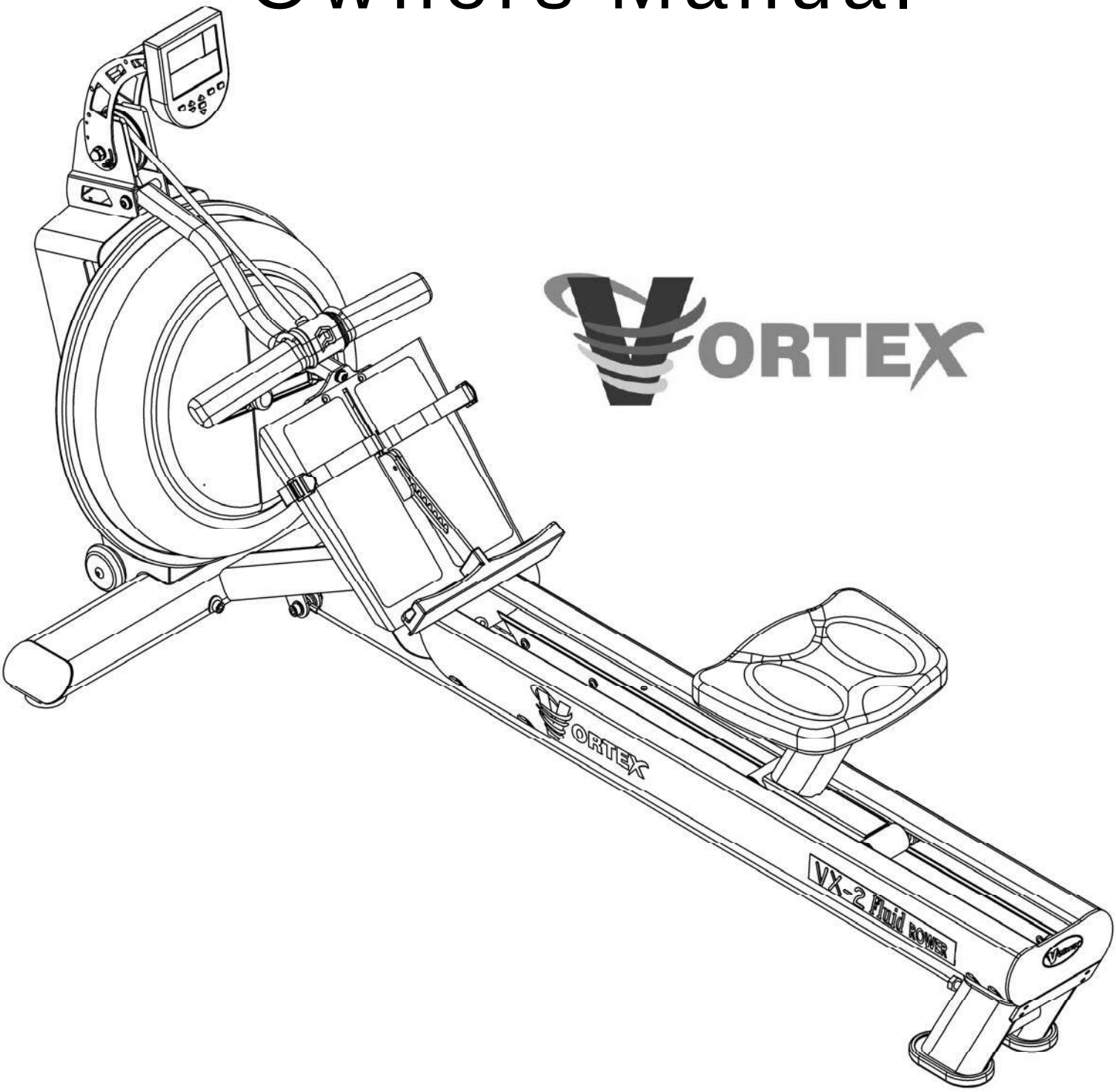
Owners Manual



VX-2 Fluid ROWER

FIRST DEGREE FITNESS
FLUID INNOVATION
firstdegreefitness.com

Contents

Training with the VX-2

1. As with any piece of fitness equipment, consult a physician before beginning your VX-2 exercise program.

2. Follow instructions provided in this manual for correct foot position and basic rowing techniques.

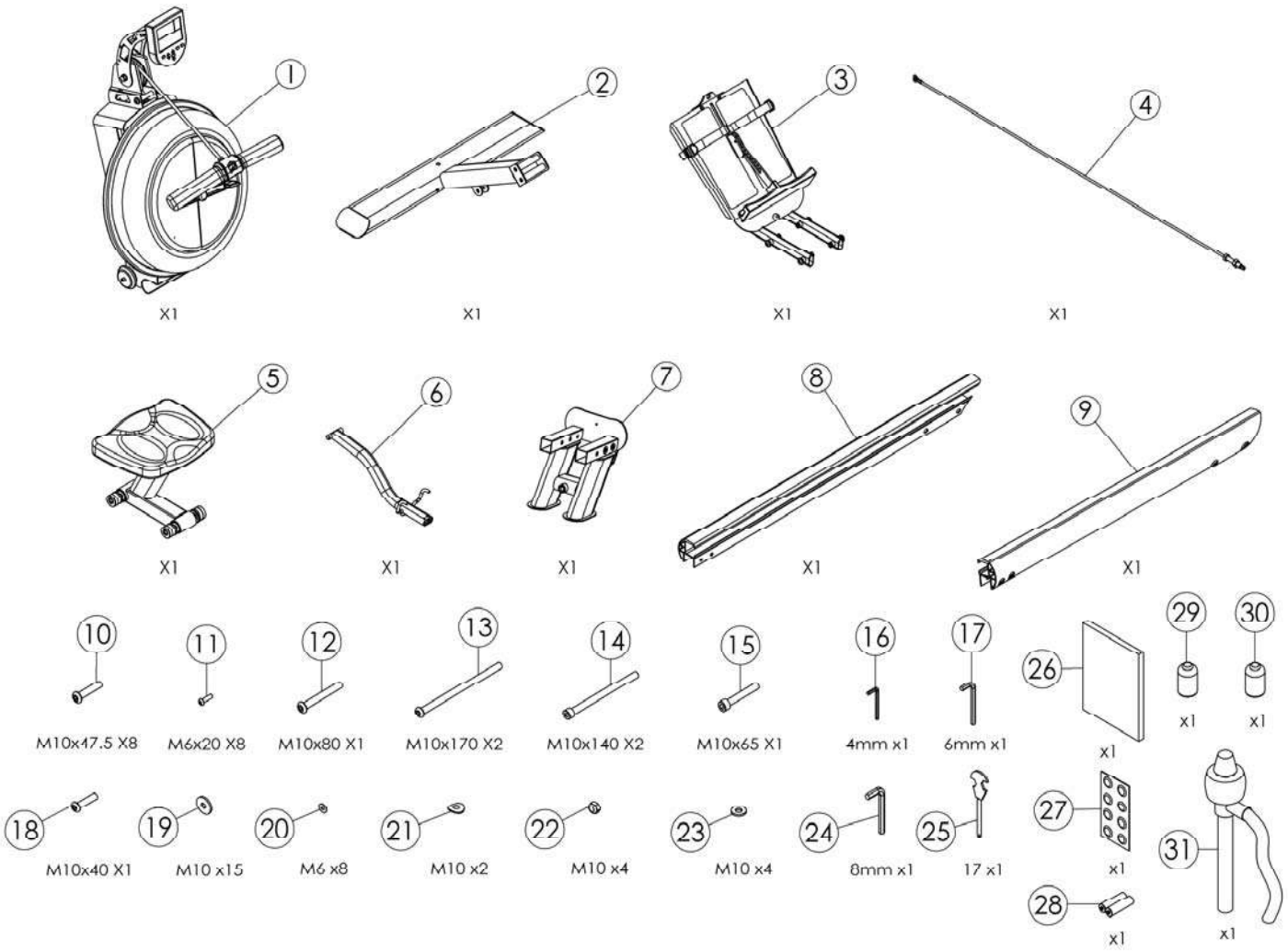
 CAUTION

1. The VX-2 can stand vertically for storage. When doing so, please follow the instructions given in the basic operation section of this manual.

 CAUTION

2. Keep hands away from moving parts, as indicated by the warning sticker on the mainframe of your machine and inside the PVC rear cover.

Box Contents:

