

Water Ski Technical Manual

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Introduction

Dear Skier,

Congratulations on your recent purchase of a GOODE Carbon Composite water ski! I hope you find our skis to be the finest in the world. The performance advantages of GOODE Skis are evident by looking at tournament results. Throughout the past decade, GOODE Skis have held both the Men's and Women's World Records longer than any other brand of ski. GOODE Skis have also won more U.S. National medals than all other ski brands combined.

We've designed water skis that are lighter and faster than anything on the market. Each GOODE ski is hand-finished. They are built of 100% PURE Carbon Fiber wrapped around an aerospace material core, which allows them to weigh-in at under three pounds. GOODE skis weigh ½ less that of traditional fiberglass skis, and the physical properties are double that of fiberglass. Our patented skis have a four times (4X) strength-to-weight ratio advantage over fiberglass! GOODE Skis are built to last. GOODE Skis will not breakdown or change flex, even after years of use.

Once you have achieved your *Personal Best*, whether it is in a sanctioned tournament or practice, go to our web site at **www.goode.com** and enter the requested information. I encourage you to share this accomplishment with all of our web visitors.

We appreciate customer feedback. If you have any questions or are seeking customer support, call my staff weekdays at 1-888-GO-GOODE.

To learn more about GOODE Ski Technologies and to keep up with our latest innovative products, visit our website at **www.goode.com** where I encourage you to join our email newsletter list.

Thank you for choosing GOODE!

GOODE SKI TECHNOLOGIES

Dave Goode Founder/President

Technical Diagram

The carbon/graphite design of GOODE water skis gives them six distinct advantages over anything on the market:

Lighter - It weighs less than half of a conventional mass-produced fiberglass water ski. Less weight means faster acceleration from buoy to buoy.

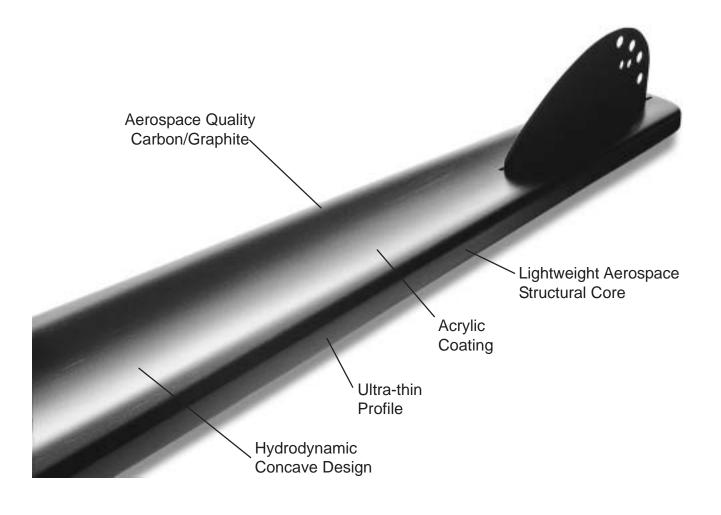
Stronger - Hands down, carbon fiber beats fiberglass, titanium, steel and aluminum in stiffness-todensity ratios. It provides the highest strength-to-weight ratio of any water ski.

Thinner - Its thin profile allows it to perform deeper in the water, slowing better at the buoy, is quicker from edge-to-edge, and is affected less by rough water.

Flexible - The flex/rocker pattern produces a soft longitudinal flex that allows the skier to turn a tighter arc at the buoy, thus maintaining a higher course line. Conversely, the stiff torsional flex provides better holding power behind the boat.

Hydrodynamic - The bottom design makes it faster, yet easier to handle. The optimized wing and fin set reduces turbulence and supplies exceptional acceleration and control.

Temperature Resistant - The specially formulated resin system combined with the carbon/graphite construction provides resistance against breakdown due to heat, unlike conventional fiberglass skis.



Model Specifications

GOODE 8000

Edge-to-Edge Concave Designed Performance Water Ski



Lengths		64	65.5	67
Widths	Forebody	6.532 6.686 6.		6.839
	Mid	6.345	6.495	6.644
	Tail	2.42	2.483	2.540
Weight		2.5 lbs.	2.7 lbs.	2.9 lbs.

