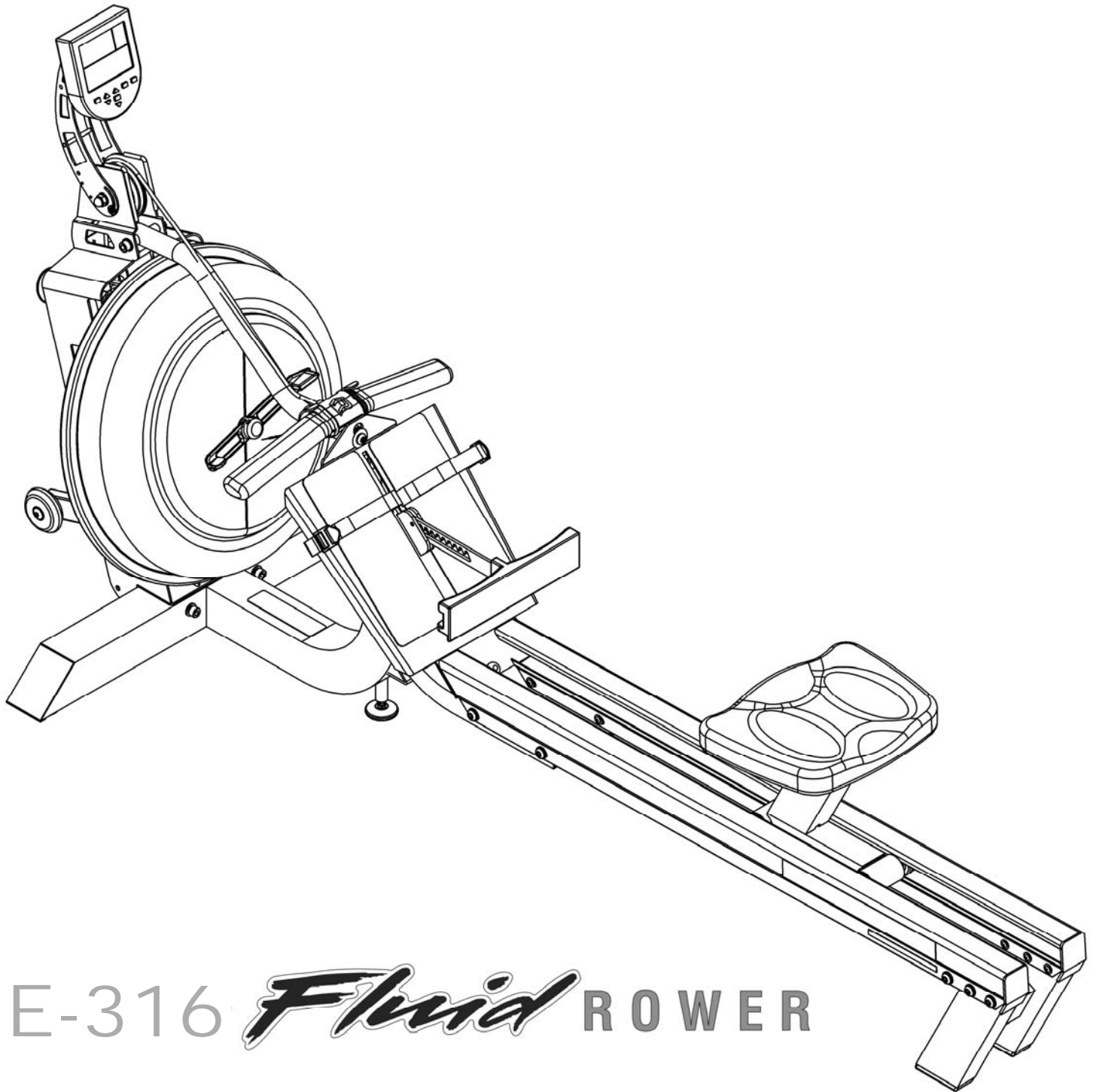


# Owners Manual



E-316 *Fluid* ROWER



**FIRST DEGREE FITNESS**  
FLUID INNOVATION

[www.firstdegreefitness.com](http://www.firstdegreefitness.com)

## Contents

1. Contents of E-316 Pack.
2. E-316 Assembly Instructions.
3. Tank Filling and Water Treatment.
4. How to Row.
5. Long Term Water Treatment and Basic Operation.
6. Maintenance Chart.
7. Troubleshooting Guide.
8. The E-316 Rower Ergometer with (optional) USB Function
9. Changing the Bungee Cord.
10. Parts List and Warranty.

## Training with the E-316

1. As with any piece of fitness equipment, consult a physician before beginning your E-316 exercise program.
2. Follow instructions provided in this manual for correct foot position and basic rowing techniques.
3. For further details regarding rowing technique, please visit our international website at [www.firstdegreefitness.com](http://www.firstdegreefitness.com)

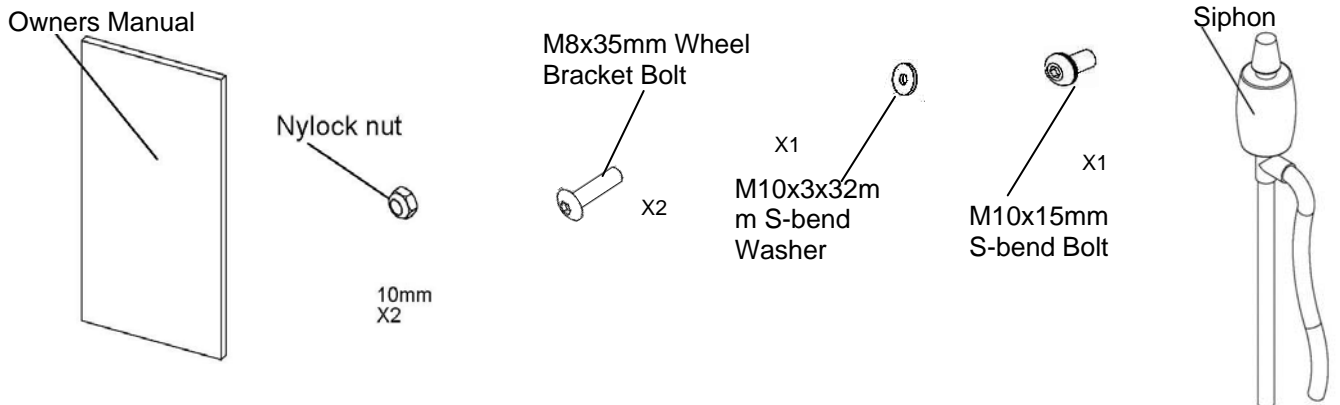
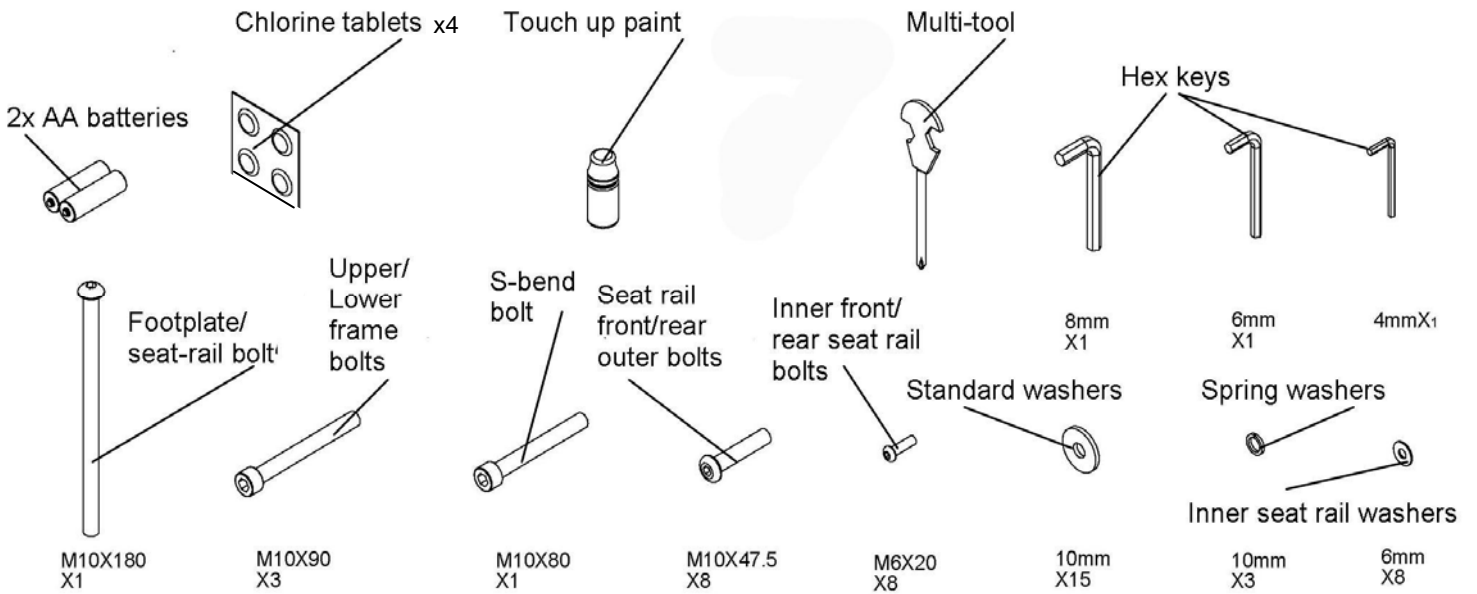
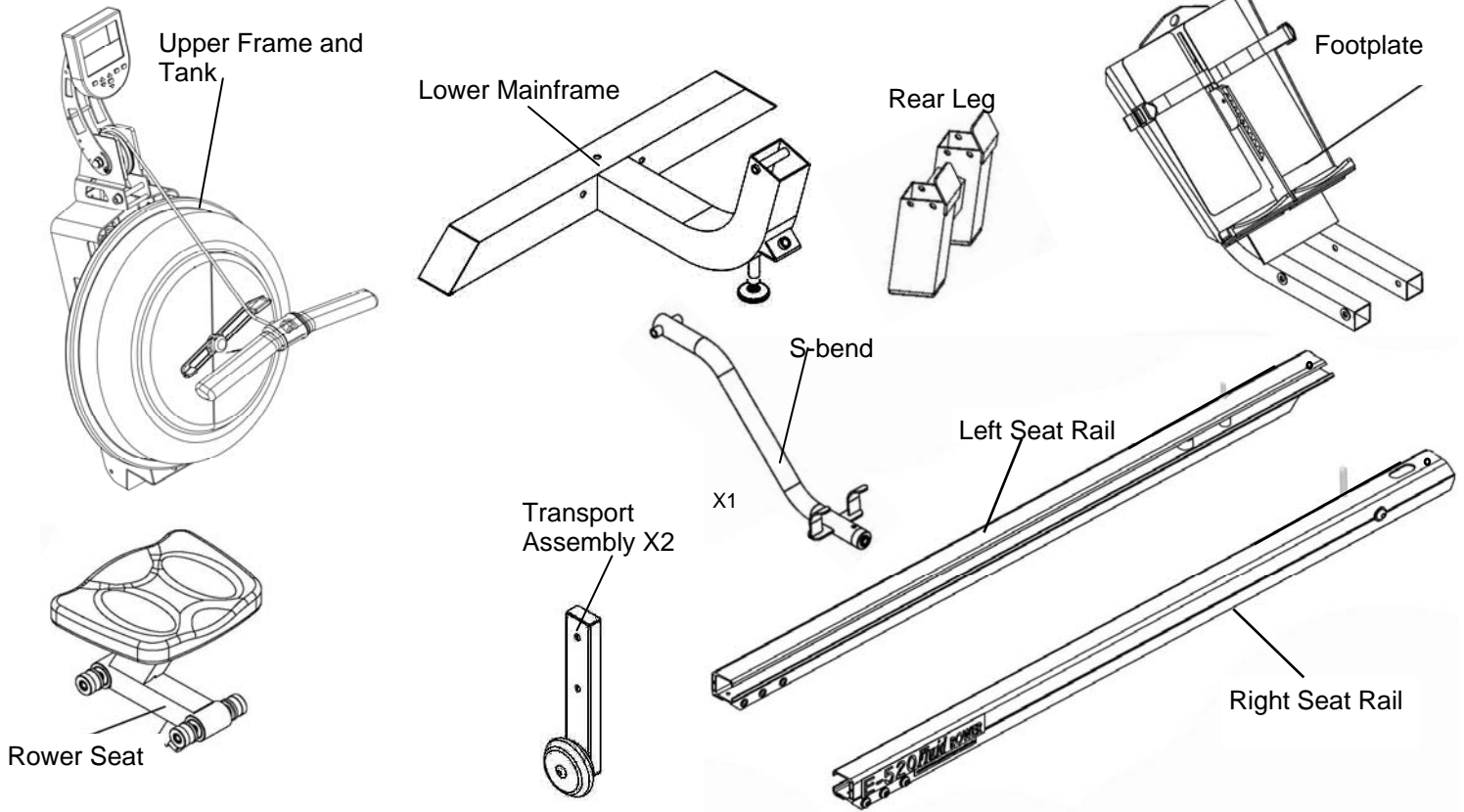
### CAUTION

