

# MANTA RAY OWNER'S MANUAL

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# UNDERSTANDING YOUR MANTA RAY

## **Hull Materials**

### **Polyethylene**

Rotationally molded boats are engineered to have sturdy hulls with maximum impact and abrasion resistance. Polyethylene can endure extended exposure to both ultraviolet light and temperature variation, enabling boats to be stored outdoors.

## **FEATURES**

### **DVC Seating**

The Manta Ray DVC seat created with environmentally friendly materials **D**rains, **V**ents and **C**ushions to provide you with an extremely comfortable ride during short or long paddling trips.

#### **Materials**

~ 3-D Mesh Spacer Fabric

This unique mesh breathes and drains easily, so you don't have to sit in a water puddle or on a soggy cushion. It is 100% recyclable and produced using an environmentally-friendly process. Ozone-depleting cfcs (chlorofluorocarbons) that are generally used in foam manufacturing have been eliminated from the process.

~Textilene® Solar Screen Fabric

The fabric used to construct DVC seats will withstand five years of daily sun exposure before it begins to break down. The light colored fabric stays much cooler than traditional black seats or compression molded seats.

### **Easy Foot™ Footbrace System**

The Easy Foot™ Footbrace System makes it easy to adjust your foot pad position while seated. The foot pads are sized to specifically suit your boat.

### **Hatch Storage**

Manta Ray has a large bow hatch to keep items safe and dry but easily accessible. Manta Ray 12 and 14.5 models also have two smaller hatches, one in front of and one behind the DVC seat.

#### **To Remove the Hatch Cover:**

1. Unhook the bungee system to expose the hatch cover.

2. Find the tab molded to the hatch cover.
3. Insert fingers under that tab, and then work them around the entire edge of the hatch cover, gently lifting it up and away from the boat.
4. Once you've lifted the entire hatch edge from the boat, pull it free.

#### To Seal the Hatch Cover:

1. Place the hatch cover over the hatch rim and engage an inch or two of the hatch by pressing down with your thumbs, or the heel of one of your hands.
2. Use the heel of each hand to press down their respective sides of the hatch around to the far end of the hatch.
3. When you've made your way around you'll feel the hatch cover drop down and lock onto the hatch rim.

Gear should be stowed in such a way that it won't shift or slide while underway, possibly impeding the safe operation of your kayak. Heavier items should be stored toward the bottom of the kayak, with lighter items on top. We recommend stowing gear in waterproof bags unless it can get wet without harm. It is also wise to tether gear stored to the seat or to other stowed items so that if you capsize, the gear will remain with the boat.

#### **Comfort and Convenience**

- There are four **carry handles**, one on each end and one on each side in the center, which allow one or two people to carry and load the boat easily.
- **Padded arm rests** make paddling, angling, and relaxing easier on your elbows.
- **Cup holders** provide convenient access to your drinks which help you ward off dehydration.
- **Utility trays** hold small items that need temporary storage.
- **Paddle parks with bungee tethers** provide a secure resting place for your paddle whenever you need your hands free.
- **Scupper Drains** relieve the boat of excess water but can be blocked with drain plugs when not needed.
- **Thigh straps** can easily be added using built-in attachment points.
- The **large cargo** area behind the seat allows you to carry additional gear and secure it with bungee cord.
- **Flush fittings** help ensure fishing lines will not get tangled on around your boat.

#### **Rudder** (optional)

The rudder comes secured to the boat with a bungee. When you release this your rudder will be available and your footbraces will be freed to direct the rudder position.

#### To lower the rudder:

1. Look for the rope on the deck that is used to raise and lower the rudder. It features two barrel knots.
2. Grab the barrel knot that is farthest aft (toward the stern) and pull it forward.
3. Adjust your footbraces so that your knees are comfortably bent and you can exert a reasonable amount of force on the footbraces before your knees are completely straightened / extended.
4. You should now be able to steer to the right or left by applying pressure on the right or left footbrace, respectively.

To retract the rudder:

1. Check to be sure the rudder is centered behind the boat by positioning both your footbraces at the same distance from you.
2. Look again to the rope on the deck that features two barrel knots. Choose the knot that is farthest aft, and pull it forward. Your rudder should exit the water easily and land in the 'vee' notch of the rudder holder.
3. When you're ready to load up your boat, re-secure the rudder with the bungee as it was when you started out.

## **USING YOUR MANTA RAY**

**Initial Set Up:**

1. Detach the seat back bungee holding the seat back to the mounted hook.
2. Raise the seat back and attach the bungee to its connection hook behind the seat on the deck.
3. Adjust the seat for your comfort.
  - a. For a more *erect* position, tighten the side straps by pulling the free strap ends toward the front of the boat.
  - b. For a more relaxed position, sit up so that the side straps are supporting you, but not stretched tight. Gently pull the rounded end of each strap buckle up and away from the strap. The strap will lengthen and loosen until you've found your desired position.
4. Adjust your Easy Foot footbrace.
  - a. Unweight the pads.
  - b. Pull or push the adjustment bar until the footpad is in the desired position.
  - c. When you feel the footpad click into place on the track, let go of the adjustment bar.
5. If your Manta Ray has a rudder, pull the adjustment straps to tighten the footbraces or release the straps to extend the footbrace position.