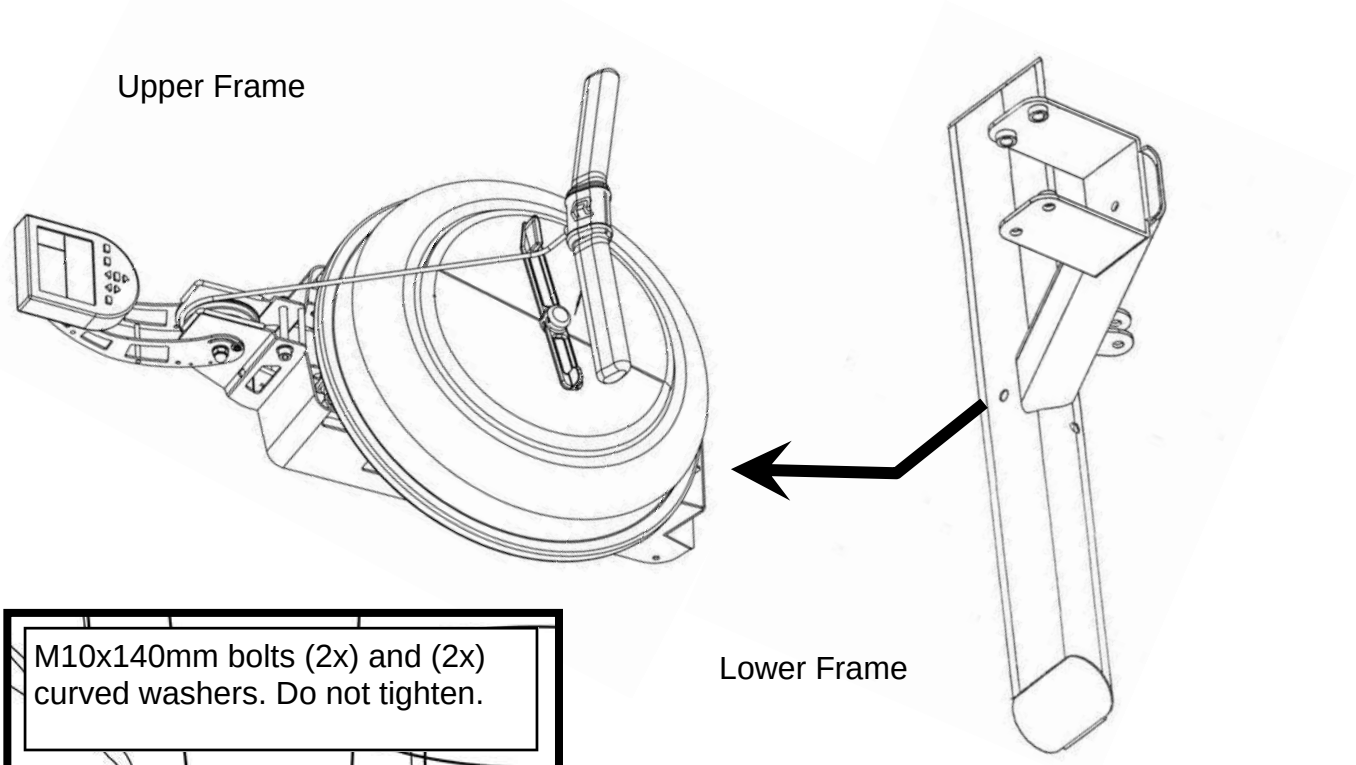


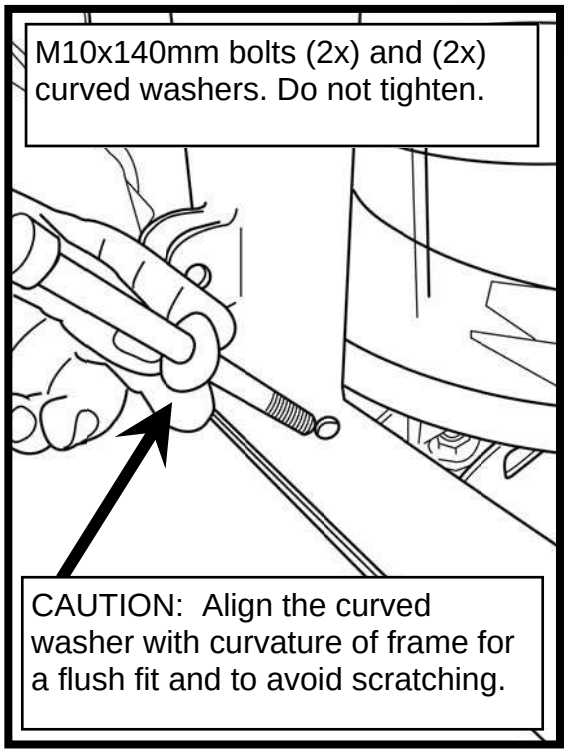
Item	Qty	Description	Item	Qty	Description
1	1	Upper Mainframe and Tank	16	1	4mm Hex Key
2	1	Lower Mainframe	17	1	6mm Hex Key
3	1	Footplate	18	1	Bolt M10 x 40
4	1	Frame Tension Cable	19	15	Washer M10
5	1	Rower seat	20	8	Washer M6
6	1	S-bend bar handle catch	21	2	Curved Washer M10
7	1	Rear leg	22	4	Nut M10
8	1	Seat Rail Left	23	4	Plastic Washer M10
9	1	Seat Rail Right	24	1	8mm Hex Key
10	8	Bolt M10 x 47.5	25	1	Multi-tool
11	8	Bolt M6 x 20	26	1	Owners Manual
12	1	Bolt M10 x 80	27	2	Chlorine tablets
13	2	Bolt M10 x 170	28	2	AA batteries
14	2	Bolt M10 x 140	29	1	Blue dye
15	1	Bolt M10 x 65	30	1	Touch up paint
			31	1	Siphon

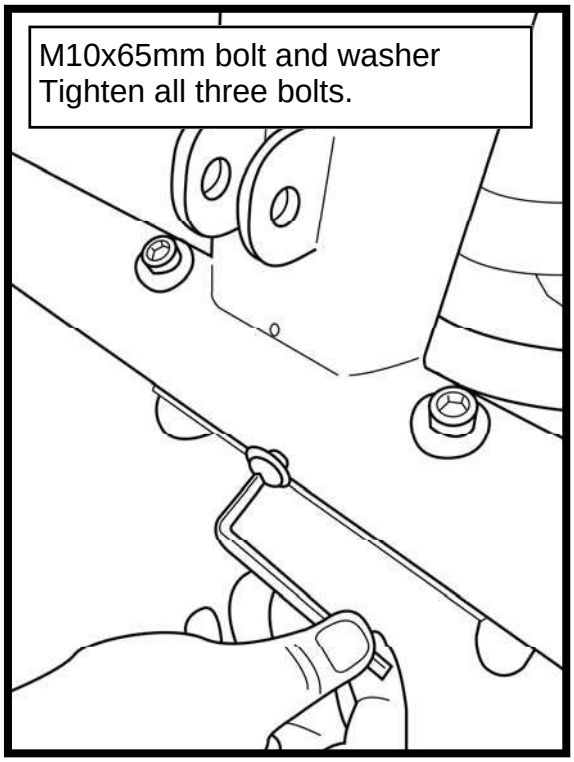
VX-2 Assembly: Attaching Upper/Lower Frame

Step 1: Open box and remove contents. Lie Upper Frame on it's back as shown here. In the bolt pack, locate 2x M10x140mm bolts and curved washers along with 1x M10x65mm dome head bolt and washer. Connect the Lower Frame to Upper using M10x140mm bolts first and do not tighten before installing the third M10x65mm bolt as shown lower right.

Caution: the curved washers can damage paint if not lying flush against oval tube when tightened. Use care when securing.







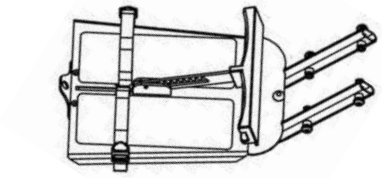
WARNING

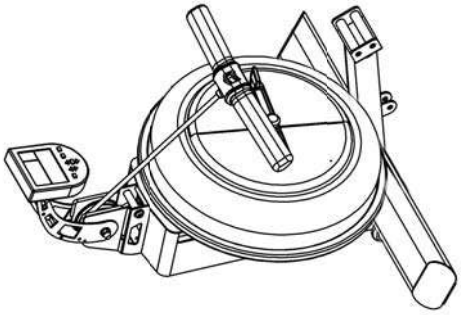
Do not attempt to stand rower until Footplate/Seat Rail assembly is attached. See following page for details.

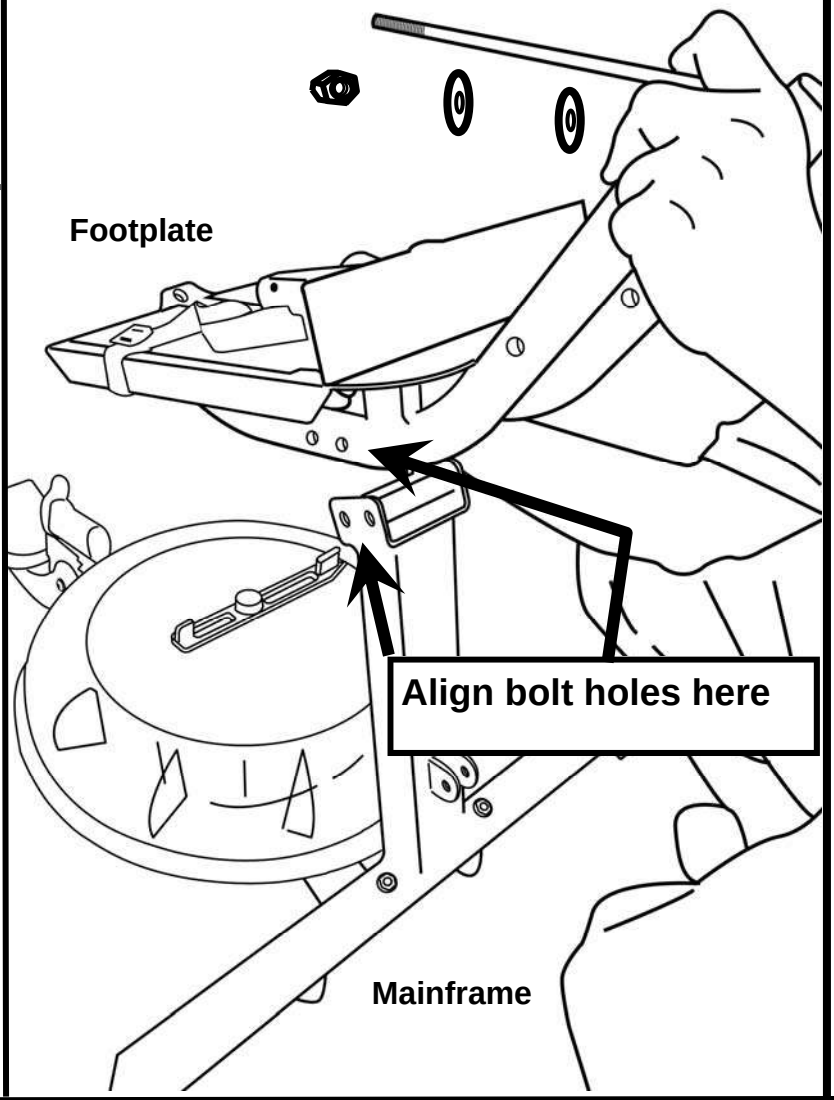
VX-2 Assembly Instructions

Attaching Footplate to Mainframe

Step 1: Using 2x 170mm bolts, 4x standard washers and 2x Nylock nuts, attach the Footplate to the Mainframe of the rower as shown.





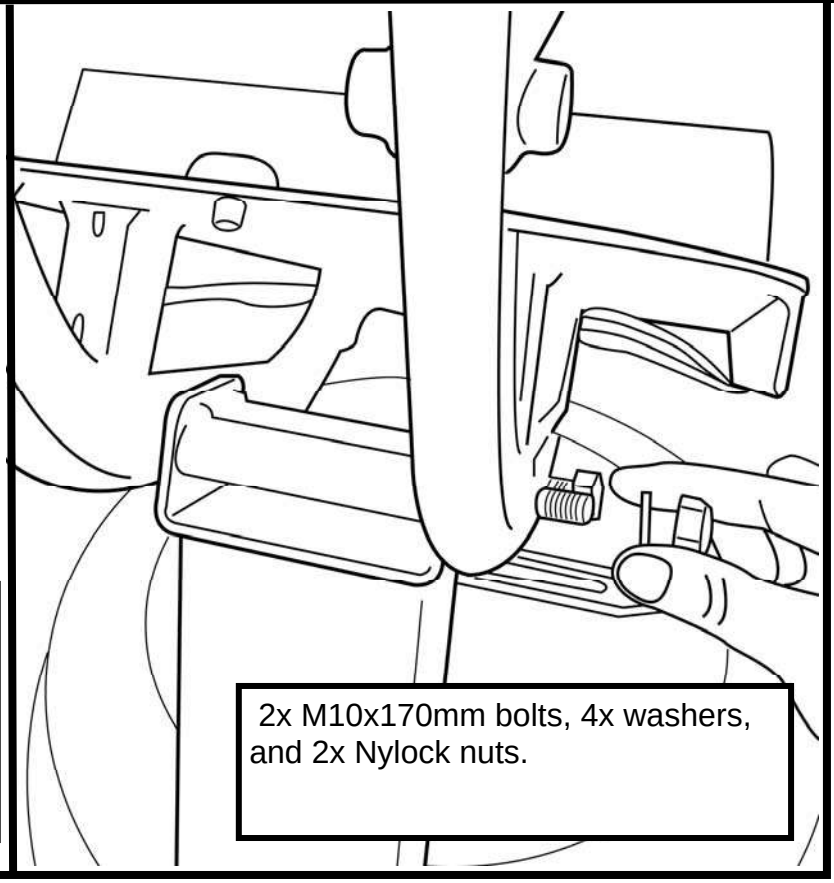


Note: Tighten bolts securely before moving on to next stage of assembly.

