

A cautionary tale – one wacko sea kayak

Most kayaks are multi purpose. Others have a limited range of things they are suitable for. I have only come across a single kayak that was only any good at only one thing and bad at lots, and sadly, I owned one. It was a Mirage 22s.

I had finally mastered an intermediate multisport boat. Fast on the flat, but not seaworthy. In waves the rudder is not submerged, they have no bulkheads and usually no hatches. I thought it would be fun to have a really fast kayak that would be OK on decent waves and in open sea.



A multisport rudder doesn't reach the water on waves. Photo Charles Jarvie

I recalled a sea kayak I'd seen that should be ideal. I looked it up and found that it was a Mirage 22s. It was ridiculously narrow at 45cm wide, but at the same width as my multisport boat the instability should not be too much of a problem. It had a sea kayak profile and the idea of a boat that was much faster than it looked appealed to me. It would be like having a Toyota with a

Ferrari engine in it.

I tracked down the owner. "Well as a matter of fact I have still got it, but I am looking to move on to an ocean racing ski". I happened to be in his vicinity soon afterwards and arranged to try the boat. I took it for a brief spin and liked it. Built to sea kayak weight, it was heavy compared to a multisport boat, but would withstand serious waves and could be used for rescues etc. – a thing not possible in paper thin race kayaks. It was sluggish on the turn I noticed, but my speed obsession discounted this as a minor issue. The build quality was super, and the owner, who had imported it to New Zealand himself, had looked after it beautifully. It was probably the only one of its kind in New Zealand and I could not resist. It came back to Wellington and went



Mirage 22S racing sea kayak. Note extreme length and wacko rudder

into the boatshed of the Kupe Canoe Club – but only just.

Installed in the boat racks, it poked further into the aisle than even the longest surf skis. At 6.7m long, it is 2m longer than some single sea kayaks, and longer than many doubles. It had a K1 style cockpit and seat. Plenty of room for torso rotation, but you'd need legs like an octopus to be able to brace against the deck for boat control. The previous owner had put in small pads which were a little help, but the lack of ability to control the boat with the hips was a worry.



Huge K1 style cockpit

In most sea kayaks it's easy to install shaped foam pads to hook the knees on, but the bow end of the cockpit was just too wide for this. I considered installing 'thigh hooks' –plates fixed inside the hull with downward curved projections like the braces on 'keyhole' style cockpits. No go. The shape of the moulding around the coaming prevented this.

Thinks. Very unstable boat and waves - capsizing is an ever present possibility. Not being able to brace or even to hold yourself in the cockpit is madness.

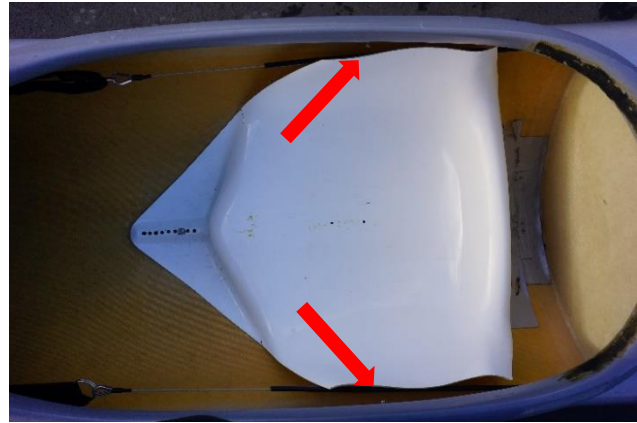
And so to a rolling test. The first attempt was successful. The foam pads which I could just reach with my kneecaps got a bit wet on the first attempt and they adopted an eel-like surface which resulted in an 'only just' second roll. I knew a third attempt would fail so left it there, determined to find an answer.



It's a skinny boat alright. Standard sea kayak 60 cm wide & Mirage 22s 45 cm wide

Pondering a solution I recalled trying a wave ski that had thigh straps and wondered if that system would work. For some reason there were two small bolts through the cockpit rim level with the seat on each side. Aha.

A piece of webbing was rigged to run through a turnbuckle bolted just in front of the nose of the coaming. The turnbuckle provided adjustable tension. It worked a treat.



Bolts for unknown purpose either side of cockpit



Webbing thigh straps

Knees go under the webbing and the boat can be easily gripped and railed. A rolling trial was very successful. The first serious failing with the kayak had been fixed - the cockpit problem was solved.

The boat slips through the water beautifully and is certainly fast. It is very unstable compared to a normal sea kayak. In the only race I did in it, I kept up with KASKite David Fisher in his multisport boat



Turnbuckle adjuster

until half way, then lost so much on the turn I never caught up. At top speed the turning circle was huge but eventually it happened. At slow speed however, turning in a cross wind was appalling. It sounds ridiculous for an experienced kayaker to be unable to turn a boat when stationary, and so it should be, but with the 22s it is not only possible, but likely.

