

# Aquatic MOWER

## OWNER'S MANUAL

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Congratulations on the purchase of your Aquatic Mower! We feel confident that you will enjoy it for many years.



Please read and understand this manual in its entirety before operating.  
Please keep this manual for future reference.



# WARNING



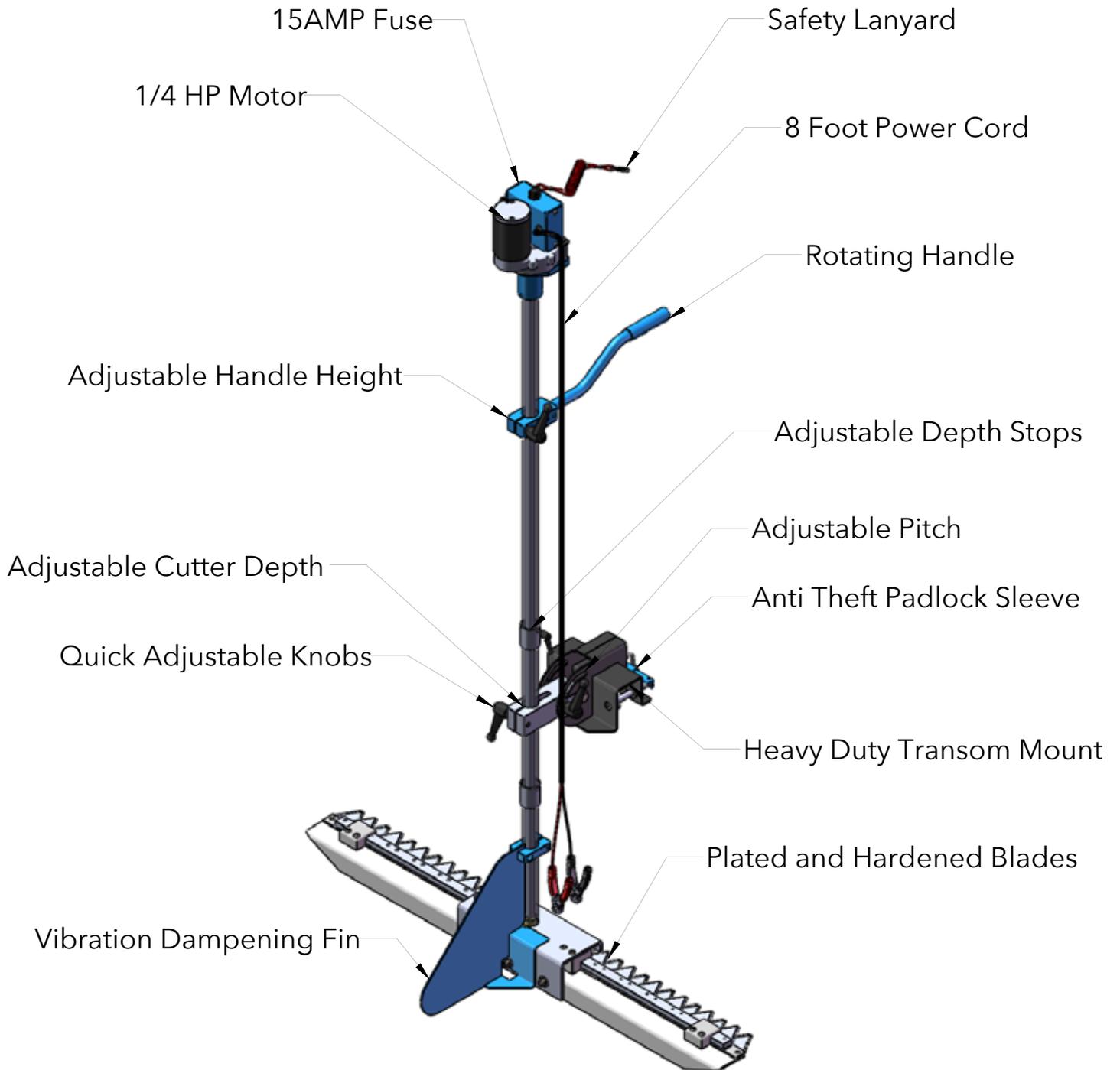
- This machine is not a toy. It is a lethal and dangerous machine.
- Never operate with children or pets in or near the water.
- Always disconnect power before clearing or servicing.
- Never use in any manor for which the product was not intended.
- Always keep clothes and hands and feet away from moving parts.
- Visibility of the machine maybe impaired by stirred sediment. Always keep an eye on your machine to avoid striking under water obstacles. Stop and wait for sediment to resettle if necessary.
- Always familiarize yourself with the work area before you begin.
- Clean machine THOROUGHLY before moving between bodies of water to avoid the spread of invasive species. See your State Department of Natural Resources for advice and guidelines.
- Always attach the safety lanyard to your person for quick availability.
- Check with your State Department of Natural Resources and or local Conservation officer for rules and regulations concerning the cutting of lake weeds in your area.
- Always replace blade guard when not in use.

