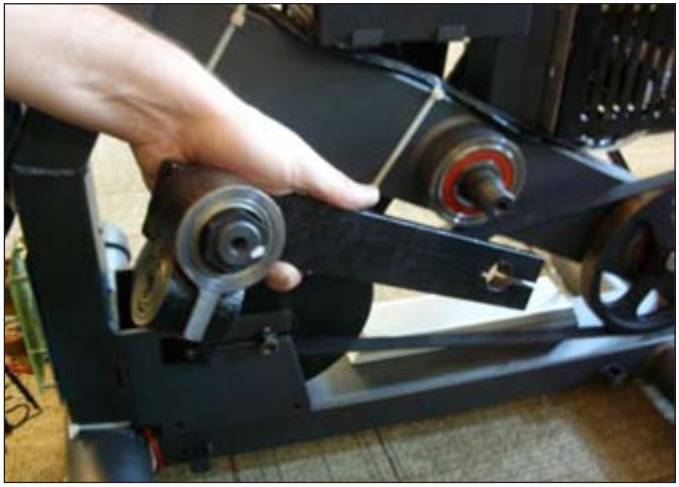


FIGURE G

FIGURE H

7.23 DRIVE AXLE SET REPLACEMENT - CONTINUED

9) Use a hammer or mallet to remove the drive axle set from the frame or use a slide hammer on the opposite side (Figures I & J). The left hand bearing will still be present in the frame, but both bearings will be damaged by the removal process.

FIGURE I

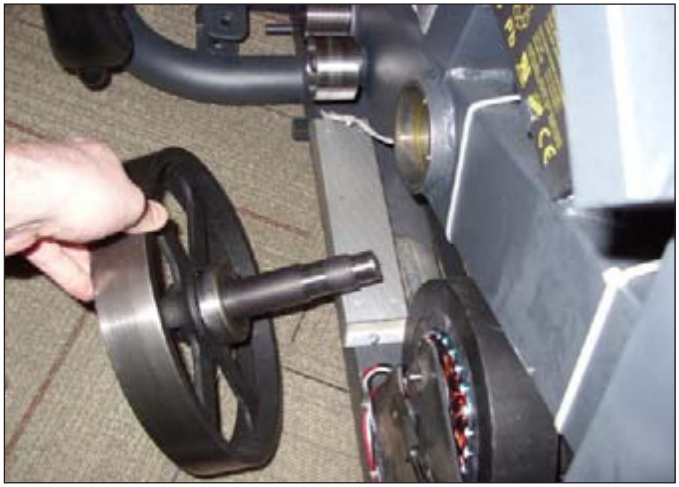


FIGURE J

10) Use a bearing tool (Vision Fitness Part # 1000201331) to remove the left side bearing (Figures K & L).

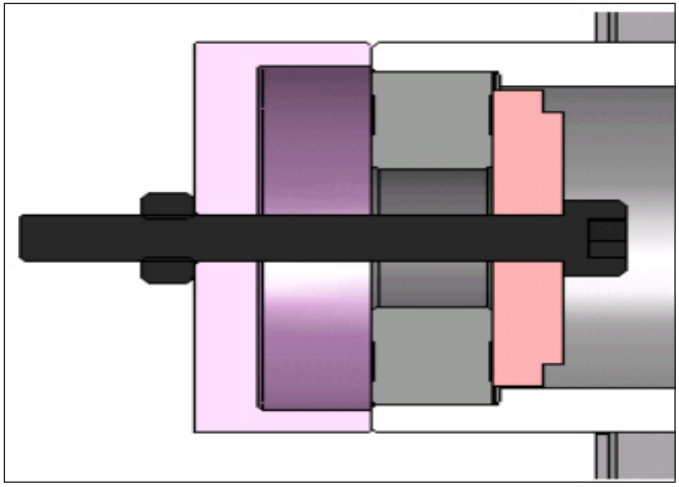


FIGURE K

FIGURE L

7.23 DRIVE AXLE SET REPLACEMENT - CONTINUED

11) Use a bearing tool to slide the new drive axle into the frame (Figure M) and to install the left side bearing (Figures N, & O).
12) Once the drive axle and bearings are in place, remove the 2 shims between the pulley and bearing on the right side of the unit (Figure P).