GOODE 96 & 9700 Edge-to-Edge Concave Designed Tournament Water Ski



Len	igths	62	64	65.5	66.25	67	69
Widths	Forebody	6.532	6.532	6.686	6.762	6.839	7.044
	Mid	6.345	6.345	6.495	6.569	6.644	6.843
	Tail	2.42	2.42	2.483	2.511	2.540	2.616
We	eight	2.3 lbs.	2.5 lbs.	2.7 lbs.	2.8 lbs.	2.9 lbs.	3.0 lbs.

Water Ski Terminology

Bevels - the transition area between the ski's sidewall and the ski's base. Sharper, flatter bevels keep the ski riding smoother, rounder and higher in the water. Larger bevels allow the ski to ride deeper in the water.

Concave - the edge-to-edge channel that runs down the ski base.

Dampening - the reduction of ski vibration or "chatter".

Fin - the underwater foil on the tail of the ski that aids in turning and tracking.

Fin box - the device that secures the fin to the ski and allows the fin to be adjusted fore and aft, as well as up and down.

Length - the measurement in inches from the ski's tip to tail.

Longitudinal flex - the measured amount in which the ski flexes along its length.

Off-side turn - a turn to the right for a left-foot-forward skier; a turn to the left for a right-foot-forward skier.

On-side turn - a turn to the left for a left-foot-forward skier; a turn to the right for a right-foot-forward skier.

Profile - the outline of the ski when viewed from the top or bottom.

Rocker - the difference between the height of the ski tip and the center of the ski body, and the difference between the height of the ski tail and the center of the ski body when the ski is placed on a flat surface and viewed from the side.

Torsional flex - the measured amount in which the ski flexes along its width or the amount in which the ski "twists".

Tunnel - the recessed channel that runs down the center of the ski base.

Weight - the physical mass of the ski.

Wing - adjustable foil on the side of the fin that aids in decelerating the ski during a turn at shorter line lengths.

Bindings

All GOODE bindings are designed for ease of entry and exit, maximum performance, control and stability. We offer two models: the rubber "Performance Series" High Wrap and the GOODE patented PowerShellTMIII Binding System (see separate PowerShellTMIII Binding System Technical Manual when using the PowerShellTM Binding System).

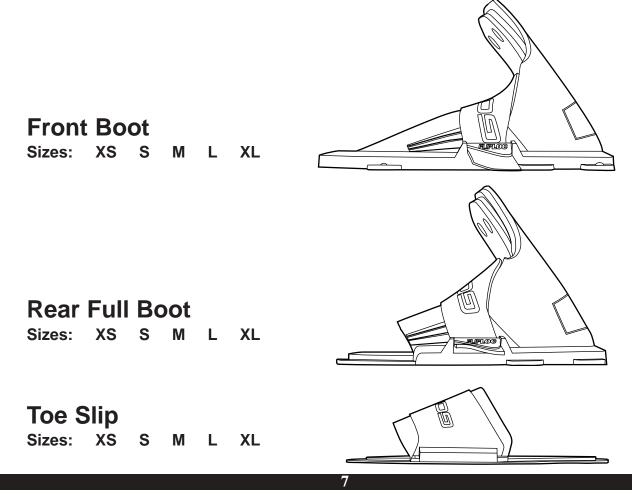
Performance Series Bindings

The Performance Series High Wrap is used by tournament water skiers worldwide and offers excellent lateral support for a conventional binding. The Performance Series Highwrap boots feature thick rubber for extra lateral support to eliminate unwanted movement. The boots are mounted on a metal plate. The Performance Series can be custom sized using the rubber overlays.

Custom Size the Performance Bindings using the following instructions:

GET WET: Make sure the foot and the bindings are wet before attempting the following adjustments.