Your machine was assembled with pride and was factory checked for fit and operation. Some assembly is however necessary by the final consumer to make the product more reasonable to ship. [Consider saving the box it came in should you need to send it back for service.](#) It is a double wall box of unusual size and you are unlikely to find a suitable replacement if necessary. Familiarize yourself with the pat names and exploded view before beginning.



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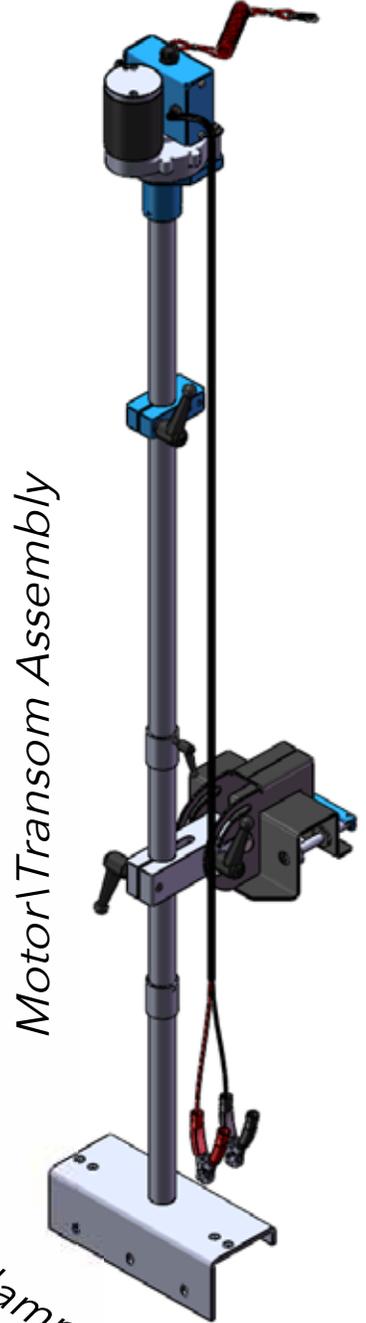
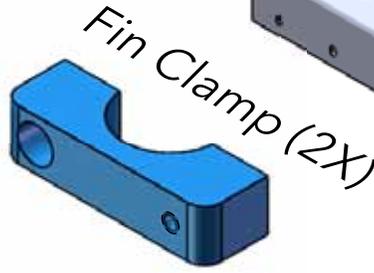
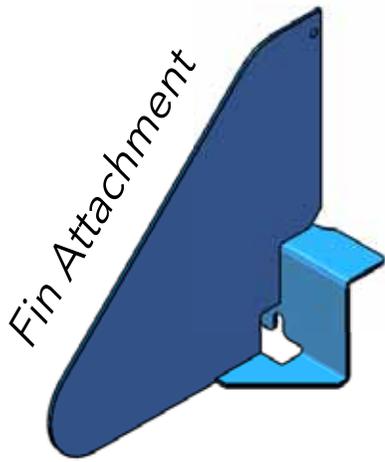
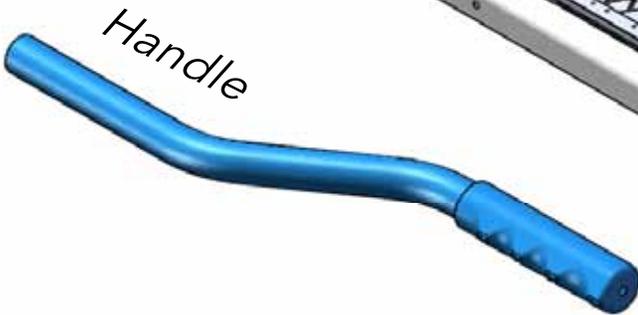
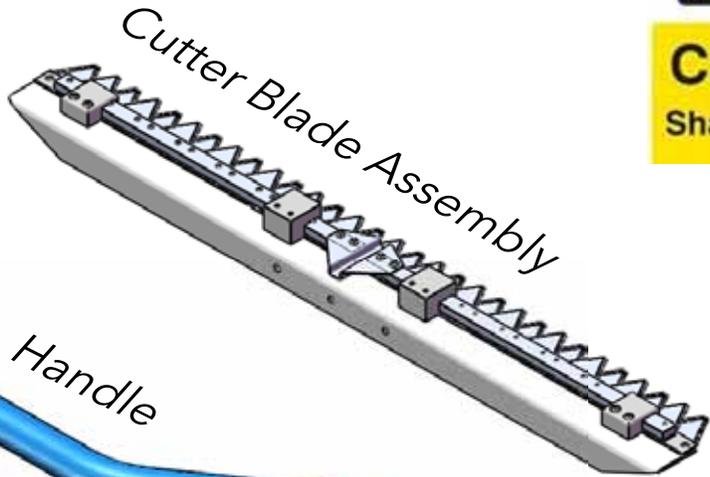
# FEATURES



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# PARTS

First, remove all the parts from the box and make sure everything is accounted for. There should be:



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# HARDWARE

## HARDWARE:

QTY	Description
4	1/4-20 x 2-3/8 Phillips Oval Head Screw
4	1/4-20 Nylock Nut
3	3/8-16 x 1 Hex Head Cap Screw
3	3/8-16 Nylock Nut
6	3/8 Flat Washer
2	1/4-20 x 1-1/2 Socket Head Cap Screw
1	Nylon Drive Bushing
1	Antisieze Lubricant Tube

## INCLUDED SPARE PARTS:

QTY	Description
1	1/8 x 3/4 Dowel Pin
1	Nylon Drive Bushing

Please store spare parts in a safe place. These may need to be replaced due to the normal wear of the machine. Some of these parts are chosen for their "shearing" properties and should never be replaced with a component other than specified or provided by the manufacturer. Failure to do so could result in injury.

