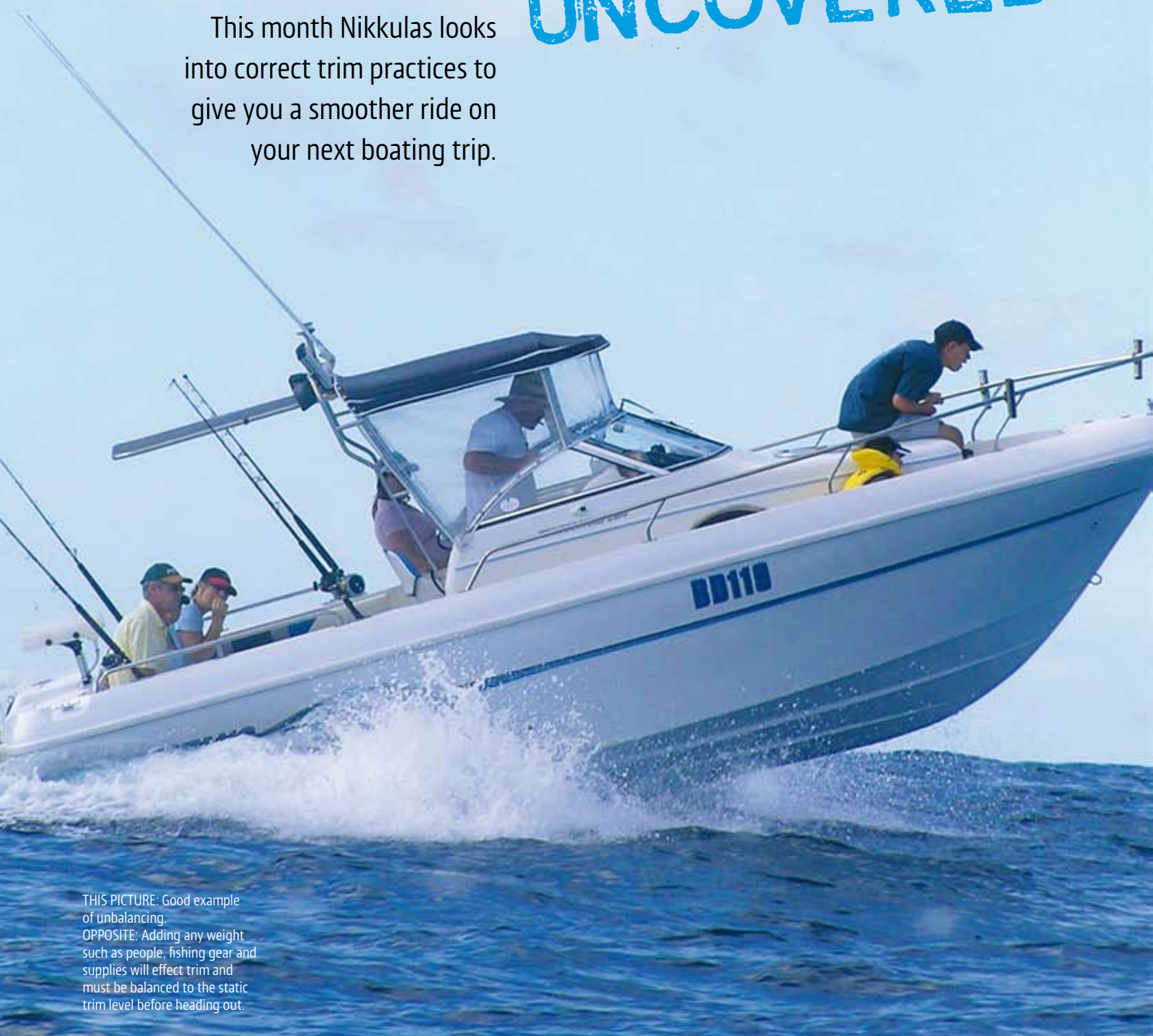


BY NIKKULAS FROM
SKIPPERS SCHOOL

TRIM TABS & TILT UNCOVERED

This month Nikkulas looks into correct trim practices to give you a smoother ride on your next boating trip.



THIS PICTURE: Good example of unbalancing.
OPPOSITE: Adding any weight such as people, fishing gear and supplies will effect trim and must be balanced to the static trim level before heading out.



