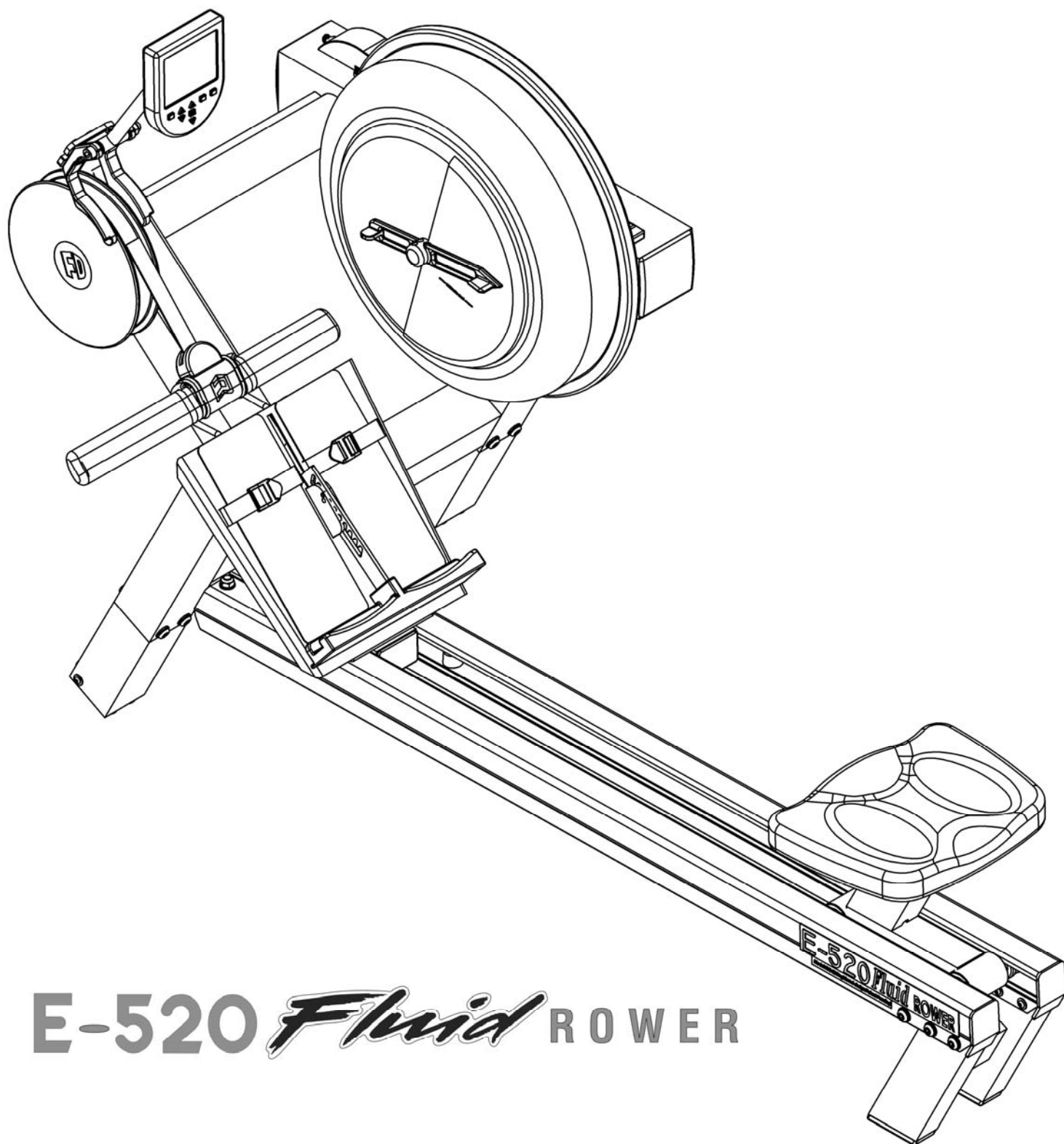


Owners Manual



E-520 *Fluid* ROWER



FIRST DEGREE FITNESS
FLUID INNOVATION

www.firstdegreefitness.com

Contents

1. Contents of E-520 Pack.
2. E-520 Assembly Instructions.
3. Tank Filling and Water Treatment.
4. Long Term Water Treatment and Basic Operation.
5. The E-520 Rower Ergometer (with optional USB Function).
6. How to Row.
7. Maintenance Chart.
8. Troubleshooting Guide.
9. Adjusting the Tank Drive Belt.
10. Replacing the Bungee Shock Cord.
11. Exploded Diagram and Parts List.
12. Warranty.

Training with the E-520

1. As with any piece of fitness equipment, consult a physician before beginning your E-520 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



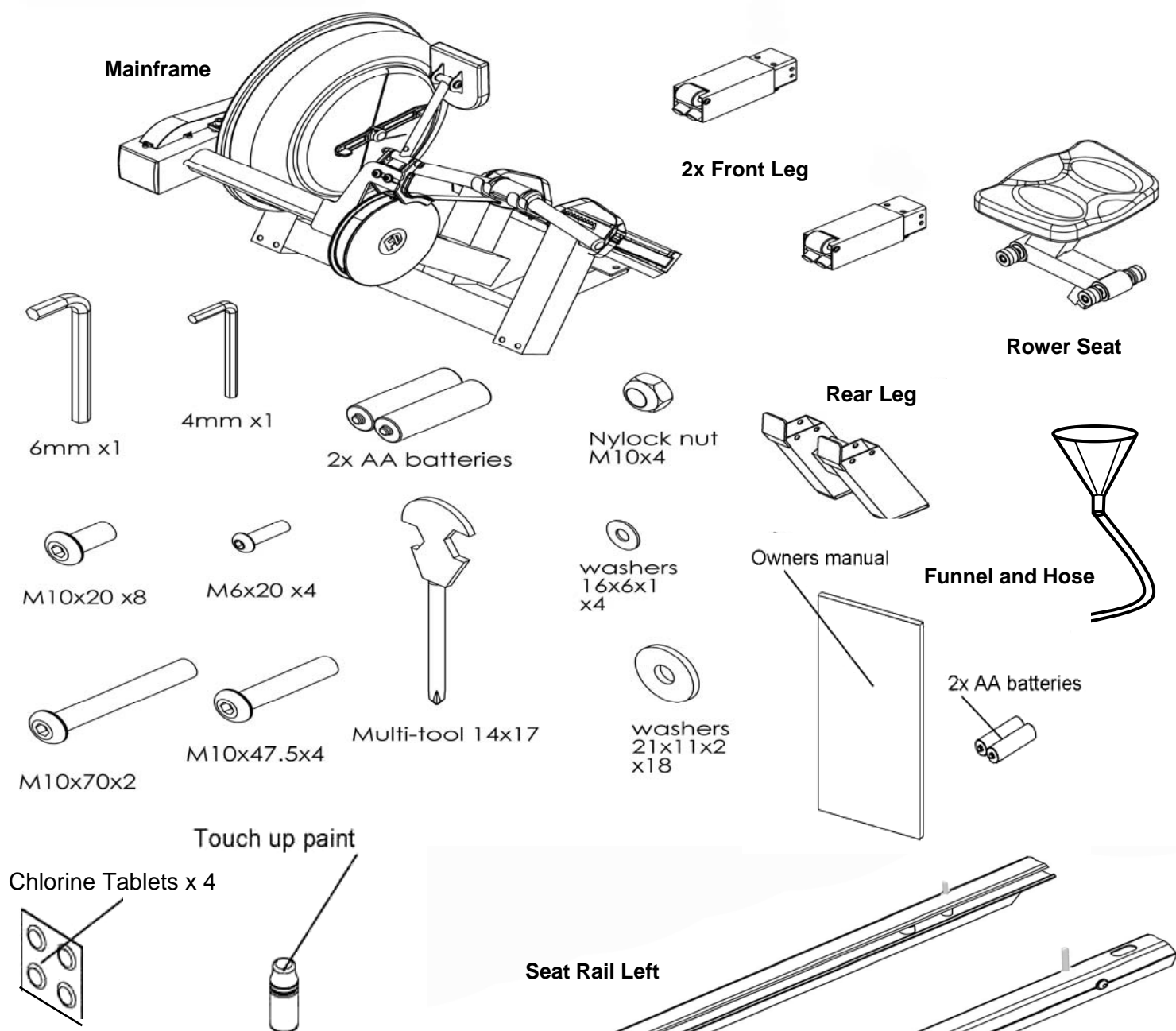
CAUTION

1. The E-520 can stand 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 on the rear of the fluid tank.



Main Frame Parts:

1. Main Frame x1.
2. Front Leg x2.
3. Rear Leg x 2.
4. Rower Seat x 1.
5. Seat Rail (Left/Right)

Bolt Pack Contents:

1. M10x20mm bolt x8.
2. M10x47.5mm bolt x4.
3. M10x70mm bolt x2.
4. M6x20mm bolt x4.
5. M10 washer x18.
6. M6 washer x4.
7. M10 nut x4.