### **! Important !**

The Hardware is made of stainless steel to avoid rusting. However it is often susceptible to galling of the threads. To prevent this apply a pea size bead of antiseize (provided) to the first few threads of every bolt and screw prior to assembly.



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# ASSEMBLY

## PART ONE: POWER HEAD

It is important to follow these instructions in order. This first part of assembly instructions will cover putting the power head together and installing to the main shaft.

1. Make sure the driveshaft is sticking out of the top bushing, and that all bushings are in place. The 1/8" (.125 inch) lip on each nylon bushing should be visible on each end of the tube shaft. If the driveshaft has fallen out of the top bushing of the tube shaft then simply turn the tube shaft upside down and grasping hold of the 1/2 inch pin on the bottom, crank it around into it falls thru the top bushing. Hold in place as you move onto step 2
2. With the driveshaft within the tube shaft, stand the shafts upright vertically and set on top of a 4 inch high block of wood. Make sure the block of wood is not supporting the 1/2" drive pin but rather is supporting the drive shaft directly underneath the length of the shaft (we want to avoid bending the 1/4 x 1-1/2 aluminum tab on the driveshaft)
3. Make sure the tube sleeves and transom mount are all in place and in the proper order. Note that the sleeves are not tapped with the 1/4-20 thread on center but towards one end of each collar, the tapped hole should be up so that the tapped hole is on the high end of the sleeve as it is placed on the vertically held tube shaft, this is true of both sleeves. They should be as follows from bottom to top.
  - A. Stainless steel sleeve (with set screw)
  - B. Transom mount (make sure orientation is correct)
  - C. Another Stainless Steel sleeve (with knob)
  - D. The handle bar mount, (consider which side you want the knob on for your preference, the choice is simply a personal one)
  - E. The power/motor head mount (painted blue). Do not yet tighten the parts down, just put them on the tube shaft in the proper order.



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# ASSEMBLY

## PART ONE: POWER HEAD

4. Make sure the top bushing is still in place and not knocked out by the driveshaft. If it was, or is not completely seated, tap it from the top with a rubber mallet gently to seat it to the top of the tube.
5. With the 4" block in place as mentioned in step two, tap downward on the steel shaft color making sure the set screw in the shaft collar is 90 degrees from the slot cut in the top of the drive shaft. Ideally we have .02 inches (approximately the thickness of two business cards) of endplay. Make sure to get a good square start. Use a block of wood as a punch and avoid hitting the end of the driveshaft. The driveshaft will extend beyond the top of the collar and must be driven on deeper than the point at which it was flush with the top of the driveshaft. (when we later tighten the set screw down this will clamp the drive shaft and motor shaft together)
6. Check for endplay. We want just a small amount of clearance between the collar and the bushing so we do not create drag on the drive shaft. Make sure the drive shaft turns freely.
7. Place the 1/8 inch diameter, by 3/4 inch long (.125 Diameter x .75 long) drive pin into the motor shaft of the power head assembly. (note that the drive pin and the inside diameter of the collar are both the same length)
8. Place the motor shaft into the end of the driveshaft deep enough that the pin lays in the center of the collar. The color serves several purposes.
  - A. It keeps the drive pin from slipping out of place.
  - B. It clamps the motor shaft and driveshaft together.
  - C. It supports the drive shaft.
  - D. Adjust the end play of our driveshaft. If you have difficulty getting the drive pin into the collar, the length of the drive pin may need to be filed or ground down ever so slightly.