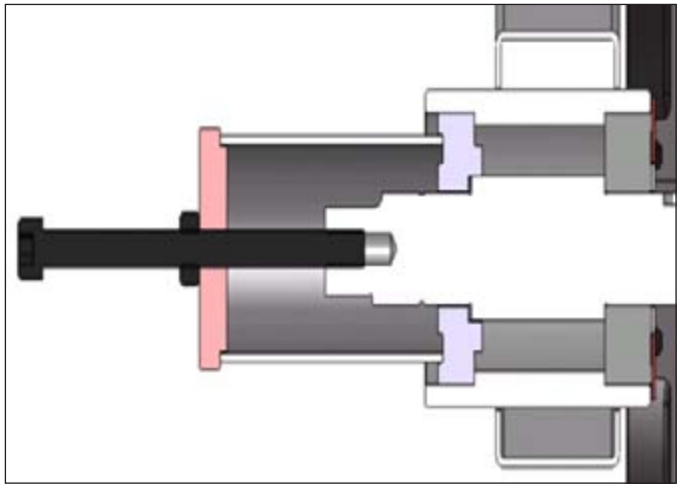


FIGURE M

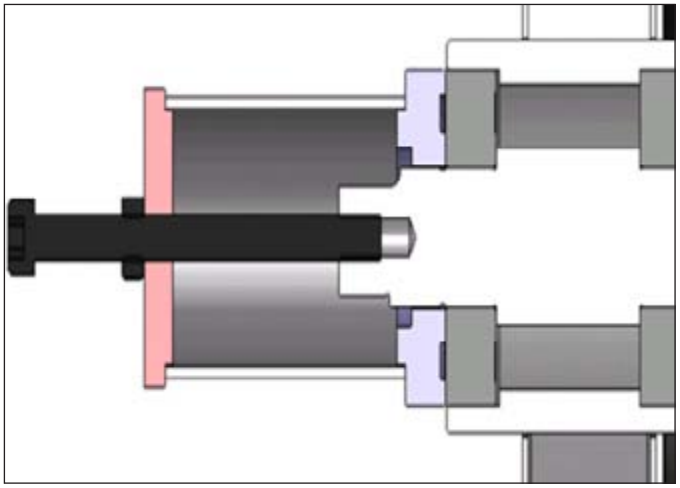


FIGURE N

FIGURE O

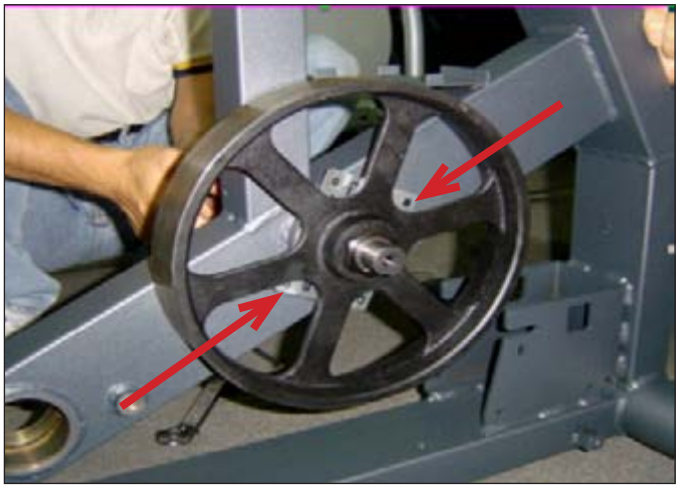


FIGURE P

12) Reverse Steps 1-8 to re-assemble the unit. ***NOTE:*** Be sure to re-tighten the drive belt to a 150 - 160 Hz vibration frequency as measured on the longest strand of the belt. See Section 7.24 for bolt torque specifications.
13) Test the suspension elliptical as outlined in Section 7.24.

7.24 TESTING THE SUSPENSION ELLIPTICAL

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, stand on the Suspension Elliptical and hold the handlebars while pedaling to simulate exercising. While moving, listen for any odd noises or squeaks.

2) After stopping movement, press the QUICK 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 and the handlebars 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.

WHEN TIGHTENING BOLTS, REFER TO THE TABLE BELOW FOR TORQUE SPECIFICATIONS

	General Torque specifications to use when no specification has been set for socket head cap screws.			
	Use this one for general cases and for button head screws.	Use this one only if you can prove the fastener will be grade 10.9 or higher.	Use this one only if you can prove the fastener will be grade 12.9.	
	Grade 8.8	**Grade 10.9**	**Grade 12.9 Nominal Use**	**Grade 12.9 Critical Use**
M4	3 N-m	4 N-m	5 N-m	6 N-m
M5	6 N-m	8 N-m	10 N-m	12 N-m
M6	10 N-m	13 N-m	16 N-m	20 N-m
M8	25 N-m	33 N-m	40 N-m	50 N-m
M10	46 N-m	65 N-m	80 N-m	94 N-m
M12	80 N-m	120 N-m	135 N-m	160 N-m

These are the most often used torque specifications for this model.

8.1 HARDWARE INCLUDED

The Vision Fitness S70 Suspension Elliptical is carefully inspected before shipment, so it should arrive in good operating condition. Vision Fitness ships the Suspension Elliptical in the following pieces: If any parts, hardware, or tools are missing, please call 1-800-335-4348.

