### **OWNER'S MANUAL**

MODEL NO.
Pro Club 24E

16317680US



- Assembly
- Operation
- Trouble –Shooting
- Parts
- Warranty



You must read and understand this owner's manual before operating unit.



## **Manufacture's Limited Warranty**

Maurice Pincoffs Canada Inc. warrants all its home use ELLIPTICAL parts for a period of time listed below, from the date of retail sale, as determined by a sales receipt or in the absence of a sales receipt. Maurice Pincoffs Canada Inc.'s responsibilities include providing new or remanufactured parts, at Maurice Pincoffs Canada Inc.'s option, and technical support to our independent dealers and servicing organizations. In the absence of a dealer or service organization, these warranties will be administered by Maurice Pincoffs Canada Inc. directly to a consumer. The warranty period applies to the following components:

### **Home Use Limited WARRANTY**

Frame Lifetime
All Other Components 2 Years
Labor 1 Year

This warranty is not transferable and is extended only to the original owner.

The warranty shall not apply to exercise units which are (1) used for commercial or other income producing purposes, or (2) subject to misuse, neglect, accident or unauthorized repair and alterations.

This warranty provided herein is lieu of all other express warranties, any implied warranties, including any implied warranties of merchantability of fitness for particular purpose, are limited in duration to the first 12 months from date of purchase. All other obligations or liabilities, including liability for consequential damages are hereby excluded.

### REPAIR PARTS AND SERVICE

All of the parts for the e-glide shown in figure can be ordered from Maurice Pincoffs Canada Inc. 6050 DON MURIE STREET, NIAGARA FALLS, ONTARIO L2E 6X8. When ordering parts, the parts will be sent and billed at the current prices. Prices may be subject to change without notice. Check or money order must accompany all orders. Standard hardware items are available at your local hardware store.

To ensure prompt and correct handling of any errors, or to answer any questions, please call our Toll Free number: 1-888-707-1880, or local number 1-905-353-8955 or fax 1-905-353-8968 or email customerservice@pincoffs.ca. Office hours are from 8:30 AM to 5:00 PM Monday to Friday Eastern Standard Time.

Always include the following information when ordering parts

- Model number
- Name of each part
- Part number of each part

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### **SAFETY PRECAUTIONS**

Thank you for purchasing our product. Even though we go to great efforts to ensure the quality of each product we produce, occasional errors and/or omissions do occur. In any event should you find this product to have either a defective or a missing part please contact us for a replacement. This product has been designed for home use only. Product liability and guarantee conditions will not be applicable to products being subjected to professional use or products being used in a gym centre. This exercise equipment was designed and built for optimum safety. However, certain precautions apply whenever you operate a piece of exercise equipment. Be sure to read the entire manual before assembly and operation of this machine. Also, please note the following safety precautions:

- 1. Read the OWNER'S OPERATING MANUAL and all accompanying literature and follow it carefully before using your elliptical.
- It is the responsibility of the owner to ensure that all users of the elliptical exerciser are 2. adequately informed of all precautions.
- If dizziness, nausea, chest pains, or any other abnormal symptoms are experienced while using this equipment, STOP the workout at once. CONSULT A PHYSICIAN IMMEDIATELY. 3.
- The elliptical exerciser is intended for in-home use only. Do not use the elliptical exerciser in a 4. commercial, rental, or institutional setting.
- Inspect your exercise equipment prior to exercising to ensure that all nuts and bolts are fully 5. tightened before each use.
- The elliptical must be regularly checked for signs of wear and damage. Any part found defective, 6. the part must be replaced with new spare part from the manufacturer.
- 7. Fitness equipment must always be installed on a flat surface, do not place the unit on a loose rug or uneven surface. It is recommended to use an equipment mat to prevent the unit from moving while it is being used, which could possibly scratch or damage the surface of your floor. Keep the elliptical exerciser indoors, away from moisture and dust.
- No changes must be made which might compromise the safety of the equipment. 8.
- It is recommended to have a minimum of 1' safe clearance around the exercise equipment while 9.
- Keep children and pets away from this equipment at all times while exercising. 10.
- 11. Warm up 5 to 10 minutes before each workout and cool down 5 to 10 minutes afterward. This allows your heart rate to gradually increase and decrease and will help prevent you from straining muscles.
- 12. Never hold your breath while exercising. Breathing should remain at a normal rate in conjunction with the level of exercise being performed
- 13. Always wear suitable clothing and footwear while exercising. Do not wear loose fitting clothing that could become entangled with the moving parts of your elliptical.
- Always hold the handlebars when mounting, dismounting, or using the elliptical exerciser. Keep your back straight when using the elliptical exerciser; do not arch your back. 14.
- 15.
- The pulse sensor is not a medical device. Various factors, including the user's movement, may affect the accuracy of heart rate readings. The pulse sensor is intended only as an exercise aid 16. in determining heart rate trends in general.
- 17. When you stop exercising, allow the pedals to slowly come to a complete stop. The elliptical exerciser does not have a free wheel; the pedals will continue to move until the flywheel stops.
- Always unplug the power cord immediately after use and before cleaning the elliptical exerciser. 18.
- 19. If decals on the elliptical exerciser are missing or illegible, please call our customer service department toll free at 1-888-707-1880 and order a replacement decal.
- 20. Care must be taken when lifting or moving the equipment, so as not to injure your back. Always use proper lifting techniques
- 21. User weight should not exceed 450 lbs.