ADJUST LATERAL SUPPORT: Remove the binding from the ski. Unscrew rear horseshoe from under the plate. Pull or loosen rubber overlay to desired size. Replace horseshoe. Screw the binding to the ski. Test adjustment while skiing. Once exact overlay placement is decided, GOODE recommends cutting off any extra rubber one inch or more beyond the edge of the plate to prevent excess rubber from dragging in the water.

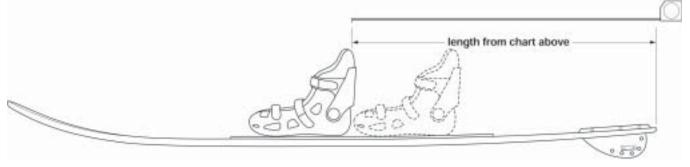


Binding Installation

The binding should be installed using #10 stainless steel sheet metal screws (provided), 5/8" long. The heel of the front boot should be located at the following area:

MODEL/LENGTH	62"	64"	65.5"	66.25"	67"	69"
8000	27.75"	29.00"	29.375"		30.375"	
9100	N/A	29.25"	29.50"		30.50"	
9200	27.75"	29.00"	29.375"		30.375"	
9200 LTD	27.75"	29.00"	29.375"		30.375"	
9300	28.00"	29.25"	29.50"		30.50"	
9400	27.75"	29.00"	29.25"		30.25"	
9500	27.75"	28.875"	29.125"	29.50"	30.125"	31.125"
9600	27.875"	29.00"	29.25"	29.625"	30.25"	31.25"
9700	27.75"	28.875"	29.125"	29.50"	30.125"	31.125"

It is important to measure from the **back** of the front boot (inside of horseshoe) to the end of the ski tail.



To install bindings on the ski, place the front binding on the ski in the proper location. Screw the binding screws provided (#10 stainless sheet metal, 5/8") into the ski with a screwdriver, using a #2 driver. Do not overtighten, as this will enlarge and strip the holes and void the warranty. Gently hand-tighten the last few threads. Position the rear binding and repeat the above steps. When remounting a ski that has existing holes, DO NOT place new holes closer than 1/4" apart. You should **NOT** place more than 24 holes (normally two sets of binding) or the ski may break causing injury.

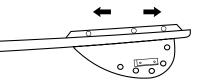
Ski Binding Adjustment

Most bindings allow for a .5" movement in either direction. GOODE recommends installing them in their center-most position, and adjust from there if needed. When first "dialing-in" a new ski, you should check to make sure your bindings are in the correct position before adjusting your fin. If your ski is over-turning on your on-side, your bindings need to go forward. If you are getting slack rope on your on-side, your bindings need to go backward.

Fin Adjustment

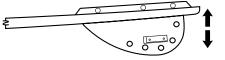
The adjustable fin on GOODE skis is designed to "fine-tune" the ski's behavior, which varies between individual skiing styles, skier weight, boat speed, and site characteristics. There are three types of adjustments that can be made to the fin: horizontal, vertical and diagonal. Differences of a few thousandths of an inch are known to make the difference between a personal best pass and a fall, so please use dial calipers to calibrate and adjust your fin. You can purchase a high-quality dial caliper that is the perfect size for fin calibration factory-direct from GOODE. If you want to ski up to your potential every pass, these calipers are a must ! Instructions for measuring fin location specifications with the GOODE dial caliper are found on the next page.

Horizontal Adjustment



A horizontal adjustment <u>forward</u> (toward the tip of the ski) lifts the front and drops the tail during an on-side turn. A horizontal adjustment <u>backward</u> drives the front into the water and raises the tail.

Vertical Adjustment



A <u>downward</u> vertical adjustment (out of the ski) improves stability and holding power, while an <u>upward</u> shift makes it easier to turn.

Diagonal Adjustment

A diagonal adjustment of a <u>lower longer front</u> makes the fin fuller, and therefore drives the tip of the ski into the water in an off-side turn. A fin with a <u>shorter front</u> raises the tip of the ski.

Each type of adjustment will substantially change the performance of the ski. The flatter the leading edge of the fin, the more the fin will keep the front of the ski up. The rounder the leading edge, the more it drives the front into the water.