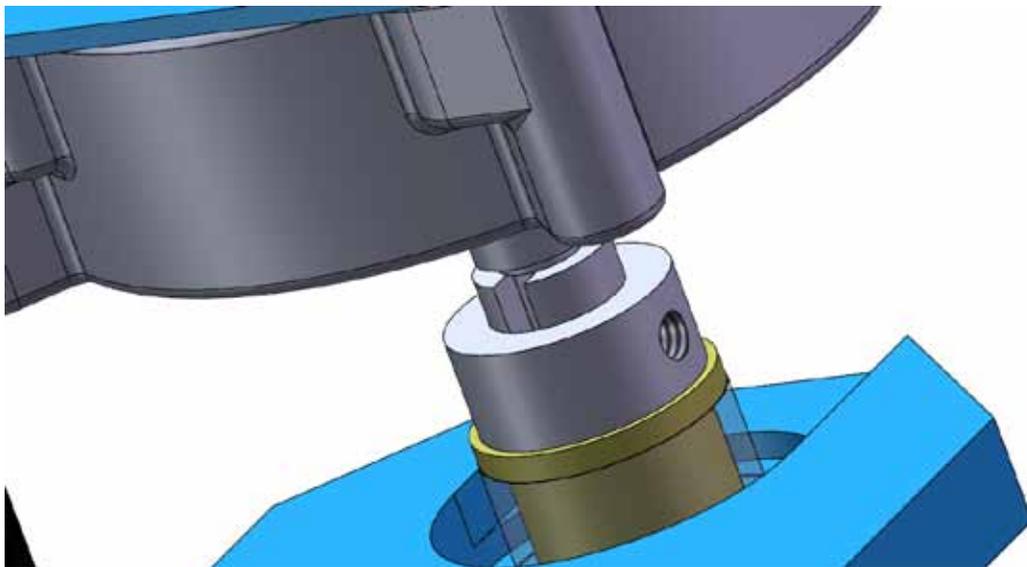


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# ASSEMBLY

## PART ONE: POWER HEAD

9. Tighten the set screw in the collar down making sure that the setscrew is again 90 degrees from the slot in the driveshaft.
10. Slide the motor mount up to the motor assembly gearbox, and using the ¼-20 bolts tighten the control box, gearbox, and motor mount together.
11. Rotate the motor assembly to face you properly as you sit in the boat and the teeth of the mower (the short bent edge of the plate on the bottom) will be facing under the boat.
12. Tighten the three set screw in the motor mount to the main tube shaft. We have purposely used set screws that are not flush but stick out a small amount so that if the hex head socket in the set screws was to crack it is easier to get it out and replace.
13. For your next operation you will install the cutter head assembly. Then the fin assembly, then you can lower the lower sleeve to just above your fin assembly and tighten into place. (You will later adjust for your specific boat)



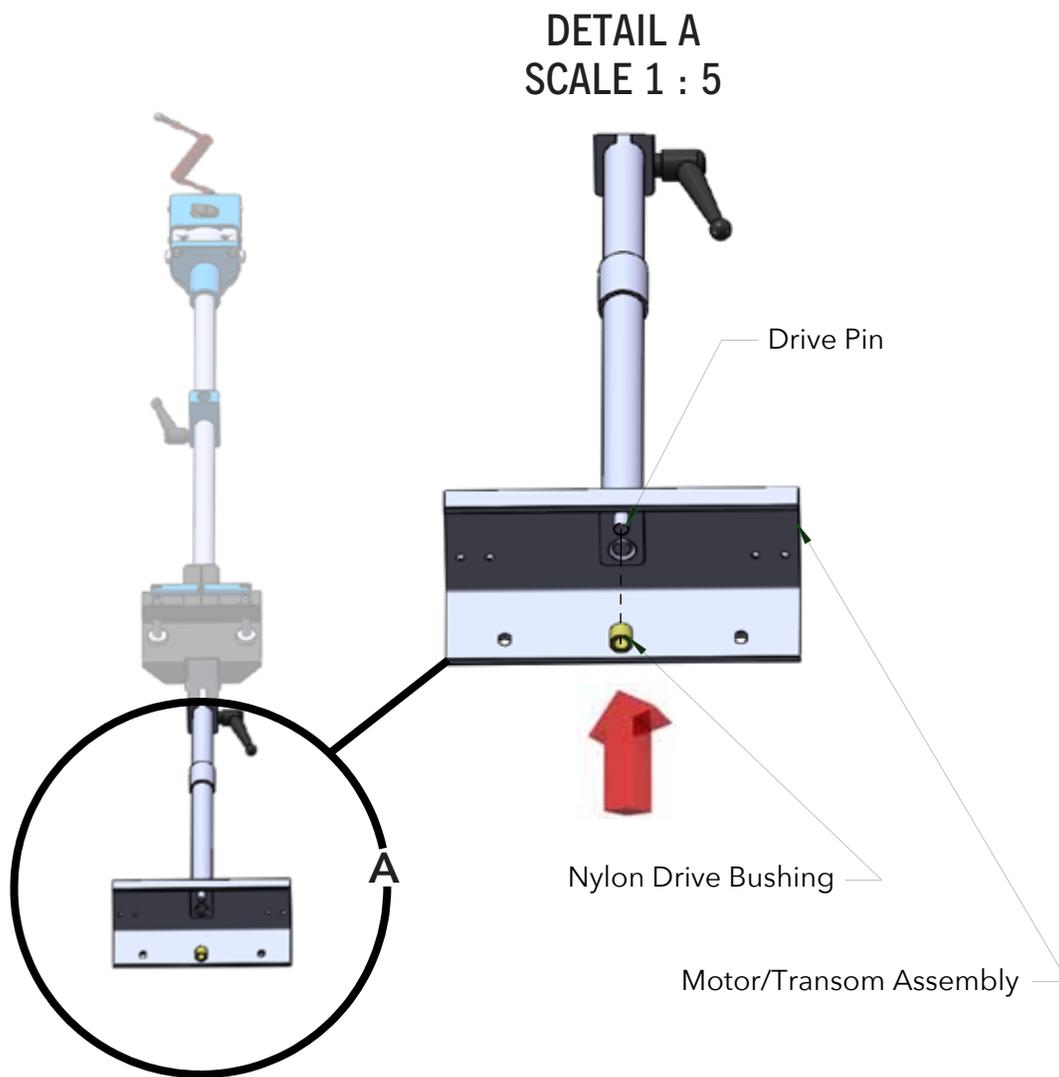
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# ASSEMBLY

## PART TWO: CUTTER BLADE

The second part of assembly instructions will cover putting the cutter blade together.