Miscellaneous:

1. Funnel and hose.
2. E520 Owners Manual.
3. 6mm Allen key.
4. 4mm Allen key.
5. Chlorine tablets x4
6. Main frame touch up paint.

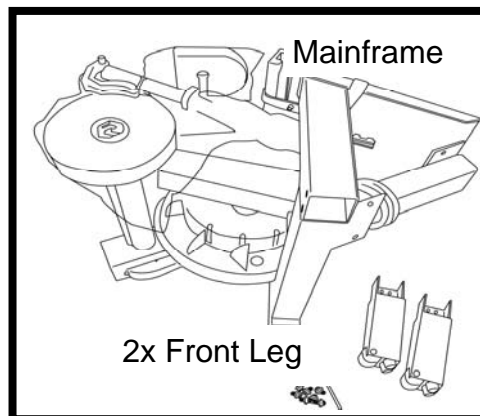
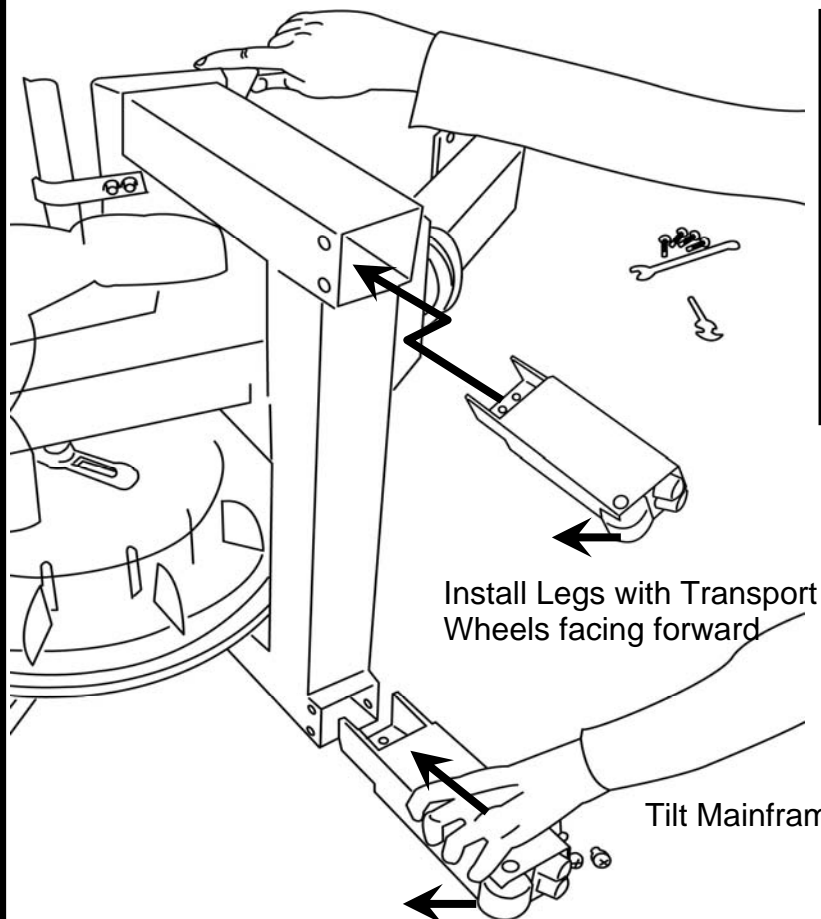
Taped inside Aluminum Rails:

1. M10x70mm bolt x2.
2. 10mm washer x2.
3. Seat Rail Spacer x2.

Front Leg Assembly

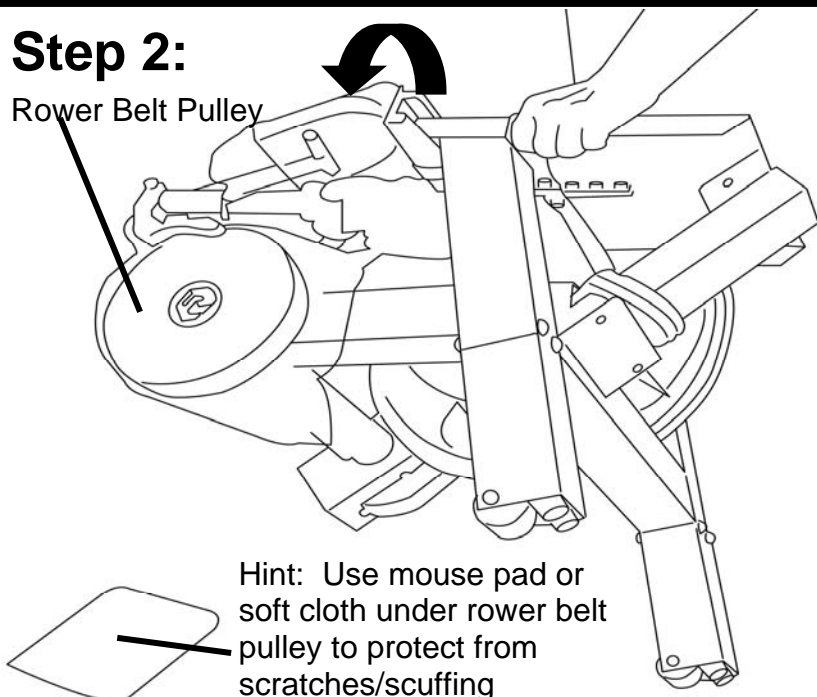
Caution: Do not free the Rowing Handle, Heel Adjuster or Computer Stalk before assembly is complete.

Step 1: Requires the Mainframe, 2x Front Leg, 8x M10x20mm bolt and washer. Remove Mainframe from box and lay on soft surface such as carpet as shown. Tilt frame upward slightly and install rower Front Leg with 4x M10x20mm bolt & washer. Repeat for other leg.