## **A**WARNING:

Before beginning any exercise program consult your physician. This is especially important for individuals over the age of 35 or persons with pre-existing health problems. Read all instructions before using any fitness equipment. We assume no responsibility form personal injury or property damage sustained by or through the use of this product.

### SAVE THESE INSTRUCTIONS

### Important Operation Instructions

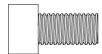
- **NEVER** operate this elliptical without reading and completely understanding the results of any operational change you request from the computer.
- Understand that changes in resistance do not occur immediately. Set your desired level on the computer console and release the adjustment key. The computer will obey the command gradually.
- Use caution while participating in other activities while using your elliptical such as watching television, reading, etc. These distractions may cause you to lose balance, resulting in serious injury.
- Always hold on to a handrail or hand bar while making control changes.

### Things To Know

Your new elliptical is engineered and manufactured to the strictest industry standards and tolerances. All elliptical trainers, no matter who the manufacturer, have a multitude of moving linkages and parts. Be aware that even with the tightest mechanical tolerances there still could be a slight amount of play between some parts. This inherent play can result in slight noises during use such as clicks and small thumps. Please expect that the e-glide will not be completely silent.

### **HARDWARE LIST**

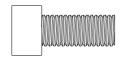
## Step1



**#58.** M10 x 20mm Stainless Steel Bolt (x4)

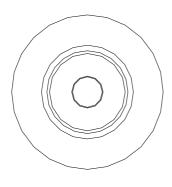


#65. M10 Split Washer (x8)



**#129.** M10 x 25mm Stainless Steel Bolt (x4)

# Step2



**#32.** Cup washer (x2)



**#58.** M10 x 20mm Stainless Steel Bolt (x2)



**#59.** M5 x 10mm Phillips Head Screw (x12)

# Step3



**#44** . 5/16" x 1-3/4" Button Head Socket Bolt (X2)



**#45.** 5/16" - 7T Nylon Nut (X2)



**#59.** M5 x 10mm Phillips Head Screw (X8)

# Step4

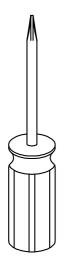


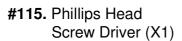
**#74.** M10 x 38mm Shoulder Bolt (X2)

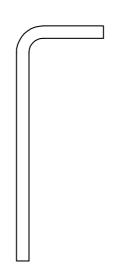


**#110.** M10 - 8T Nylon Nut (X2)

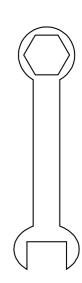
### **Tools**



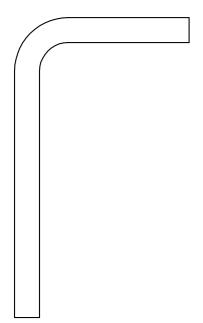




**#116.** 8mm Allen Wrench(X1)



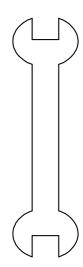
**#117.** 17mm Wrench (X1)



**#118.** 12mm Allen Wrench (X1)



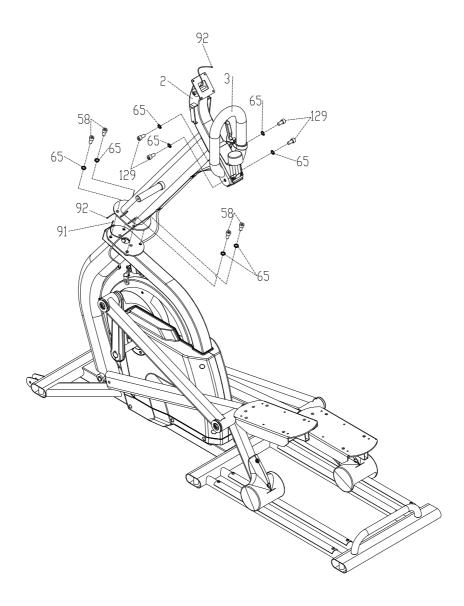
**#119.** 5mm Allen Wrench(X1)



**#120.** 13.14m/m\_ Wrench (X1)

### **STEP 1: CONSOLE MAST**

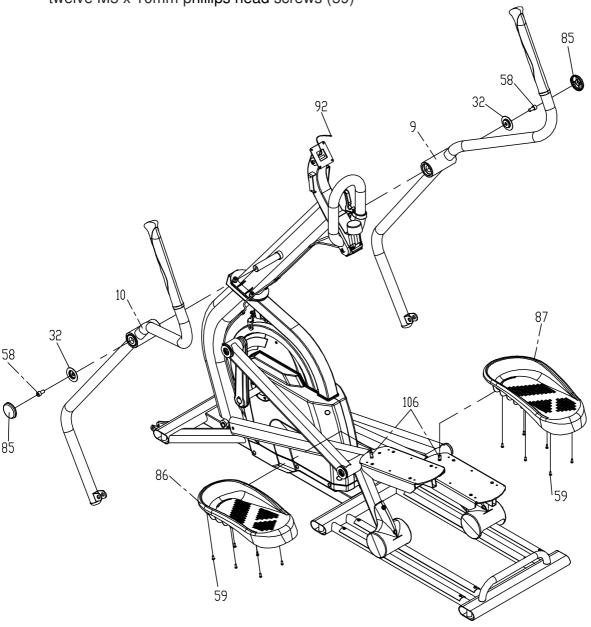
- The tension adjustment cable and speed sensor wire are pre-installed to the console mast and main frame so be careful not to pull too hard on the console mast during assembly to avoid damaging them. Connect the two speed sensor wires together.
- Lift the console mast (2) into place and align it so the locating pins in the mounting plate are set into the holes in the mating plate of the main frame. Be careful not to pinch the speed sensor wire between the console mast and the main frame plates during assembly.
- Secure the console mast in place with the four M10 x 20mm stainless steel bolts (58) and M10 split washers (65). Make sure the bolts are securely tightened.
- Install the stationary handlebars (3) to the console mast with four M10 x 25mm stainless steel bolts (129) and M10 split washers (65). Make sure the bolts are securely tightened.