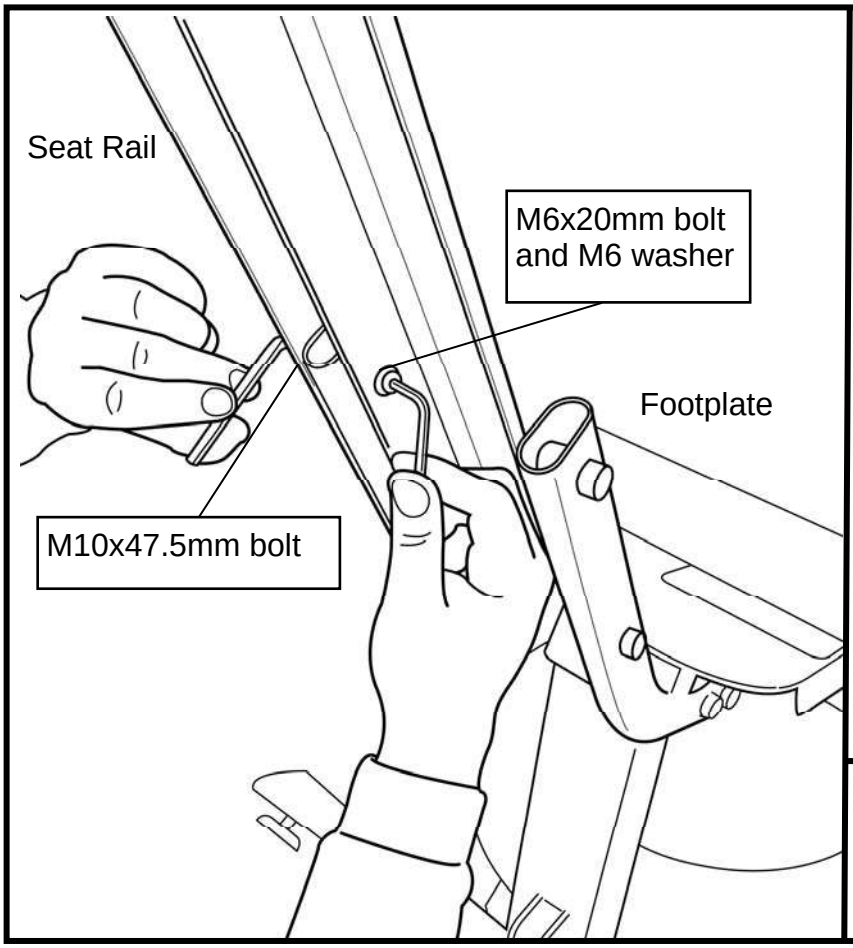
WARNING

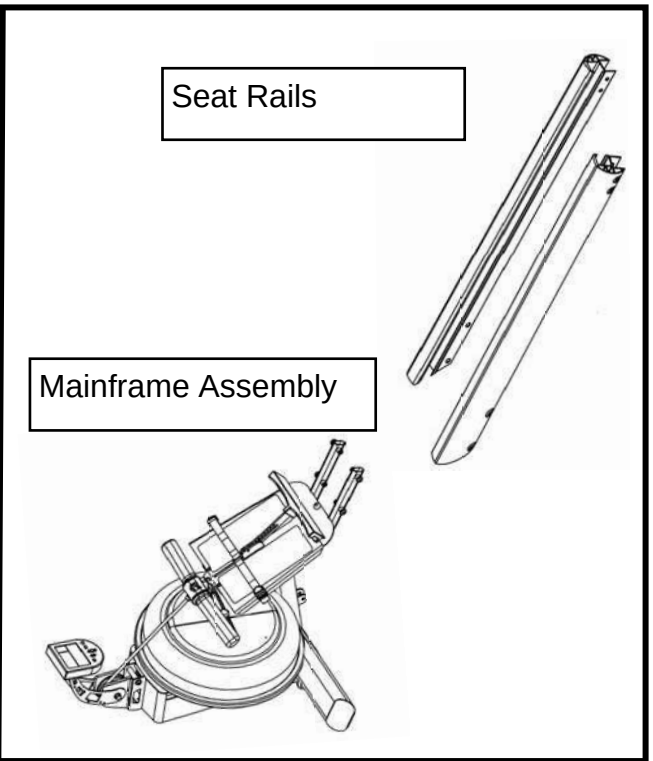
Do not attempt to stand rower until both Footplate and Seat Rails are attached.

See following page for details.



Attaching Seat Rails to Mainframe



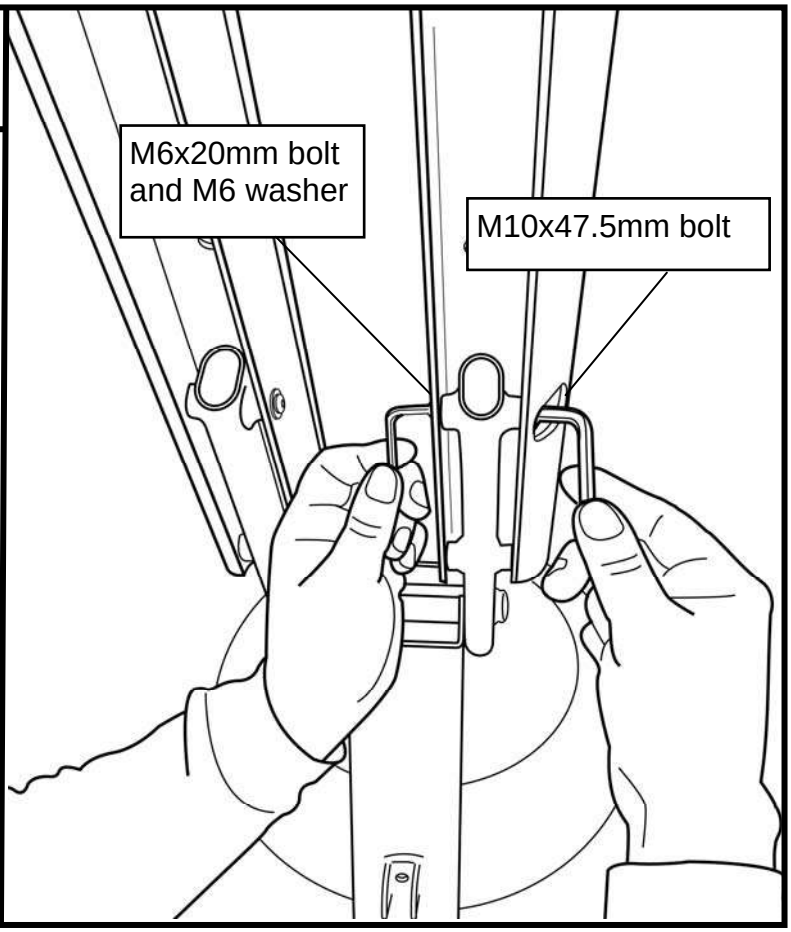


Step 1: Install Seat Rail onto Footplate/ Mainframe Assembly using 4x M10x47.5mm bolts (no washers) and 4x M6x20mm bolts with M6 washers.

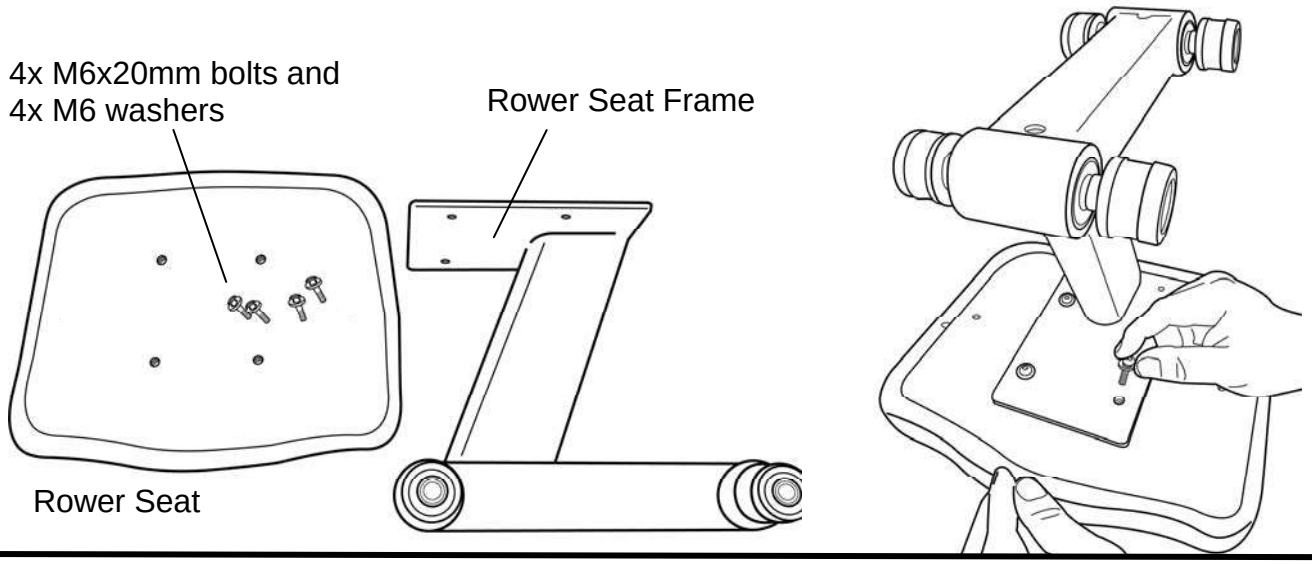
Step 2: Install the right Seat Rail.

Tip: Install both M10x47.5mm bolts first from the outside to hold the rail in position before securing from the inside with the M6x20mm bolts and M6 washers.

The front of the Seat Rails have potentially sharp edges. Use care when handling.



Rower Seat Assembly



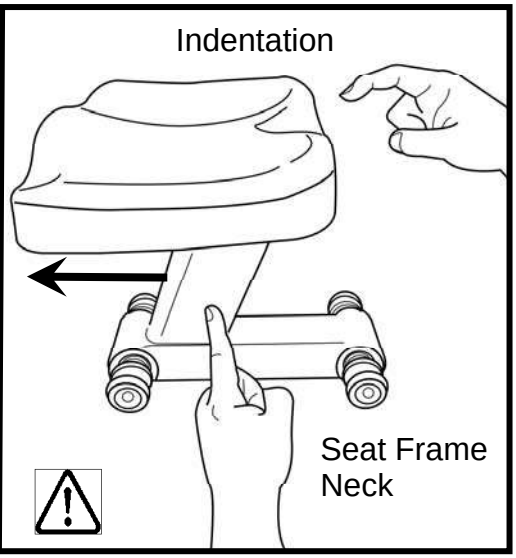
Install the Rower Seat onto the Rower Frame using 4x M6x20mm bolts and 4x M6 washers.