Skippering involves more than just steering a boat and trailable boat owners should appreciate that trim plays a major part of the boating experience. Have you ever noticed how close the trim button is to your thumb when you hold the controls? It's not in that position to be only used when launching and retrieving at the ramp. It should be used constantly to adjust the ride for the passenger's comfort and safety as well as getting peak performance from the hull and engine.

TECHNICAL TRIM TALK

Outboards engines above 30hp are generally have power tilt and trim. The hydraulic piston set in the engine bracket does the trimming. (Angle of engine when underway) A second hydraulic rod connector is used to tilt up the outboards leg completely out of the water.

Set at a 20 degree angle the outward movement of the propeller (away from skipper) is the trim range

and after that only at stand still or slow speed can you tilt past the trim range. This is good to know when you're testing your trim at speed, as you've no danger of popping the propeller completely out of water. For shallow water operation at low speed as long as the cooling water intake holes are under water you can tilt the propeller past the trim range. Watch for the tell tale signs to prevent this and adjust correctly. If you need to operate the tilt/trim manually, anything below 2000rpm is the recommended rate in shallow water tilt positions.

I remember when my old Black Max Electrical system burnt out I happened to have the tilt all way up out at sea. It was good to know that a manual release screw existed to drop the outboard back down out of danger. It's a good idea to have this screw in, and set so you can have your outboard at a desired height.

Trim Tab is the small downward facing fin directly above your propeller. This can be moved from left to right (or port to starboard!) to

compensate for any sideways pull you may experience at high speed on your steering wheel.

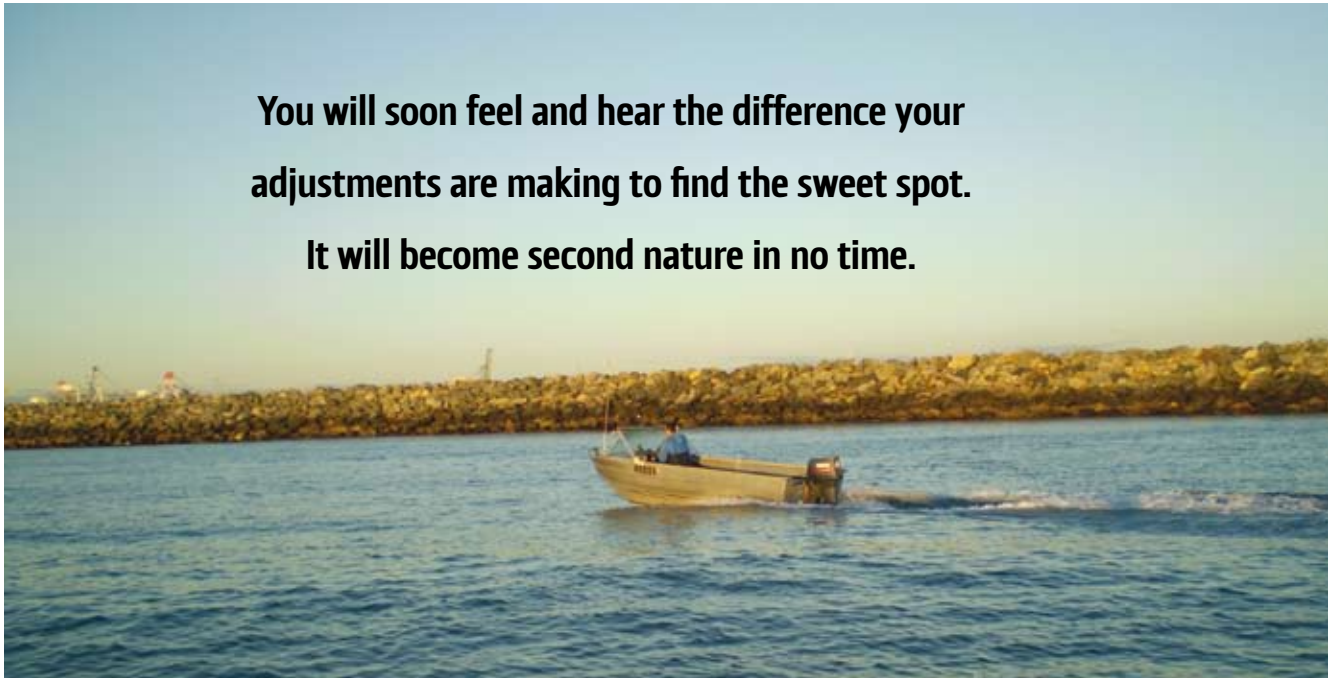
Trim tabs are located either side of the outboard and mounted on the transom. They push the bow of the boat down keeping the boat balanced for travel and being hydraulic means it can be controlled quite easily.