## **STEP 2: SWING ARMS & PEDALS**

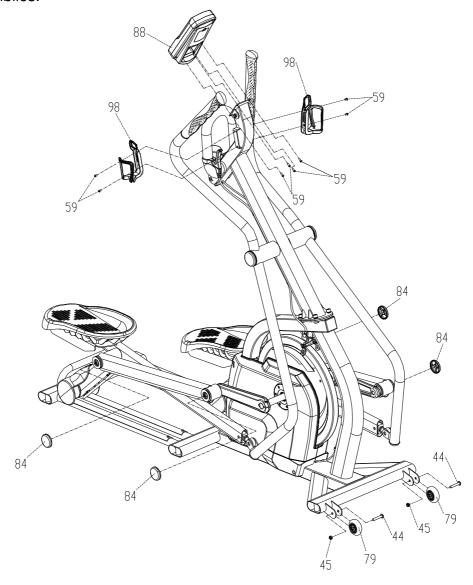
- Slide the two swing arms (9 &10) onto the console mast axle. There is a left and right swing arm so make sure you assemble the correct one on each side. Do not force the arms onto the axle or use a hammer as damage to the bearings could occur. The swing arms have been previously installed at the factory and should fit properly, although it is a snug fit.
- Secure the swing arms in place with the M10 x 20mm stainless steel bolts (58) and cup washers (32) and tighten. Snap the decorative caps (85) over the cup washers.

• Connect the clear drain hoses (106) and install the foot pedals (86 left, 87 right) with twelve M5 x 10mm phillips head screws (59)



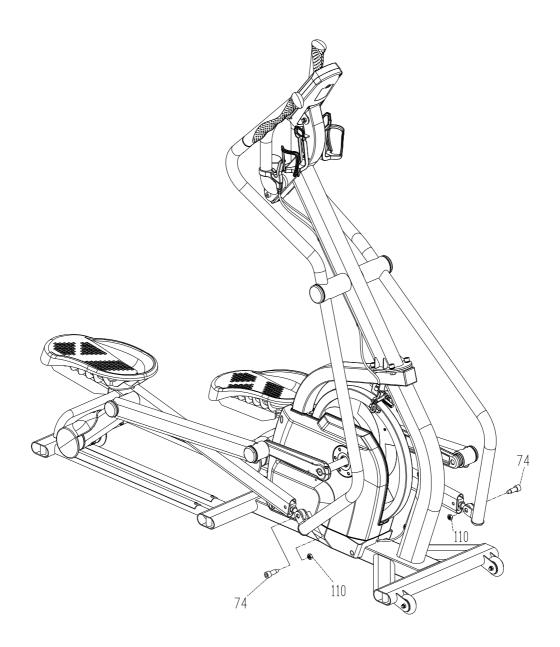
# STEP 3: CONSOLE

- Assemble the transport wheels (79) with the two 5/16" x 1-3/4" bolts (44) and 5/16" nuts (45)
- Unpack the console and install the 3 AA batteries. Connect the speed sensor wire into the white two pin connector accessed through the opening in the back of the console. Mount the console onto the console mast plate and secure with four M5 x 12mm phillips head screws (59).
- Secure the two bottle cages (98) to the console mast with four M5 x 10mm phillips head screws (59)
- Snap the four end caps (84) onto the cup washers on the left & right pedal arm assemblies.



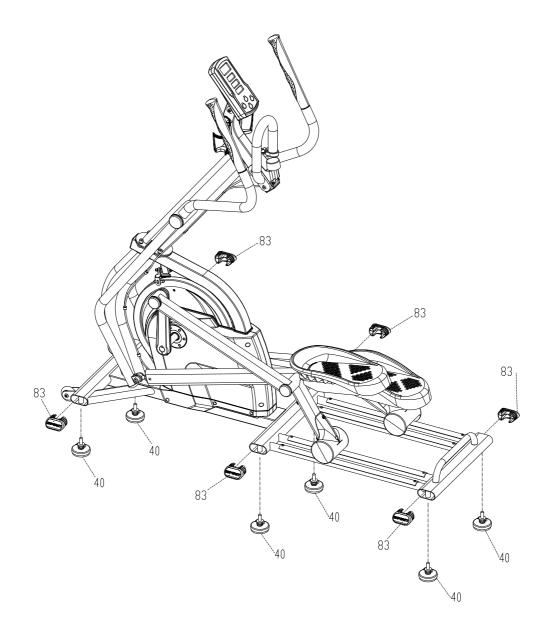
# **STEP 4: SWING ARMS**

 Assemble the bracket at the bottom of the swing arms to the rod ends on the pedal arms using the M10 x 38mm shoulder bolts (74) and the M10 nuts (110). Tighten securely.