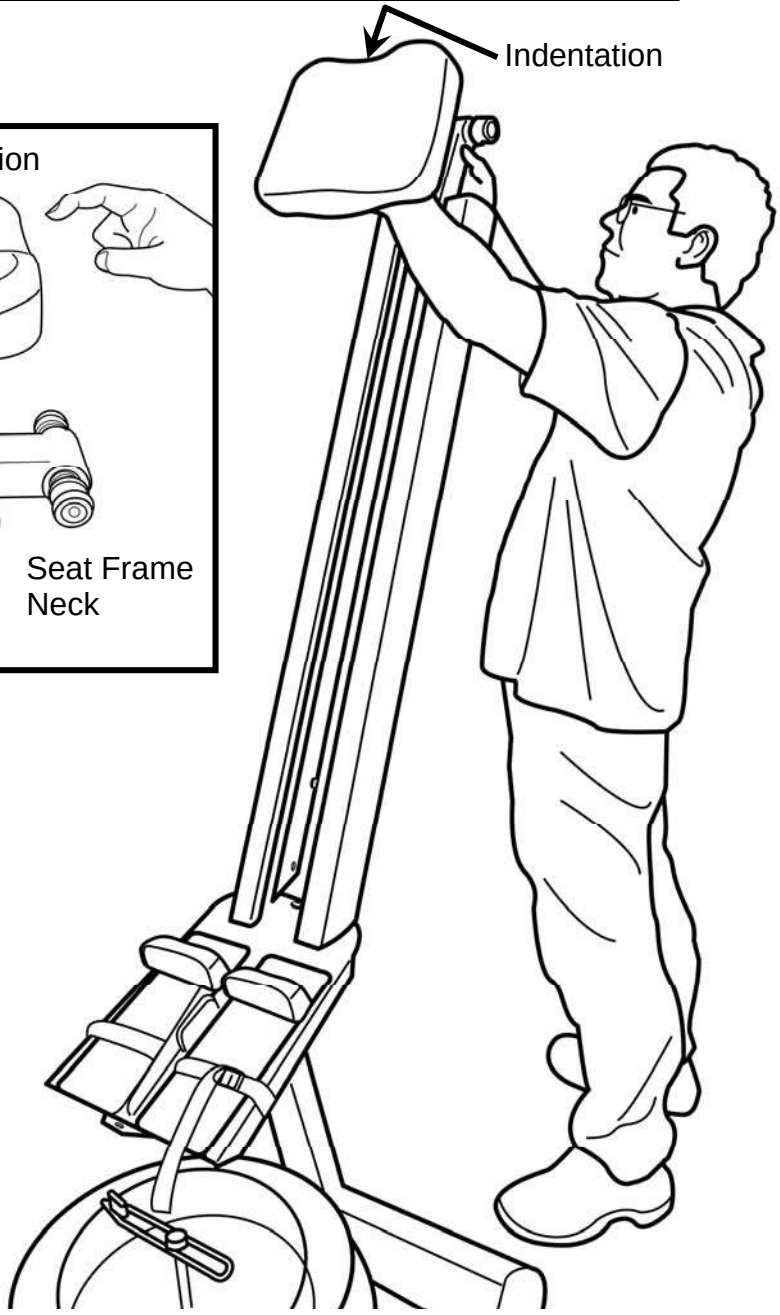
Completed Rower Seat.

The Seat must be mounted exactly as shown.

The Seat Assembly is placed into the Seat Rails facing in the direction of the arrow.

The Seat Indentation must be towards the rear of the machine.



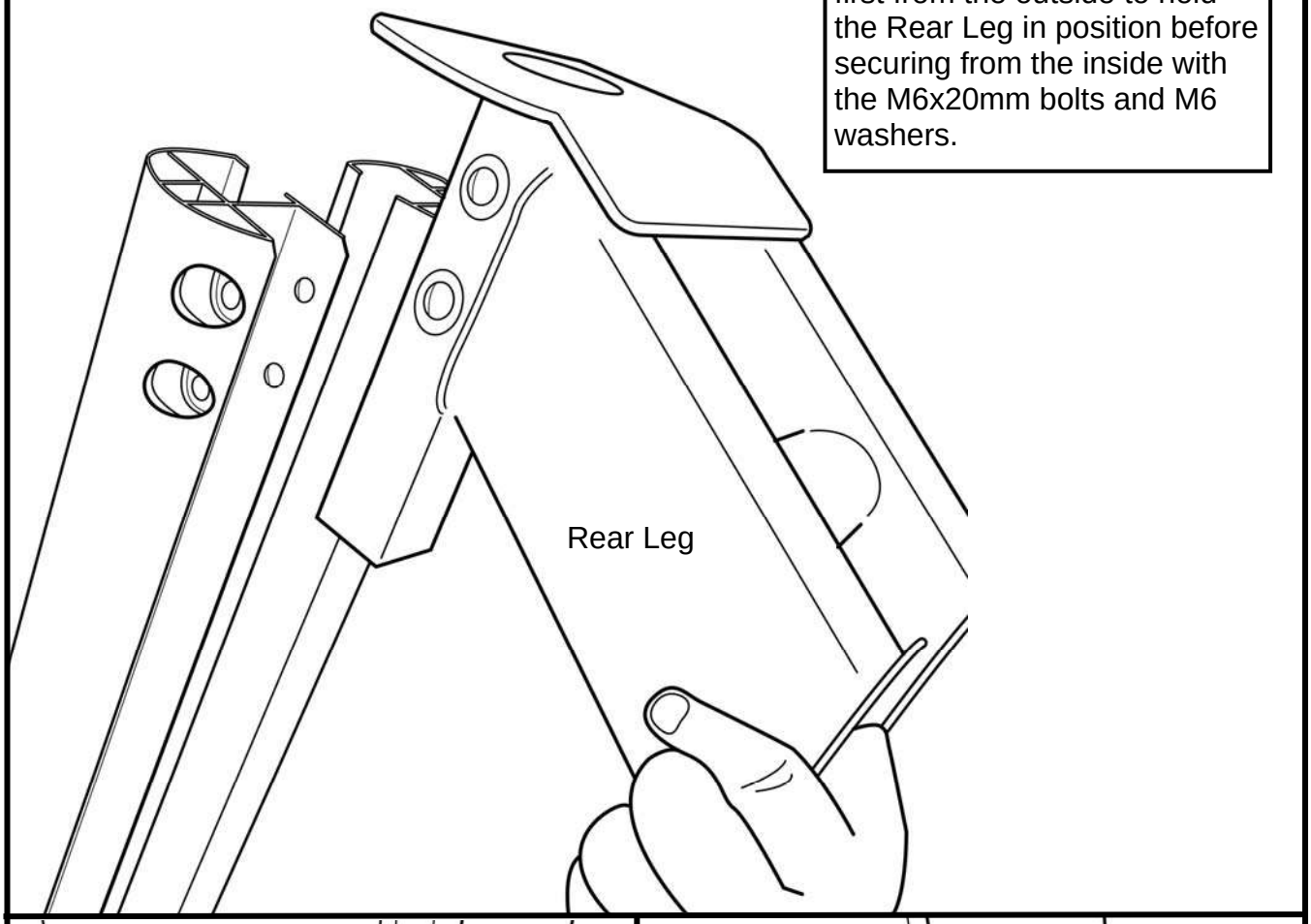


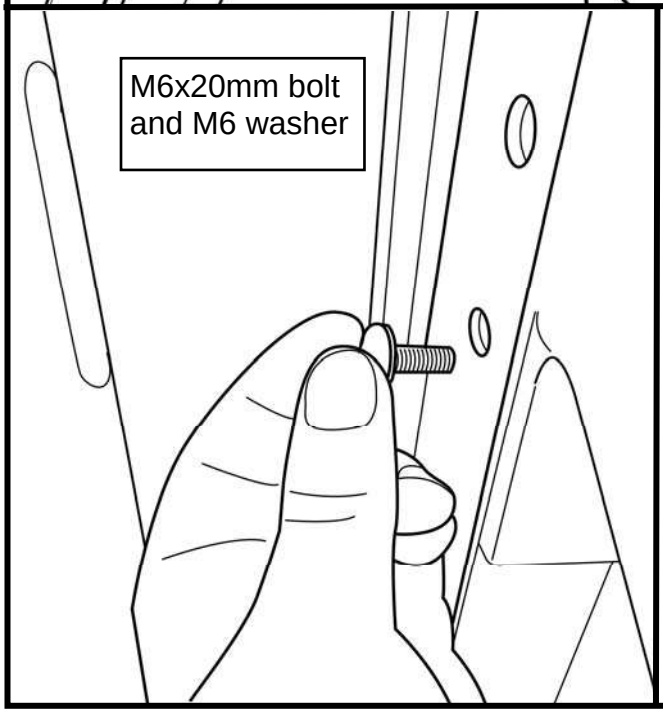
CAUTION: The Rower Seat is heavy. Use both hands and keep fingers clear of rower channels when guiding seat down the seat rails.

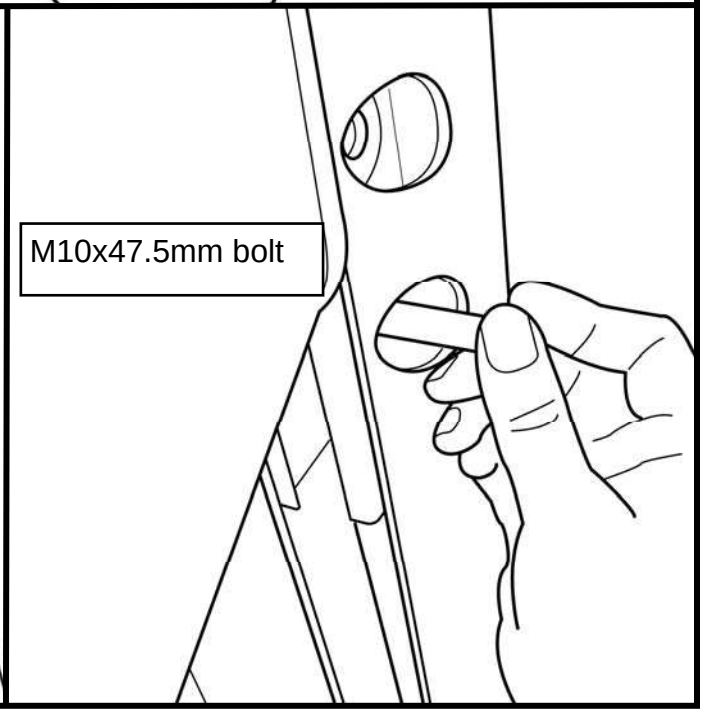
Installing the Rear Leg

Using the Rear Leg, 4x 10x47.5mm bolts, 4x M6x20mm bolts and M6 washers, mount the Rear Leg onto Seat Rails and secure as shown below.

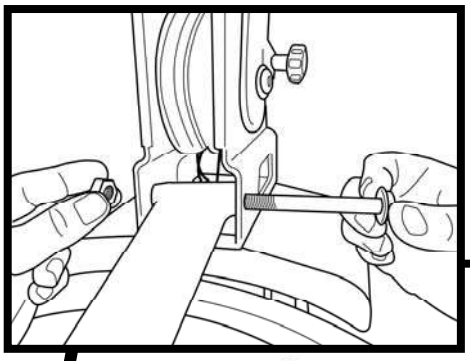
Tip: Install all M10x47.5 bolts first from the outside to hold the Rear Leg in position before securing from the inside with the M6x20mm bolts and M6 washers.