In order to accurately verify results, only one type of adjustment should be made between ski rides. Do not exceed 0.050" adjustments per ski ride. Exceeding this tolerance can result in unacceptable results and quick falls.

To adjust the fin, a 5/32" allen wrench is needed to loosen/tighten the three set screws along the top side of the fin assembly. Diagonal adjustments can be made by loosening the two end screws and keeping the center set screw tight. Retighten all screws after making fin adjustments. Once the ultimate fin position has been determined, measure the fin position and record it in your fin log. Therefore, if the fin is accidentally moved, the exact position can be easily readjusted with dial calipers.

Using GOODE Dial Calipers

Follow these easy steps to measure the position of your fin. Every time you change fin settings, record the measurements into your fin log. The log is your record of fin adjustments, so that you can better account for changes in your skiing. You can also record measurements for different sites and conditions, for future reference.

Prior to adjusting your fin, record your wing angle using a wing angle gauge. Remove the wing from your ski and being the steps below.



Length of Fin Measurement

- 1. Set caliper to Zero.
- 2. Hold caliper as shown at left.
- 3. Record length in fin log.

Depth of Fin Measurement

- 1. Hold caliper as shown at right.
- 2. Record depth in fin log.





Distance from Tail Measurement

- 1. Hold caliper as shown at left.
- 2. Record distance in fin log.

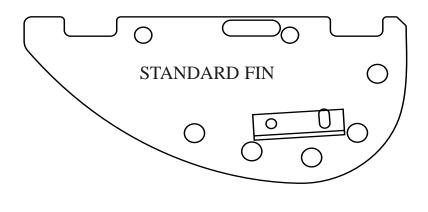
Fin Adjustment Options

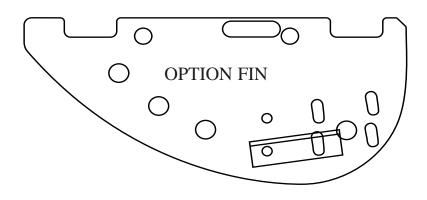
Problem	Solution
Difficult to initiate turn	Decrease fin depth (Vertical Adjustment) and/or move fin forward (Horizontal Adjustment)
Breaking at the waist during off-side turn	Decrease front fin depth (Diagonal Adjustment)
Unstable and/or too fast into turn	Increase fin depth (Vertical Adjustment) and/or move fin backward (Horizontal Adjustment)
Too much ski tip in water on both left and right turns	Increase fin depth (Vertical Adjustment)
Too much ski in the water during off-side turn, causing breaking at the waist	Decrease front fin depth (Diagonal Adjustment)
Too much ski in the water during on-side turn	Move fin forward (Horizontal Adjustment)
Too much ski tip out of the water during on side turn	Move fin backward (Horizontal Adjustment)
Difficult to initiate angle across wakes	Move fin forward (Horizontal Adjustment)
Ski overturns and gets too much angle across wakes	Move fin backward (Horizontal Adjustment)
Ski changes edges too slowly	Decrease fin depth (Vertical Adjustment) and/or move fin forward (Horizontal Adjustment)
Ski is too responsive	Increase fin depth (Vertical Adjustment) and /or move fin backward (Horizontal Adjustment)

Factory Fin Settings

FIN	STANDARD	OPTION	AMF	
DISTANCE FROM TAIL	0.690"	0.870"	0.900"	
LENGTH OF FIN	6.872"	6.690"	6.550"	
DEPTH OF FIN	2.449"	2.500"	2.510"	
WING ORIENTATION Upside-Down		Right-Side Up	Right-Side Up	
WING ANGLE	9 DEGREES	7 DEGREES	7 DEGREES	

Wing Positions for GOODE Skis





GOODE Ski Care Instructions

STEP 1: Preparing

Wash the bottom of the new ski with mild dish soap and a sponge and rinse well with clear water. It is normal for a black residue to come off during initial cleaning. Grease and oil on the ski will inhibit performance by reducing the ski's adherence to the water. Water beading up on the base of the ski indicates the presence of grease or oil. Reclean the bottom to restore surface.