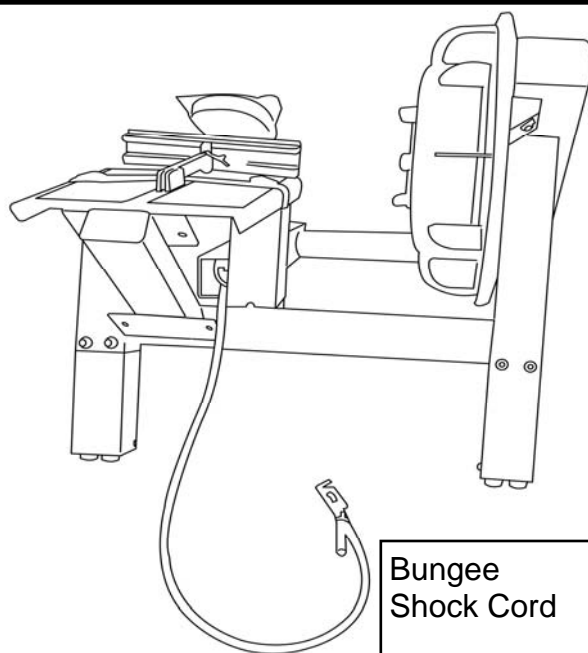


Step 2:

Rower Belt Pulley

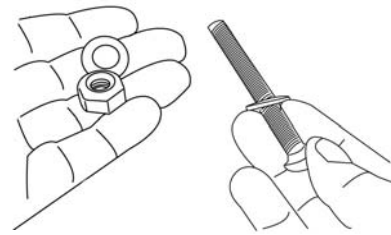
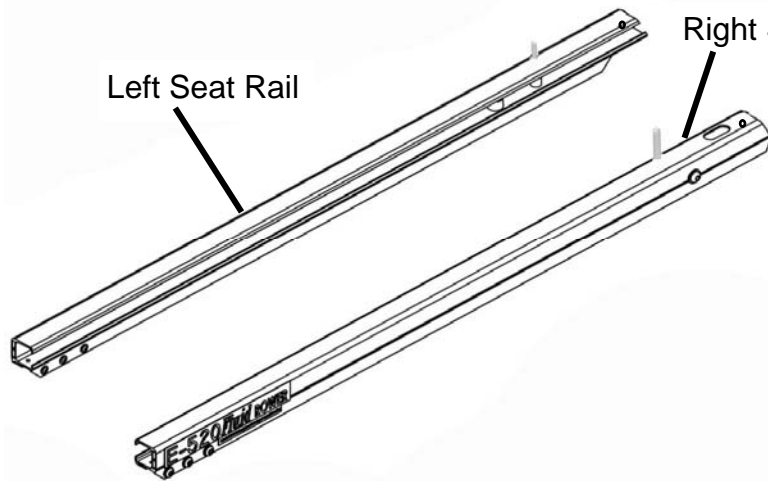


Slowly stand the rower upright. On a hard surface, it is recommended to place something soft under the Rower Belt Pulley to avoid surface scratches.



Locate and unwrap the Bungee Shock Cord from the frame before moving on to the installation of the Seat Rails.

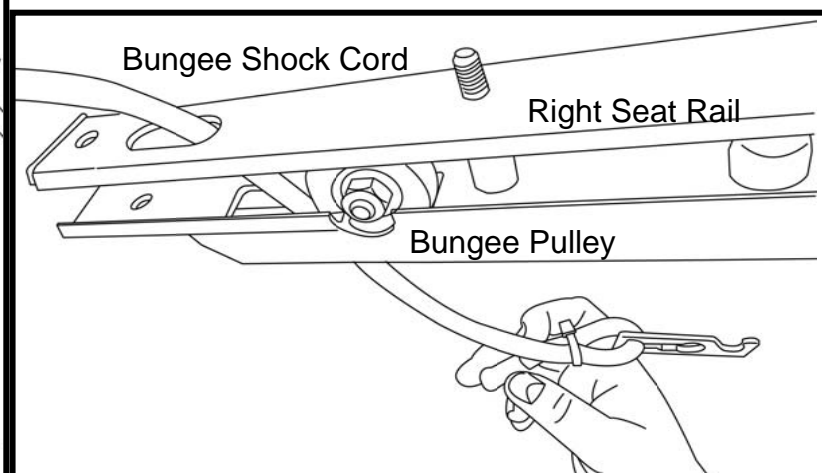
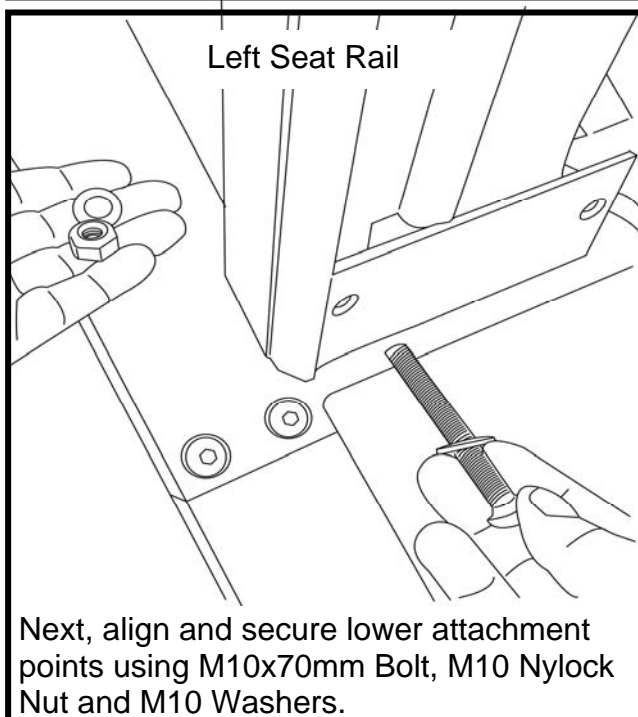
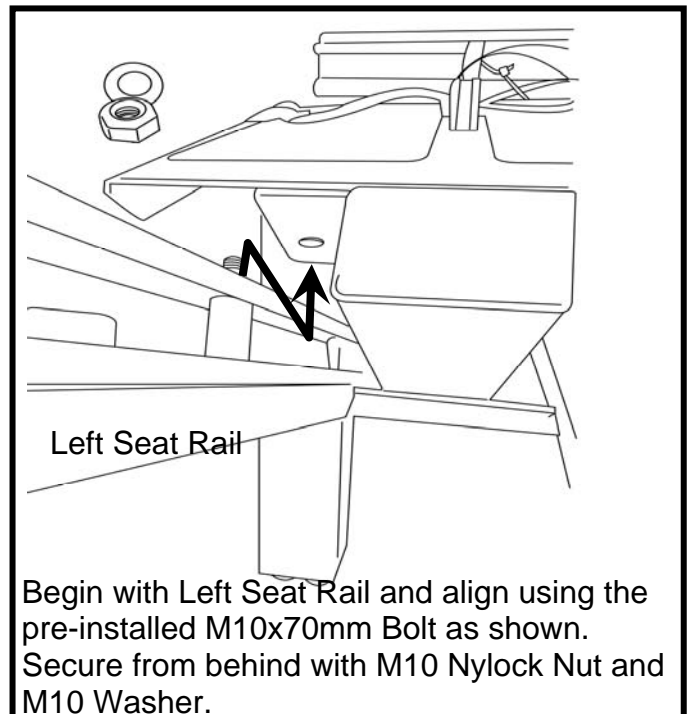
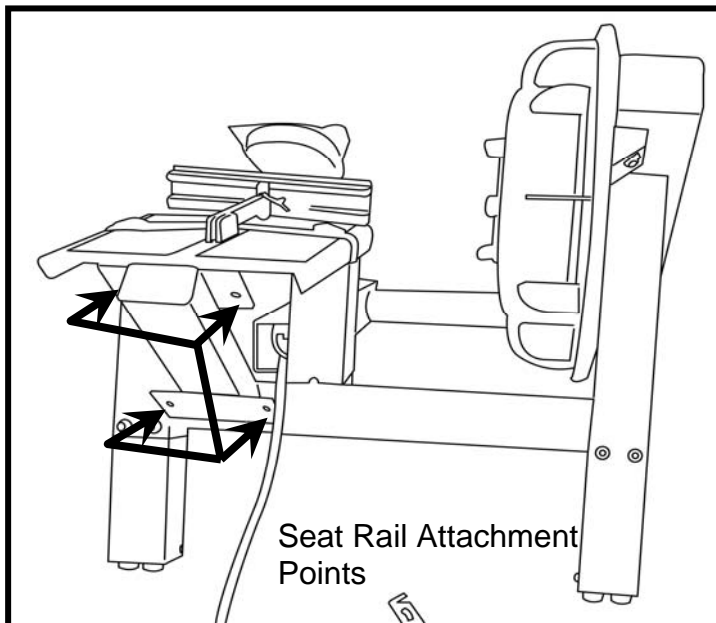
Step 3: Attaching Seat Rails to Frame



M10x70mm Bolts, 2x and 4x Nylock Nut/
M10 Washer.