**Removing and Re-installing the Seat:**

1. Remove a DVC seat:
  - a. pinch the quick-release buckles

- b. loosen the two straps at the base of the seat back by lifting the release tab
  - c. unthread the straps through the pad eyes
  - d. unhook the rear attachment bungee from the seat tensioning bungee at the intersection of the back and seat pad
2. Re-install a DVC seat:
- a. attach the seat straps by threading them through the respective pad eyes and release buckles
  - b. attach the side straps via their respective quick release buckles
  - c. attach the rear bungee hook to the seat tensioning bungee in the rear at the intersection of the back and seat pad

## **Transporting Your Manta Ray**

To transport your kayak securely, we suggest that you install a rigid bar, sport rack system on the roof of your vehicle. Your boat will remain most stable when loaded upside down. If you are unlikely to encounter rain during your road trip, you can also load it with the hull down.

## **Caring for Your Manta Ray**

A **fresh water rinse** for the hull and all moving parts is all that is necessary to keep your boat clean. It is heartily recommended after paddling in salt water, especially if your boat is outfitted with a rudder system. Thoroughly rinse the rudder, rudder cables, and foot braces with fresh water to remove dirt, sand and salt.

We also recommend that you treat your DVC seat with a **mold retardant cleaner** (found at grocery or home improvement stores) if you use it infrequently or if it will be stored in a moist or poorly circulated environment.

You should periodically **lubricate** all moving parts (like the footbraces, or rudder) to keep them in top working order. We recommend using 303 Lubricant, available at outdoor specialty and select home improvement retailers. For polyethylene hulls, 303 Lubricant can also be used to protect the luster of the boat's surface.

### **Polyethylene**

Polyethylene is a tough, resilient material which can withstand a reasonable amount of impact and usage over rough surfaces. However, over time and with continued use, abrasions can reduce the hull's ability to glide smoothly through the water. You can minimize raised texture on the hull by scrapping the polyethylene ridges off with a sharp knife or buffing them out with sand paper. Also, please remember that the hull is tough, not indestructible, but minor damages may be repairable. Contact your local Native Watercraft dealer for additional information and assistance regarding polyethylene repair.

## **Storage Tips**

The ideal environment for storing your kayak is a shaded, dry space. Never store your kayak in direct sunlight. Position it upside down with each end supported on sturdy, cushioned racks. Wood 2 x 4's covered with carpet or closed-cell foam work nicely (coverings that will either dry quickly or not absorb moisture will keep mildew away).

Polyethylene material softens somewhat when it is exposed to extremely warm conditions. If your kayak is strapped tightly to a roof rack or sitting on a storage rack during a series of hot days, it may deform. You can encourage your boat to "remember" its original shape by unstrapping it and setting it on a flat or padded surface in the sunlight but it may not completely regain its shape if it has been deformed by severely tightened straps or ropes.

Storing the boat with the seat installed also helps encourage it to keep its shape. Also, if you will be storing your boat in a location where the air temperature can remain high for extended periods, it is best to remove your hatch covers.

## **Basic Gear**

When you paddle you should always carry safety equipment, carry appropriate personal gear, use a comfortable paddle, and wear a PFD (personal flotation device).

### **Paddle**

The choice of a paddle is as personal as the choice of your boat. Factors to consider in selecting your paddle include blade shape, length, weight and material. Synthetic paddles are the most damage resistant. Composite models will generally be lighter and better if you'll be paddling for long periods of time. Most paddlers use paddles between 225 and 240 cm in length: you should try different lengths and types of paddles before you make a purchase, just as you would test paddle your boat.

Take-apart paddles offer the ability to change blade angle ("feather") to suit your preference, and are easy to store and transport. A spare paddle is good to have as well. It can be an inexpensive take-apart paddle that can be stowed easily on deck.

### **PFD – Personal Flotation Device**

A comfortable and securely-fitting PFD is an absolutely essential paddling accessory that should be worn when you're in your kayak. Try your PFD on before you make a purchase, to be sure it fits comfortably. Swing your arms and rotate your torso to make sure you can move your arms freely without feeling restricted. If it does, adjust the outfitting or try another model / size.

If you will be wearing a sprayskirt or have a short torso, wear your pfd while sitting in a boat: it should not ride up more than an inch or two, and someone should be able to pick you up by its shoulders without it lifting up over your head.

## **Safety Equipment**

You should consider carrying a bilge pump to rid the interior of standing water that can destabilize your ride. United States Coast Guard regulations require an audible signal device (horn or whistle) on all watercraft.

Note: Safety equipment is not worth much unless you know how to use it. We recommend that you obtain qualified instruction and practice under controlled, comfortable conditions.

## **Personal Gear**

The following is a list of items that you should keep with you on every trip in a dry storage bag or case:

- drinking water
- sunscreen
- a brimmed hat and sunglasses
- insect repellent
- compass
- waterproof flashlight
- matches or a lighter
- a first aid kit

The following should also be considered:

- A dry set of clothes, if the weather will not dry you quickly after a capsize
- Weather radio
- Global positioning device (GPS)
- Cell phone
- Navigation charts
- Repair kit
  - o Duct tape
  - o Screwdriver
  - o Vise grips
  - o Spare cord
  - o Knife

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**If you have additional questions about your new product from Native Watercraft or would like to learn about any of our suggested accessories, please ask your dealer. They will be happy to help you get to your next day on the water safely, and soon!**

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