STEP 2: Transporting

The ski should always be transported in a bag. To avoid making water marks on your ski, dry your ski when done skiing. The GOODE ski bag has been specially designed with a hard inlay between two pads to protect the bottom of the ski, wing and fin. This bag is not recommended for air travel. The ski should be placed in a hard-sided container for air travel.

STEP 3: Storing

Store the ski in a cool, dry place. Even though carbon is a temperature resistant material, it is recommended that extremes in temperature be avoided.

STEP 4: Repairing

Be aware that carbon is a fibrous material and care should be used when working on the ski to avoid getting slivers. Should the ski become deeply scratched or nicked, use any quick-dry two-part epoxy to fill the area. Carefully smooth the repaired area with fine grit sand paper. If repairing areas on the ski bottom, be careful not to change the surface angles.

Warranty

GOODE skis carry a limited warranty for one year from the date of purchase. GOODE will replace (at GOODE's option) the ski if found to be defective as to workmanship or material. This warranty does not extend to damage resulting from misuse, neglect or abuse, normal wear and tear, accident or exterior appearance or color, breakage (except breakage resulting from manufacturing defects), improper dealer service, ski mounted with FOGMAN bindings or improper mounting of bindings.

All water ski products are prone to "dock rash", handle dings (handle pops), binding holes stripped from overtightening, etc. These are considered regular wear and tear for skis and not covered by our warranty policy. You can have your GOODE ski refinished by factory-trained ski tuners at GOODE for a nominal charge. The average cost is \$50.00 for a ski with no major damage. Your ski's bottom can be refinished and top surface cleaned up. Skis with major damage will be evaluated and a price quoted to you. Please email goode@goode.com or call 248-666-2500 for more information.

This limited warranty extends only to the original consumer who purchased a new ski factory-direct or from an Authorized GOODE Dealer.

In no event shall GOODE be liable for incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation exclusions may not apply. All implied warranties or merchantability or otherwise are limited in duration to one year following the date of purchase.

If a defect arises in the ski within the limited warranty period, the user should promptly call GOODE for Return Authorization. GOODE will not be responsible for any costs, such as, but not limited to handling, shipping or insurance. If a ski is replaced, the replacement product is covered only for the remainder of the original limited warranty period dating from the purchase of the original ski. Furthermore, if a ski that needs to be replaced is a discontinued model, it will be replaced with a ski of comparative performance. Please allow 2 to 3 weeks for completion of repairs or replacement and return of the product.

This limited warranty gives the owner specific legal rights and possibly other rights which vary from state to state.

This limited warranty extends only to the original consumer who purchased a new ski factory-direct or from an Authorized GOODE Dealer.

Warranty Procedures

Warranty service is very important to everyone concerned. Therefore, GOODE asks that the following procedures be complied with to ensure efficient service or replacement. **No returns will be accepted without prior Return Authorization from GOODE**. Compliance with these procedures will ensure the quickest possible resolution of the warranty claim.

To Obtain Return Authorization Number (RA#)

A Return Authorization number (RA#) may be requested by emailing goode@goode.com or calling GOODE factory-direct customer service at **248-666-2500**.

Be prepared to provide the following information:

- 1. Your name, shipping address, email address and daytime phone number.
- 2. Model of ski.
- 3. Length.
- 4. Serial number of ski.
- 5. Date and place of purchase.
- 6. A brief description of the damage.

7. Make sure you record the Return Authorization number which is assigned to the warranty

To Return Warranty Ski

1. Package the ski carefully to prevent further damage.

2. Write the **RETURN AUTHORIZATION NUMBER** (**RA**#) clearly on the outside of the carton being returned. **NO** skis will be accepted without a proper RA#.

3. Ship the ski **FREIGHT PREPAID** to:

GOODE Ski Technologies 7340 Highland Road Waterford, MI 48327

ATTN: Water Ski Customer Service

4. Record your shipper tracking (FedEx, UPS, DHL) number. This number will help track the shipment if it does not arrive at GOODE Ski Technologies.