# **STEP 5: LEVELERS & END CAPS**

- Tilt the e-glide to one side and put something under the unit for support and install the three levelers (40) for that side. Tilt the unit to the other side and install those three levelers (40). Level the e-glide once it is positioned where it will be used. Screw the two middle levelers all the way in and the front and rear levelers all the way in, then back them out about two or three turns. Level the unit using only the front and rear levelers first, then adjust the middle levelers so they touch the floor. Make sure to lock the levelers when finished.
- Press the six plastic end caps (83) into the oval stabilizer tubes.



# **CONSOLE OPERATION**



### **Power**

The power for the console is provided by 3 AA alkaline batteries (provided) and will operate on rechargeable NiCd AA batteries. Once the batteries are installed the console will power on, the Time window will display an hour meter reading, the Distance window will display an odometer reading and the RPM/Cadence window will display the software version. The hour reading shows how long the e-glide has been in use and the distance shows how many virtual miles the e-glide has gone.

If the console does not detect a speed signal, or key activations, it will go to sleep to protect battery life. To wake the console up you can press any key.

## **Display**

**Time:** Displays workout time two ways; either count up (accumulated time) or count down (remaining time), depending on your preference selected before starting the timer.

**Speed/Cadence/ RPM:** Displays the current pedaling speed as revolutions per minute.

**Distance:** Displays virtual distance traveled in miles or kilometers (units selected through management mode, see page 13 for details).

**Heart Rate:** Displays heart rate in beats per minute when a heart rate chest belt transmitter is worn and detected by the console. The heart rate receiver is compatible with Polar coded transmitters.

## **Keys**

**Time + (up):** Used to set workout time before the start key is pressed. The up key will increase the time setting by 1 minute for each key press. The time will change more rapidly when the key is held down for 2 seconds. The key is also used to switch the time reading to count up (elapsed time).

**Time = (Down):** Used to set workout time before the start key is pressed. The down key will decrease the time setting by 1 minute for each key press. The time will change more rapidly when the key is held down for 2 seconds. The key is also used to switch the time reading to count down (remaining time).

**Start/Stop:** Starts and stops the program timer.

**Reset:** Performs a complete reset of the console.

## **Operation**

- **Power** the console on by pressing any key.
- Enter **Quick start** operation by simply pressing the start key. The time will count up from zero.
- You may **set a workout time** by using the Time up and down keys. When you press the Start key the time will count down to zero from the set time. After pressing start you can use the up and down keys to switch the time to count up or count down.
- Press the start/stop button to **Pause** the timer and also to resume the timer when it is in Pause mode.
- Press the Reset key to reset all the data.
- For **Heart Rate readings** you must wear a heart rate transmitter. The console will pick up the transmitter signal and display your heart rate automatically.

### **Features**

This all new product from Spirit is a next generation e-glide machine specially designed for use with group exercise workouts or for serious training at home. Here are the top reasons why we believe the Spirit group exercise e-glide is among the best e-glide machines available, for everyone:

- **State of the Art** patent-pending, industry-leading, super-smooth, super-fast e-glide motion that opens up vast new possibilities for riders to vary their workouts, by duration, intensity, frequency and personal goals, whether health, fitness, endurance, strength, or professional athletic.
- Compatible Uses with both ElliptiCore group exercise programs, as well as with all
  indoor group cycle programs, gives riders an exercise choice in the same room, which
  empowers club owners to offer variety in group exercise programs, to fill open slots,
  and to improve overall financial performance of dedicated group exercise space.
- **Safety** features include an emergency hand brake and a manual lever to lock the flywheel when not in use.
- Thirty pound Steel Flywheel, along with a patented transmission system, provides the
  perfect amount of inertia that both challenges the rider, and assists in maintaining a
  smooth and even ride at every cadence.
- **Powerful Magnetic Resistance** provides super smooth, abundant resistance for high intensity workouts, ride variation, and larger riders.
- **Generous Footpads** allow precise foot placement both fore-aft and inside-out, and remain in a basic horizontal orientation throughout the e-glide stride, eliminating undesirable tipping forward of the feet.
- **Center-Mounted** fixed hand grips facilitate mounting and dismounting, in-ride recovery, and controlled sprints and interval training.
- **Essential Data** of cadence (RPM), total distance, heart rate and total elapsed time are displayed on an adjustable, heads up, LCD digital console.
- Self-Powered operation with no need for electricity (other than recyclable AA batteries).
- **Enhanced Movability** with a rear mounted hand grip, front-mounted heavy duty casters, and a narrower footprint.
- **Commercial Quality** materials with precision engineering and automated robotic welding give the machine consistent quality and long term durability.
- Affordable Excellence makes the Spirit e-glide a best buy in the market, for both clubs and individuals.

## **Important Safety Instructions**

- Do not operate elliptical on deeply padded, plush or shag carpet. Damage to both carpet and elliptical may result.
- Keep children away from the elliptical. There are obvious pinch points and other caution areas that can cause harm.
- Keep hands away from all moving parts.
- Never drop or insert any object into any openings.
- Do not use outdoors.
- Do not attempt to use your elliptical for any purpose other than for the purpose it is intended.
- Wear proper shoes. High heels, dress shoes, sandals or bare feet are not suitable for use on your elliptical. Quality athletic shoes are recommended to avoid leg fatigue.
- Use caution while participating in other activities while using your elliptical such as watching television, reading, etc. These distractions may cause you to lose balance and may result in serious injury.
- Always hold on to a handrail or hand bar while making control changes.
- To avoid injury when stopping the elliptical pull on the brake lever that is attached to the stationary handlebar. The elliptical produces high amounts of inertia when pedaled at higher speeds. Using the brake will allow you to stop the pedals within one revolution.