1. Lay the tube shaft/power head assemble horizontally on your workbench with the short bent edge facing upwards.
2. Make sure the drive bushing is in place on the ½" diameter pin. The end with the radius on it should face down. See Detail A.

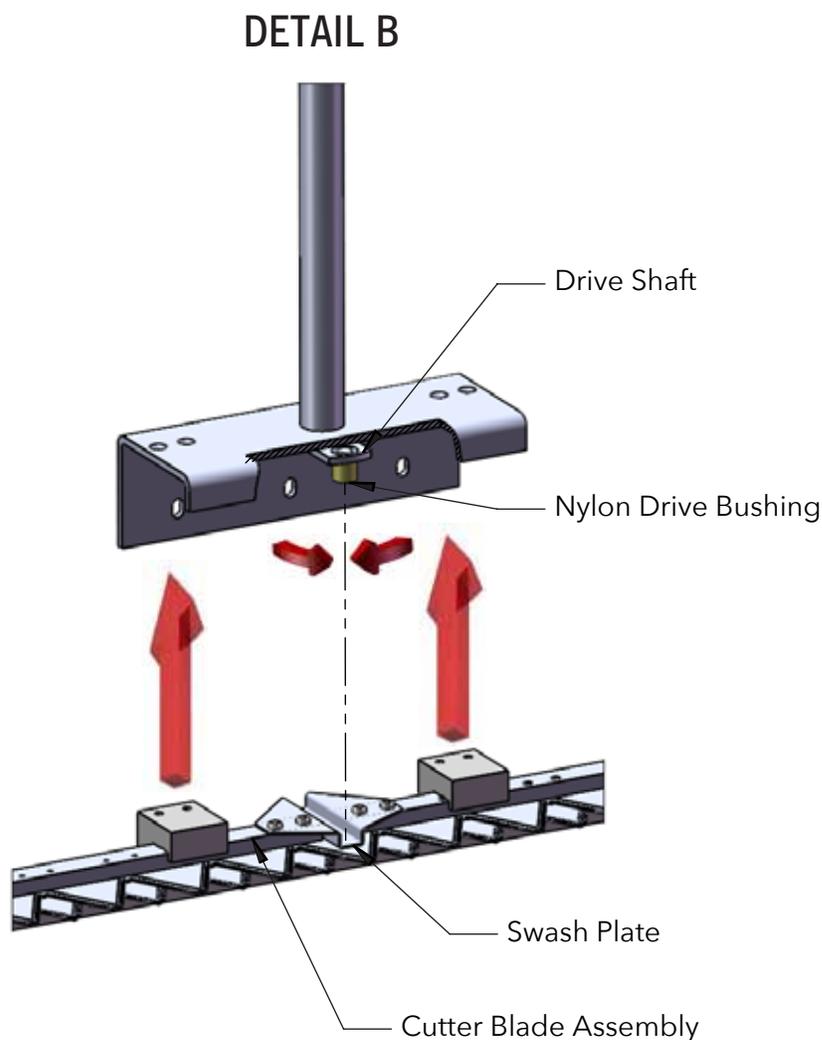


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# ASSEMBLY

## PART TWO: CUTTER BLADE

3. Locate the lower cutter assembly and cover the teeth with cardboard and tape the cardboard in place. Make sure the blades are tightly held in place. Failure to do so may result in the blades shifting causing serious injury.
4. Carefully rotate the driveshaft to that the drive bushing will slip into place on the swash plate when the main assemble and the cutter assemble are brought together.