ORANGE BAG

M8x12L Flat Head Bolt
Quantity: 2

M8x20L Socket Head Bolt
Quantity: 4

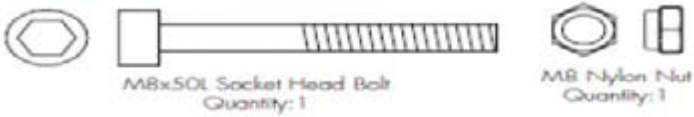
8.2x16x1.4T Washer
Quantity: 4

M8 Lock Washer
Quantity: 4

BLACK BAGS x2

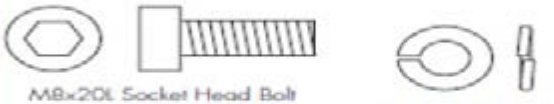
M5x25L Phillips Head Bolt
Quantity: 4

GREEN BAGS x2



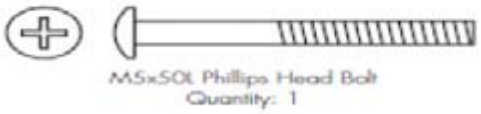
M8x50L Socket Head Bolt
Quantity: 1

M8 Nylon Nut
Quantity: 1



M8x20L Socket Head Bolt
Quantity: 4

M8 Lock Washer
Quantity: 4



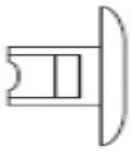
M5x50L Phillips Head Bolt
Quantity: 1

M5 Hex Nut
Quantity: 1

YELLOW BAG

M5x12L Round Head Bolt
Quantity: 2

8.2x12.8x1.3H
Safety Washer
Quantity: 4



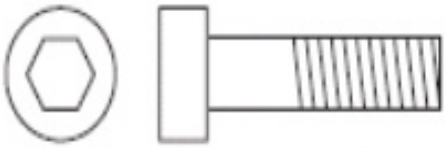
End Cap
Quantity: 2

M8x15L Socket Head Bolt
Quantity: 4

8.1 HARDWARE INCLUDED - CONTINUED

PINK BAG

M10x65L Socket Head Bolt
Quantity: 4



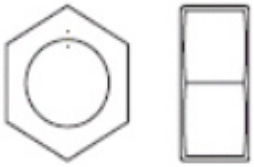