Installing the S-bend and Frame Tension Cable

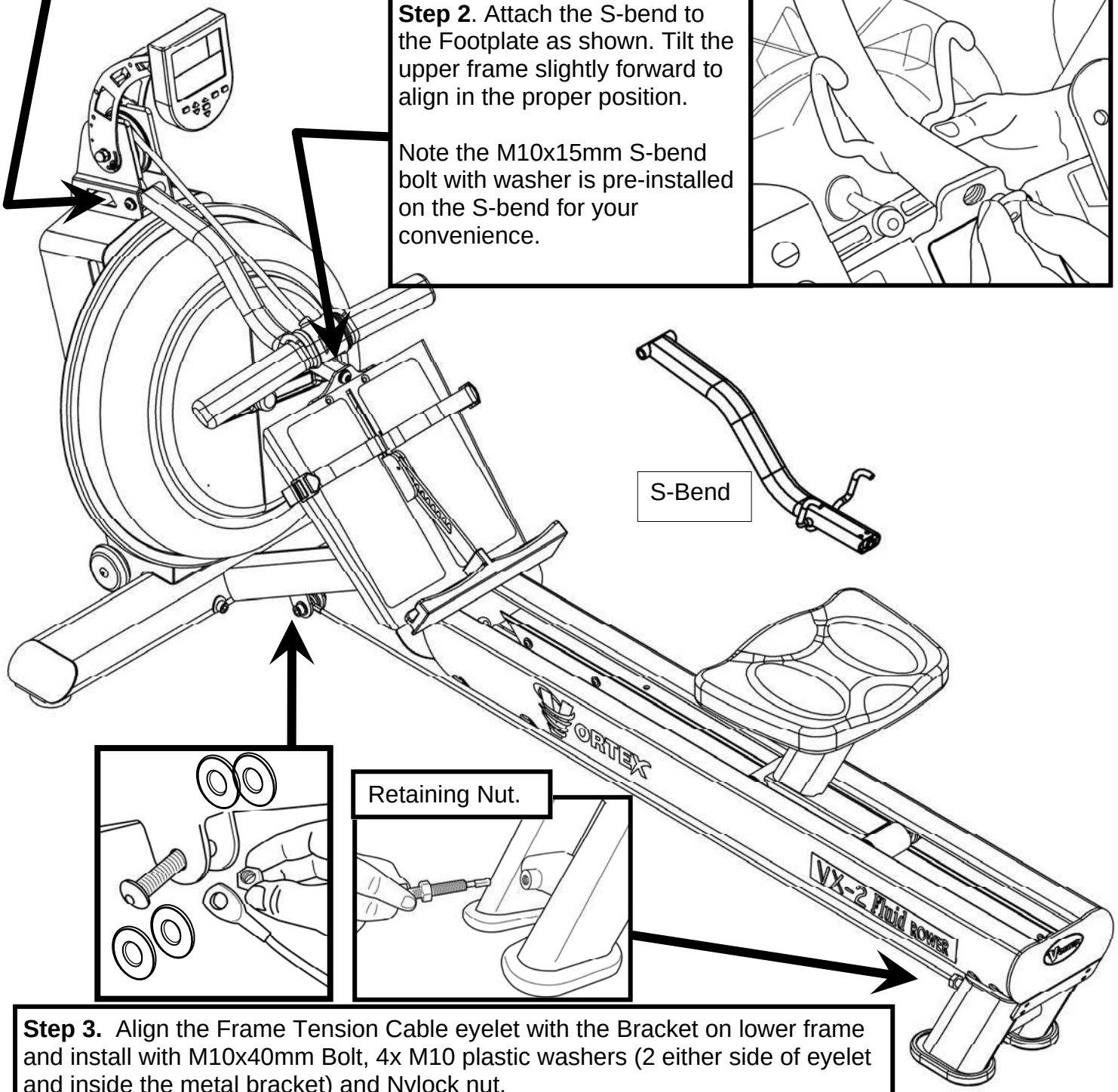


Carefully lower the rower to its normal operating position to complete assembly with S-bend installation and Frame Tension Cable.

Step 1. Install rear of S-bend onto the Upper Frame using M10x80 mm bolt, M10 Nylock and 2 x M10 washers.

Step 2. Attach the S-bend to the Footplate as shown. Tilt the upper frame slightly forward to align in the proper position.

Note the M10x15mm S-bend bolt with washer is pre-installed on the S-bend for your convenience.

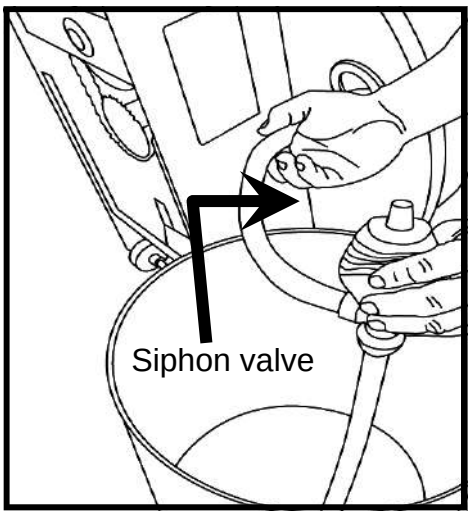


Retaining Nut.

Step 3. Align the Frame Tension Cable eyelet with the Bracket on lower frame and install with M10x40mm Bolt, 4x M10 plastic washers (2 either side of eyelet and inside the metal bracket) and Nylock nut.

Then, align and screw the opposite end into the Rear Leg as shown. Tension until taut and then secure with Retaining Nut.

Tank Filling and Water Treatment



Fill tank as shown left. Use the yellow plug only for filling.

Fill with adjuster handle at level 16 only.

Once filling is complete, use a coin or large blade screwdriver to tighten tank plug into place.

Warning:

Do not for any reason insert fingers into the tank!

1. Filling requires a large bucket (not supplied) and the Fluid Rower siphon (included). Filling will take approximately 7.6 liters of water.

2. Unscrew the yellow tank plug on tank back and insert the flexible tube into the rear of the tank while keeping the rigid hose in the bucket. Note: The siphon tube may be impeded by one of the impeller blades. Use the siphon only to push the impeller down slightly.

Note: Where water quality is known to be poor, FDF recommends the use of distilled water.

3. Move the adjuster handle to level 16, and begin filling. **Note**: The siphon valve must be closed to allow siphoning action to occur. Tip: Placing the bucket in an elevated position will allow the siphon to continually pump water into the tank. **Do not fill past the calibration mark indicated on the tank!**

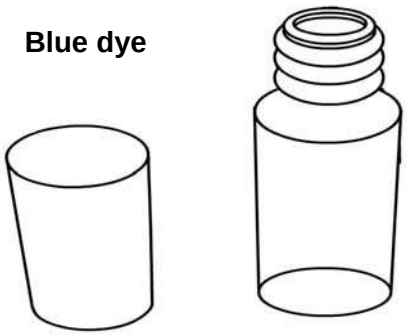
Note: Opening the siphon valve will stop the pumping action. Use this feature to avoid water spillage when nearing filling completion.

4, Once filling is complete (to the proper calibration level as indicated on the tank), follow water treatment schedule as shown.

Note: the lower tank plug is permanently sealed.

Water Treatment Procedures:
1. Add one Chlorine tablet.

2. Wait a minimum of 72 hours. Then add very small amount of blue dye and check for desired color. ***Important! Do not add blue dye for at least 72 hours following Chlorine treatment.*** *The blue dye adds visual appeal as well as cutting down the amount of light affecting the tank water, thus extending the amount of time between water treatments.*



Caution: Use a drop cloth under the tank both when filling the tank and adding blue dye to avoid staining floor or carpet

How to Row?

1. Begin the stroke comfortably forward and push strongly back with your legs while keeping your arms and back straight.

2. Begin to pull your arms back as they pass over your knees and continue the stroke through to completion rocking slightly back over your pelvis.

3. Return to the starting position and repeat.

4. For further details regarding rowing technique, please refer to our international website at firstdegreefitness.com

How Often?

Begin with 5 minute training sessions once a day and aim for around 2:30 to 2:45 for 500m time. Row at a pace that keeps the water circulating continuously between strokes.

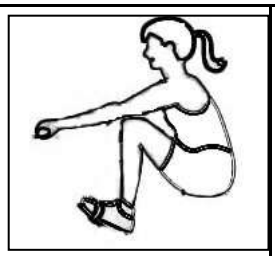
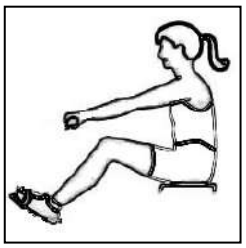
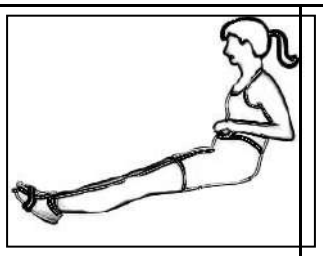
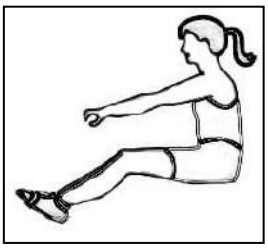
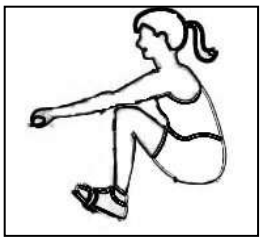
Progress a few minutes more each day until you are comfortable with 30-45 minutes training time 3 or 4 times a week.

This will provide aerobic endurance benefits, muscle toning and sufficient calorie burning to form part of a weight loss program.

CAUTION

Always consult a doctor before beginning an exercise program.

Stop immediately if you feel faint or dizzy.

				
Catch Comfortably forward with straight back and arms.	**Drive** Push with the legs while arms remain straight.	**Finish** Pull through with arms and legs rocking slightly back on your pelvis.	**Recovery** Upper body tips forward over your pelvis and move forward.	**Catch** Catch and begin again.

Long Term Water Treatment and Basic Operation

⚠ CAUTION: **Important:** Do not fill past the calibration mark as indicated on the tank level sticker or water spillage can occur. See tank filling/water treatment page for details.

Long Term Water Treatment:

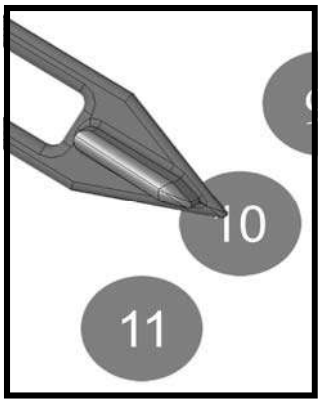
Do not use any water treatment other than the tablets supplied with this machine. For replacement tablets, contact your local First Degree Fitness distributor.

Water treatment schedules for the VX-2 will vary according to the fluid tanks exposure to sunlight, but expect 8-12 months near a bright, sunlit window and 2 years or more for a darker location. At the point of finding the water slightly cloudy, add a Chlorine tablet. Remember to wait 72 hours following the chlorine tablet before adding the blue dye as the Chlorine tablet is extremely concentrated.

⚠ CAUTION: It is recommended that a drop cloth be used under the fluid tank whenever the tank is open for water treatment

Vertical Storage: The VX-2 can easily be stored in a vertical, upright position. For safety, choose a suitable location, such as a corner of a room. It is recommended that something soft (such as carpet or a small towel) be placed under the upper rear of the unit to avoid marring either the paint or Perspex cover.

Resistance:
The level of resistance is determined by the level indicator located on the front of the tank. Level one indicates lightest resistance, level sixteen represents heaviest resistance. Allow three to four strokes after adjusting resistance handle to allow the desired resistance level to be reached.



Dyneema Cable Drive:

The Dyneema Cable Drive system allows for simplicity, smoothness and unparalleled performance. The unique properties of Dyneema Cable make it extremely useful in harsh environments, such as sailing, climbing, fishing lines, body armor, etc. It is quite literally stronger than steel. The 6mm Dyneema Cable used on the VX-2 is rated in excess of 1,000kg.

Note: If the Dyneema Cable is twisted excessively, the rowing stroke will feel lumpy. Use the rower handle to untwist the cable to its normal operating position.

Light fraying is normal. The Dyneema Cable may have a slight “fuzzy” appearance after a period of use. Dyneema Cable is extremely abrasion resistant and to some degree self-lubricating. Expect many years of trouble free performance.

Frame Tension Cable:

The VX-2 is fitted with a Frame Tension Cable which provides improved frame rigidity. The cable may on occasion require adjustment. For optimum performance, the cable should be taut. If the cable becomes loose, first loosen the Retaining Nut, retighten the Frame Tension Cable and then secure the Retaining Nut.