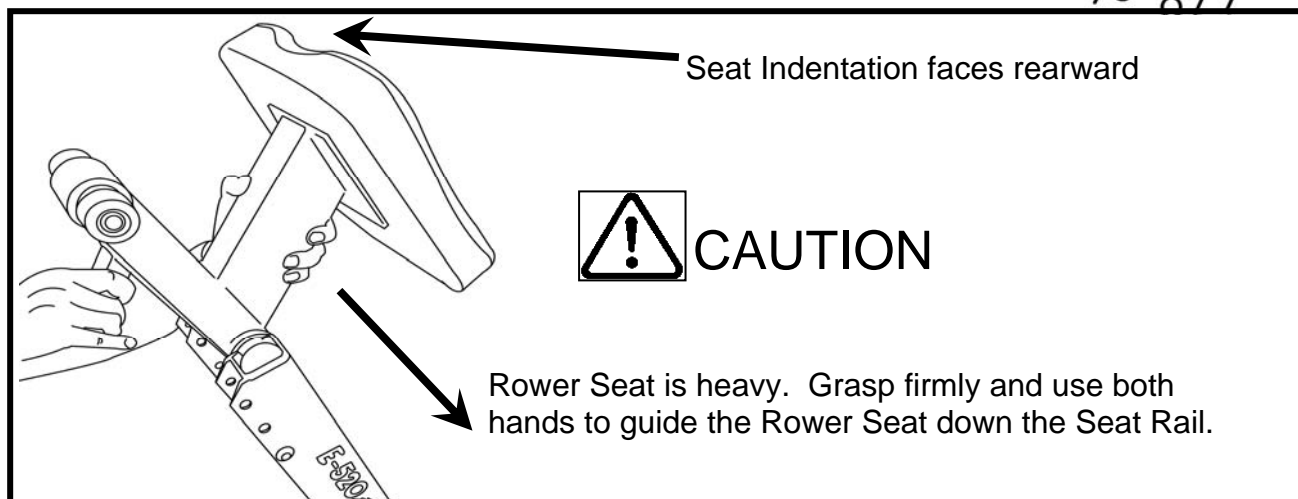
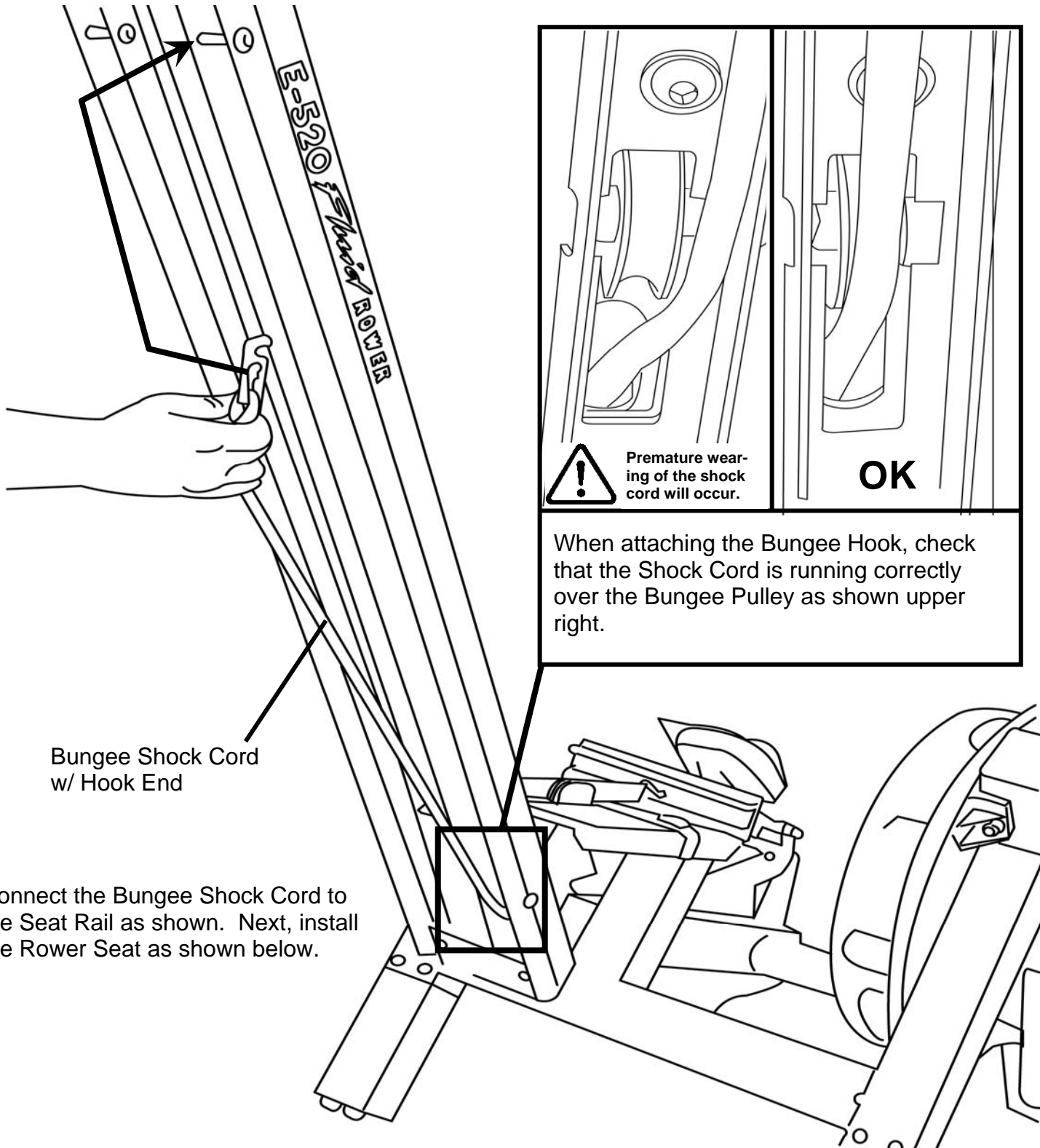
This portion of the assembly requires the Mainframe, 1x Left/1x Right Seat Rail, 2x M10x70mm Bolt, 4x M10 Nylock Nut and 4x M10 Washer.

Note 2x M10x70mm bolt/spacer are pre-installed on the Seat Rails for your convenience.



Before installation of the Right Seat Rail, thread the Bungee Shock Cord through the top of the Seat Rail, around the Bungee Pulley and out the bottom as shown.