M8x30L Socket Head Bolt
Quantity: 4

8x13x1.4T Washer
Quantity: 8

M8 Nylon Nut
Quantity: 4

BLUE BAGS x2

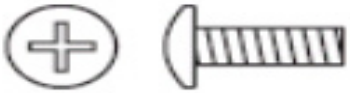
M12 Lock Washer
Quantity: 1



M12 Hex Nut
Quantity: 1

M12x95L Hex Bolt
Quantity: 1

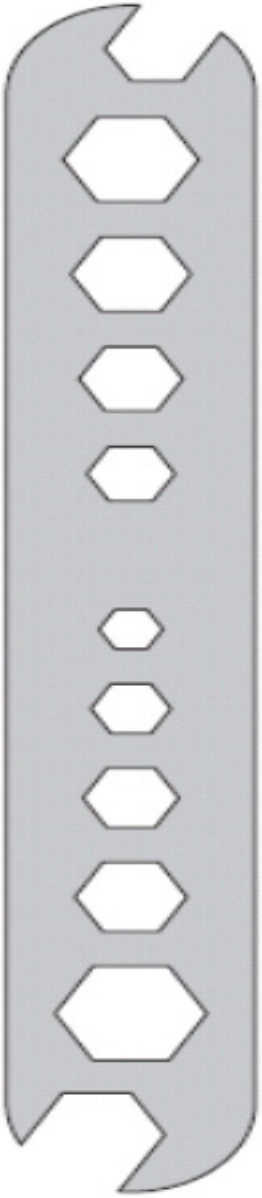
RED BAG



M5x15L Phillips Head Bolt
Quantity: 2

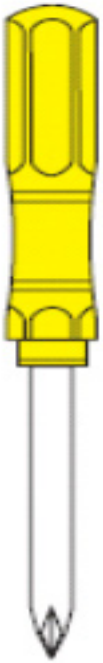
8.2 TOOLS & PARTS INCLUDED

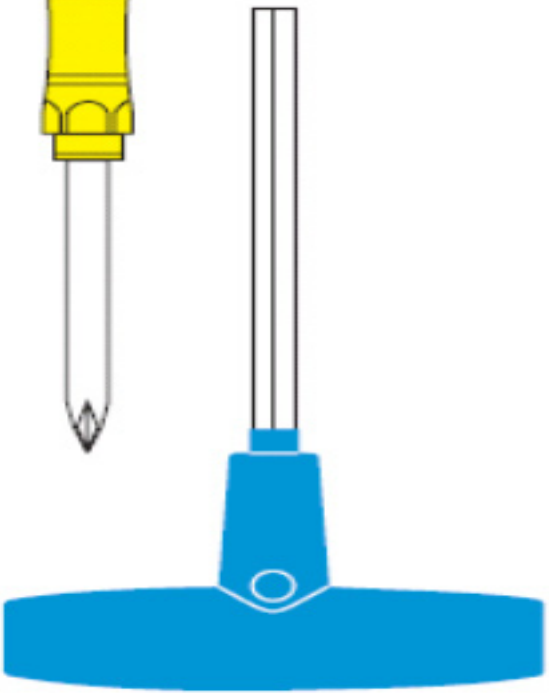
TOOLS & PARTS REQUIRED FOR ASSEMBLY



Multi-Wrench - Qty 2

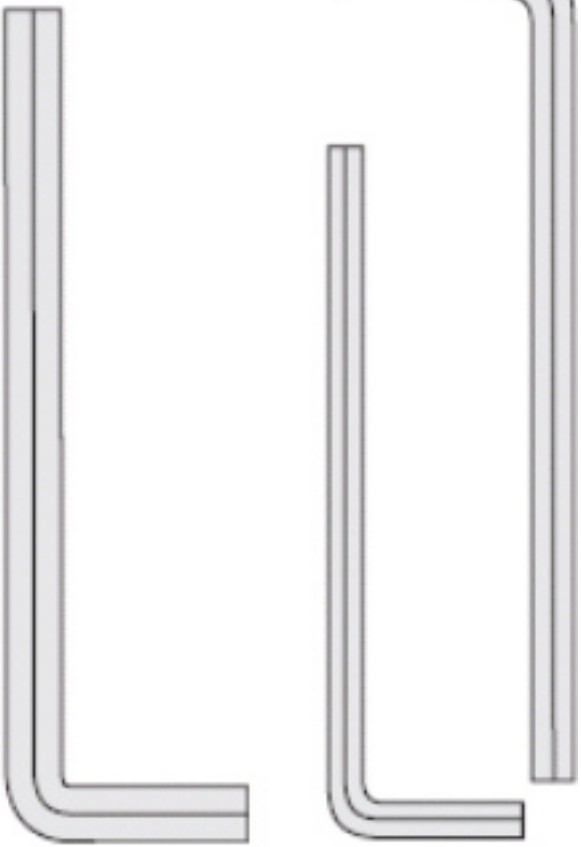
Phillips Screwdriver





6mm T-Shaped Wrench

6mm L-Shaped Wrench



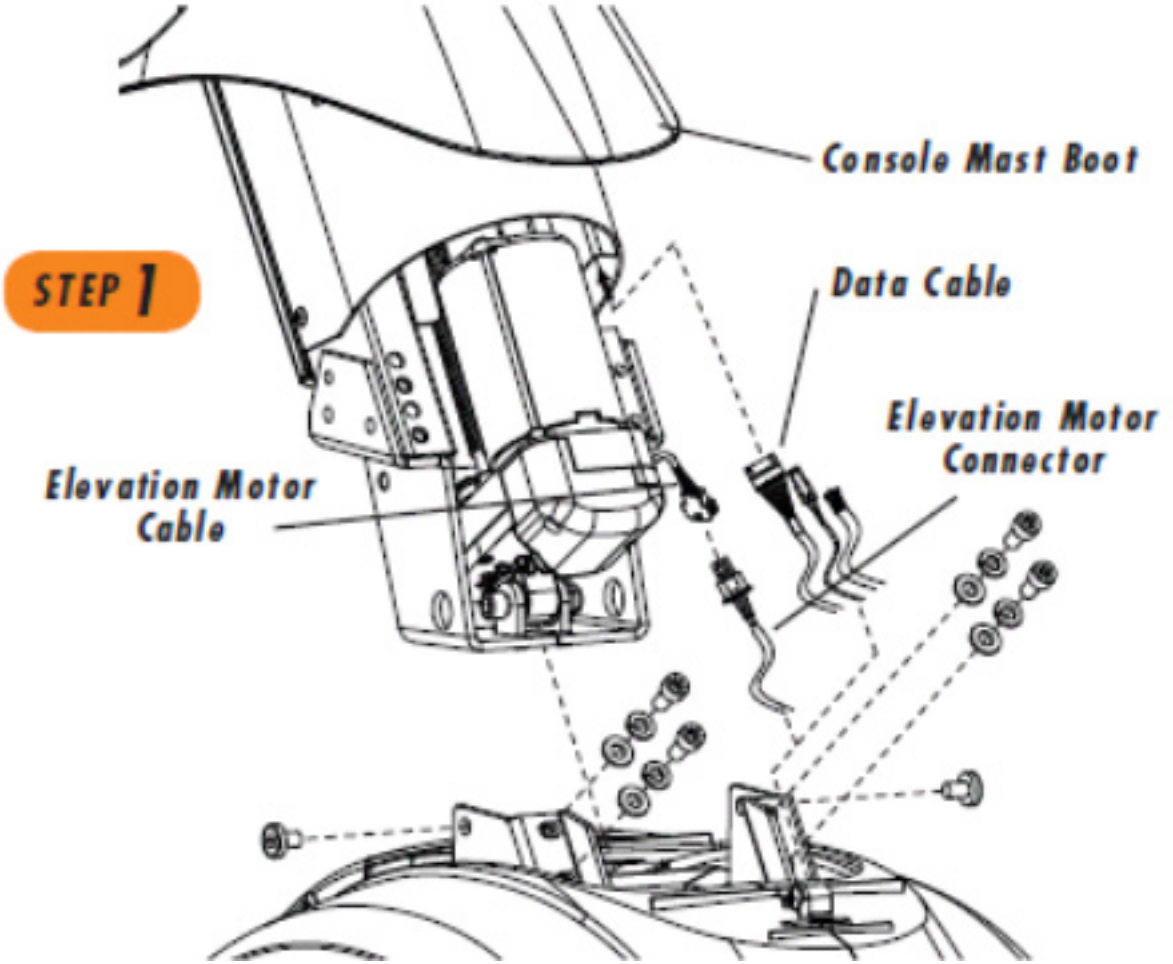
8mm L-Shaped Wrench

5mm L-Shaped Wrench

PARTS BOX

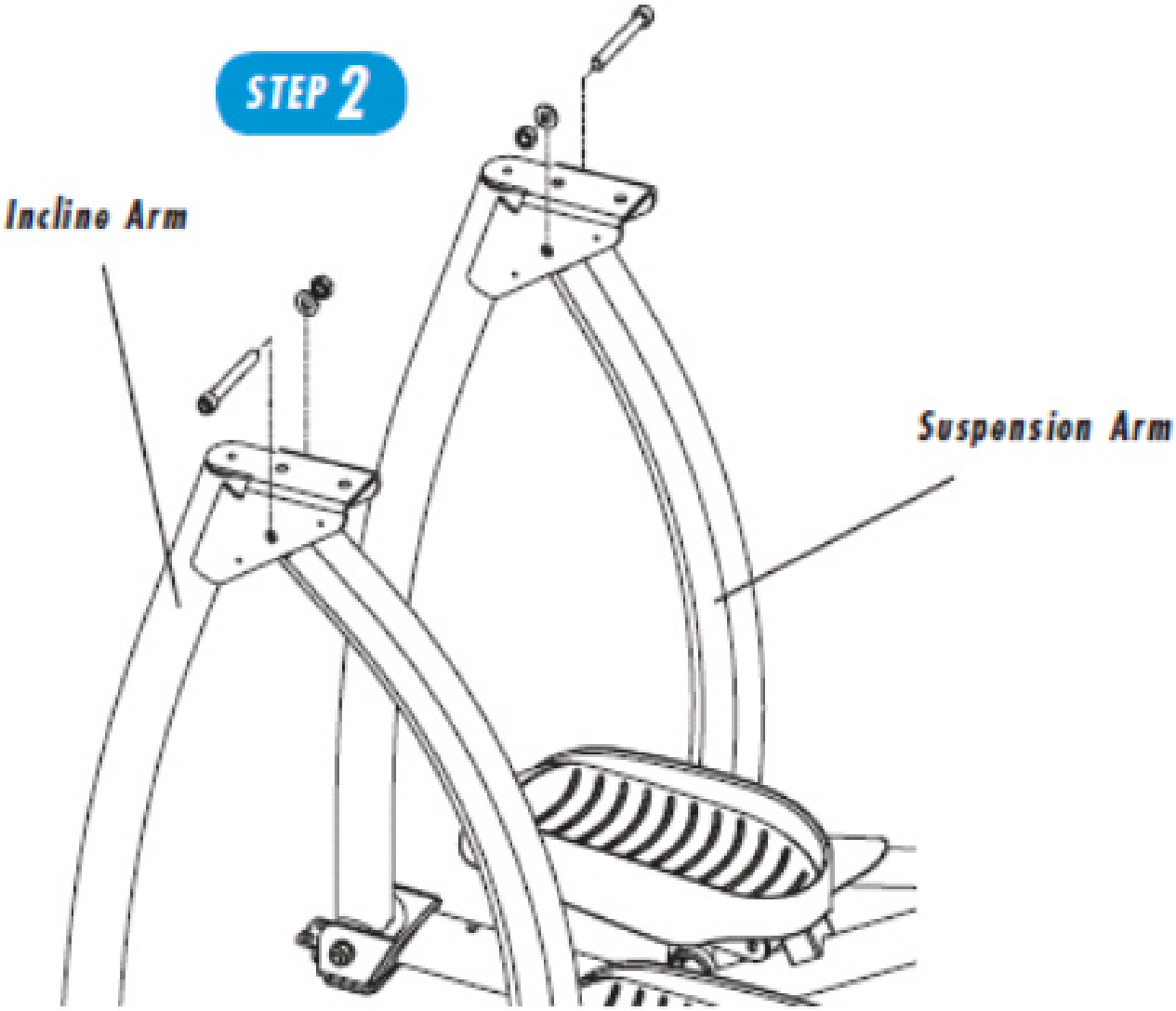
Power Cord
Console Mast
Console Mast Boot
Accessory Tray
Color-coded Hardware Bags
Owner's Guide
Assembly Guide
Warranty Card