Product Instructions & Warnings

Watersports can be safe and fun for all levels of enthusiasts. The Operator's Manual is presented to enhance your enjoyment of the sport. It is intended to alert you to some of the potential dangerous conditions that can arise in all watersports.

The binding, even if properly adjusted, may or may not release in a fall which could result in injury to the ankle, knee, leg or other parts of the body.

To reduce your risk of injury or death, follow these guidelines:

- · Use correct size ski and binding. Binding should be adjusted for a snug, not tight, fit.
- Wet binding and feet with water before use.
- · Inspect skis, fins and bindings for loose screws, wear, cracks, delamination or tearing.
- · Check foot straps (bindings) and fins prior to each use to insure they are fastened securely to the ski.
- The faster you ski, the greater your risk of injury. Exercise additional caution when skiing at competitive speeds. Beginners should be towed at slower speeds that allow for reasonable control and stability.
- Water skiing instruction is recommended before use. Instruction will teach general safety guidelines and proper skiing techniques, which may reduce your risk of injury.

WaterSports Safety Code*:

Watersports are fun and challenging but involve inherent risks of injury or death. To increase your enjoyment of the sport and to reduce your risks, use good judgment and common sense and follow these rules:

Before You Start:

- Familiarize yourself with all applicable federal, state and local laws. It is your responsibility to familiarize yourself with the proper use of the equipment and the risks inherent in the sport.
- Know the waterways.
- Always have a person other than the boat driver as an observer.
- · Skier/rider, observer and driver must agree on hand signals.
- Never start out until skier/rider signals he/she is ready. Observer and skier/rider should maintain constant eye contact.

Your Equipment and Your Tow Rope:

- Inspect all equipment prior to use. Check bindings, fins, tube and attachment point, and flotation device prior to each use. Do not use if damaged.
- · Always wear a U.S. Coast Guard Type III (PFD) vest.
- Rope should be attached to the watercraft in an approved fashion with hardware designed for towing. Refer to your watercraft manual for instructions on proper tow rope attachment.
- Tow ropes stretch during use. If a rope breaks or is suddenly released, it can snap back into the watercraft. Warn all riders, skiers and occupants of the danger of rope recoil.
- Inspect tow rope and its attachments before using. Do not use tow rope if frayed, knotted or damaged. Replace when signs of excessive deterioration are indicated by discoloration, broken filaments, unraveling or other obvious signs of wear on the rope or hardware.
- Use proper tow rope for the activity.
- Ensure tow rope is clear of all body parts prior to starting out or during use.
- Keep persons and ropes away from propeller when engine is running even in neutral. Should rope become entangled in propeller, SHUT OFF ENGINE AND REMOVE IGNITION KEY BEFORE RETRIEVING ROPE.

When You Ski or Ride:

- Attempting land or dock starts can increase the risk of injury or death. USE THIS PRODUCT ONLY ON WATER.
- Before starting always remove any slack in the rope between watercraft and skier/ rider. Sudden shock loads may cause injury to skier/rider or failure of rope, resulting in snap-back or breakage.
- Do not ski or ride in shallow water, near shore, pilings, docks, rafts, swimmers, other boats or other obstacles. Such obstacles are examples of risks that are inherent in the sport.
- The driver and skier/rider must watch for and be able to stop or turn to avoid obstacles.
- Falling and the injuries that may result are inherent risks in the sport.
- Always ski or ride in control and at speeds appropriate for your ability. Ski or ride within your limits. Follow instructions on product for proper speed limits.
- Do not ski or ride over ramps or jumps without prior instruction.
- Use a flag to signal others that a skier or rider is in the water.
- · Do not operate watercraft, ski or ride under the influence of alcohol or drugs.

THE WARNINGS AND PRACTICES SET FORTH ABOVE IN THE WATERSPORTS SAFETY CODE REPRESENT SOME COMMON RISKS ENCOUNTERED BY USERS. THE CODE DOES NOT PURPORT TO COVER ALL INSTANCES OF RISK OR DANGER. PLEASE USE COM-MON SENSE AND GOOD JUDGMENT.

*Source: WaterSports Industries of America



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