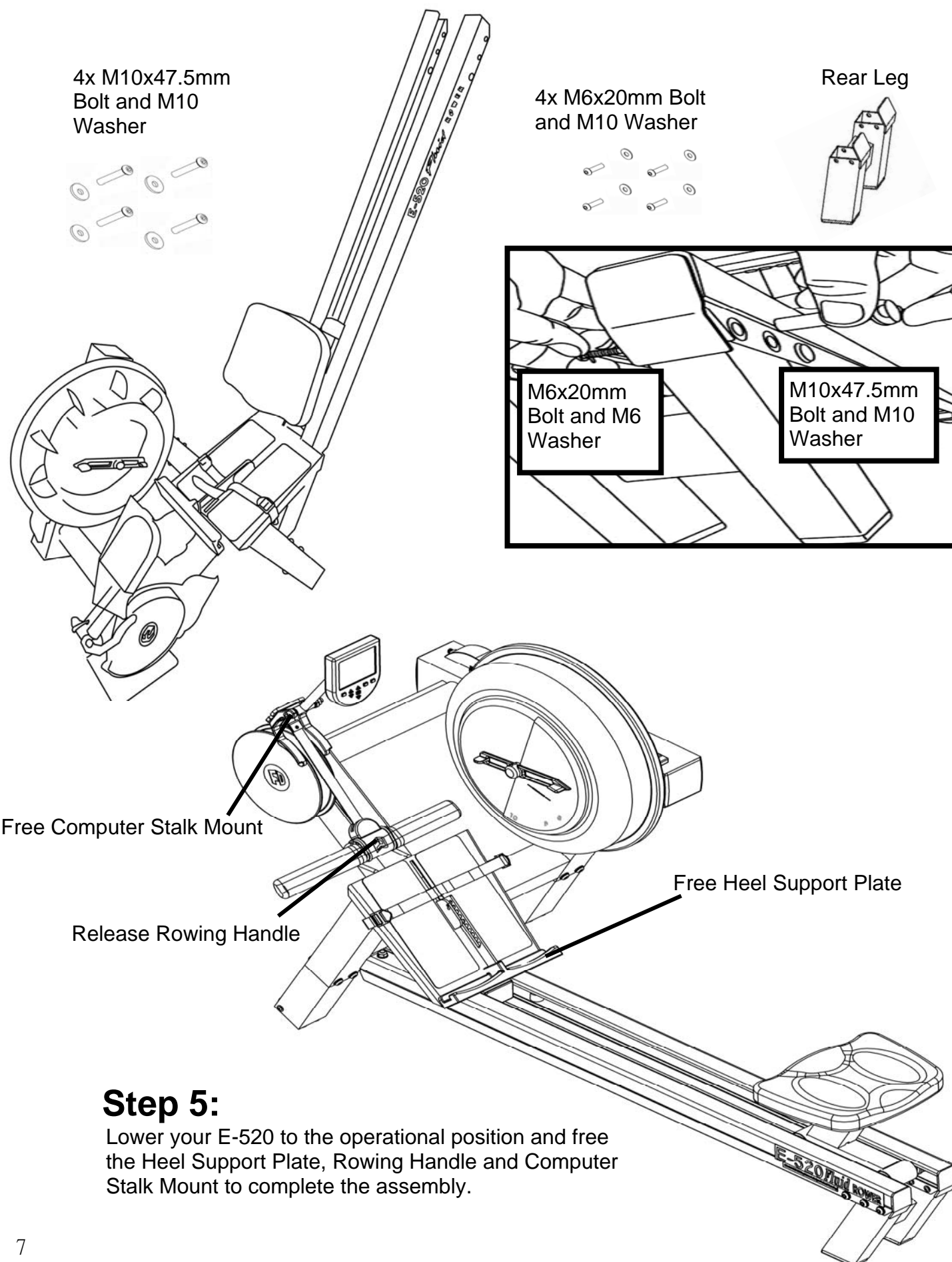
Once this is complete, repeat the same assembly procedure as used on the (previous page) Left Seat Rail.



Step 4: Rear Leg Installation

Requires 4x M10x47.5 bolt, 4x M10 washer, 4x M6x20mm bolt and 4x M6 washer.

Note: the M10x47.5 bolts/washers are to be installed on the outside of the Seat Rail, while the smaller, M6x20mm bolts and washers are fitted on the inside.



Tank Filling and Water Treatment



Note: A large bucket is required for filling (Not included)

In areas where tap water quality is known to be poor, FDF recommends the use of distilled water.

Open the rear upper Yellow Tank Plug and insert hose into tank (rotating the impeller slightly may be necessary to allow the hose to pass), move the Tank Adjuster Handle to level 20 and begin filling. Do not fill the tank higher than the level indicator on the front of the clear shell. A properly filled tank holds approximately 8 liters of water.



Warning:

Do not under any circumstances put fingers into the tank. Use the end of the hose to move the impeller should the need arise.

Water Treatment Procedures:

1. *Add Chlorine Tablet.*
2. *Enough Chlorine Tablets are supplied for many years of Water treatment. Add a chlorine Tablet whenever the Water appears dirty or cloudy.*

WARNING: Only use First Degree Fitness Supplied Water treatment tablets.

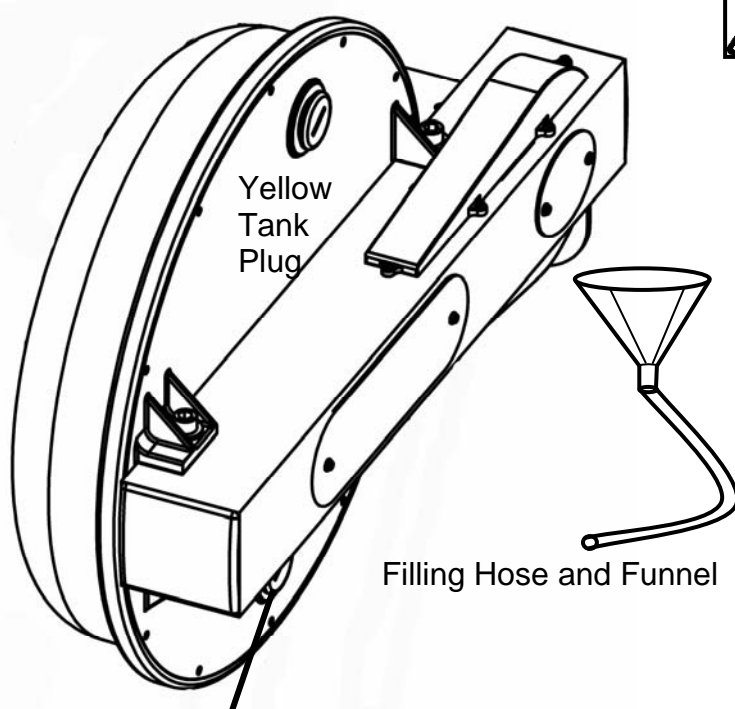


Caution:

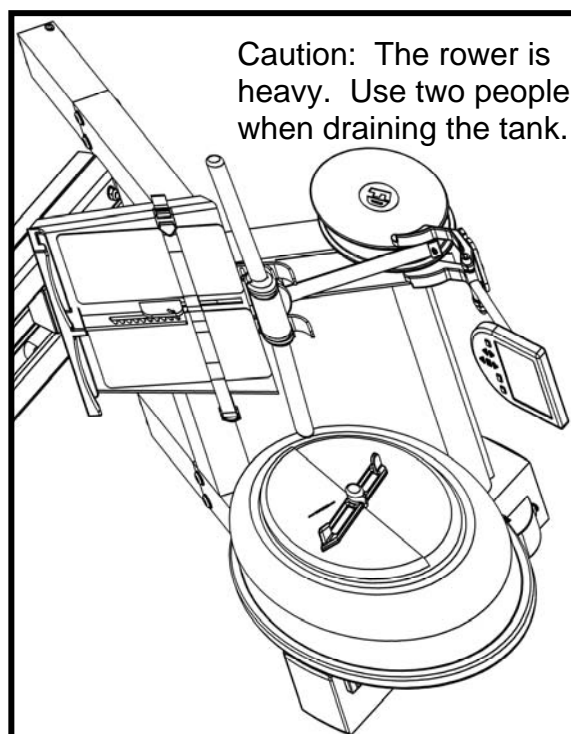
Use a drop cloth under the tank when filling the tank to avoid damage floor or carpet

Draining the Fluid Tank:

When draining indoors, a suitable container capable of holding 8 liters of water is required. Open the Yellow Tank Plug, and on a protective surface, turn the E-520 on its side as shown above. Once the rower is in this position, the tank can be easily drained.



Use a drop cloth for splash and stain protection.



Note: the lower Black Tank Plug is permanently sealed.

Long Term Water Treatment and Basic Operation



CAUTION: Do not fill past the calibration mark as indicated on the tank level sticker or water spillage may occur. See Tank Filling and 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-520 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 strongly recommended that a drop cloth be used under the fluid tank whenever the tank plug is opened for water treatment.