8.3 ASSEMBLY INSTRUCTIONS



STEP 1 - ORANGE BAG

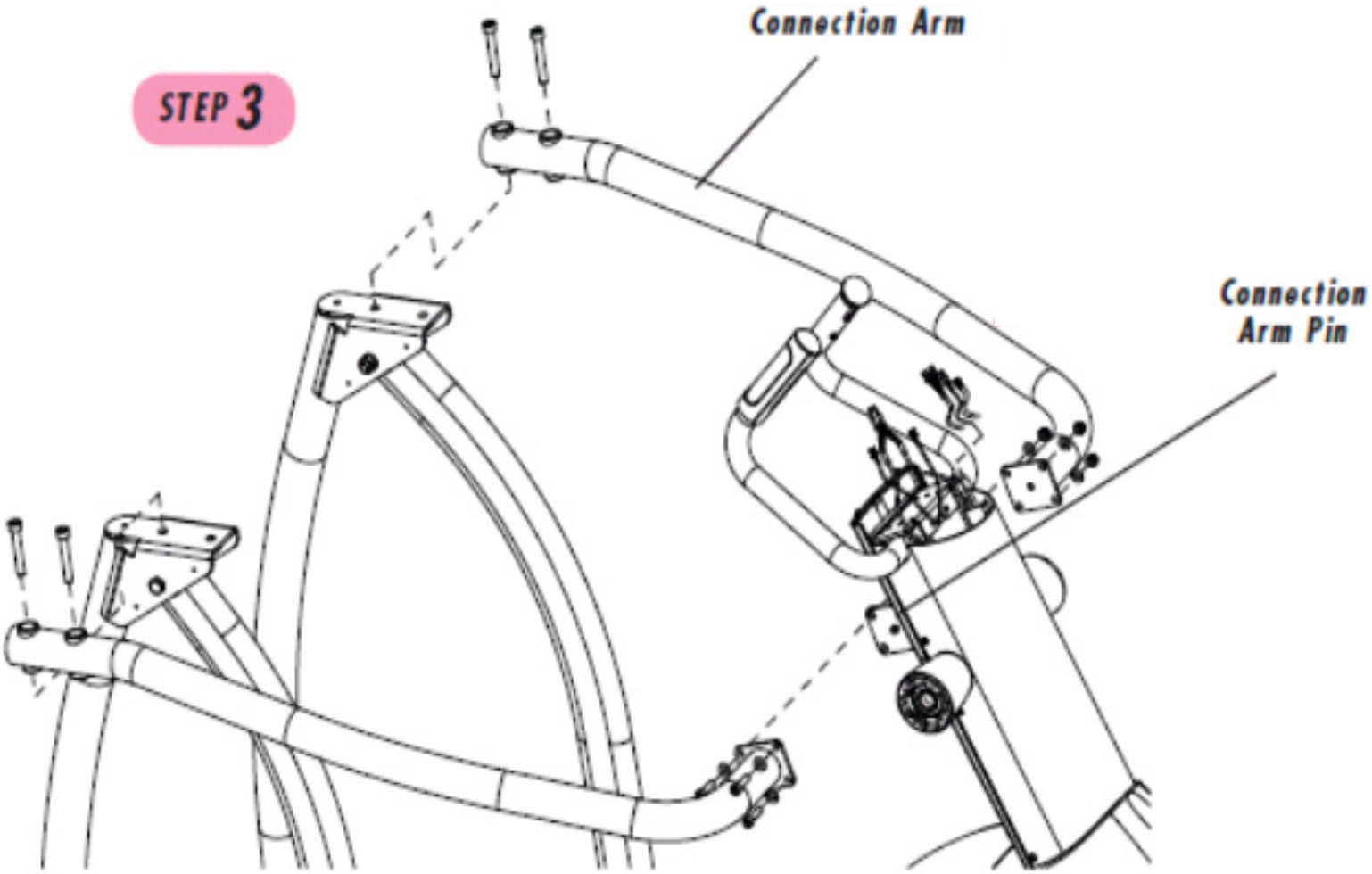
1) Slide the console mast boot onto the console mast.
2) Locate the data cable and elevation motor connector in the main frame recess. Make sure they are pulled out of the opening and can be easily plugged in when the mast is inserted.
3) Set the console mast into the console mast frame bracket. Secure the front of the mast to the frame bracket with four socket head bolts (M8 x 20L), four lock washers (M8), and four flat washers (8.2 x 16 x 1.4T) (these bolts should be torqued to 40 N-m). Tighten with the 6mm T-Shaped Wrench. Secure the sides of the console mast to the console mast bracket with one flat head bolt (M8 x 12L) to each side (these bolts should be torqued to 25 N-m). Tighten with the 5mm L-Shaped Wrench.
4) Plug in the elevation motor cable to the cable socket sitting in the frame bracket.
5) Wrap the wire tie that comes out of the bottom of the console mast around the data cable that exits the top of the frame. Feed the wire tie and data cable up through the channel in the side of the mast while pulling the wire tie straight up through the top of the mast.
6) Slide the boot down over the frame and snap in place.



STEP 2 - BLUE BAGS

1) Lift the left incline arm and insert the bearing end of the suspension arm into the bracket of the incline arm. From the outside, insert a hex head bolt (M12 x 95L) through the bracket and suspension arm. Secure with a lock washer (M12) and nut (M12). Tighten with the two 19mm Multi-Wrenches (this bolt should be torqued to 120 N-m).
2) Repeat this step on the right side.