**SAVE THESE INSTRUCTIONS - THINK SAFETY!** 

# **PARTS LIST**

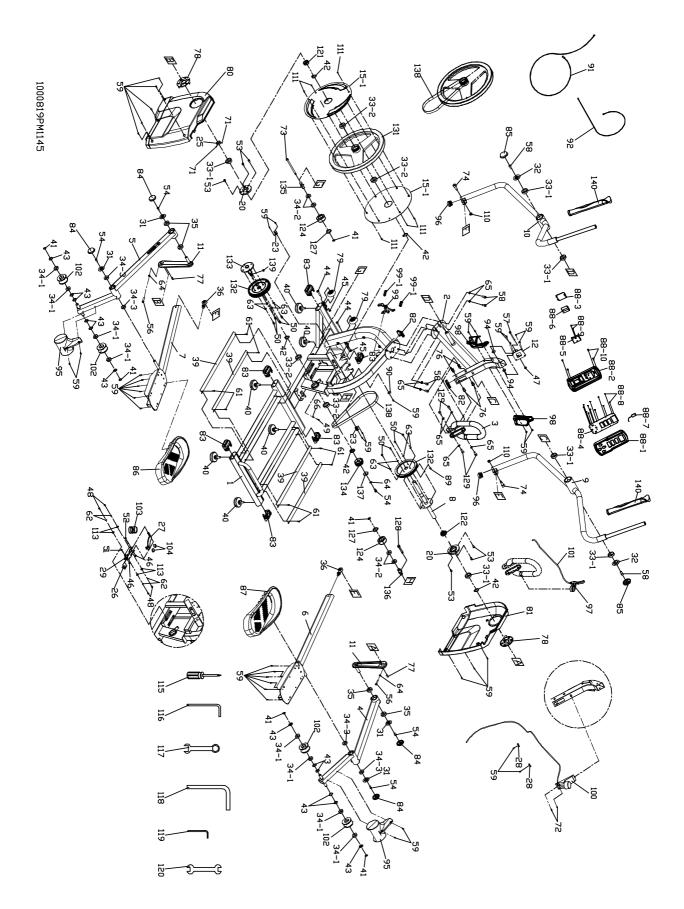
I AILIO I		DECORIDATION	OITV
KEY NO.	PART NO.	DESCRIPTION	O'TY
1	1768001-1	Main Frame	l 4
2		Console Mast	l 4
3	1768003	Stationary Handlebar	l a
4	1768004-1	Sliding Pedal Arm (R)	1
5	1768005-1	Sliding Pedal Arm (L)	1
6	1768006-1	Connecting Pedal Arm (R)	1
7	1768007-1	Connecting Pedal Arm (L)	l a
8	1768008	Main Crank Axle	1
9	1768009	Swing Arm (R)	1
10	1768010	Swing Arm (L)	1
11	1768011	Crank Arm	2
12	1768012-1	•	1
15-1	1768015-1	Flywheel covers	2
20	1768020	Bearing Housing, Crank Axle	2
23	1768023	Side Case bracket	2
25 26	1768025	Set Collar	1
26 27	1768026	Tension Cable Pulley	1
27	1768027	Brake Magnet Mounting Arm	1
28	1768028	Tension Cable Retainers	2
29 21	1768029	Brake Mounting Bracket	1
31	1768031	Cup Washer For M8 Bolt	4
32	1768032	Cup Washer For M10 Bolt	2
33-1	1768033-1	Bearing (6005)	6
33-2	1768033-2		4 8
34-1	1768034-1	Bearing (6003)(NTN)	4
34-2	1768034-2	Bearing (6003)(CN TMT)	
34-3 35	1768034-3 1768035	Bearing (6003)(C3 TMT)	4 4
36	1768035	Bearing (6203)(C3 TMT) Rod End Bearing (M14 x P2.0)	2
39	1768036	Aluminum Track 2.5T x 625L	4
40	1768039	Leveling Foot M12 x 1.75 x 75mm dia	6
41	1768040	C Ring 17mm dia	6
42	1768041	C Ring 25mm dia	5
43	1768042	Wave Washer 17mm dia	12
44	1768044	Button Head Socket Bolt 5/16" x 13/4"	2
45	1768045	Nyloc Nut 5/16" - 7t	2
46	1768046	Nyloc Nut M6 - 6t	2
47	1768047	Nyloc Nut M8 - 7t	1
48	1768048	Socket Head Cap Bolt M5 x 0.8 - 12mm	4
49	1768049	Socket Head Cap Bolt M5 x 0.8 - 12mm	1
<del>5</del> 0	1768049	Socket Head Cap Bolt M6 × 1.0 - 15mm	8
51	1768050	Socket Head Cap Bolt M6 × 1.0 - 15mm	1
52	1768051	Socket Head Cap Bolt M6 × 1.0 - 25mm	1
53	1768052	Socket Head Cap Bolt M8 × 1.25 - 12mm	6
54	1768054	Socket Head Cap Bolt M8 × 1.25 - 15mm	5
J <del>-1</del>	1700004	Outhor riedu Oap Duit Mu x 1.20 - Tullilli	9