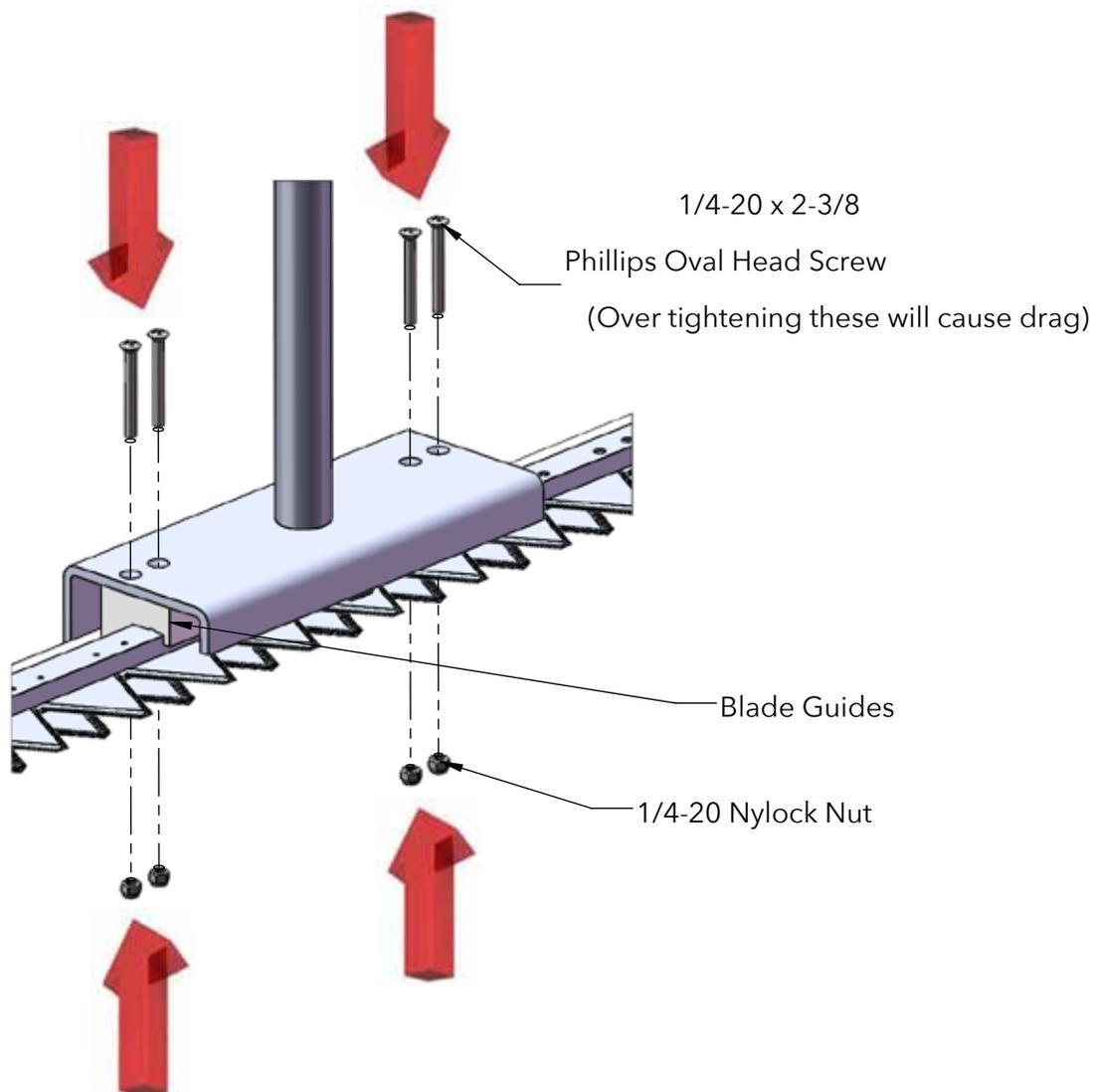


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# ASSEMBLY

## PART TWO: CUTTER BLADE

5. Place the (4) 1/4-20 x 2-3/8 Phillips Oval Head Screws through the 4 tapered holes in the top of the frame located on the Motor/Transom Assembly. Be sure they pass through the Blade Guides for the shifting blade assemble.
6. Hand tighten the (4) 1/4-20 Nuts on the bottom of the fixed blade backbone. Make certain the black guides for the shifting blade assembly are not twisted in any way causing binding on the sickle bar.