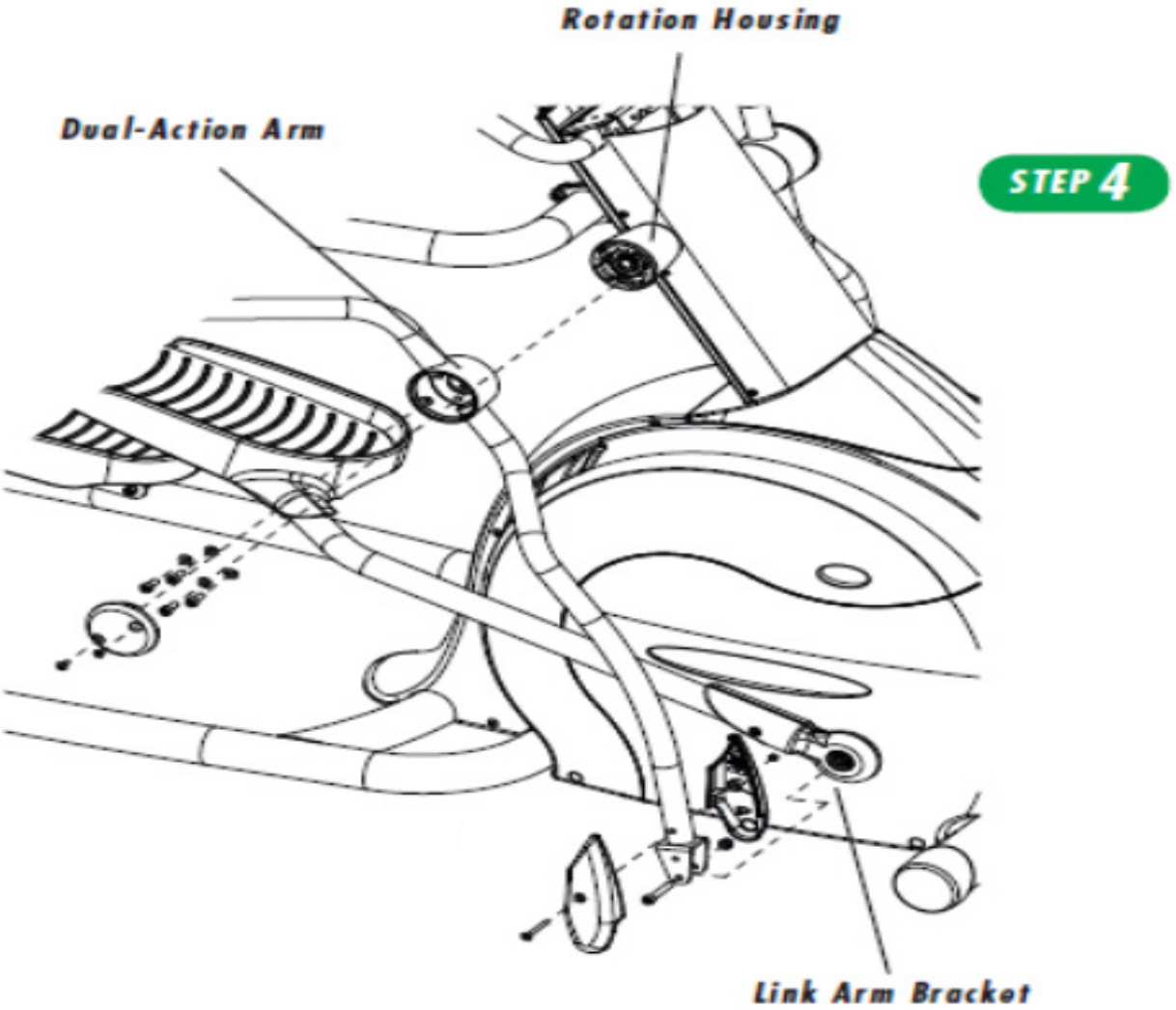
8.3 ASSEMBLY INSTRUCTIONS - CONTINUED



STEP 3 - PINK BAG

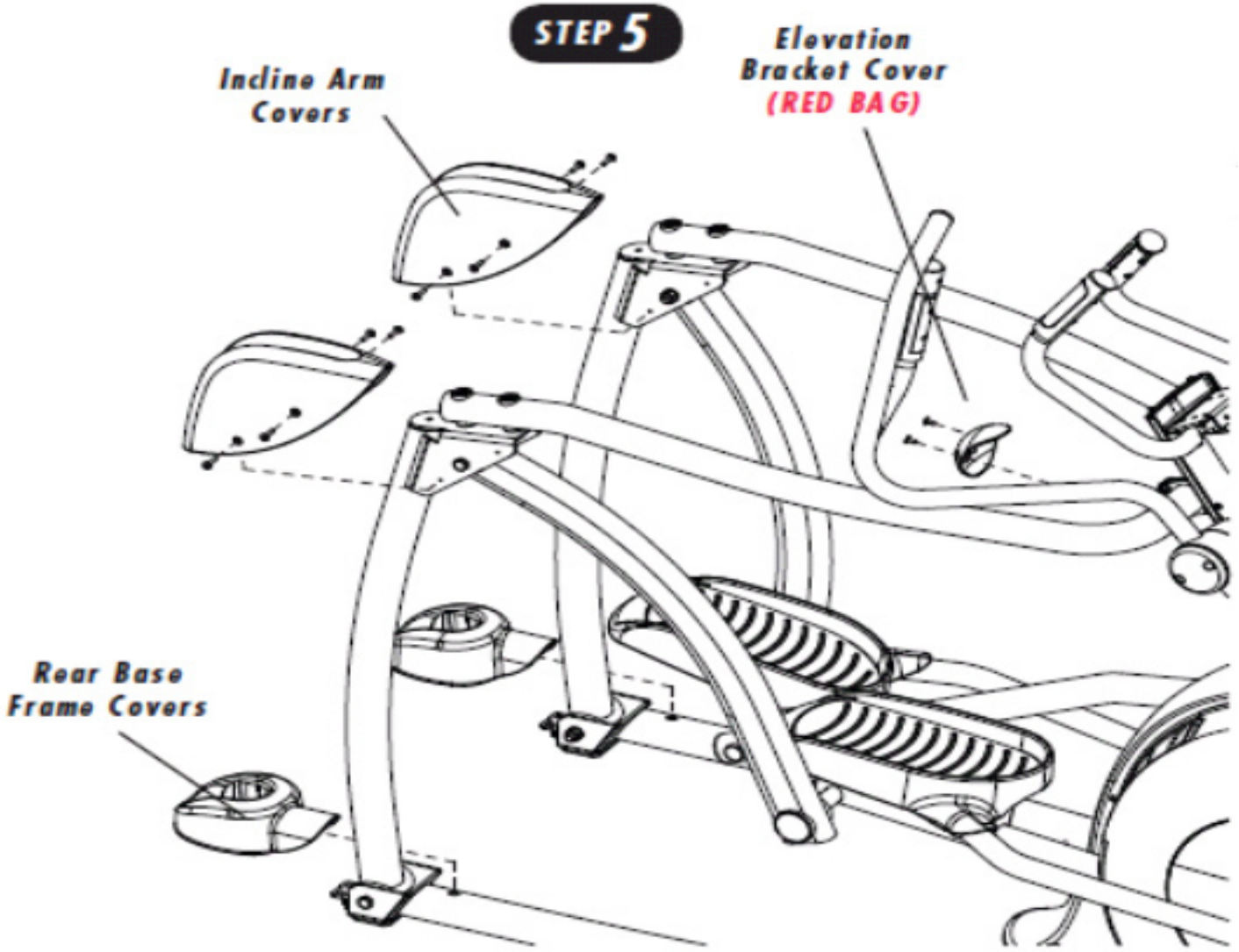
1) Place the left connection arm over the left incline arm bracket and connect with two socket head cap bolts (M10 x 65L). Tighten only a few turns with the 8mm L-Shaped Allen Wrench.
2) Insert the pin on the front flange of the connection arm to the hole in the console mast elevation bracket.
3) Repeat these steps on the right side.
4) When the pins of both connection arms are seated in the holes of the console mast elevation bracket, lift the entire assembly slightly to line up the screw holes. Insert four socket head cap bolts (M8 x 30L) with washers (8.2 x 13 x 1.4T) through these holes. Secure with a washer (8.2 x 13 x 1.4T) and nylon nut (M8) to each bolt (These bolts should be torqued to 25 N-m). Tighten with the 6mm L-Shaped Allen Wrench and 13mm Multi-Wrench.
5) Go back and completely tighten the screws that connect the connection arms to the incline arms with the 8mm L-Shaped Allen Wrench (These screws should be torqued to 80 N-m).