PRACTICE THE PERFECT TRIM ANGLE

This part of your boating knowledge can only come with playing around with different trim settings at different speeds and conditions. You will soon feel and hear the difference your adjustments are making to find the sweet spot. It will become second nature in no time.

At the start of every trip it's the skipper's responsibility to ensure the weight is spread evenly and low as possible to get the boat to sit square and level in the water. This includes your passengers and makes

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THIS PICTURE & ABOVE: The trim requires constant adjusting as conditions change. A small adjustment down will give the skipper what he is looking for.



allowances for weight lost by fuel use.

The variables that need action taken on your power trim button are shift in weight for example passengers that change seats after you balance the boat up or fuel used on your trip and direction of swell and wind. Not all boats respond the same so it's an individual adjustment that once mastered will give you optimum comfort and performance for sure.

The boats that don't have this ability to power trim while underway generally have the angle of the propeller to the transom set. It still can be adjusted but not while underway, so alternatively shifting the weight

forward or backward to compensate is the go. For example if you were in a small dingy the position of a full fuel tank would make a huge difference to your trim. Other obvious choices are seating arrangements of individual body types, anchors, fuel tanks and fishing gear.

The Skippers with power trim have the ability to trim the propeller ether towards your transom (trimming down) or away (trimming up). If you have a trim gauge you will see the change up or down but once in tune with your boat performance and sounds so you will know which way to trim. In the early stages of practice, trim all the

way down and you will hear the motor under more strain and speed also decreases.

It may be basic boat knowledge to some readers but there are many so called boating industry professionals particularly in sales that haven't got a clue on how to trim a boat. I don't mind if somebody doesn't have all the answers or experience but when they pretend they do, safety becomes the issue. When showing someone a test boat, I fail to see how going flat out with the trim all the way up to jump the wake of the Rottneest ferry is safe practice other than madness. Those types of practices will not be accepted by the informed and knowledgeable RST ticket holders of WA. Let's hope these cowboys go back to car sales.

Ok back to the topic .The ideal trim angle for outboards depends on the speed and conditions. By moving it up and down will adjust the angle at which your boat rides through the water. The best way to get a feel for things is start in smooth water and still conditions.

Trim all the way down and accelerate slowly to your normal cruising speed and adjust the trim upwards in small increments until the speed reaches its fastest point. Your boat should experience a speed increase without any increase in throttle. For the sake of experience keep going in small increments until the speed is lost again and/or cavitations of prop .You may also experience the bow becoming excessively high or buried low.



THIS PICTURE: Skipper trimming the outboard leg in Venom Marine 660 reducing drag on the lower leg and allowing the maximum speed and least resistance without the propeller breaking the water surface.

CHOPPY WEST COAST WATER

Its often said that our West Coast Skippers are held in some sort of regard due to the conditions we endure on our water ways. The Rotto boat run can test your trimming skills for sure in smaller vessels on most days. It's not a pleasant stretch of water to cross when the chop is so close together. It's only when you get closer to the island, the distance between peaks allow for your vessel to ride down and come up again. This is when can you relax and prepare yourself to visit the Fremantle Doctor on the way home! .

CROSSWIND CHOP AND FOLLOWING SEAS

Be sure to get the bow up in both these circumstances. Making constant adjustments to speed and trim will make your situation a lot more fun and a lot safer. Over trim in these circumstances because the bow offers protection from getting wet and more importantly avoiding breaching if traveling with a following sea.

BOATS WITH V HULLS

Getting the vessel to the sweet spot or plane generally requires starting with full trim down with ease on the throttle. If you are towing a skier then you may be excused for pushing hard on the throttle and wasting fuel. As the hull comes over the hump caused by your bow wave, that's when you start trimming the engine out. You will notice an increase in speed without adjusting your throttle.

Many V-Hulls ride better in choppy water with the engine trimmed in a bit for the most efficient angle. The hull rides flatter over the chop and breaks through the water further forward where a sharper deadrise angle exists.

Next month I will be looking at different storage options available in WA and techniques to keep the stored vessel looking good and sea worthy. If you have any comments or questions relating this topic please email me at nikkulas@skippersschool.com.au.

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