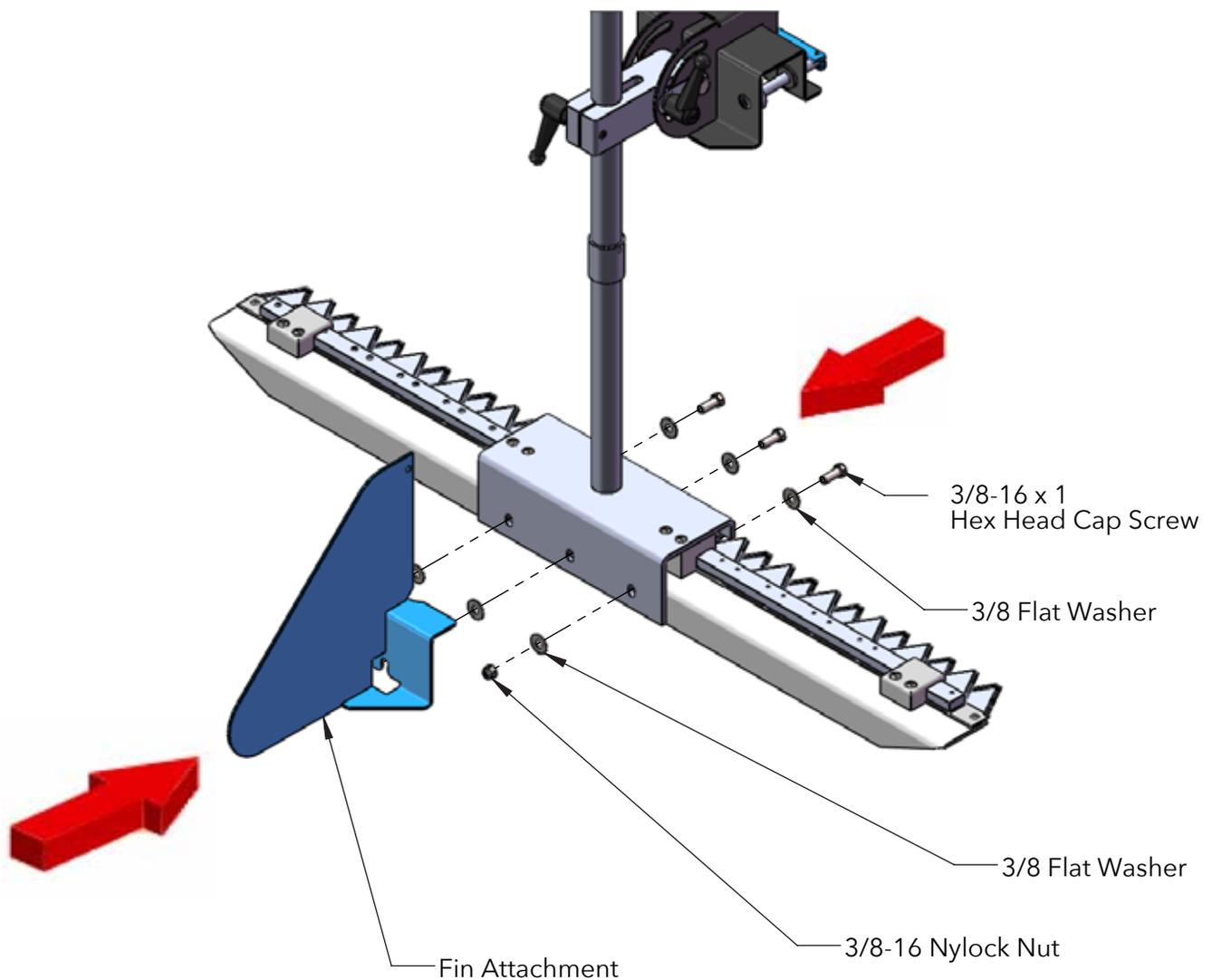


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# ASSEMBLY

## PART TWO: CUTTER BLADE

7. Place (3) 3/8 Flat Washers on (3) 3/8-16 x 1 Hex Head Cap Screws. Insert them into the holes in the Cutter Blade Assembly and through the Motor/Transom Assembly.
8. Slip The Fin Attachment over the center screw and place a 3/8 Flat Washer and a 3/8-16 Nylock Nut onto each of the (3) screws and Hand tighten.

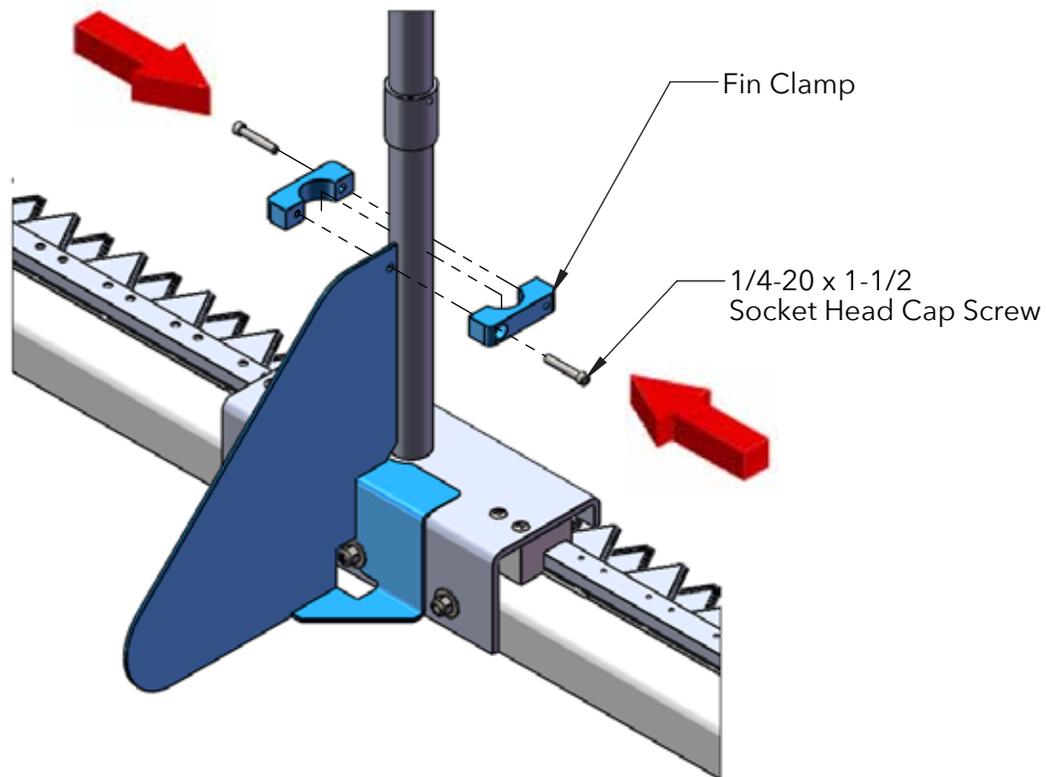


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# ASSEMBLY

## PART TWO: CUTTER BLADE

9. Next place (2) fin clamps around the stem of the Motor/Transom Assembly opposite of each other so that there is a threaded hole aligned with a through hole.
10. Pass a 1/4-20 x 1-1/2 Socket Head Cap Screw through a hole in the Fin Clamp and through the Fin Attachment and into the threaded hole of the other Fin Clamp.
11. Insert the other 1/4-20 x 1-1/2 Socket Head Cap Screw into the remaining hole. Hand tighten both screws evenly.