1. The E-316 can stand vertically for storage. When doing so, please follow the instructions given on the basic operation section of this manual.

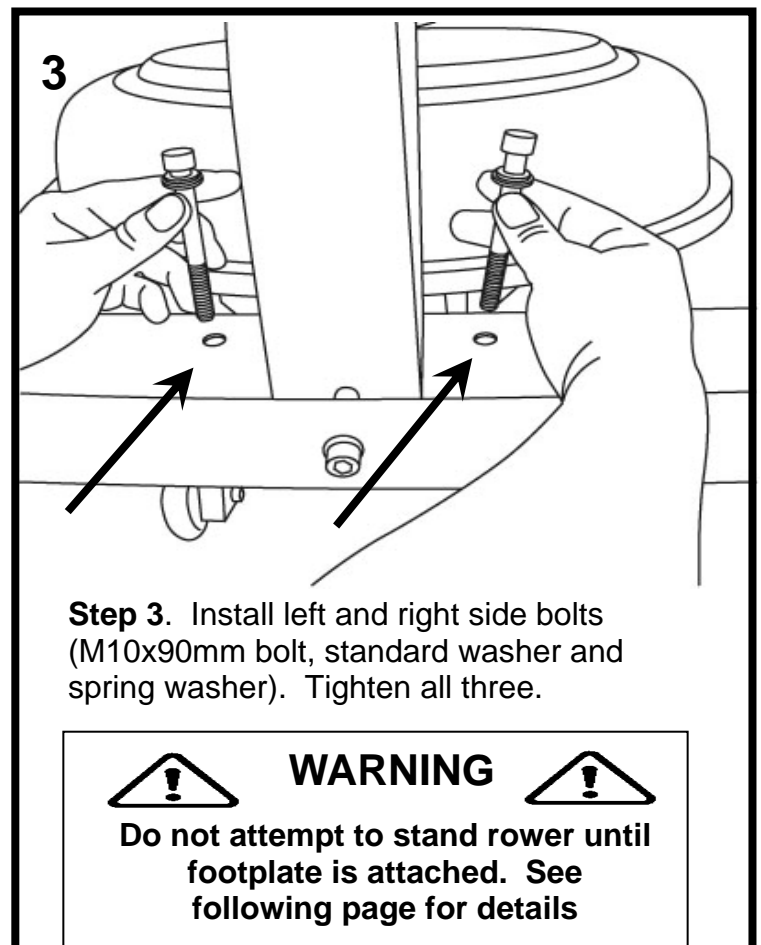
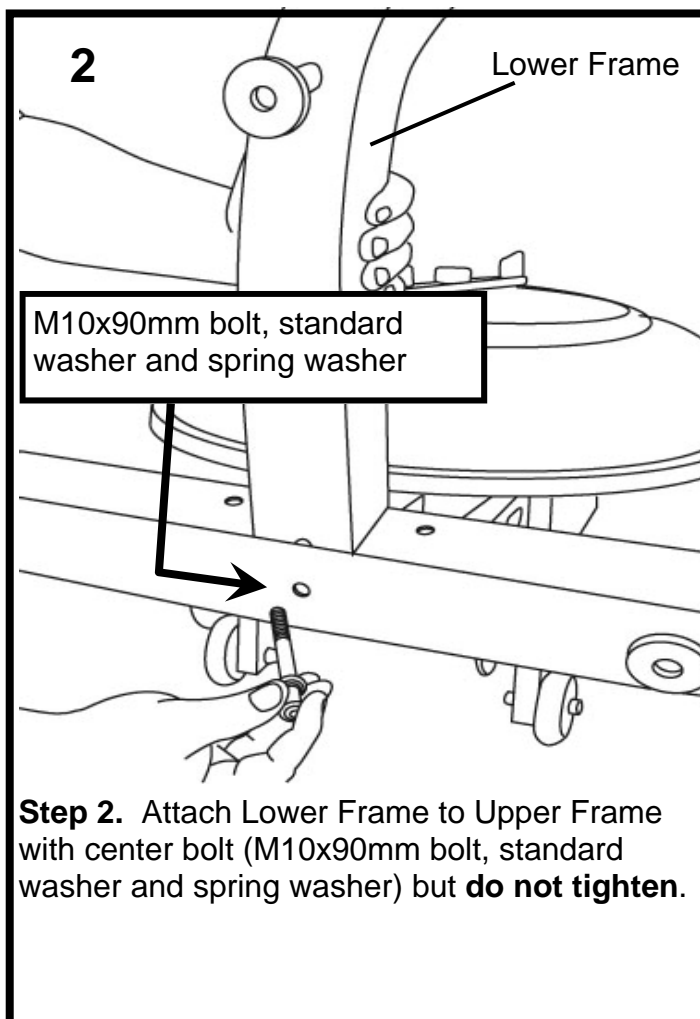
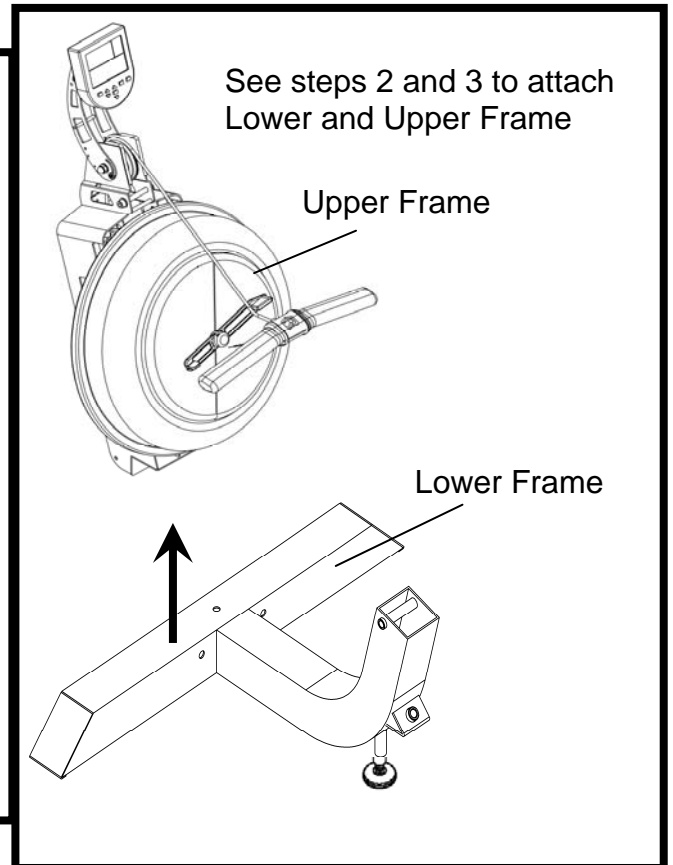
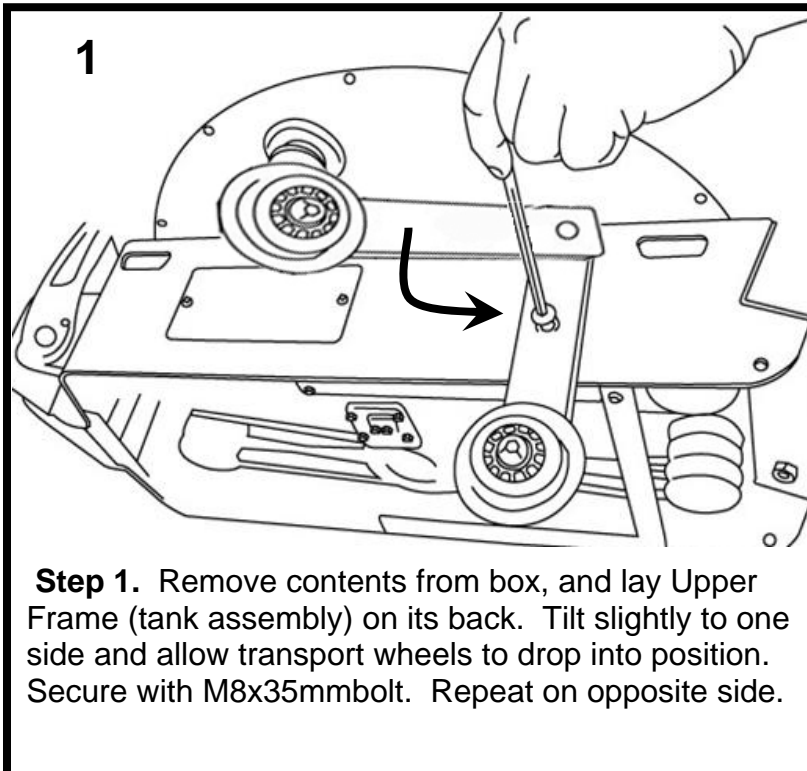
### CAUTION

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.