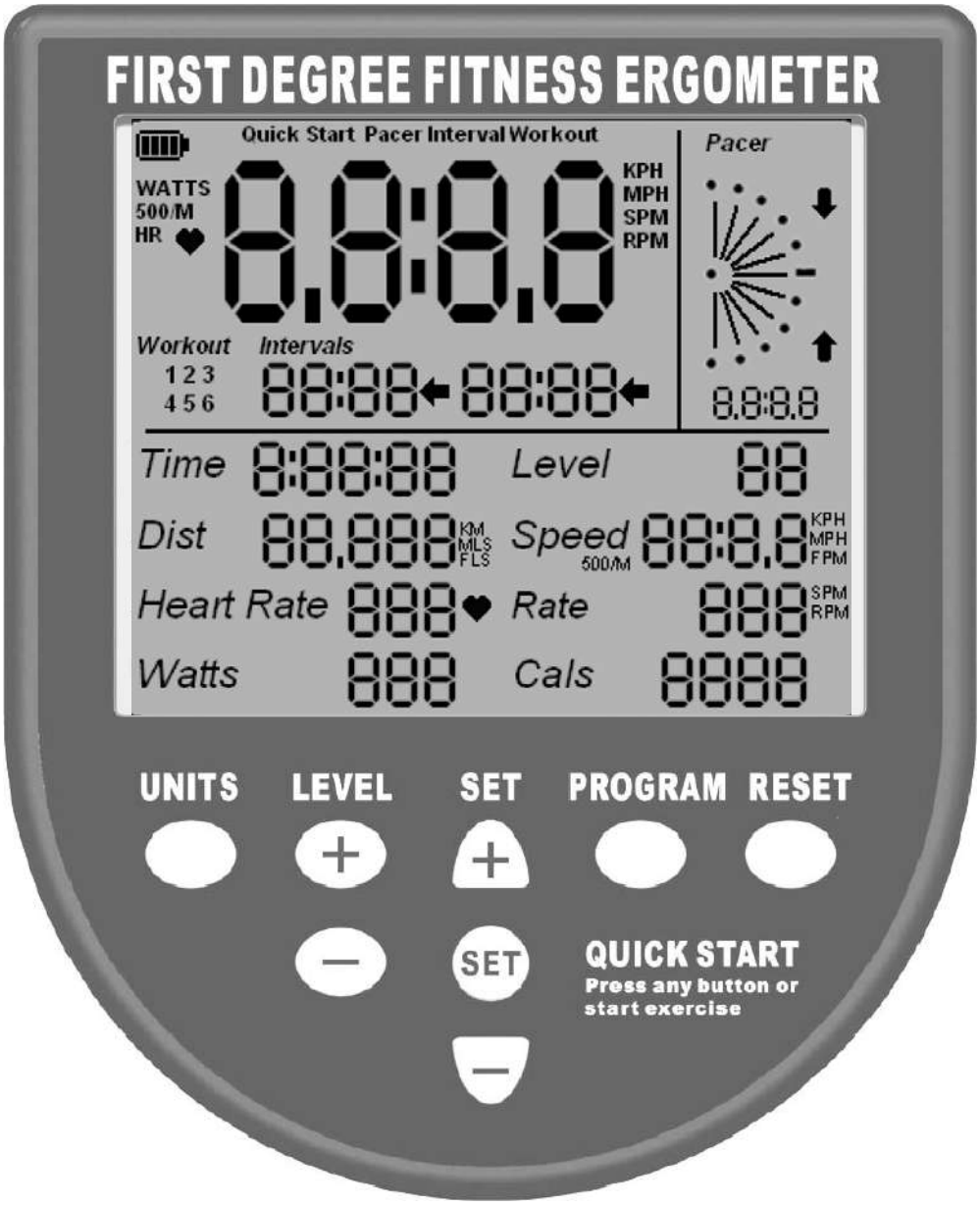
Maintenance chart.

Item	Timeframe	Instructions	Notes
Seat and Seat Rails.	Weekly.	Wipe Seat Rails with lint free cloth. Spray Seat Rails with a light coat of silicone spray.	
Frame.	Weekly.	Wipe down with lint free cloth.	
Tank and Water Treatment.	12 months to 2 years.	Follow instructions as specified in the “Water Treatment” section of this manual.	
Bungee Cord.	Check every hundred hours for correct tension and for signs of wear.	The Bungee Cord should last for many years. If a Bungee Cord change is required, please follow the instructions provided in the “Changing the Bungee Cord” section of this manual.	
Dyneema Cable.	Check monthly for signs of twisting, excess fraying or other signs of premature wear. Note that a light “fuzz” is perfectly normal for Dyneema Cable and will not affect performance or longevity in any way.	The Dyneema Cable should rarely require changing, but should the need arise, please follow the instructions provided in the “Changing the Dyneema Cable” service section of the First Degree Fitness website at www.firstdegreefitness.com	
Frame Tension Cable	Check regularly for proper tension.	Tighten until taut. See Basic Operation page for details	

Troubleshooting Guide

Fault	Probable Cause	Solution
Water changes color or becomes cloudy.	Rower is in direct sunlight or has not had water treatment.	Change rower location to reduce direct exposure to sunlight. Add water treatment and blue dye or change tank water as directed in the water treatment section of this manual.
Rowing stroke return is too light.	Bungee not under enough tension.	Open rear Perspex cover, cut bungee tie wrap . Tighten by small increments using the bungee tie off tab point and test tension by allowing the rowing handle to return to its furthest point forward while still having some slight tension. Note light fraying of the bungee cord is normal.
Rower rocks from side to side when sitting on floor	Front/Rear frame levelers need adjusting	Adjust the front two frame levelers until stability is reached.
Excess Flex in frame during hard rowing	Frame Tension Cable requires tightening	Loosen retaining nut, and tighten rear of Tension Cable into rear leg until cable is taut. Retighten retaining nut. It is not necessary to overtighten the Cable.
Computer screen illuminates, but does not register when rowing.	Loose or failed connection/Sensor gap too wide (see erratic computer display).	Check that the computer lead is connected properly. If connected properly check sensor gap. Contact your local service center if this fails to address the problem.
Rowing stroke feels lumpy, not smooth..	Dyneema Cable is twisted .	You can untwist the Dyneema Cable by simply pulling the rowing handle to the end and turning the rowing handle to untwist the cable. Note: Light fraying is normal.
The VX-2 computer does not illuminate after battery installation.	Batteries installed incorrectly or need replacing.	Reinstall batteries in correct position and try again. If the LCD screen fails to illuminate, try rotating the batteries slightly in the computer. If this fails, contact your local service center.
The VX-2 computer display is erratic while displaying SPM and 500meter times.	Gap between sensor and magnetic ring is too wide.	Adjust sensor location using rear sliding adjustment located inside rear Perspex cover to a gap of no more than 2.5mm.

The VX-2 Rower Ergometer



Quick start: Provides instant workout information. Just start training to activate. You can choose to change UNITS displayed

UNITS: Displays WATTS, SPM, HR, 500/m

LEVEL: Adjustable from 1-16. Match LEVEL number with resistance level on the Fluid tank.

SET: Changes Time, Distance parameters

PROGRAM: Clears current exercise program

RESET: Clears data

Note: For complete operational instructions, please refer to the computer manual, which is included with your VX-2 Series rower.

Using the First Degree Fitness USB Interface

Description:

The USB connectivity now built in to all new models of FDF Console and IPM allow you to enhance your exercise experience by connecting to your home PC or Laptop. Using FDF's own sample applications you can exercise while enjoying your favorite movies. *NetAthlon 2 XF for Rowers* lets you race with other Internet connected rowers in a Virtual Reality 3D environment or train solo.

Setting up USB connectivity

1. Download and Install the USB Device Driver (CDM2xxxx_Setup.exe for 32 and 64 bit Windows 7/ Vista/XP) from the FDF Website.

2. Download and Install the Sample USB Applications from the FDF Website (www.firstdegreefitness.com).
   Download and Install NetAthlon 2 XF for Rowers from
   www.webracing.org/downloads.htm

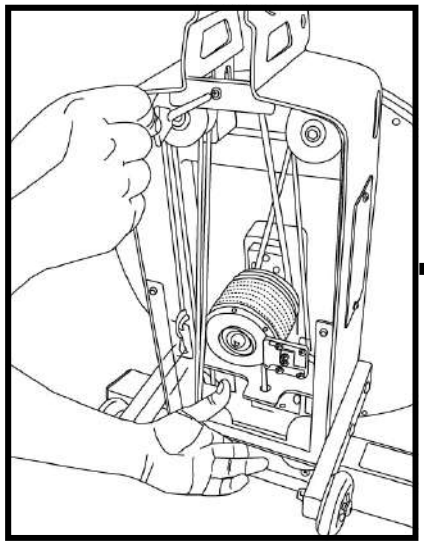
Connecting your console

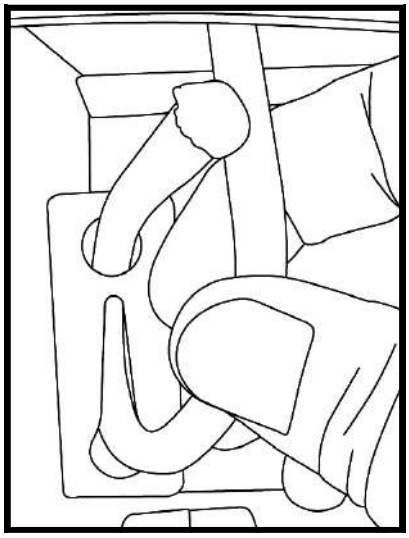
- The USB Connector is located on a flying lead at the rear of the IPM, along with the Sensor and Heart Rate Monitor Connectors.

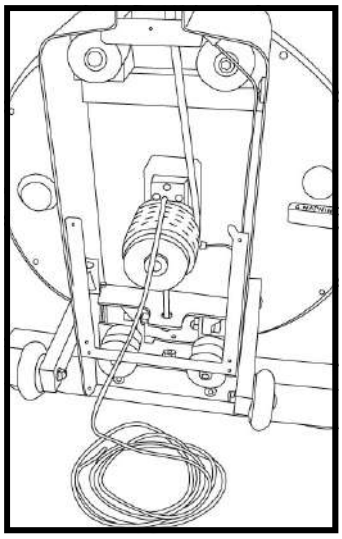
- Connect to a Laptop or PC using a standard USB cable, you may need to wait while Windows starts the USB Device Driver.

Note: Please refer to computer manual where applicable or for further information refer to our website at www.firstdegreefitness.com

Replacing the VX-2 Bungee Shock Cord







Step 1. Remove the Perspex cover from rear of upper frame.

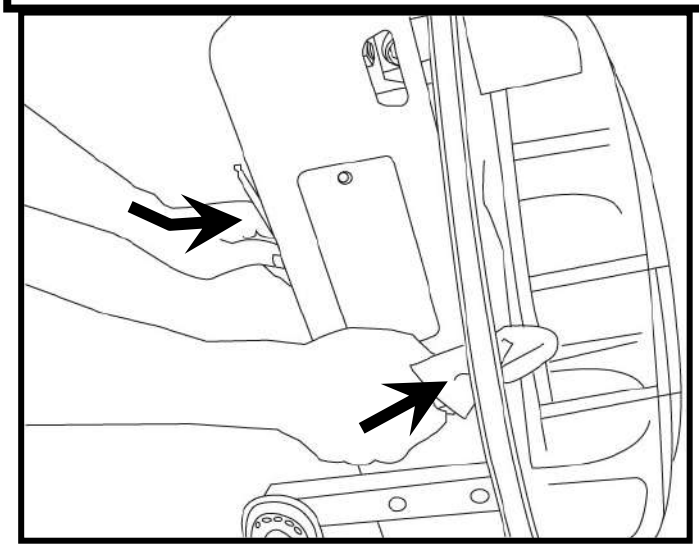
⚠ Disconnect sensor lead before removing cover completely.