Vertical Storage:

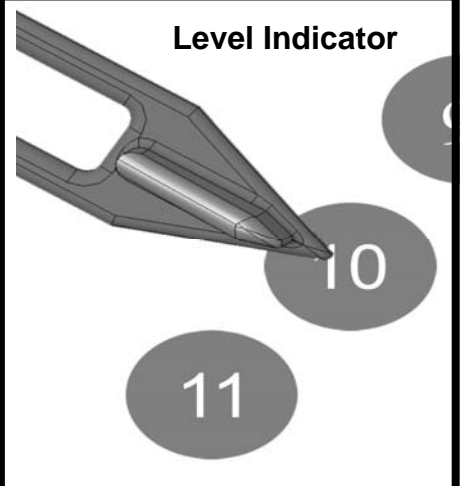
The E-520 can easily be stored in a vertical position. For safety, choose a suitable location, such as a corner of a room. It is recommended that something soft (such as carpet or a small towel) be placed under the rowing pulley of the unit to avoid chipping or floor damage. **Note:** Move with caution as the machine is heavy. Pick up from back and pull at 45 degree angle.

Heel Support Adjuster:

The E-520 has a unique and easy to use Heel Plate Support system. Simply slide the Heel Plate up or down and allow the teeth to lock it into place. This should be adjusted to place the ball of your foot directly under each horizontal foot strap. Tighten to secure before rowing.

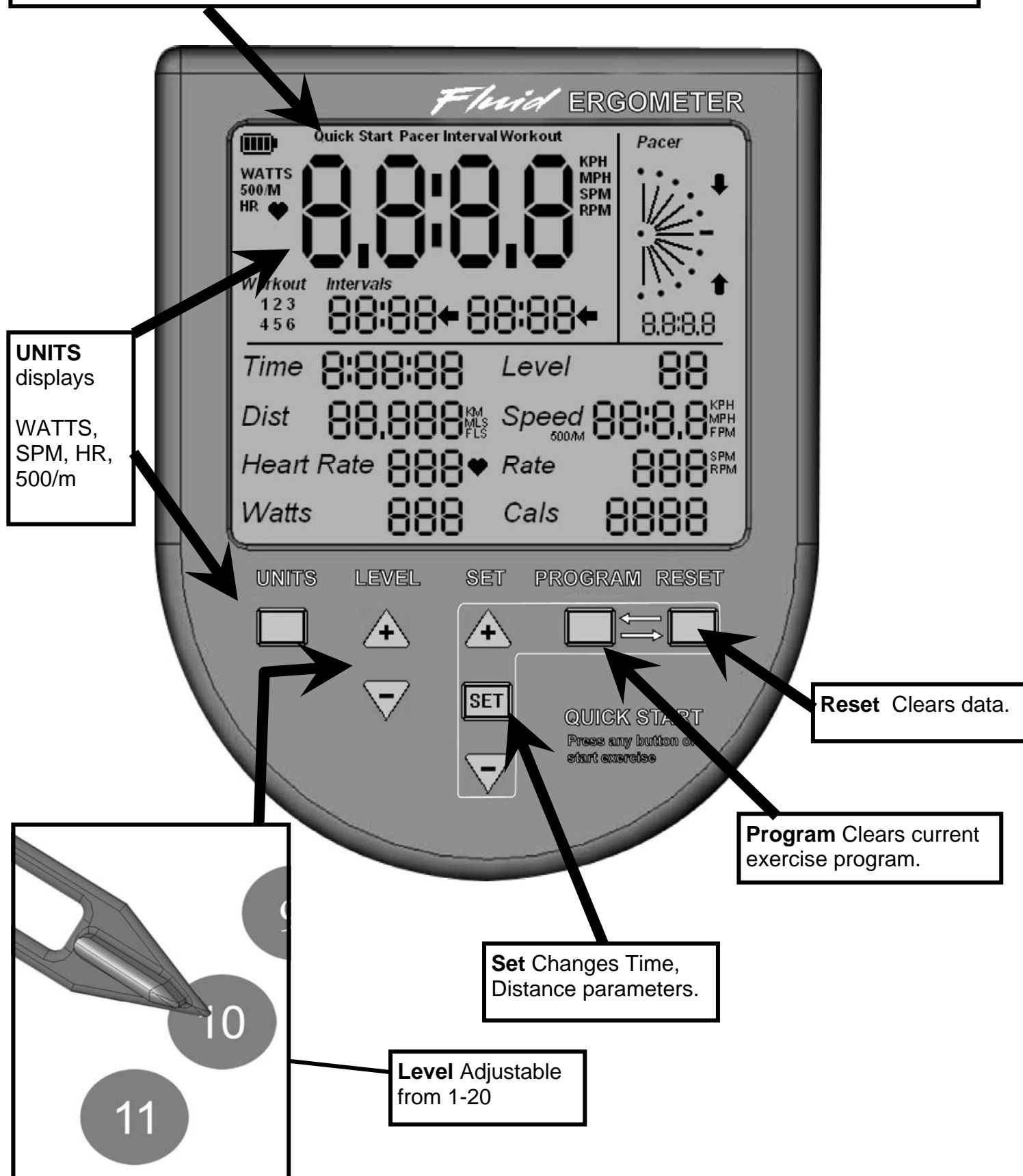
Resistance:

Resistance is determined by the Level Indicator on the front of the tank. Level 1 indicates lightest resistance and level twenty the heaviest. Allow three to four strokes, after moving the level indicator, for the new level to be achieved. Note computer level must be changed to provide accurate input at each individual tank level. Consult your IPM computer manual (included) for details.



E-520 Rower Ergometer.

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



Note: For complete operational instructions, please refer to the computer manual, which is included with your E-520.

Using the First Degree Fitness USB Interface (Optional)

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 <http://www.webracing.org/downloads.htm>

Connecting your console

- The USB Connector is located on the lower 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

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

How Often?

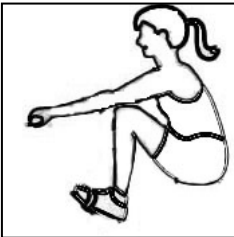
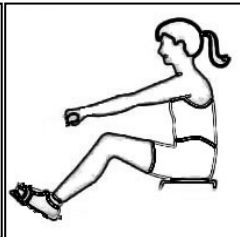
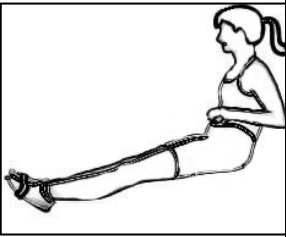
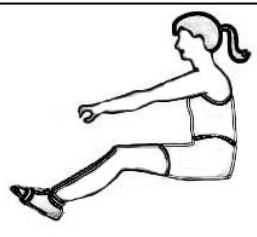
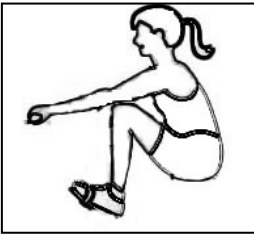
Begin with 5 minute training sessions once a day and aim for around 2:30 to 2:45 for 500m time. Row at a pace that keeps the water circulating continuously between strokes.

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.