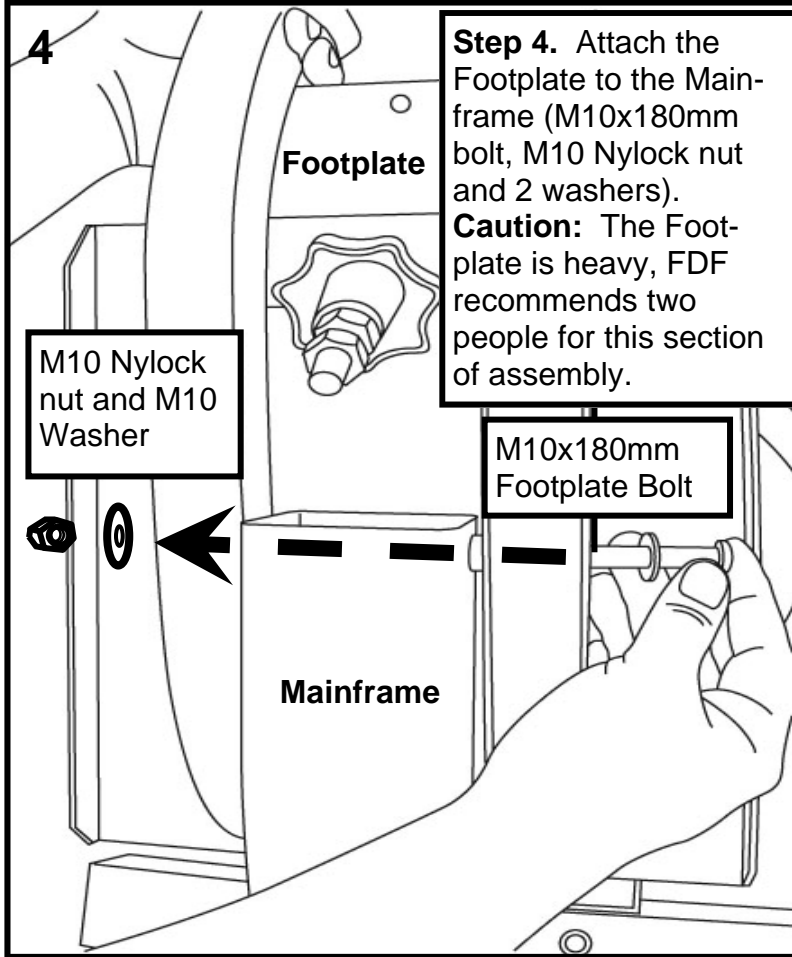
# E-316 Box Contents



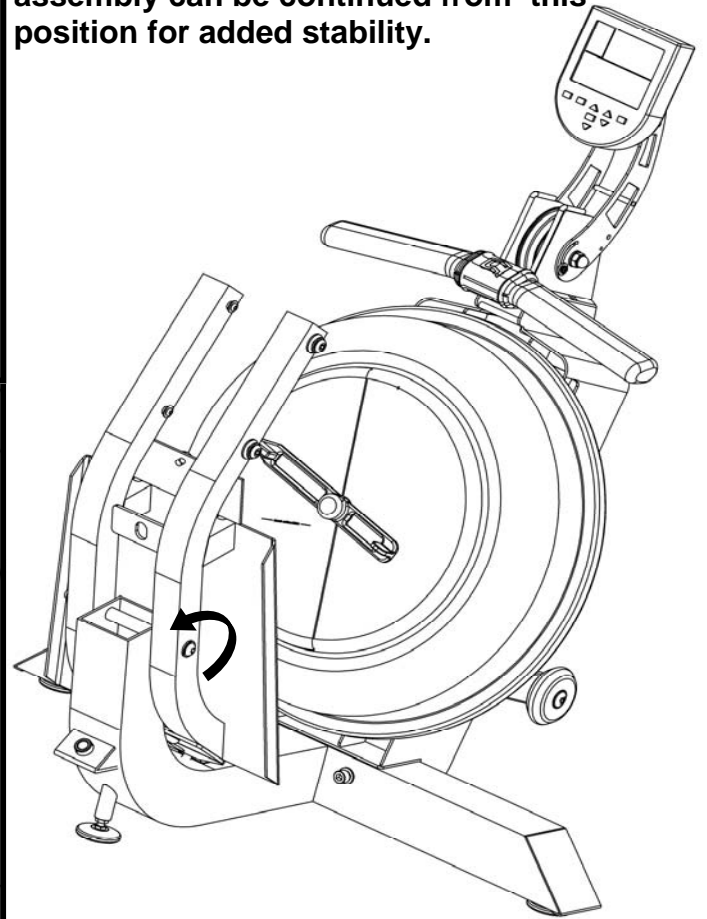
# E-316 Assembly Instructions



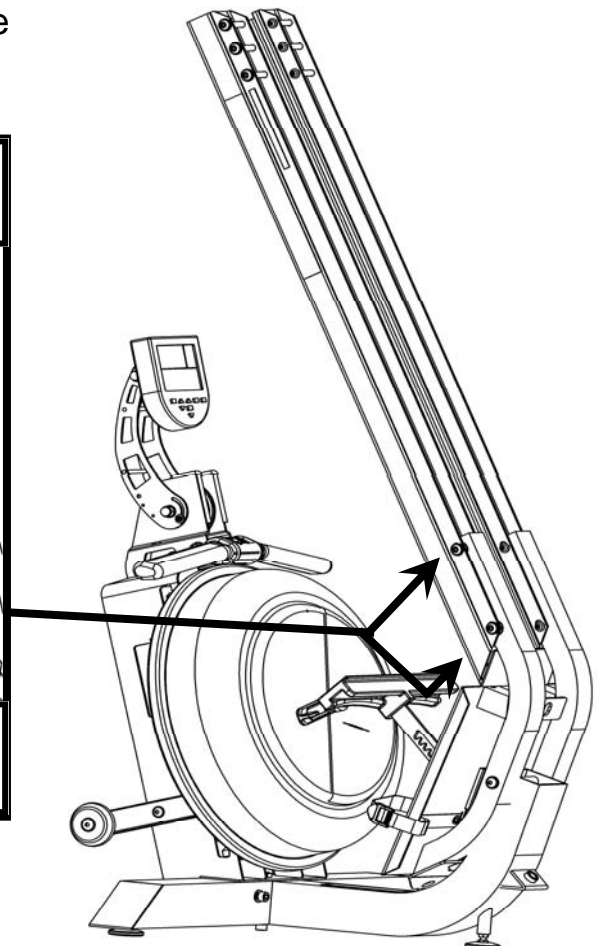
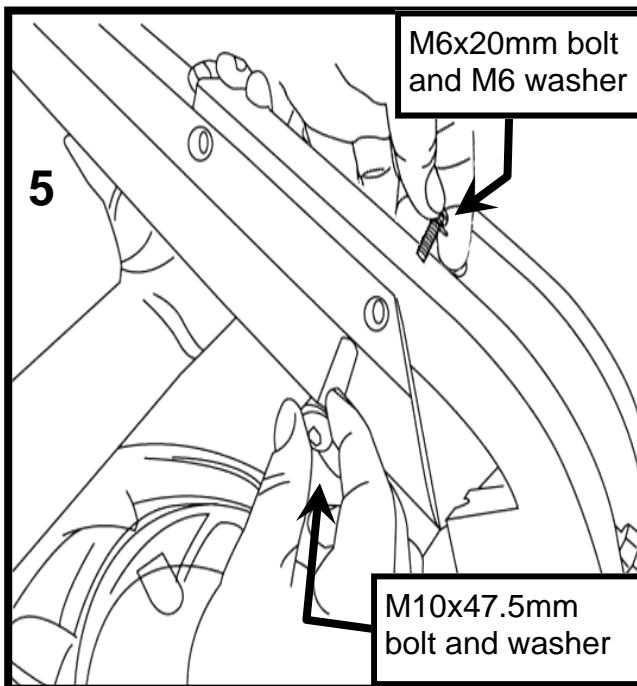
# E-316 Assembly Instructions