8.3 ASSEMBLY INSTRUCTIONS - CONTINUED



STEP 4 - GREEN BAGS

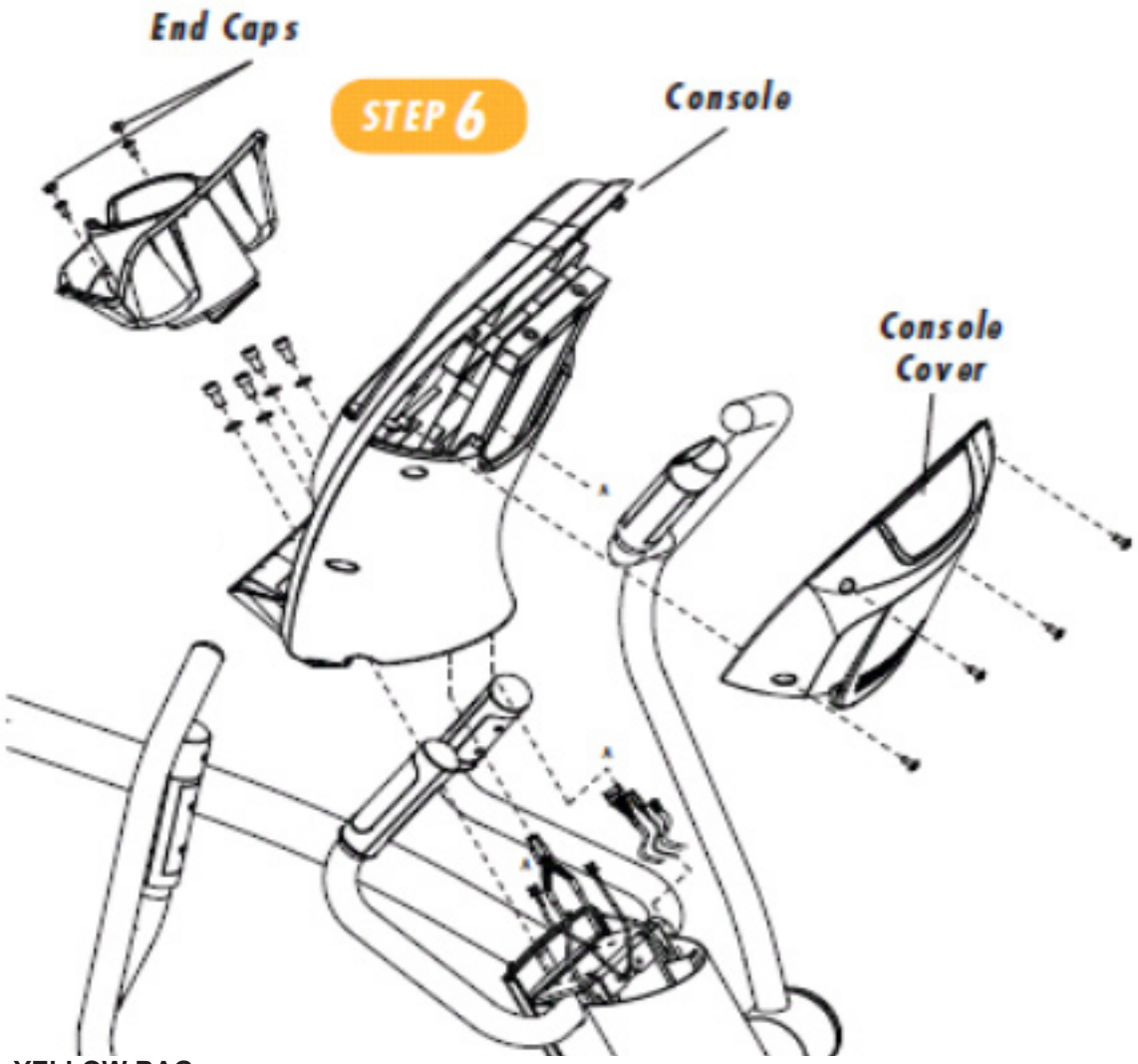
1) Connect the remote toggle cables. Place the left dual action handlebar on the left rotation housing and secure in place with four bolts (M8 x 20L) and lock washers (M8). Tighten with the 6mm L-Shaped Allen Wrench (these bolts should be torqued to 25 N-m).
2) Line up the rotation housing cover over the rotation housing and push to snap into place.
3) Slide the link arm between the flanges of the dual action handlebar bracket. Insert a socket head cap bolt (M8 x 50L) through the hole to connect the brackets. Secure with a washer (M8) and nylon nut (M8). Tighten with the 10mm Multi-Wrench and 5mm L-Shaped Allen Wrench.
4) Set the dual action handlebar cover in place over the connection bracket. Place the nut (M5) into the recess on the inside cover. Insert a bolt (M5 x 50L) through the outside hole and tighten to the nut with a screwdriver.
5) Repeat these steps on the right side with the other green hardware bag.



STEP 5 - BLACK BAGS

1) Position the covers over the rear incline arm bracket and secure each cover in place with four bolts (M5 x 25L).
2) Position the cover over the elevation bracket and secure with the two bolts (M5 x 15L) from the RED BAG.
3) Take the rear base frame covers and pull apart to separate and slide around the bottom of the incline arm. Snap the three tabs down to set in place.
4) Begin pedaling to power up the unit or plug the power cord into the power socket in the front of the unit. Plug the other end of the cord into the wall outlet. Make sure the power switches at the bottom of the unit and on the back of the console are in the on position.

