



# Aqua-Cycle International, Inc.

*Ride a Tricycle on Water*

## AC3 PEDAL CRANK REPLACEMENT KIT

These instructions are for the replacement of an AC3 or prior model Aqua-Cycle pedal crank and gear. When the pedal crank is replaced, it is important to replace all pedal crank bearings at the same time.

**Installation:** Turn the Aqua-Cycle upside down so it is resting on the fork handlebar and the top of the seat back. Now, remove the plastic belt guard, the bearings holding the pedal crank onto the frame, and the old pedal crank. Remove the side locking collars from the old pedal crank.

Carefully inspect the following before installing the replacement pedal crank:

**Belt** - Check for frays, missing or worn teeth, or broken places in the rubber. The belt takes all the strain of pedaling and must be in good shape to keep your Aqua-Cycle operating.

**Locking collars** - If you do not have the locking collars from the old pedal crank, you must order them before the new pedal crank can be installed properly. Check that the locking collars will slip onto the ends of the new pedal crank. If not, it will be necessary to file or grind the new pedal crank ends until they fit. Never attempt to operate the Aqua-Cycle without the locking collars in place.

Locate the square gear mounting plate near the center of the new pedal crank. Notice that the plate is not exactly in the center of the pedal crank. When you attach the gear to this plate, the gear will be mounted to the side of the plate that is closest to the bend, not toward the pedal crank center as would seem logical.

Now slide the plastic gear end plate onto the pedal crank so that its square inset pattern mates with the gear mounting plate. Remember to put it on the side nearest a bend, not toward the center. If the gear plate does not easily seat onto the mounting plate you must file or grind the metal plate slightly until it fits.

Slide the gear onto the same end of the pedal crank so that the round off-set on the side of the gear mates with the round inset on the gear plate.

Bolt the gear and end plate onto the mounting plate using 5/16" x 1¼" stainless steel bolts, nuts, and special washers. Assemble with the head of the bolt against the metal mounting plate and the washer and nut on the inner part of the plastic gear. Tighten firmly.

If the mounting holes in the gear and plate do not perfectly match the holes in the mounting plate, use a drill and 5/16" bit to drill through the mounting plate holes and enlarge the holes in the gear and gear plate slightly to match the mounting plate.

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Two tests need to be performed on the pedal crank mounts (points where the pedal crank bearings mount to the frame). First, use a string, pipe or any other reference that is or can be pulled straight. Stretch the string or lay the pipe across the two side mounting plates and inspect the point in the center. If the center is lower than the sides, you will need to use a shim of some type under the center bearing to raise it up to match the sides. If the center is higher than the sides, shim up the side points to match the center. A shim can be a strip of aluminum of proper thickness, several stainless steel washers or most anything that will not rust to make all four bearings the same height. Even a single washer thickness of shim is necessary to keep the pedal crank from being bowed down (in the center or on the sides) when the bearings are bolted in place.

Slip the pedal crank into the belt with the gear in the belt guard area and the ends reach both sides of the frame.

Replace all old bearings with new ones. This helps protect the pedal crank against accumulative damage due to reverse stress. Be sure that the grease channel of each bearing half matches the other channel, which allows the grease to flow from the reservoir to the bearing center where the pedal crank rotates.

Slide the locking collars onto each end of the new pedal crank and, when the pedal crank is perfectly aligned with the rear axle gear, tighten the locking collars.

Once everything is assembled with all nuts, bolts, and locking collars tight, rotate the pedal crank to be sure that it turns easily and there is no rubbing. If the gear rubs, readjust the locking collars.

Be sure the belt is tight. If loose, then the bearings need to be remounted moving them forward slightly in the existing mounting holes. If that does not tighten the belt, re-drill the bearing mounting holes forward enough to tighten the belt. The belt must be tight for proper and safe operation of the Aqua-Cycle.

Replace the plastic belt guard for the safety of your riders. Never operate the Aqua-Cycle without the plastic belt guard installed. Again, rotate the pedal crank to be sure no parts rub with the belt guard installed.

Grease the new pedal crank bearings and flip your Aqua-Cycle right side up. You are ready to pedal.

If you have any questions about this installation, please call our office. We are available and glad to talk you through this process.