**Note:** Once Footplate is secured, the assembly can be continued from this position for added stability.



**Step 5.** Attach the Seat Rails to the Footplate using M10x47.5 bolts, M6x20 bolts, screws and 4x10mm/4x6mm washers.



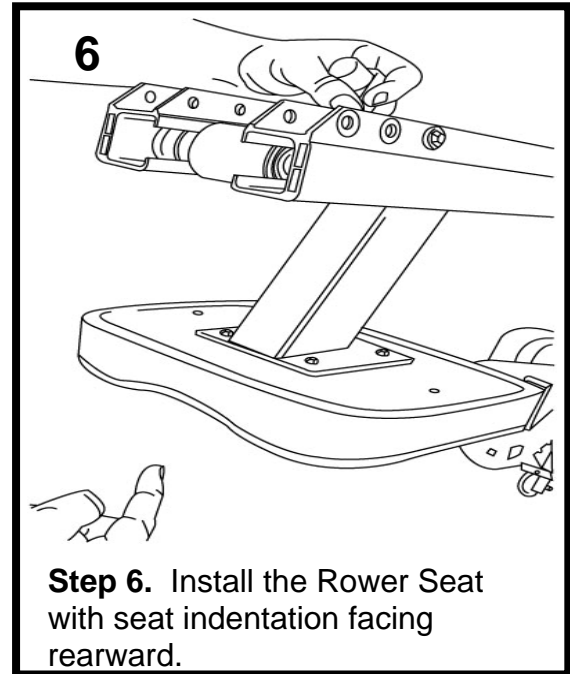
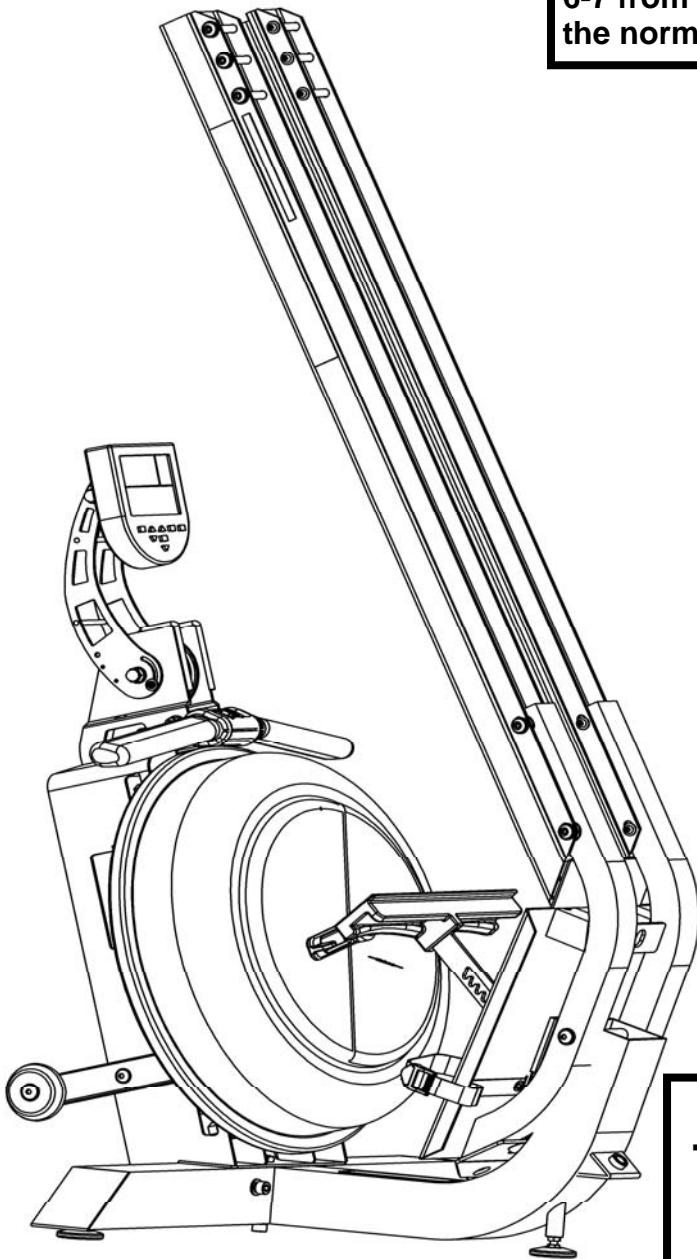
**WARNING**



**Keep hands clear of pivoting parts during assembly.**

# Assembly Instructions

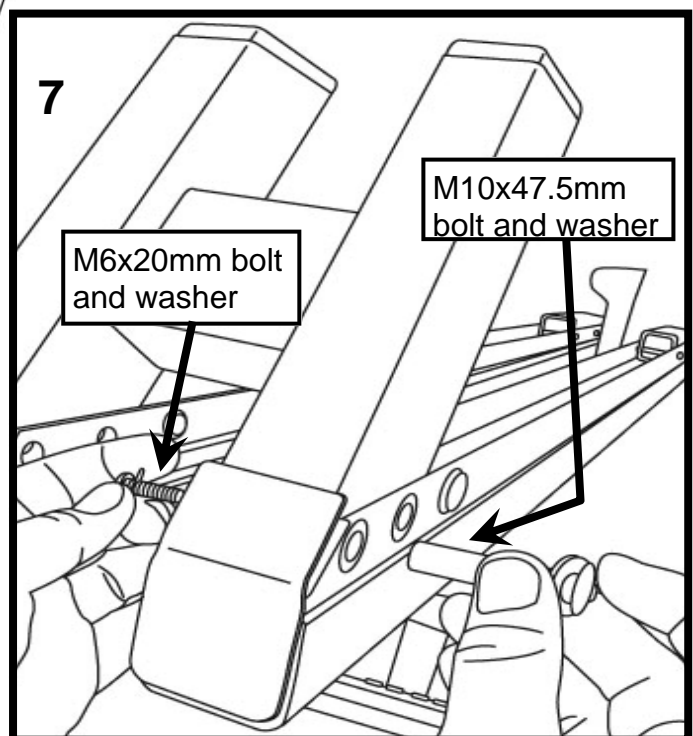
**Note:** Once Seat Rails are attached, complete steps 6-7 from this position before lowering the E-316 to the normal operating position.



**Step 6.** Install the Rower Seat with seat indentation facing rearward.



**Caution:** The Seat Rower is heavy. Use care when guiding down the Seat Rail.



**Step 7.** Install the Rear Leg Assembly to the Seat Rails using M10x47.5 bolts, M6x20 Allen key screws and 4x10mm/4x6mm washers.

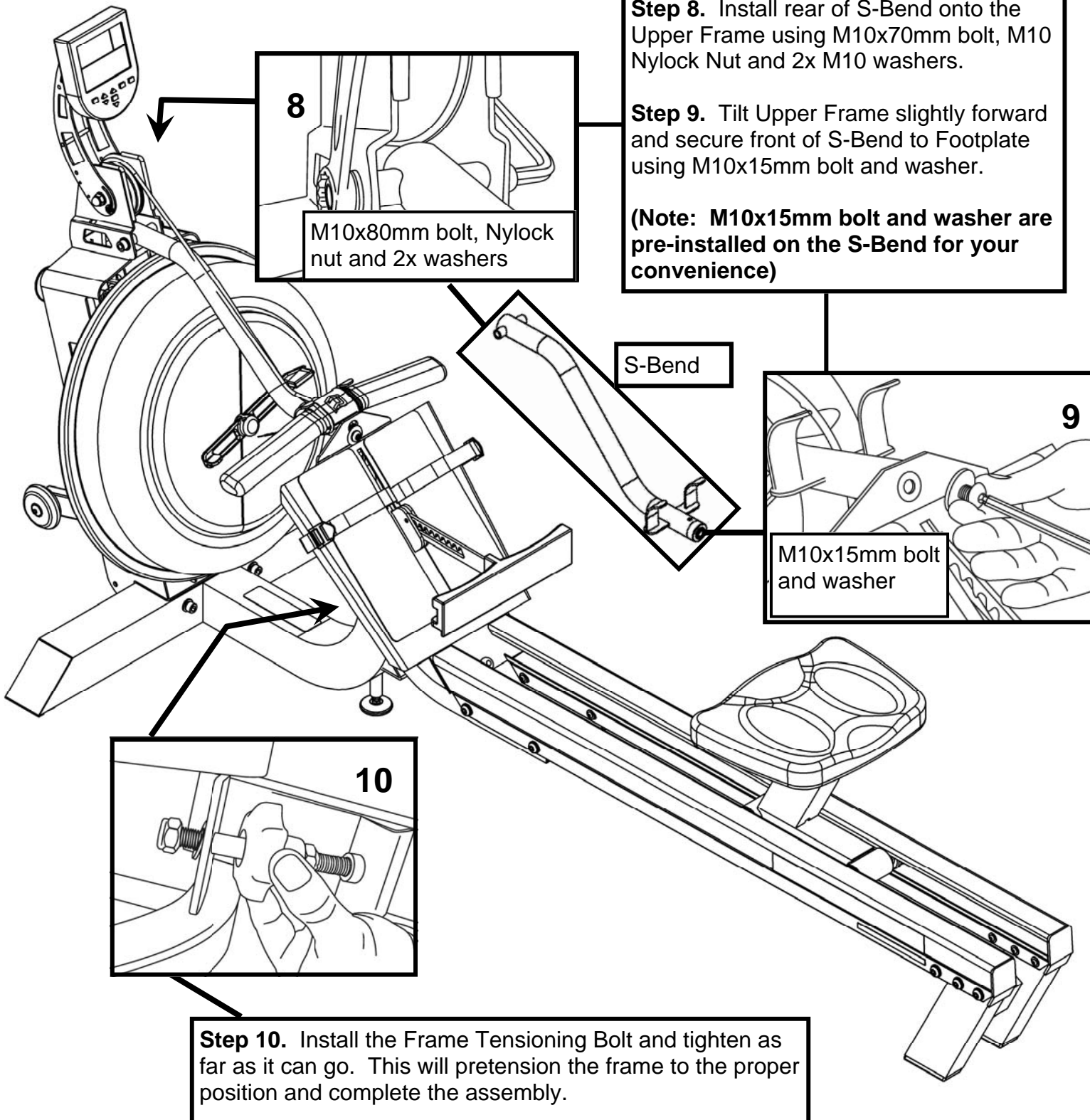
# Assembly Instructions

Carefully lower the rower to its normal operating position to complete assembly with S-bend installation and frame tensioning bolt.