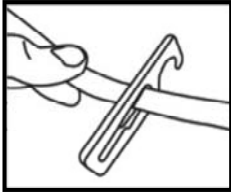
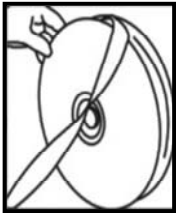
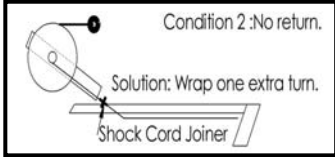
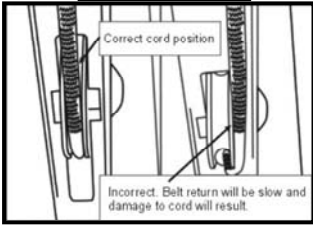
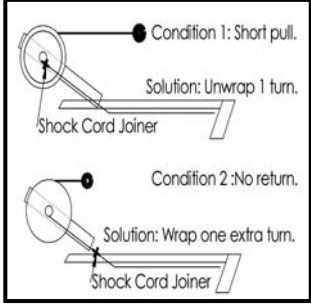
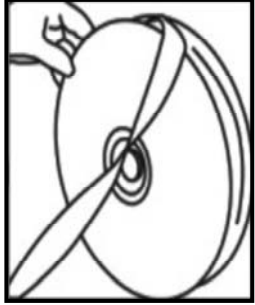
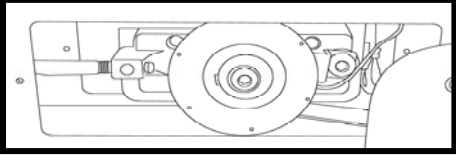
Always consult a doctor before beginning an exercise program.
 Stop immediately if you feel faint or dizzy.

				
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.

Maintenance Chart.

Item	Timeframe	Instructions	Notes
Seat and Seat Rails.	Weekly.	Wipe seat rails with a clean, dry cloth. Lightly spray the inside of rails with 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.	
Rowing Belt.	Check every hundred hours for correct tension and for signs of wear.	The Rowing Belt should provide many years of trouble free use. If a rowing belt change is required, please contact your local service representative or go online at www.firstdegreefitness.com for further 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 or change tank water as directed in the water treatment section of this manual.
Rowing stroke return is too light.	<p>Bungee not under enough tension.</p> <p>Rowing Belt missing one wrap around rower belt pulley.</p> <p>Bungee has slipped off the Bungee Pulley Wheel.</p>	<p>Cut Bungee Tie Rack and tighten slightly on Bungee Hook.</p>    
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 Belt cannot extend to the end of rowing stroke or no resistance.	Rowing Belt needs to be unwrapped 1 turn or, requires an extra wrap on the Rower Belt Pulley	 
The E-520 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-520 computer display is erratic while displaying SPM and 500meter times.	Gap between sensor and magnetic ring is too wide.	 <p>Remove large service cover and check gap between sensor and magnetic ring (should be no more than 2.5mm).</p>

Tank Belt Adjustment

Tank Tensioning Bolt

Step 1

Step 1: Remove large metal inspection plate as shown above.

Step 2: Using a long tool, push out the rear end cap as pictured below left. This will give you access to the tank tensioning bolt (shown left & below right).

End Cap

Step 2

Step 3

Step 3: Loosen both the rear and front tank bolts slightly as shown left. Remove front Rubber Belt Cover.

Step 4: Using a 6mm Allen Key, tighten the Belt using the Tank Tensioning Bolt until the belt no longer slips during hard rowing.

Note: Do not over tighten tank bolts.

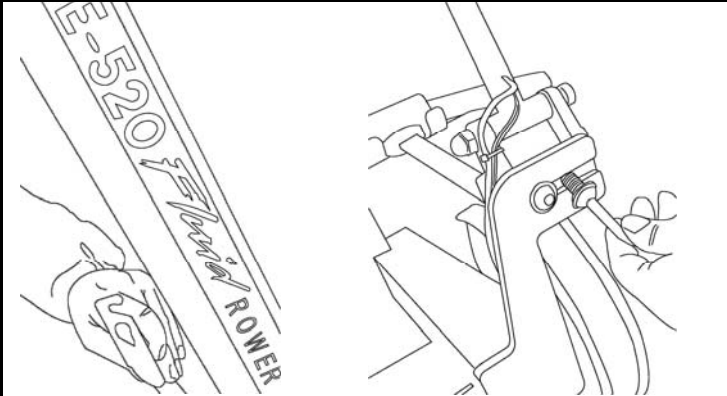
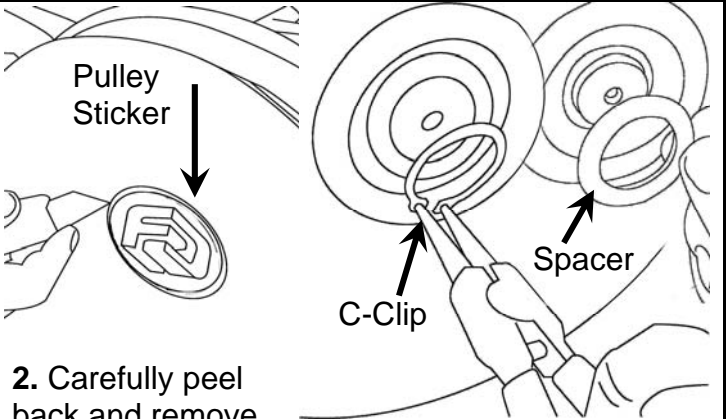
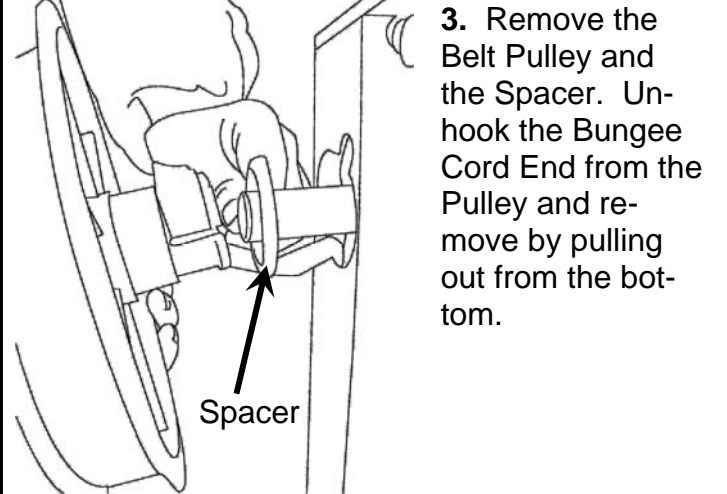
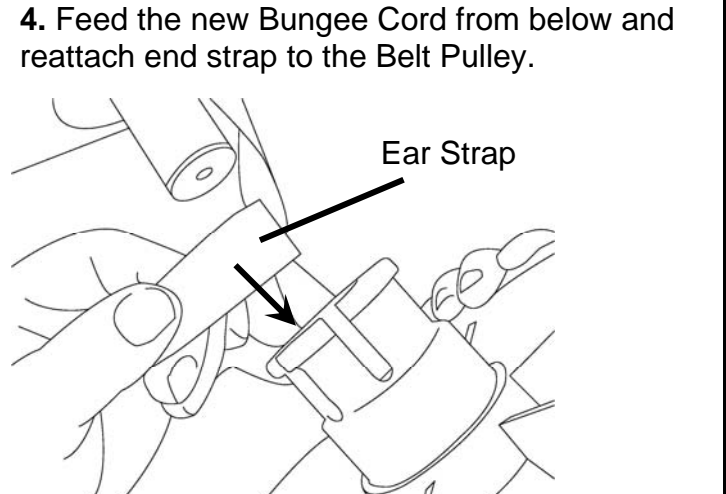
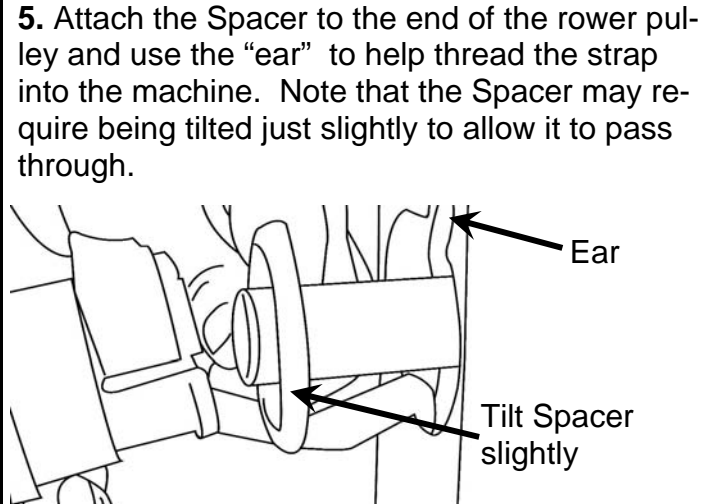
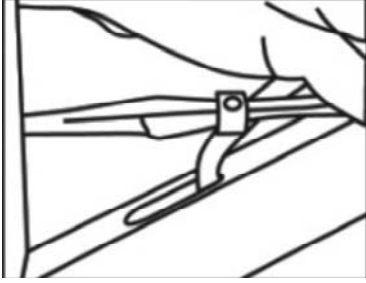
Tip: Twist the belt by hand to gauge tightness. Correct tension should be obtained when no longer able to twist more than 60 degrees.