Customer Service 1-888-707-1880 Email: <a href="mailto:customerservice@pincoffs.ca">customerservice@pincoffs.ca</a>

KEY NO.	PART NO.	DESCRIPTION	O'TY
56	1768056	Socket Head Cap Bolt M8 × 1.25 - 35mm	2
57	1768057	Socket Head Cap Bolt M8 × 1.25 - 70mm	1
58	1768058	Socket Head Cap Bolt M10 x 1.5 - 20mm (Stainless steel)	6
<b>59</b>	1768059	Phillips Head Screw M5 x 0.8 - 10mm	39
61 60	1768061	Phillips Head Screw M6 × 1.0 - 10mm (Stainless steel)	8
62 63	1768062	Split Washer MS	4
64	1768063 1768064	Split Washer M6 Split Washer M8	8 3
65	1768065	Split Washer M10 (Stainless steel)	8
66	1768065	Nut M5 - 4t	1
71	1768071	Set screw M5 - 5mm	2
72	1768072	Flat Head Socket Screw M4 x 10mm (Stainless steel)	2
73	1768073	Idler Adj. Bolt M10 x 1.5 x 220L	1
74	1768074	Shoulder Bolt 14mm dia x M10 x 38mm	2
76	1768076	Riv-Nut 13mm dia x- M10 x 1.5	4
77	1768077	Woodruff Key ( $7 \times 7 \times 23L$ )	2 2
78 70	1768078	Round Side Case Insert	2
79	1768079	Transportation Wheel (65mm dia )	2
80 81	1768080-1	Side Case (L)	1 1
82	1768081-1 1768082	Side Case (R) Square End Cap ( □50 )	2
83	1768083-1	Oval End Bevel Cap	6
84	1768084-1	M8 Snap-Cap	4
85	1768085	M10 Snap-Cap	2
86	1768086	Foot Pedal (L)	1
87	1768087	Foot Pedal (R)	1
88	1768088	Console Assembly	1
89	1768089	Speed Magnet	1
90	1768090	Speed Sensor Mounting Bracket	1
91	1768091	Speed Sensor W/Cable 950mm x 24AWG	1
92	1768092	Speed Sensor Connecting Cable (Upper) 1150mm	1
94	1768094	Nylon Washer ( 5/16" x 25 x 3t )	2
95	1768095	Slide Wheel Cover, Black	2
96	1768096	Button Head Plug	2
97	1768097	Emergency Brake Lever	1
98	1768098	Drink Bottle Holder	2
99	1768099	Emergency Brake Assembly	1
99-1	1768099-1	Emergency Brake Pad	2
100	17680100	Tension Knob Assembly	1
101	17680101	Emergency Brake Cable	1
102	17680102	Sliding Wheel (PU 72mm dia )	4
103	17680103	Brake Return Spring (52 x 3.5 x 50L)	1
104	17680104	Brake Magnet N35 (25 x 10L)	2
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KEY NO.	PART NO.	DESCRIPTION	O'TY
105	17680105	Sweat Tube Retainers	4
106	17680106	Ø1/4 × 1.5-450m/m_Drainage Tube, PVC	2
110	17680110	Nyloc Nut M10 - 8t	2
111	17680111	Tapping Screw M4 x 12mm, Black	6
113	17680113	Flat washer M5	4
115	17680115	Phillips HeadScrew Driver	1
116	17680116	8th L Allen Wrench	1
117	17680117	17m/m_Combination Wrench	1
118	17680118	12th L Allen Wrench	1
119	17680119	5th L Allen Wrench	1
120	17680120	13.14m/m_Wrench	1
121	17680121	Flywheel Set Collar ( L )	1
122	17680122	Flywheel Set Collar (R)	1
124	17680124	Idler Wheel	2
127	17680127	35 Retaining Ring for Bore	2
128	17680128	Socket Head Cap Bolt M10 × 1.5 - 80mm	1
129	17680129	Socket Head Cap Bolt M10 × 1.5 - 25mm (Stainless steel)	4
131	17680131	Flywheel	1
132	17680132	Pulley Ø174	2
133	17680133	Drive Axle	1
134	17680134	Pulley Ø60	1
135	17680135	Axle for Idler Wheel (L)	1
136	17680136	Axle for Idler Wheel (R)	1
137	17680137	Flat Washer Ø8 × 35 × 3.0T	1
138	17680138	Poly-V Belt, 6PK 1000mm	2
139	17680139	Twin Circle Key 6 × 6 × 16L	1
140	17680140	TPR Handgrip Foam	2



# **MAINTENANCE**

The E-glide is practically maintenance free. Just keep it clean by wiping down the unit with a damp cloth after each use. Do not use harsh detergents. Every month check that all the hardware is securely tightened. Do not use the e-glide if any parts are loose or broken.

The wheels and aluminum tracks will need to be kept clean to prevent noise and maintain smoothness. No lubrication should be necessary but if persistent noises from the wheels develop you can use a small amount of lubricant. Natural lubricants work well such as vegetable oil or soy based lubrication products like Biokleen from Ecoviva:

## **Management Mode**

- To enter the management mode press Start/Stop and Up keys simultaneously for 3 seconds
- The time window will show the software checksum (for engineering use) then tests the LCD display by sequencing all segments on.
- The next display shows total usage time in the time window, software version In Speed window and odometer in distance window.
- Press the Reset key for distance reading setting, use up & down keys to adjust:
   0 = Kilometers, 1 = Miles
- Press the Reset key for distance per pedal revolution setting: 1.83 = 1.83 meters (6 feet) per pedal revolution. Adjust to desired setting by using up & down keys.
- o To clear odometer, press **up** and **down** at the same time.
- Press start/stop to exit.