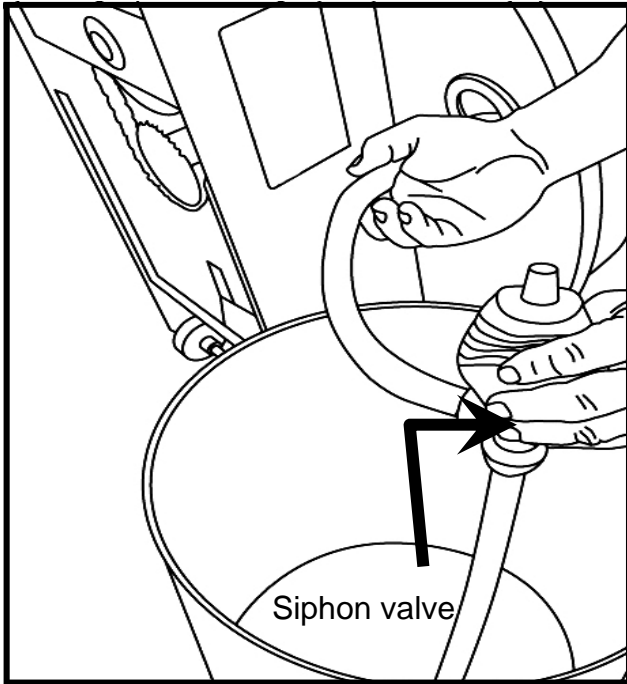
**Step 8.** Install rear of S-Bend onto the Upper Frame using M10x70mm bolt, M10 Nylock Nut and 2x M10 washers.

**Step 9.** Tilt Upper Frame slightly forward and secure front of S-Bend to Footplate using M10x15mm bolt and washer.

(Note: M10x15mm bolt and washer are pre-installed on the S-Bend for your convenience)



# Tank Filling and Water Treatment



Fill tank as shown left. Use the right 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 right tank plug on the rear of the fluid tank 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), add 1x Chlorine Tablet into the water tank. Enough tablets are supplied for many years of water treatment. Water treatment is only required should the water become cloudy.

**WARNING: Use of any other water treatment tablet could damage the tank and void warranty. Only use FDF recommended water treatment tablets.**

**Note: the lower tank plug is permanently sealed.**



**Caution:**

Use a drop cloth under the tank when filling the tank to avoid damage 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 [www.firstdegreefitness.com](http://www.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.

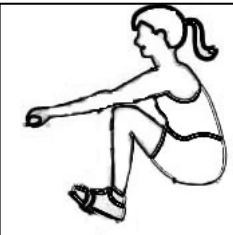
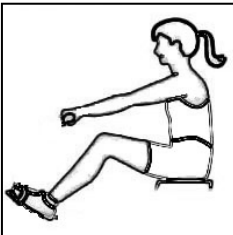
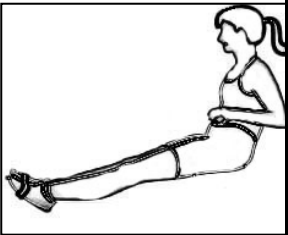
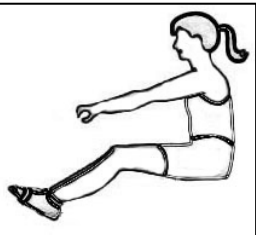
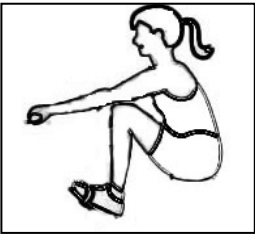
Progress a few minutes more each day until you are comfortable with 30-45 minutes training time 3 or 4 times a week.

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.

				
<b>Catch</b> Comfortably forward with straight back and arms.	<b>Drive</b> Push with the legs while arms remain straight.	<b>Finish</b> Pull through with arms and legs rocking slightly back on your pelvis.	<b>Recovery</b> Upper body tips forward over your pelvis and move forward.	<b>Catch</b> 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 E-316 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.



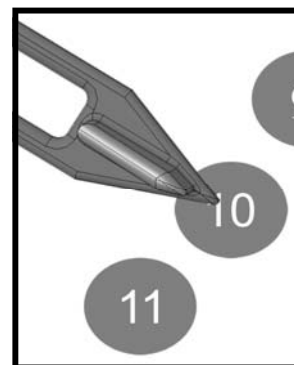
**CAUTION:** It is recommended that a drop cloth be used under the fluid tank whenever the tank is open for water treatment

## Vertical Storage:

The E-316 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 water to move to the correct location.



## Dyneema Cable Drive:

The Dyneema Cable drive system allows for simplicity, smoothness and unparalleled performance. The unique properties of Dyneema 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 E-316 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 may have a slight “fuzzy” appearance after a period of use. Dyneema is extremely abrasion resistant and to some degree self-lubricating. Expect many years of trouble free performance.

## Heel Support Adjuster:

The E-316 has a unique and easy to use Heel Support Adjuster. Simply slide the Adjuster up or down to the required position. This should place the ball of your foot directly under the horizontal Foot Straps. Secure Foot Straps. The Heel Support allows the user to row without shoes if desired.

## Maintenance chart.

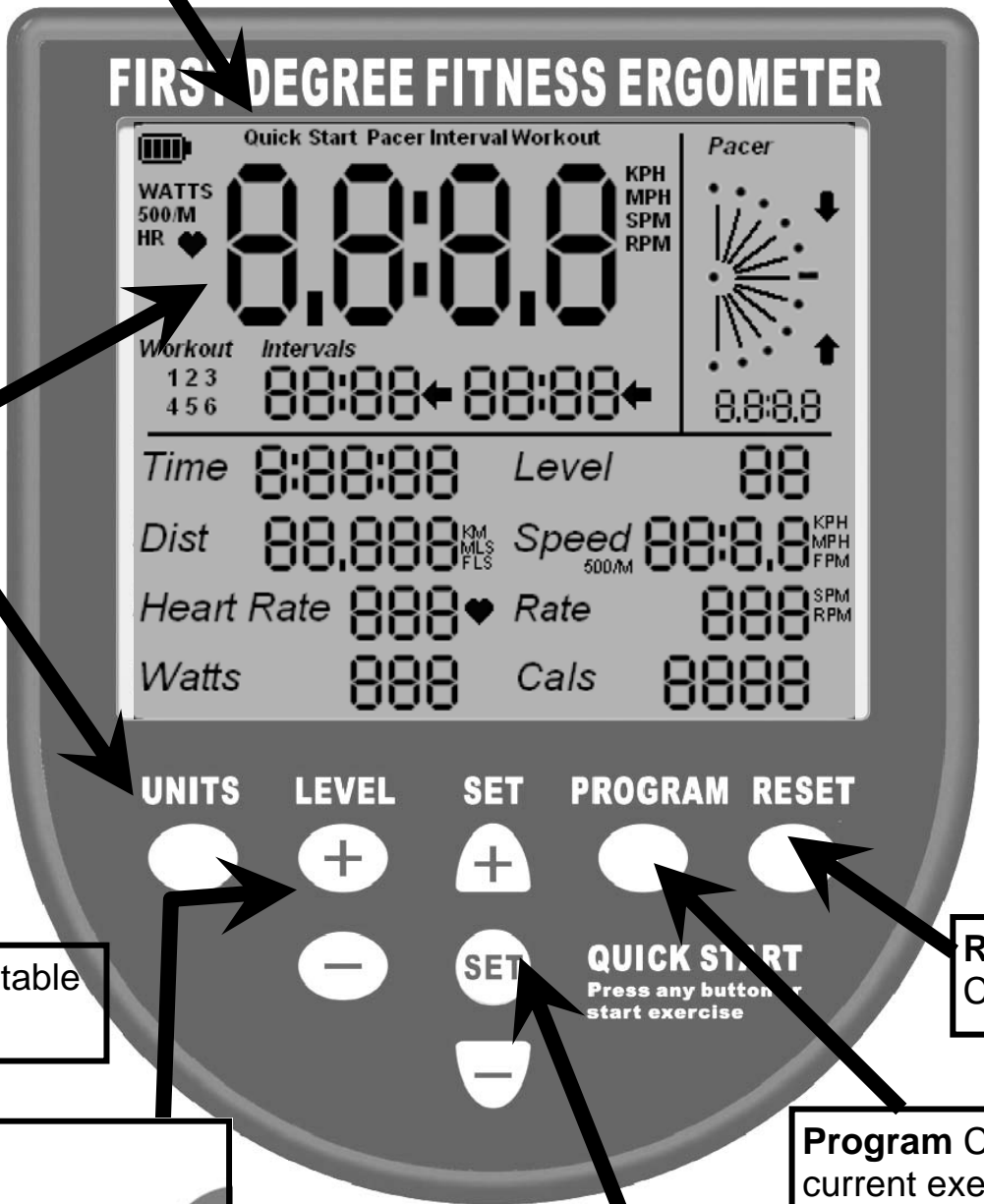
Item	Timeframe	Instructions	Notes
Seat and Seat Rails.	Weekly.	Wipe Seat Rails with lint free cloth. Spray seat rails with a light coat of silicone spray.	
Frame.	Weekly.	Wipe down with lint free cloth.	
Tank and Water Treatment.	12 months to 2 years.	Follow instructions as specified in the "Water Treatment" 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" section of in the service section of the First Degree Fitness website at <a href="http://www.firstdegreefitness.com">www.firstdegreefitness.com</a>	

# 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 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 or rear leg levelers until stability is reached. <b>Note: It is normal for the lower rear leveler to rest slightly off the floor.</b>
Front of rower lifts slightly during vigorous rowing.	Lower rear frame leveler too high.	Check to see that frame tensioning bolt is tightened properly. Lower rear frame leveler should be approx 5mm off the ground.
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 E-316 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 E-316 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.

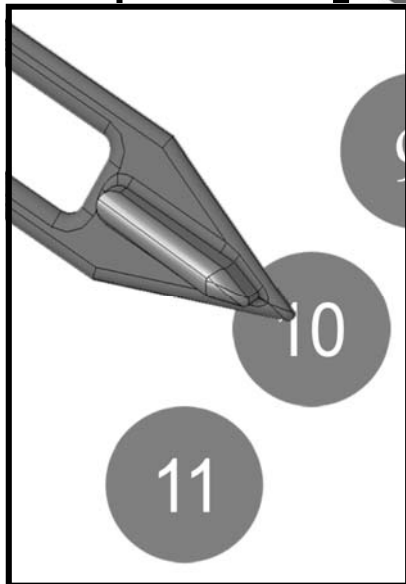
# E-316 Rower Ergometer.