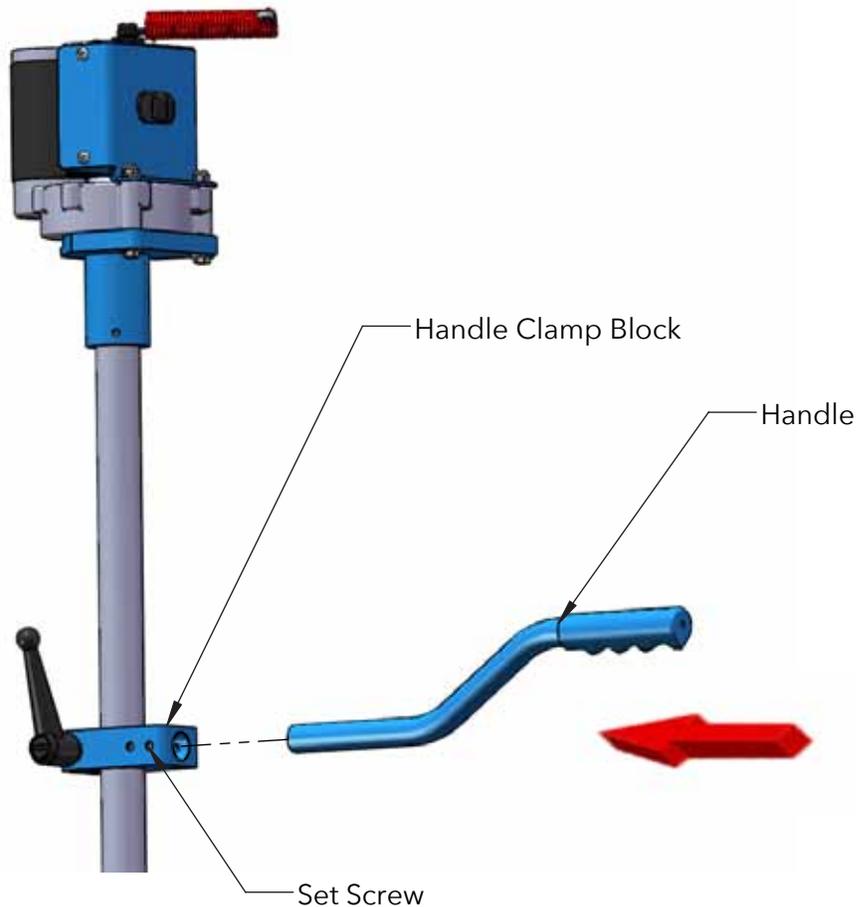
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# ASSEMBLY

## PART TWO: CUTTER BLADE

12. Lastly insert the Handle into the Handle Clamp Block Located on the Motor/Transom Assembly. Position handle to the desired position and hand tighten the four Set Screws (2 on each side) against the Handle.

Congratulations, your Aquatic Mower is now fully assembled and ready to use.



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# HELPFUL TIPS

The backbone plate teeth do not move. Only the top layer of teeth move. The backbone plate is painted white for greater visibility in the water.

The fin is not necessary in cutting at shallow depths but is desirable at greater depths to steady the sway caused by an unbalanced load.

Experience will tell you it best to travel at a slow and comfortable speed. Rowing or paddling is best. Traveling at too great of speed will cause the weed to be cut at a higher level than the cutter was set at and causes greater threat of damage if underwater obstacles are struck.

The cutter teeth are made of carbon tool steel with a hardened edge. They were then Cadmium plated offering the best rust protection available. It still, none-the-less is a good idea to give them a shot of silicone spray when done using the machine. This will ensure many years of service.

You can lock the machine to your boat by using the included lock tube. Tighten the handles on the transom clamp so that by swinging the handle right or left the will meet each other in the middle. Swing one side out slightly and slip the lock tube onto one of the handles. Swing it back in and slide the tube onto the other handle as well. Place a lock through the holes in the middle of the tube between the handles.

Do not tighten any more than necessary the clamp that allows the top to swing into the boat if an underwater obstacle is struck. If it is too loose the drag of the cutter through the water will make the top swing into the boat. If it is too tight then damage may occur if an underwater obstacle is struck. Familiarize yourself with the area you are cutting before you begin.



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# CONTACT INFORMATION

If you have questions or comments we are here to help. Our regular office hours are Monday through Friday from 8 a.m. to 3:30 p.m.

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