Step 2. Move the rowing handle from the S-Bend handle catch to a point where it is resting on top of the tank . This helps line up the Bungee Cord hole for easier removal/ replacement. Detach Bungee Cord from lower rear attachment point.

Step 3. Unwrap the Bungee Cord from all of the Bungee Pulleys.

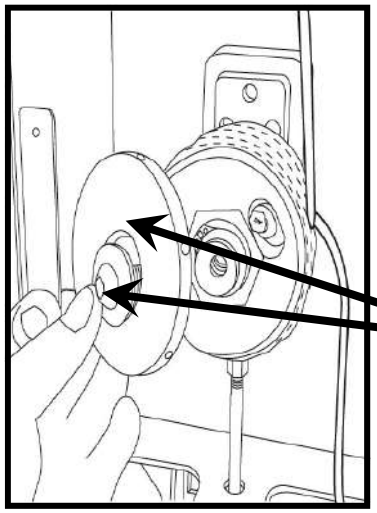
Step 4. Next, remove the magnetic ring. To loosen the Rear Mainshaft Bolt holding the magnetic ring in place, it is necessary to keep the mainshaft and impeller assembly from turning with the bolt. Open the yellow tank plug, and insert a wrench wrapped in a lint free cloth (to protect the electroplating finish on the blades) to catch the impeller blade and allow the Rear Mainshaft Bolt to be loosened as shown below right with a 6mm Allen key.
Caution: Do not allow a dissimilar metal to directly contact the impeller blade. Premature rusting could occur . Cover any tool inserted the tanks with a lint free cloth and keep fingers clear.

Capture impeller blade using tool covered with a lint free cloth and a 6mm Allen key to remove Rear Mainshaft Bolt as show right



⚠ WARNING ⚠

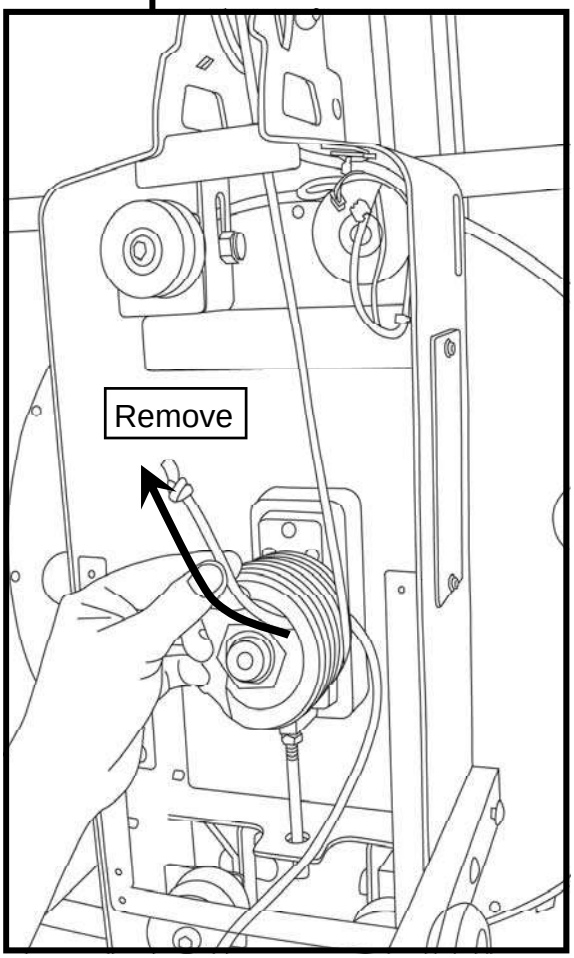
Do not insert fingers into tank!

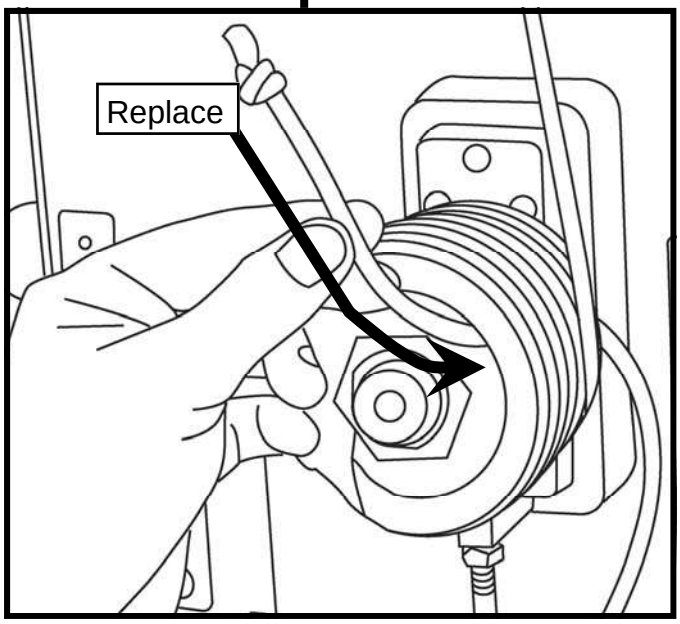


Rear Mainshaft Bolt and Magnetic Ring

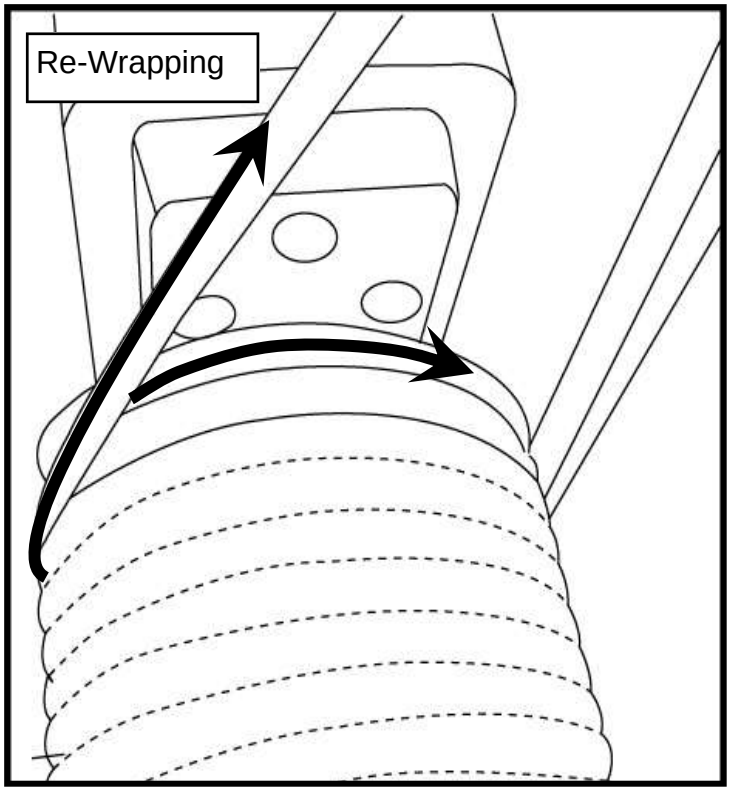
Replacing the VX-2 Bungee Shock Cord

Step 5. After removing the magnetic ring, the Bungee Cord will be accessible. Pull through the Rope/Bungee Pulley and remove. Note that the rower handle should be resting on top of the tank (as shown in step 2) for the bungee hole to line up. Thread new Bungee Cord through and pull until knotted end is held securely in the slot.





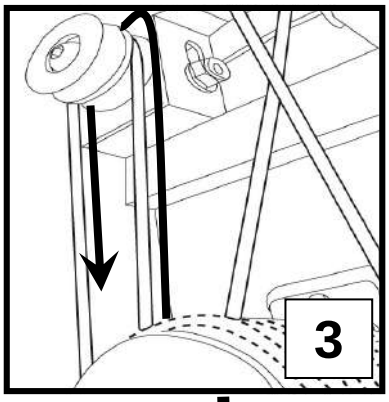
Step 6. Once the Bungee Cord is in position, make two wraps on the Rope/Bungee Pulley in a clockwise direction, making sure the Bungee Cord tracks in the proper grooves. Make sure the Bungee is wrapped behind the Dyneema Cable. Once the Bungee has reached the position shown below, you may begin to re-wrap the Bungee around the Bungee Pulleys, starting with the upper-right rear Pulley.



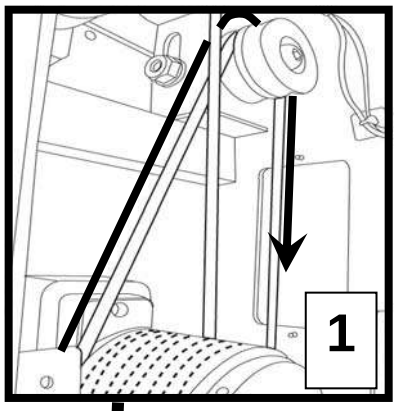
Replacing the VX-2 Bungee Shock Cord

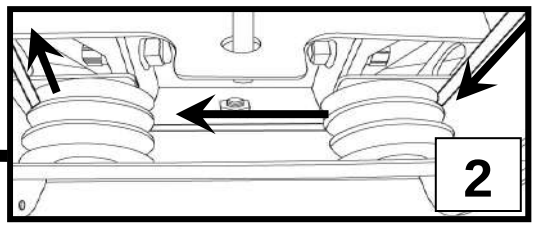
Bungee wrapping in order:

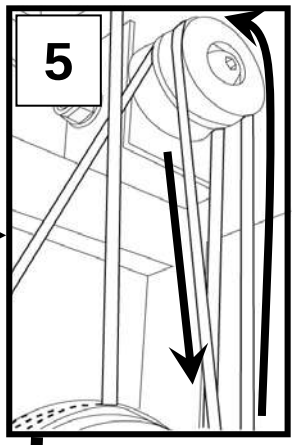
1. Rope/Bungee Pulley to upper rear right Bungee Pulley.
2. Upper rear right to lower rear right and left rear Pulleys.
3. Lower left rear to upper left rear Pulley.
4. Upper left rear to lower middle left and right Pulleys.
5. Middle right Pulley to upper right front Pulley.
6. Upper front right Pulley to lower front right and left Pulleys.
7. Lower left front Pulley to upper left front Pulley.
8. Upper left front Pulley to tie off point.

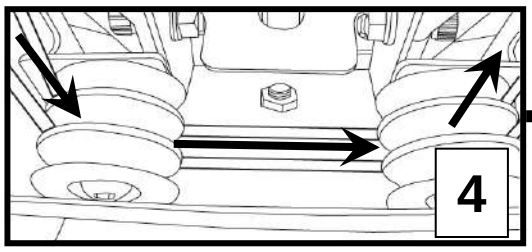


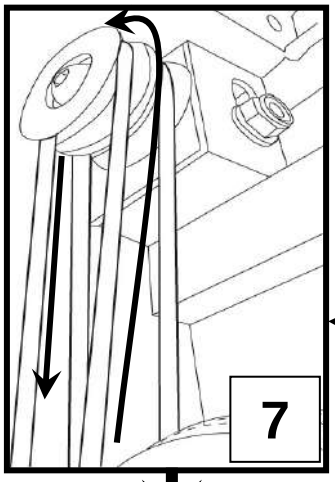
Hint: Keep a slight tension on the Bungee Cord when threading through the Bungee Pulleys.