**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



**Reset**  
Clears data.

**Program** Clears  
current exercise  
program.

**Set** Changes Time, Distance parameters.

**Note:** For complete operational instructions, please refer to the computer manual, which is included with your E316.

# Using the (optional) 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

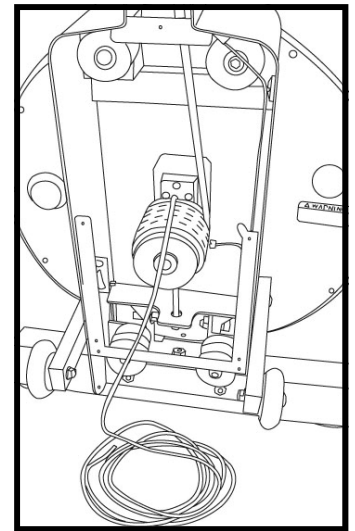
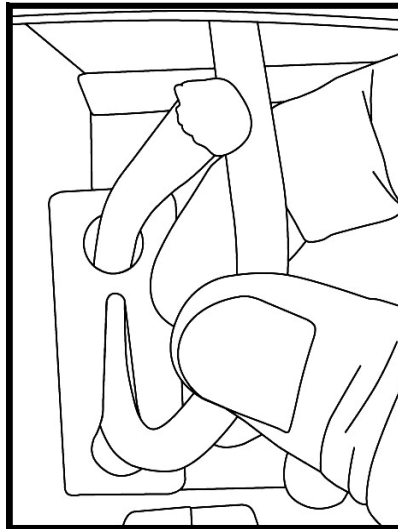
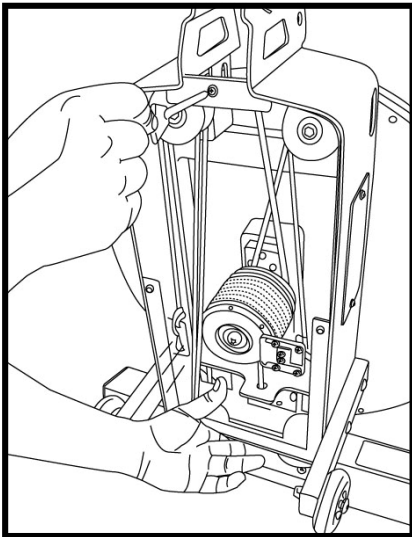
1. Download and Install the USB Device Driver (CDM2xxxx\_Setup.exe for 32 and 64 bit Windows 7/ Vista/XP) from the FDF Website.
2. Download and Install the Sample USB Applications from the FDF Website ([www.firstdegreefitness.com](http://www.firstdegreefitness.com)).  
Download and Install NetAthlon 2 XF for Rowers from <http://www.webracing.org/downloads.htm>

## Connecting your console

- The USB Connector is located on the lower rear of the 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](http://www.firstdegreefitness.com)

# Replacing the E-316 Bungee Shock Cord



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



Disconnect sensor lead before removing cover completely.

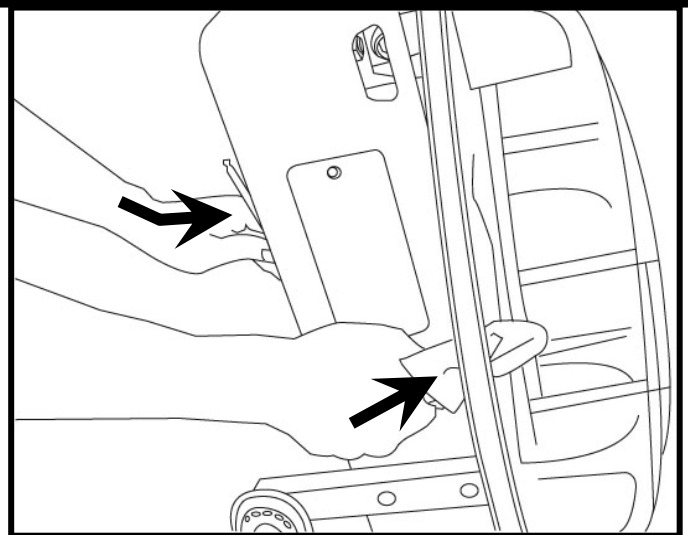
**Step 2.** Move the rowing handle from the S-Bend handle catch to a point where it is resting on top of the tank . This helps line up the Bungee Cord hole for easier removal/ replacement. Detach Bungee Cord from lower rear attachment point.

**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 right rear 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.

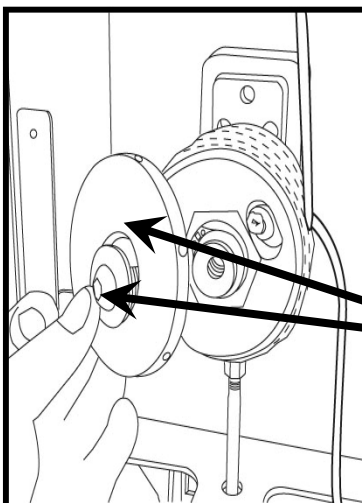
**Caution:** Do not allow a dissimilar metal to directly contact the impeller blade. Premature rusting could occur . Cover any tool inserted the tanks with a lint free cloth and keep fingers clear.

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 !**

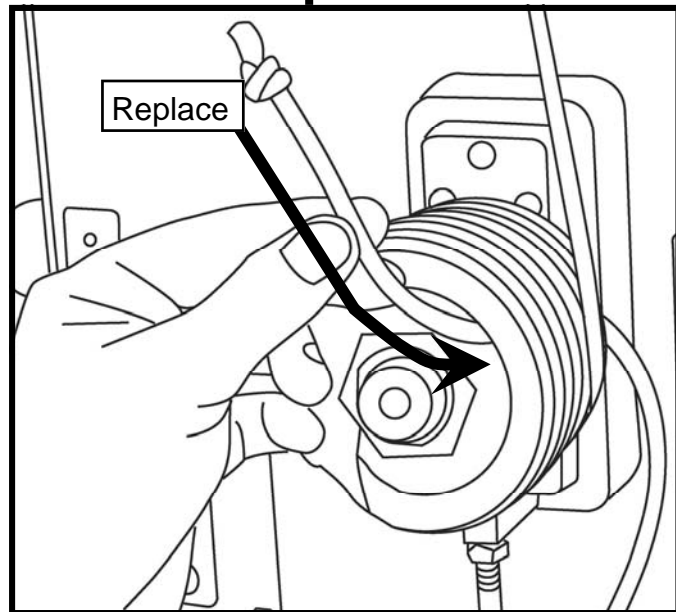
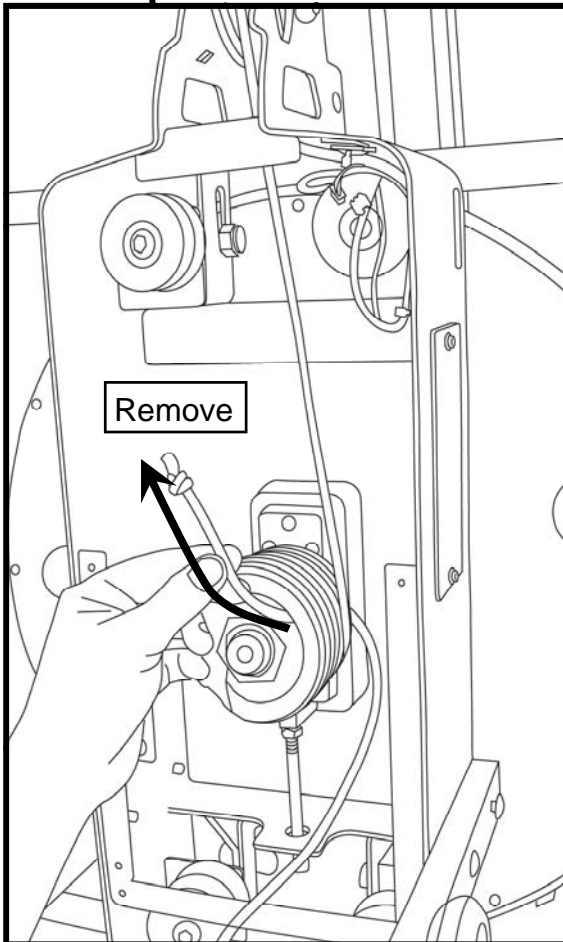
Do not insert fingers into tank!