8.3 ASSEMBLY INSTRUCTIONS - CONTINUED

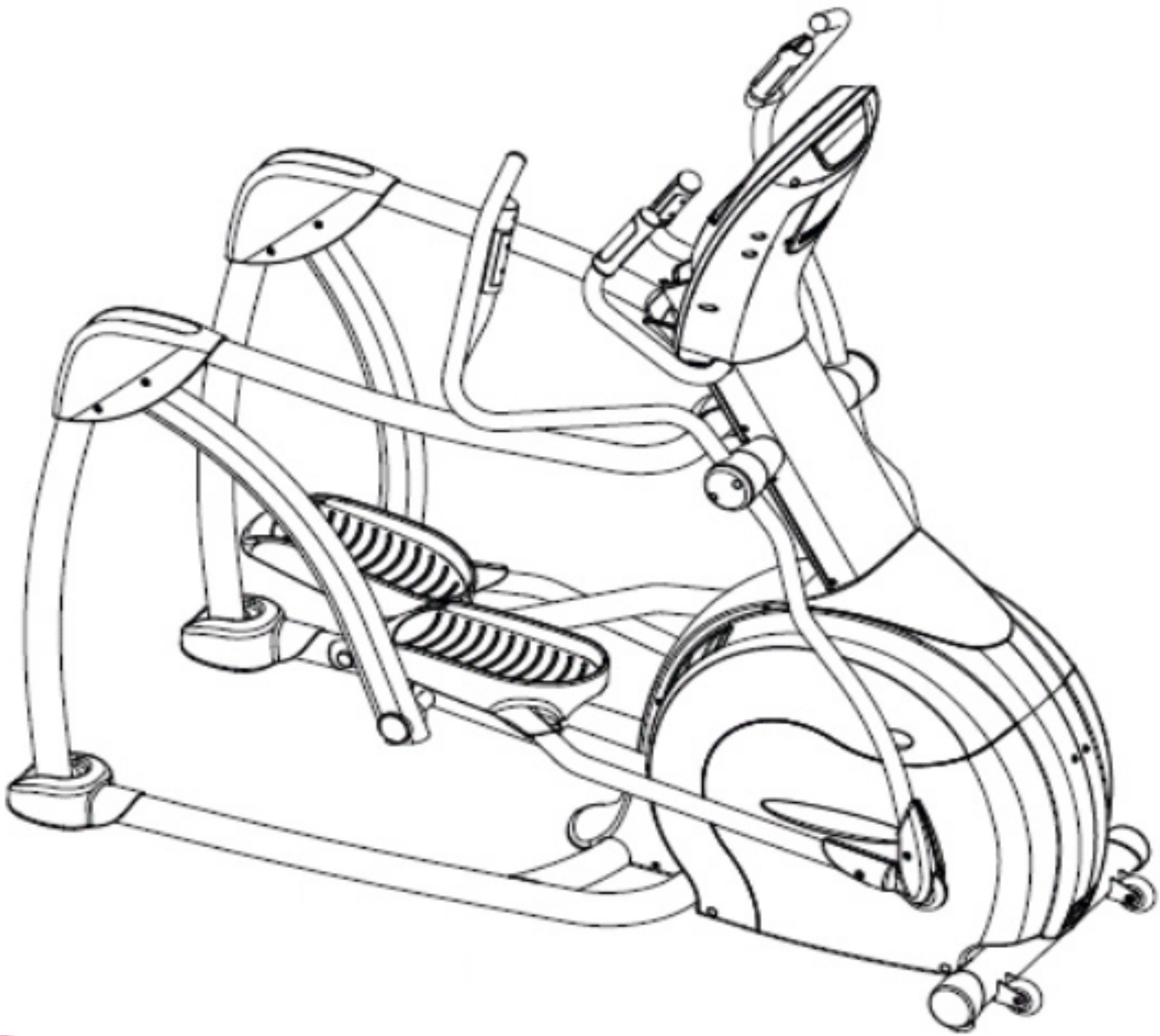


STEP 6 - YELLOW BAG

1) Remove the wire tie from the data cable and console mast.
2) Remove the four console mounting bolts from the backside of the console with the screwdriver. Connect the heart rate wires coming from the mast to the heart rate wires coming from the bottom of the console. Insert the data cable through the bottom of the console and plug into the board. Pull any extra wires down into the console mast. Secure the console to the bracket using the four socket bolts (M8 x 15L) (these bolts should be torqued to 25 N-m).
3) Connect the 9-volt battery. Position the rear console cover on the back of the console and secure with the four bolts removed earlier. Tighten with the screwdriver.
4) Insert the cup holder and attach with 2 bolts (M5 x 12L). Snap the end caps into place.

8.3 ASSEMBLY INSTRUCTIONS - CONTINUED

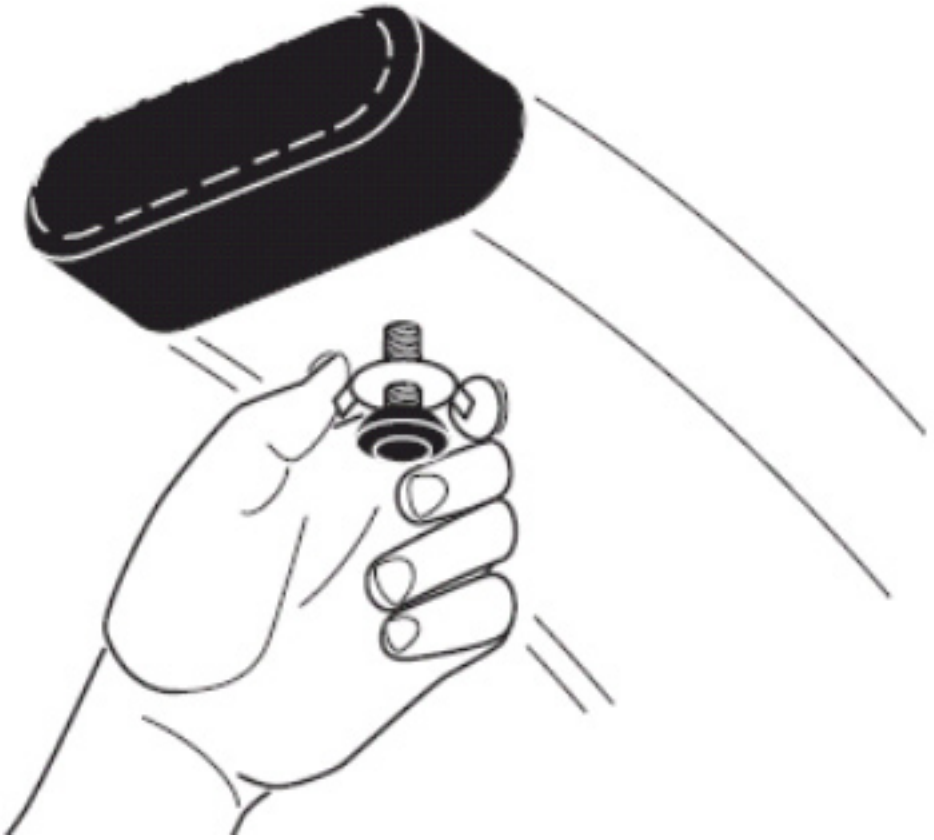
FINAL ASSEMBLY



STABILIZING THE VISION FITNESS S70 SUSPENSION ELLIPTICAL

After positioning the Suspension Elliptical in its intended location, check its stability by attempting to shake it side to side. Shaking or wobbling indicates that your Suspension Elliptical needs to be leveled. A good way to test if the unit is level is to push on the console mast while standing on each side of the unit. If the front stabilizer lifts up off the floor more on one side than the other, an adjustment is needed.

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 Suspension Elliptical is stable. Lock the adjustment by tightening the nut against the rear foot support.



NOTES

VISION FITNESS SYSTEMS CORP.
1610 LANDMARK DRIVE COTTAGE GROVE WI 53527 USA
TOLL FREE 800.335.4348 www.visionfitness.com FAX 608.839.1717

KO
REV. 1