### TRAINING GUIDELINES

#### **Exercise**

Exercise is one of the most important factors in the overall health of an individual. Listed among its benefits are:

- · Increased capacity for physical work (strength endurance)
- · Increased cardiovascular (heart and arteries/veins) and respiratory efficiency
- · Decreased risk of coronary heart disease
- Changes in body metabolism, e.g. losing weight
- Delaying the physiological effects of age
- · Physiological effects, e.g. reduction in stress, increase in self-confidence, etc.

### **Basic Components of Physical Fitness**

There are four all encompassing components of physical fitness and we need to briefly define each and clarify its role.

Strength is the capacity of a muscle to exert a force against resistance. Strength contributes to power and speed and is of great importance to a majority of sports people.

Muscular Endurance is the capacity to exert a force repeatedly over a period of time, e.g. it is the capacity of your legs to carry you 10 Km without stopping.

Flexibility is the range of motion about a joint. Improving flexibility involves the stretching of muscles and tendons to maintain or increase suppleness, and provides increased resistance to muscle injury or soreness.

Cardio-Respiratory Endurance is the most essential component of physical fitness. It is the efficient functioning of the heart and lungs.

#### **Aerobic Fitness**

The largest amount of oxygen that you can use per minute during exercise is called your maximum oxygen uptake (MVo2). This is often referred to as your aerobic capacity.

The effort that you can exert over a prolonged period of time is limited by your ability to deliver oxygen to the working muscles. Regular vigorous exercise produces a training effect that can increase your aerobic capacity by as much as 20 to 30%. An increased MVO2 indicates an increased ability of the heart to pump blood, of the lungs to ventilate oxygen and of the muscles to take up oxygen.

### **Anaerobic Training**

This means "without oxygen" and is the output of energy when the oxygen supply is insufficient to meet the body's long term energy demands. (For example, 100 meter sprint).

### The Training Threshold

This is the minimum level of exercise which is required to produce significant improvements in any physical fitness parameter.

### **Progression**

As your become fitter, a higher intensity of exercise is required to create an overload and therefore provide continued improvement

#### Overload

This is where you exercise at a level above that which can be carried out comfortably. The intensity, duration and frequency of exercise should be above the training threshold and should be gradually increased as the body adapts to the increasing demands. As your fitness level improves, so the training threshold should be raised.

Working through your program and gradually increasing the overload factor is important.

### **Specificity**

Different forms of exercise produce different results. The type of exercise that is carried out is specific both to the muscle groups being used and to the energy source involved.

There is little transfer of the effects of exercise, i.e. from strength training to cardiovascular fitness. That is why it is important to have an exercise program tailored to your specific needs.

#### Reversibility

If you stop exercising or do not do your program often enough, you will lose the benefits you have gained. Regular workouts are the key to success.

#### Warm Up

Every exercise program should start with a warm up where the body is prepared for the effort to come. It should be gentle and preferably use the muscles to be involved later.

Stretching should be included in both your warm up and cool down, and should be performed after 3-5 minutes of low intensity aerobic activity or callisthenic type exercise.

#### Warm Down or Cool Down

This involves a gradual decrease in the intensity of the exercise session. Following exercise, a large supply of blood remains in the working muscles. If it is not returned promptly o the central circulation, pooling of blood may occur in the muscles.

#### **Heart Rate**

As you exercise, so the rate at which your heart beat also increases. This is often used as a measure of the required intensity of exercise. You need to exercise hard enough to condition your circulatory system, and increase your pulse rate, but not enough to strain your heart.

Your initial level of fitness is important in developing an exercise program for you. If you are starting off, you can get a good training effect with a heart rate of 110-120 beats per minute(BPM). If you are fitter, you will need a higher threshold of stimulation.

To begin with, you should exercise at a level that elevates your heart rate to about 65 to 70% of your maximum. If you find this is too easy, you may want to increase it, but it is better to lean on the conservative side.

As a rule of thumb, the maximum heart rate is 220 minus your age. As you increase in age, so your heart, like other muscles, loses some of its efficiency. Some of its natural loss is won back as fitness improves.

The following table is a guide to those who are "starting fitness".

Age	25	30	35	40	45	50	55	60	65
Target heart Rate 10 Second Count	23	22	22	21	20	19	19	18	18
Beats per Minute	138	132	132	126	120	114	114	108	108

### **Pulse Count**

The pulse count (on your wrist or carotid artery in the neck, taken with two index fingers)is done for ten seconds, taken a few seconds after you stop exercising. This is for two reasons: (a) 10 seconds is long enough for accuracy, (b) the pulse count is to approximate your BPM rate at the time you are exercising. Since heart rate slows as you recover, a longer count isn't as accurate.

The target is not a magic number, but a general guide. If you're above average fitness, you may work quite comfortably a little above that suggested for your age group.

The following table is a guide to those who are keeping fit. Here we are working at about 80% of maximum.