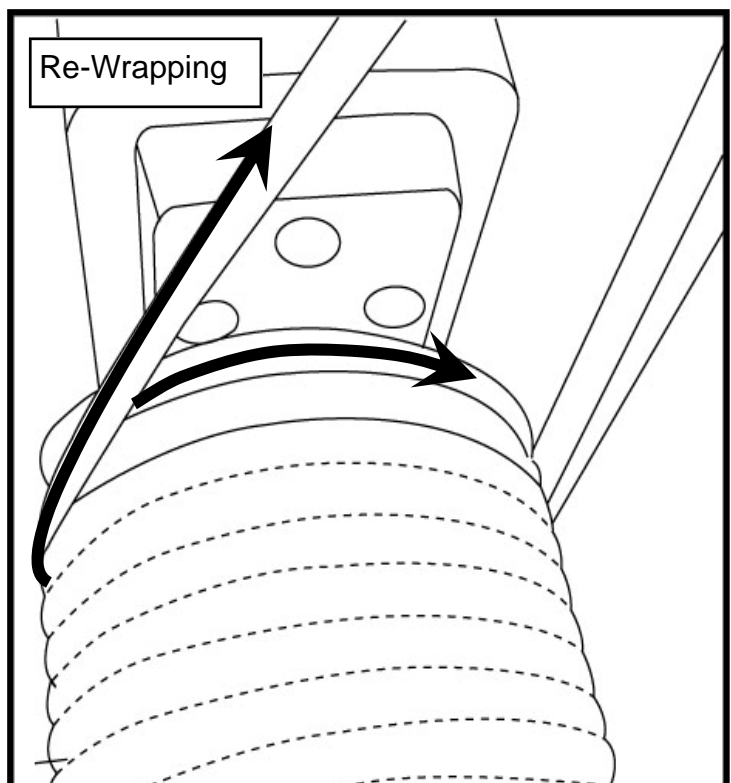
Rear Mainshaft Bolt and Magnetic Ring

# Replacing the E-316 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.

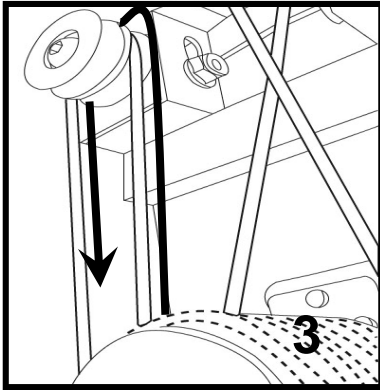




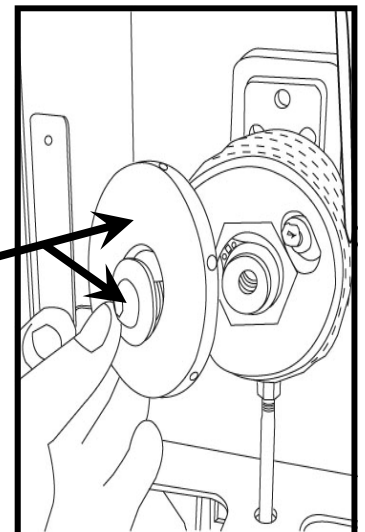
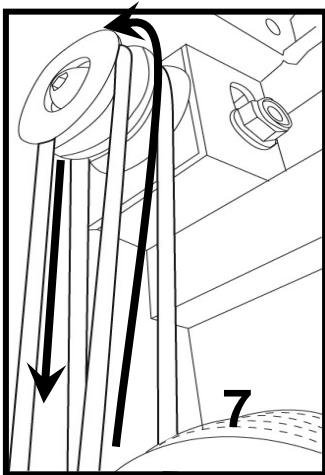
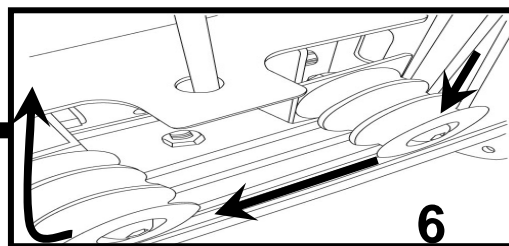
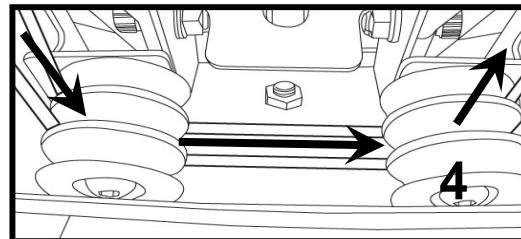
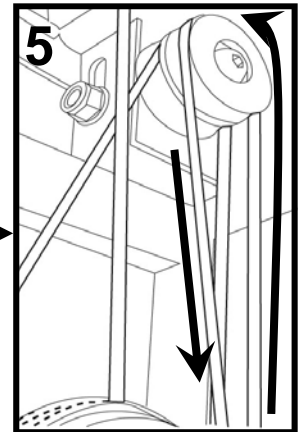
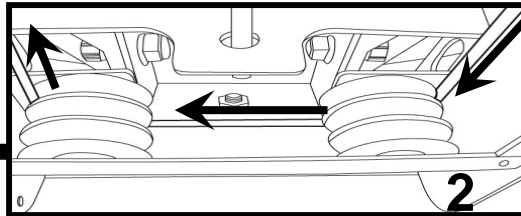
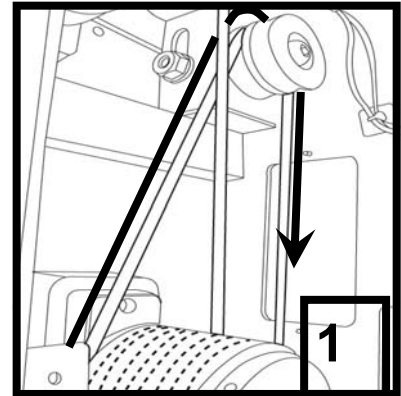
# Replacing the E-316 Bungee Shock Cord

## Bungee wrapping in order:

1. Rope/Bungee Pulley to upper rear right Bungee Pulley.
2. Upper rear right to lower rear right and rear left Pulleys.
3. Lower rear left to upper rear left Pulley.
4. Upper rear left 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.



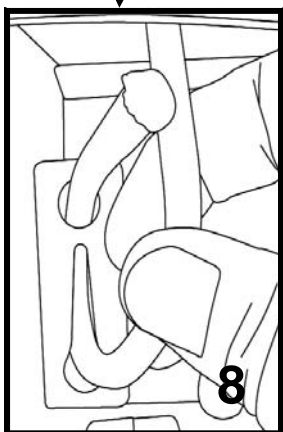
Hint: Keep a slight tension on the Bungee Cord when threading through the Bungee Pulleys.

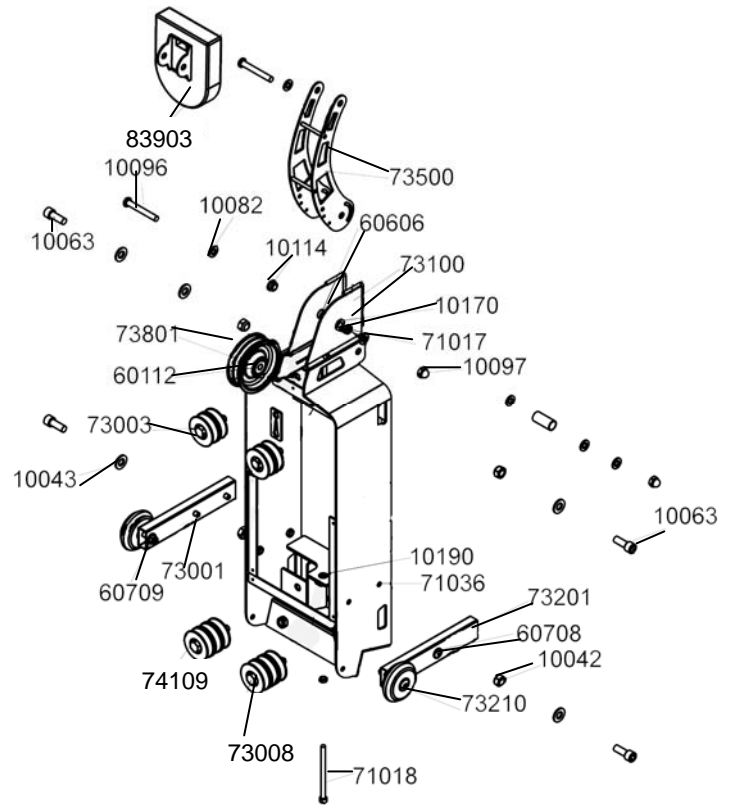
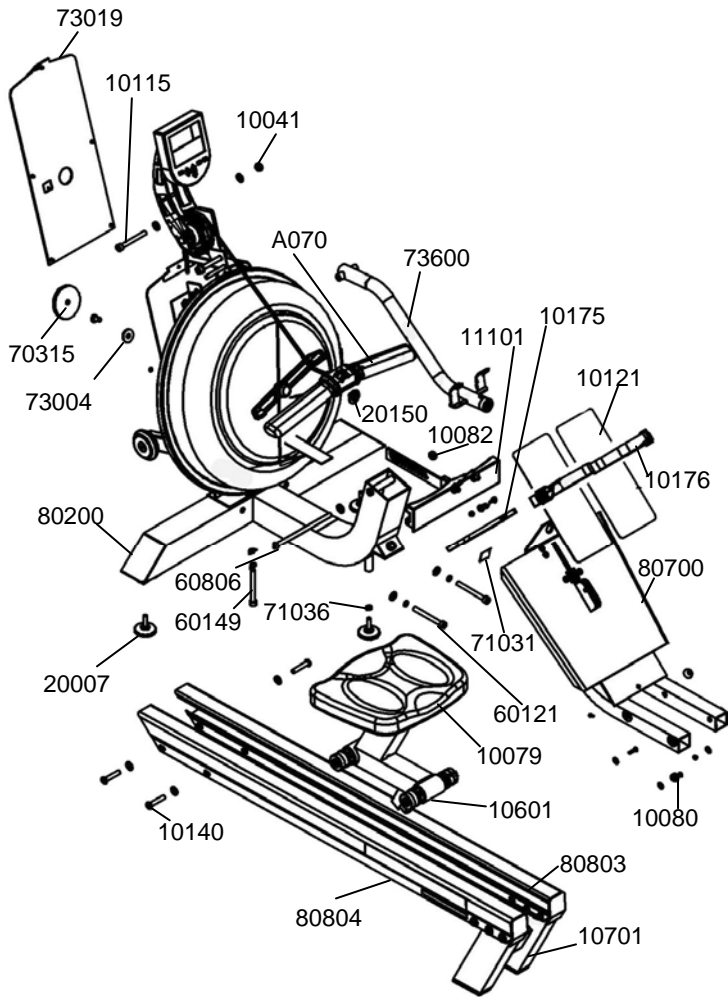


Finish the Bungee re-wrap by tying off the Bungee. You may elect to not use a tie wrap as the metal tab is designed as a stand alone attachment point. Thread the Bungee through to desired tension and thread the Bungee end through the upper hole as shown.