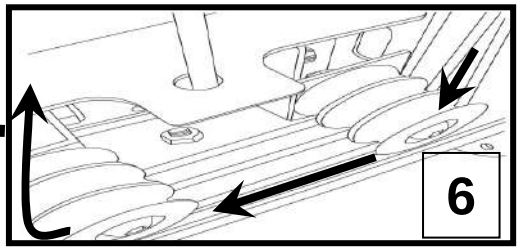


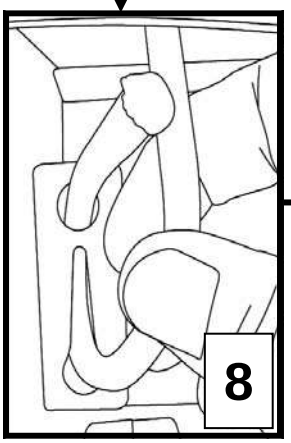








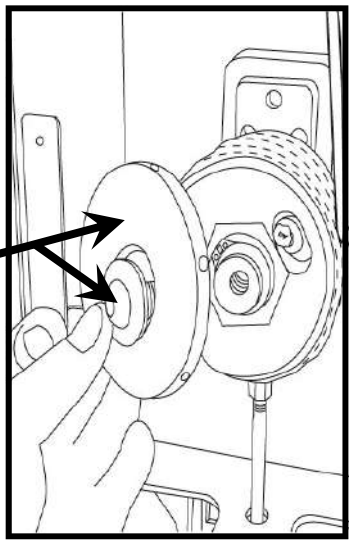




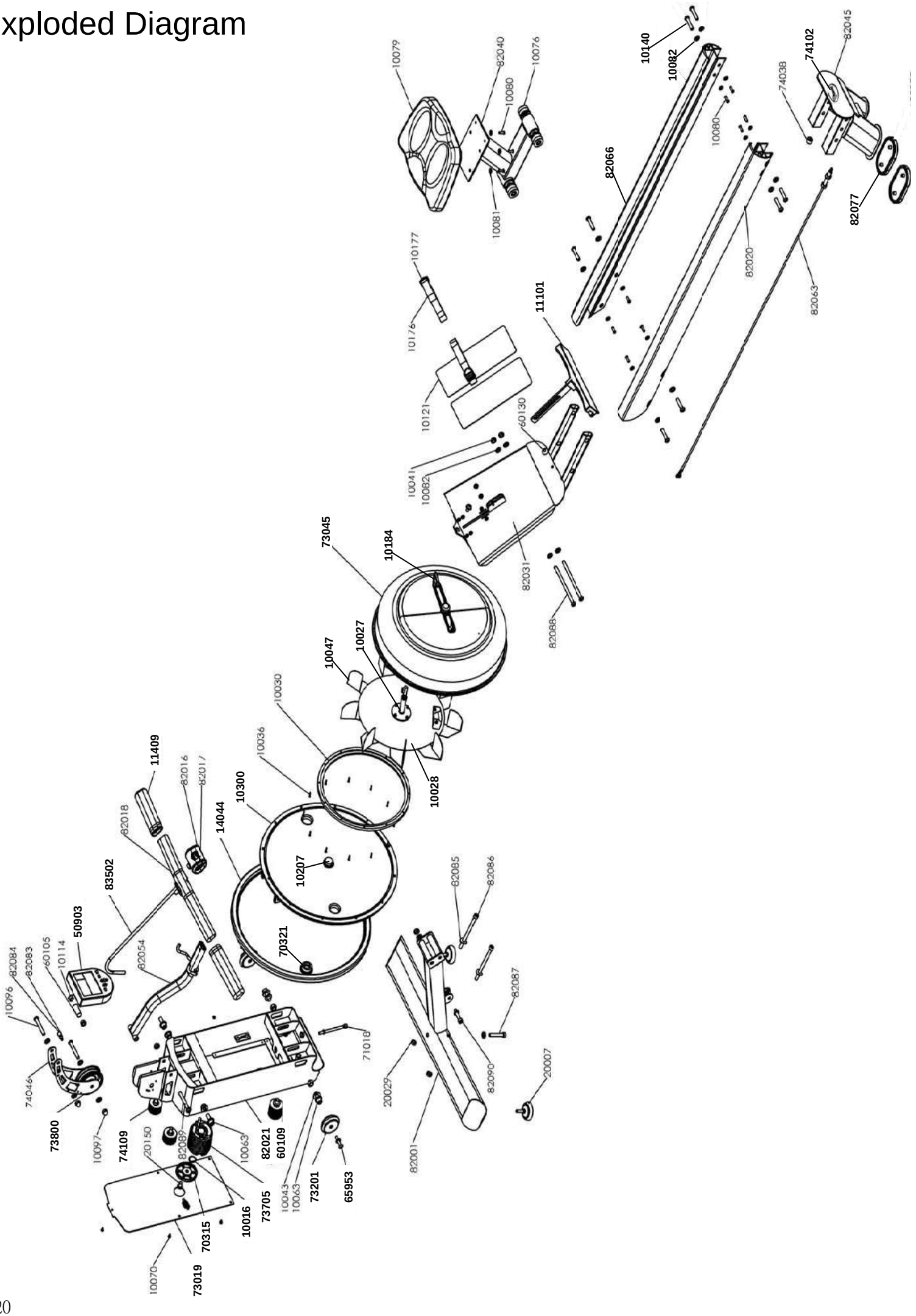
Finish the Bungee re-wrap by tying off the Bungee. You may elect to not use a tie wrap as the metal tab is designed as a stand alone attachment point. Thread the Bungee through to desired tension and thread the Bungee end through the upper hole as shown.

Reattach the Magnetic Ring and Rear Mainshaft Bolt. Tighten securely.

Finally, reattach the Sensor Lead and replace the Perspex rear cover.



Exploded Diagram



Parts list

P/N	Qty	Description	P/N	Qty	Description
10016	1	C Clip STW-25	60130	1	Frame Rubber Bumper
10027	1	Adjuster Handle Shaft	65953	8	Bolt M8x45-B
10028	1	Stainless 0.8mm Backing Plate	70315	2	Magnetic Ring & Rare Earth Magnet #70319
10030	1	Adjuster PP Tank Ring 358x10	70321	1	Tank Plug Black
10036	12	Screw M3x20 SUS	71018	1	Tank Bolt Adjuster Washer M8x110
10041	4	Nut M10 Nylock	73019	1	PVC Cover & Decal
10043	12	Washer M12	73045	1	PC Tank Cover with Level Decal 16R - Blue
10047	9	Impeller Blade	73201	2	Transport Wheel Frame
10063	4	Bolt M12x30	73705	1	Rope/Bungee Pulley & One Way & Needle Bearings
10070	5	Screw M4x10	73800	1	Rope Pulley 102mm & Bearings 6000ZZ #60112
10076	4	Seat Wheel Polyurethane	74038	1	Rubber Bumper
10079	1	Seat LS-E28	74046	1	Computer Stalk VX-1/2
10080	12	Bolt M6x20	74102	1	Decal - Vortex Oval
10081	14	Washer M6	82001	1	Lower Frame - VX2
10082	23	Washer M10	82016	1	O-ring for Dyneema Handle
10096	2	Bolt M10x70	82017	1	Handle Rubber Cover
10097	2	Nut Dome Head M10	82018	1	Handle Bar for Dyneema
10114	2	Plastic Bushing 20x16x13x10	82021	1	Upper main frame - VX-1/2
10121	2	3M Foot Plate Non Slip	82031	1	Footplate - VX2
10140	8	Rear Leg Bolt M10x47.5mm	82045	1	Rear Leg - VX2
10176	2	Foot Strap & Buckle #10177	82054	1	S Bend for VX
10184	1	Adjuster Handle & PU Cover P/N 10193	82063	1	Steel Cable - VX2
10207	1	Tank Plug Yellow	82077	2	Rear Leg End Cap - VX2/3
10300	1	Aluminum tank back	82084	1	Pop Pin
11101	1	Heel Support	82085	2	Curved Washer M10
14044	1	Tank Black Outer Cover Ring - Blue	82086	2	Bolt M10 x 140
20007	2	Foot Levelers M8x30 Hardened Rubber	82087	1	Bolt M10 x 65
20029	3	Nut Welded M10	82088	2	Bolt M10 x 170
20150	2	Bolt M10x15	82089	1	Bolt M10 x 80
50903	1	IPM	82090	1	Bolt M10 x 45
60105	1	Computer Mounting Bracket	83502	1	Dyneema with Crimped End P/N 60617
74109	10	Bungee Pulley 50mm with Bear-ing			

VORTEX SERIES ROWERS

INTERNATIONAL WARRANTY – FULL COMMERCIAL USE

This product is designed and constructed for use in any Health Club / Fitness Studio application.

First Degree Fitness Limited warrants that the **Vortex Rower (model VX-1, VX-2 & VX-3)**, purchased from an authorised agent and in its undamaged original packaging, is free from defects in materials and workmanship. First Degree Fitness Limited or its agent will, at their discretion, repair or replace parts that become defective within the warranty period, subject to the specific inclusions and exclusions below.

Metal Frame – 10 Year Limited Warranty
First Degree Fitness will repair or replace the metal Main Frame of the Rower should it fail due to any defect in materials or workmanship within 10 years of the original purchase. Warranty does not apply to frame coating.

Polycarbonate Tank & Seals – 3 Year Limited Warranty
First Degree Fitness will repair or replace the polycarbonate tank or seals should they fail due to any defect in materials or workmanship within 3 years of the original purchase.

Mechanical Components (of a non-wearing nature) – 2 Year Limited Warranty
First Degree Fitness will repair or replace any mechanical component should it fail due to any defect in materials or workmanship within 2 years of the original purchase.

All Other Components (of a wearing nature) – 2 Year Limited Warranty
First Degree Fitness will repair or replace any component should it fail due to any defect in materials or workmanship within 2 years of the original purchase.

Specific Inclusions

Bungee recoil cord, belt and pulley
Hand grips & foot straps
Polyester rowing belt / Dyneema cable
Seat
All pulleys, rollers & bearings
All rubber components
Computer & speed sensor (excluding replaceable batteries)
All drive belts
Aluminum seat rails

General Exclusions

Damage to the finish of any part of the machine
Damage due to neglect, abuse, incorrect assembly or use of the machine
Any charges for freight or customs clearance associated with the return or dispatch of parts
Any damage to or loss of goods during transport of any kind
Any labour cost associated with a warranty claim

General Conditions

- The serial number of the machine must be correctly registered with First Degree Fitness Limited or one of its appointed distributors
- First Degree Fitness Limited reserve the right to examine any part where replacement is claimed under warranty
- Warranty period applies only to the original purchaser from the date of purchase and is not transferable
- The product must be returned to your place of purchase in original packaging with transportation, insurance and associated charges paid for by you and risk of loss or damage assumed by you
- First Degree Fitness makes no other warranties except as stated here and expressly disclaims all warranties not stated in this warranty. Neither First Degree Fitness nor its associates shall be responsible for incidental or consequential damages
- Manufacturer's warranty automatically commences upon sale of the product to end user or upon the expiration of one (1) year from month of manufacture, whichever occurs first