Age	25	30	35	40	45	50	55	60	65
Target heart Rate 10 Second Count	26	26	25	24	23	22	22	21	20
Beats per Minute 156 156 150 144 138 132 132 126 120  Don't push yourself too hard to reach the figures on this table. It can be very uncomfortable if you overdo it. Let it happen naturally as you work through your program. Remember, the target is a guide,									

Two final comments:(1) don't be concerned with day to day variations in your pulse rate, being under pressure or not enough sleep can affect it;(2) your pulse rate is a guide, don't become a slave to it.

**Endurance Circuit Training** 

not a rule, a little above or below is just fine.

Cardiovascular endurance, muscle, strength, flexibility and coordination are all necessary for maximum fitness. The principle behind circuit training is to give a person all the essentials at one time by going through your exercise program moving as fast as possible between each exercise. This increases the heart rate and sustains it, which improves the fitness level. Do not introduce this circuit training effect until you have reached an advanced program stage.

**Body Building** 

Is often used synonymously with strength training The fundamental principal here is OVERLOAD. Here, the muscle works against greater loads than usual. This can be done by increasing the load you are working against.

#### **Patronization**

This is the term used to vary your exercise program for both physiological and psychological benefits. In your overall program, you should vary the workload, frequency and intensity. The body responds better to variety and so do you. In addition, when you feel yourself getting "stale', bring in periods of lighter exercise to allow the body to recuperate and restore its reserves. You will enjoy your program more and feel better for it.

Muscle Soreness

For the first week or so, this may be the only indication you have that you are on an exercise program. This, of course, does depend on your overall fitness level. A confirmation that you are on the correct program is a very slight soreness in most major muscle groups. This is quite normal and will disappear in a matter of days.

If you experience major discomfort, you may be on a program that is too advanced or you have increased your program too rapidly.

If you experience PAIN during or after exercise, your body is telling your something. Stop exercising and consult your doctor.

#### What to Wear

Wear clothing that will not restrict your movement in any way while exercising. Clothes should be light enough to allow the body to cool. Excessive clothing that causes you to perspire more than you normally would while exercising, gives you no advantage. The extra weight you lose is body fluid and will be replaced with the next glass of water you drink. It is advisable to wear a pair of gym or running shoes or "sneakers".

**Breathing during Exercise** 

Do not hold your breath while exercising. Breathe normally as much as possible. Remember, breathing involves the intake and distribution of oxygen, which feeds the working muscles.

Rest periods

Once you start your exercise program, you should continue through to the end. Do not break off halfway through and then restart at the same place later on without going through the warm-up stage again.

The rest period required between strength training exercises may vary from person to person. This will depend mostly on your level of fitness and the program you have chosen. Rest between exercises by all means, but do not allow this to exceed two minutes. Most people manage with half minute to one minute rest periods

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### **STRETCHING**

Stretching should be included in both your warm up and cool down, and should be performed after 3-5 minutes of low intensity aerobic activity or callisthenic type exercise. Movements should be performed slowly and smoothly, with no bouncing or jerking. Move into the stretch until slight tension, not pain, is felt in the muscle and hold for 20-30 seconds. Breathing should be slow, rhythmical and under control, making sure never to hold your breath.

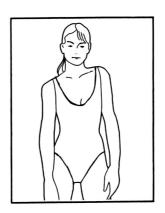
#### **Head Rolls**

Rotate your head to the right for one count, feeling
The stretch up the left side of your neck. Next rotate
your head back for one count, stretching your chin to
the ceiling and letting your mouth open. Rotate your
head to the left for one count, and finally, drop your
head to your chest for one count.



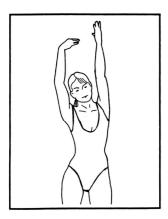
#### **Shoulder Lifts**

Lift your right shoulder up toward your ear for one count. Then lift your left shoulder up for one count as you lower your right shoulder.



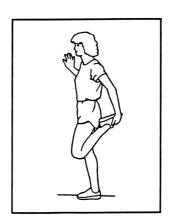
### **Side Stretches**

Open your arms to the side and continue lifting them until they are over your head. Reach your right arm as far upward toward the ceiling as you can for one count. Feel the stretch up your right side. Repeat this action with your left arm.



### **Quadriceps Stretch**

With one hand against a wall for balance, reach behind you and pull your right foot up. Bring your heel as close to your buttocks as possible. Hold for 15 counts and repeat with left foot up.



### **Inner Thigh Stretch**

Sit with the soles of your feet together with your knees pointing outward. Pull your feet as close into your groin as possible. Gently push your knees towards the floor. Hold for 15 counts.



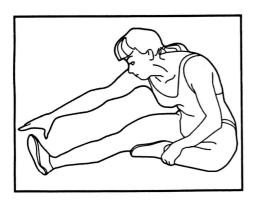
### **Toe Touches**

Slowly bend forward from your waist, letting your back and shoulders relax as you stretch toward your toes. Reach down as far as you can and hold for 15 counts.



### **Hamstring Stretches**

Sit with your right leg extended. Rest the sole of your left foot against your right inner thigh. Stretch toward your toe as far as possible. Hold for 15 counts. Relax and then repeat with left leg extended.



### Calf/Achilles Stretch

Lean against a wall with your left leg in front of the right and your arms forward. Keep your right leg straight and the left foot on the floor; then bend the left leg and lean forward by moving your hips toward the wall. Hold, then repeat on the other side for 15 counts.