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

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

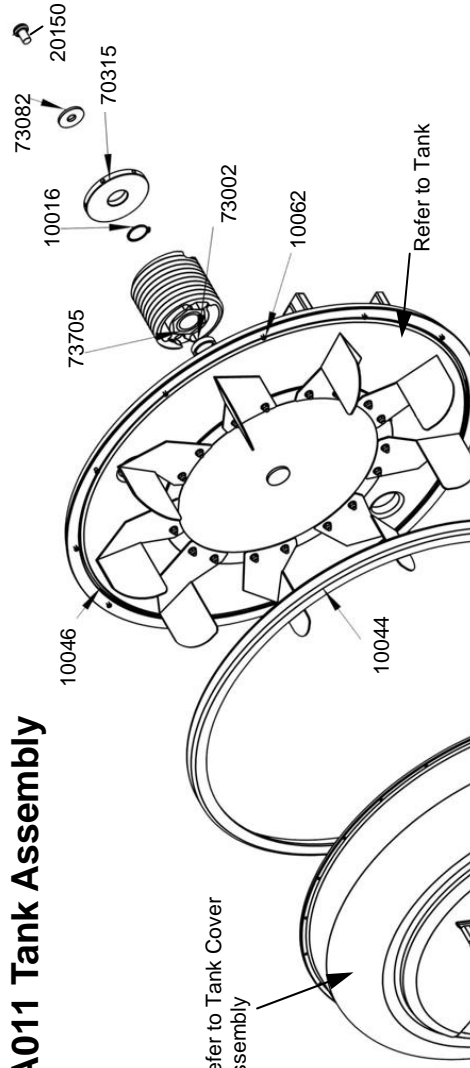




P/N	Qty	Description	P/N	Qty	Description
10041	2	Nut M10 Nylock	60149	3	Spring Washer M10 5x7x2
10042	4	Nut M12 Nylock	60606	1	Plastic Spacer 15*6*2.5t for Heel Adjuster
10043	8	Washer M12	60708	2	Washer M8.5x19x1.6t
10063	4	Bolt M12x30	60709	2	Nut Nylock M8
10079	1	Seat LS-E28	60806	1	Bolt M10x180 for FootPlate
10080	4	Bolt M6x20	65945	1	Decal - How to Row
10081	6	Washer M6	70315	1	Magnetic Ring & Rare Earth Magnet #70319
10082	11	Washer M10	20007	5	Foot Levelers M8x30 Hardened Rubber
10096	2	Bolt M10x70	71017	2	Bolt M4 x 15
10097	2	Nut Dome Head M10	71018	1	Tank Bolt Adjuster Washer M8x110
10114	2	Plastic Bushing 20x16x13x10	71031	1	Decal - Hand Warning
10115	1	Bolt M10x80	71036	1	Nut M8
10120	2	Bolt M6x15	73001	4	Bolt M8x35
10121	2	3M Foot Plate Non Slip	73003	2	Bolt M12x50
10140	4	Rear Leg Bolt M10x47.5mm	73004	2	Washer M10x3x32
10170	3	Washer M4	73008	2	Screw M12x70
10174	2	Nut M6 Nylock	73019	1	PVC Cover & Decal
10175	1	Heel Support Pin	73100	1	Upper Main Frame Complete
10176	2	Foot Strap & Buckle #10177	73201	2	Transport Wheel Frame
10190	2	Washer M8x26	73210	2	Transport Wheel
10604	1	Seat frame welded (front/rear)bearing housing	73500	1	Computer Stalk Complete
10701	2	Rear Leg	73600	1	S-Bend Complete E316
11101	1	Heel Support	73801	1	Rope Pulley 102mm
20150	1	Bolt M10x15	80200	1	Lower Frame
83903	1	Computer with USB without HR	80700	1	Foot Plate E316
74109	10	Bungee Pulley 50mm with Bearing	80803	1	Seat Rail Decal Right E316/S350
60112	10	Belt pulley bearing 6000ZZ	80804	1	Seat Rail Decal Left E316/S350
60121	3	Bolt M10x90	A070	1	Deluxe Handle Assembly—Dyneema

## A011 Tank Assembly

Refer to Tank Cover Assembly

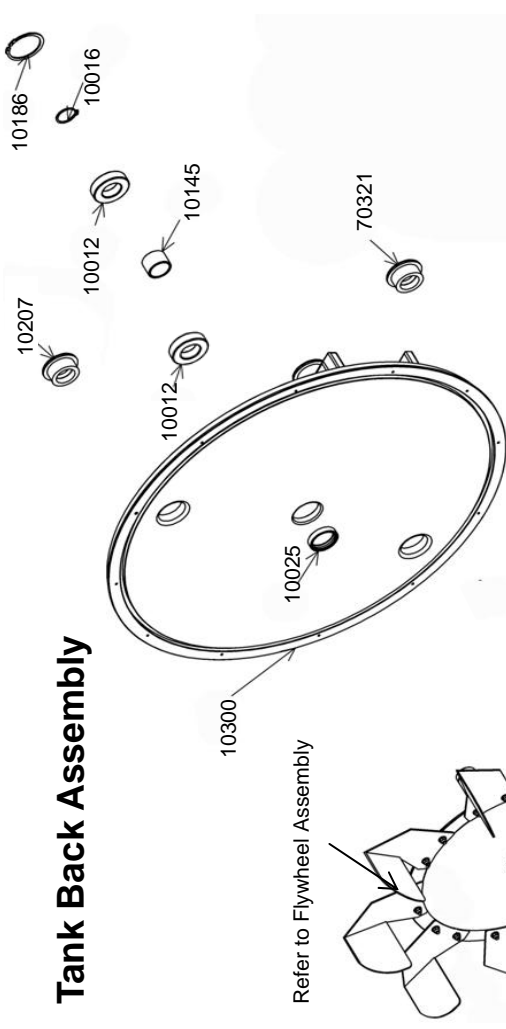


P/N	Description	QTY
10016	C-Clip STW-25	1
10044	Tank Outer Cover Ring—Blue	1
10046	Tank Large Seal	1
10062	Bolt M3x12	12
20150	Bolt M10x15	2
70315	Magnetic Ring & Rare Earth Magnet #70319	1
73002	Main Shaft Rear Spacer	1
73082	Washer M10x3x32	2
73705	Rope/Bungee Pulley & One Way & Needle Bearings	1

Refer to Tank

## Tank Back Assembly

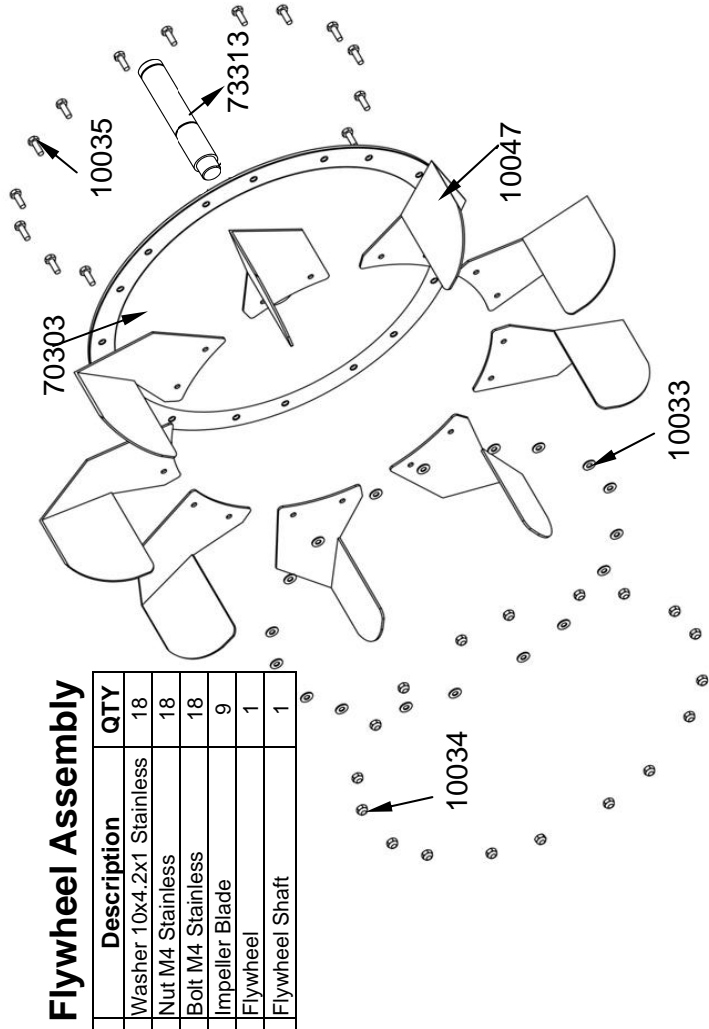
Refer to Flywheel Assembly



P/N	Description	QTY
10012	Bearing NSK 6005ZZ	2
10016	C Clip STW-25	1
10025	Seal NBR 37x30x8t for Flywheel Shaft	1
10145	Bearing Spacer 30x25.1x20.5mm	1
10186	C Clip RTW-48	1
10207	Tank Plug Yellow	1
10300	Tank Back—Gray	1
70321	Tank Plug Black	1

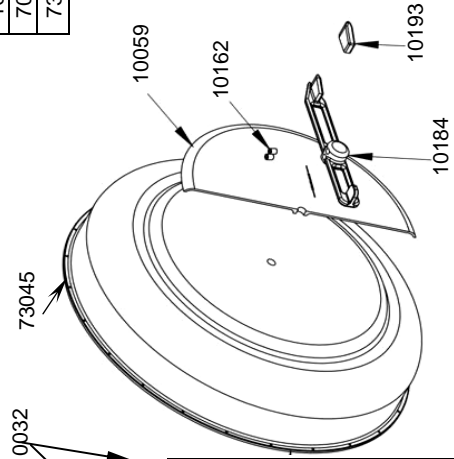
## Flywheel Assembly

P/N	Description	QTY
10033	Washer 10x4.2x1 Stainless	18
10034	Nut M4 Stainless	18
10035	Bolt M4 Stainless	18
10047	Impeller Blade	9
70303	Flywheel	1
73313	Flywheel Shaft	1



## Tank Cover Assembly

P/N	Description	QTY
10027	Adjuster Handle Shaft	1
10028	Stainless 0.8mm Backing Plate	1
10030	Blue Adjuster PP Tank Ring 358x10	1
10032	Nylon Resistance Adjuster O Ring 12x9x1.5	2
10033	Washer 10x4.2x1 Stainless	4
10034	Nut M4 Stainless	4
10035	Bolt M4 Stainless	4
10036	Screw M3x20 SS for Blue Tank Ring	12
10162	Grub Screw M8x10	2
10184	Resistance handle & PU Cover #10193	1
73045	PC Tank Cover & Level Decal 16R #10059	1



# **FLUID ROWER (model FR-E316)**

## **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 **Fluid Rower (model FR-E316)**, 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) – 1 Year Limited Warranty**

First Degree Fitness will repair or replace any component should it fail due to any defect in materials or workmanship within 1 year of the original purchase.

### **Specific Inclusions**

- Bungee recoil cord, belt and pulley
- Hand grips & foot straps
- 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