Tank Tensioning Bolt

Step 4

Bungee Cord Replacement. Dealer Assistance Required

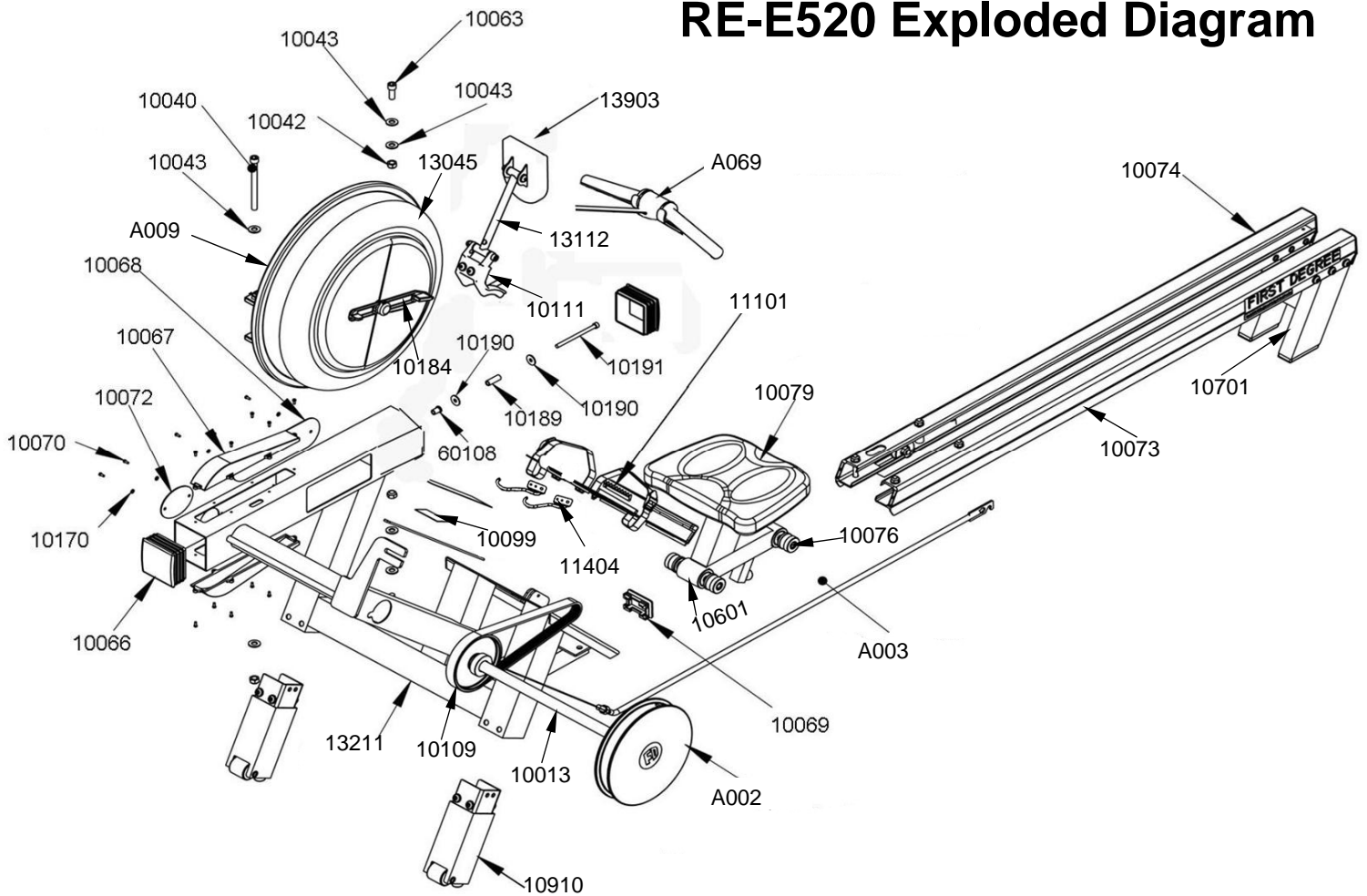
(Expect 2-5 years bungee life in commercial use. Damage during initial rower assembly is not covered under warranty)

 <p>1. Unhook Bungee Cord Hook. Remove computer mount with 6mm Allen key.</p>	 <p>2. Carefully peel back and remove the Belt Pulley Sticker. Then remove C-Clip and Black Spacer as shown.</p>
 <p>3. Remove the Belt Pulley and the Spacer. Unhook the Bungee Cord End from the Pulley and remove by pulling out from the bottom.</p>	 <p>4. Feed the new Bungee Cord from below and reattach end strap to the Belt Pulley.</p>
 <p>5. Attach the Spacer to the end of the rowing pulley and use the "ear" to help thread the strap into the machine. Note that the Spacer may require being tilted just slightly to allow it to pass through.</p>	<p>Reattach the Bungee Hook to the end of the Seat Rail, install outer Spacer, C-Clip and Sticker. Test for proper installation. If the C-Clip cannot be reinstalled, then remove Pulley and try again as the Strap may be jammed.</p>  <p>The Joiner should be able to reach this position.</p>

Note: A light tap may be required if the black inner Spacer will not pass inside the frame.

Reassemble. Note: A tight C-Clip mounting indicates the process should be repeated as the belt is jammed up.

RE-E520 Exploded Diagram



P/N	Qty	Description	P/N	Qty	Description
A002	1	Belt Pulley Complete	10099	1	Caution Decal
A003	1	Bungee Assembly	10109	1	PK Belt 7 Rib 926mm Hutchinson
A009	1	Tank Assembly	10111	1	Belt Guard Aluminum
A069	1	Handle Assembly	10170	4	Washer M4
10013	1	Main Pulley Shaft & Shaft Sleeve Bearing Mount	10184	1	Adjuster Handle & PU Cover P/N 10193
10040	1	Bolt M12x140 for Tank Assembly	10189	1	Tank Tension Adjustment Bushing
10042	4	Nut M12 Nylock	10190	2	Washer M8x26
10043	7	Washer M12	10191	1	Bolt M8x120
10063	2	Bolt M12x30	10601	1	Seat Frame
10066	2	End Cap 100x100mm	10701	2	Rear Leg
10067	2	Rubber Cover for Large PK Pulley	10910	2	Front Leg
10068	1	Large Steel Side Cover 276mm	11404	2	Bar Catch - 520
10069	1	End Cap 75x50mm	11101	1	Heel Support
10070	16	Screw M4x10	13045	1	PC Tank Cover & Level Decal 20R - Blue
10072	1	Small Steel Side Cover 100mm	13112	1	Computer Mounting Arm
10073	1	Seat Rail - Left, Small & Large Decal #10102 & 10106	13211	1	Main Frame Complete
10074	1	Seat Rail - Right, Small & Large Decal #10102 & 10106	13903	1	IPM USB without HR Built-in
10076	4	Seat Wheel Polyurethane	60108	1	Bungee Pulley Spacer 8mm
10079	1	Seat LS-E28			

FLUID ROWER (model FR-E520)

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-E520)**, 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
- 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