The hull is so long, with steep sides and has such a deep stern that at slow speed in cross wind the rudder is entirely ineffective. Even forward and reverse sweep strokes will not turn the boat if there is a side wind. Before any hull speed is attained, a decent breeze from the side blows the bow downwind and it is simply not possible to turn into it. Having launched into a 30m wide space between a boat ramp and a jetty, I was

unable to turn. I tried a multipoint effort like a learner car driver and still could not turn the damned boat round.

With a normal rudder, it is a simple matter to increase turning ability by lifting it clear of the water. Not so with the Mirage – its rudder cannot be retracted. A kayak that can't be turned in a moderate breeze is just daft and in certain circumstances, could be dangerous.

Shocked by my failure to carry out such a simple manoeuvre, I did some testing to determine turning circle in calm conditions. In the sheltered environment between two ranks of moored boats in a marina I did full lock turns keeping the boat level and paddling evenly on both sides. I could just turn between two lines of mooring posts



Turning circle test location. The mooring posts are 32m apart

which were later measured at 32m apart, so the turning circle about 30m. Even railing the boat only reduced it to about 27m in windless conditions. I suspect in a breeze the turning circle would increase significantly. For general paddling, the turning ability of the Mirage 22s is hopeless. The reason? Along with the length of boat and the hull shape, it is the rudder used.

All Mirages feature their 'integrated rudder system'. Mirage kayaks have a very good name and are highly thought of by many owners. I have not tried any other models from this manufacturer and I hope their rudder works better on less extreme designs.

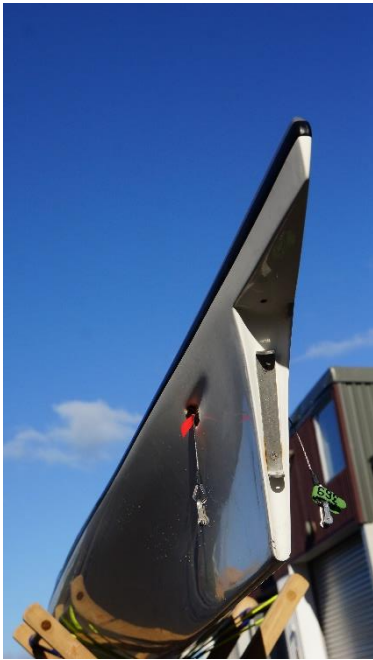
The lower stern section of the boat pivots to give steering. My boat came with two rudders that can be easily interchanged. The



Mirage 22s with modified long rudder

standard one for use on flat water penetrates about 4cm beneath the hull line of the boat and a long rudder for use on waves which projects down about 10cm or so.

Originally the rudder on my boat had a squarer form but the previous owner used it on a lake and found it caught weed so he shaped the front to have a smooth weed-shedding curve.



Rudder removed showing the deep 'keel'

The hull just in front of the rudder is a very deep sharp V, which is almost like a keel that runs for a metre or so at the stern. This has the effect of rendering steering strokes from the paddle ineffective. To turn fast, the stern needs to skate across the water surface. Slewing this boat's stern is like pushing a plank flat-side on through the water. The integrated rudder is fine for going in a straight line or for gentle curves, but almost hopeless for turns.

What to do about this? Another long kayak that I use in the sea had a multisport style rudder, which was not ideal in waves. On that boat the original rudder was swapped for an underslung one in the style of a surf ski. The change was highly effective. The rudder is under the hull about a metre from the stern and so is always under water. The turning circle improved dramatically. The drawback is that this rudder style is not good for beach

landings and worse for launches as the rudder needs to be in deep enough water to clear the seabed. However if launching and landing from a boat ramp or jetty, they are great.

Surely the steering would have to improve from such a change. Wrong. After some hours of work to install the new rudder, turning ability actually got worse. The turning circle had increased by about 10%. I couldn't believe it. Back went the wacko Mirage rudder. Second serious failing.



Sea kayak modified to have an underslung rudder. The wooden thing is a weed guard.

I gave up trying to solve this one.

I do not consider the Mirage 22s to be a safe seagoing craft. It is very unstable, it's impossible to brace or roll reliably and its steering is so poor in certain conditions it could get you in trouble.



Underslung rudders steer brilliantly but are trouble on beaches

I finally decided to sell the damn thing. It was no use to me for any of the things I use kayaks for. In my advert I went to lengths to say it had super straight line speed but was not manoeuvrable and was definitely not a boat for beginners. Fortunately someone who knew Mirage kayaks and who was used to less stable boats bought it. When he collected he also had a JKK Supernova on the roofrack. I wish him better luck with it than I had.

In the boat's defence I should say the previous owner used it very successfully on lake Taupo, in particular for long crossings. He managed to do the 42km 'Trans Taupo' route in under 4 hours, which is a stunning achievement. If you have the balance of a circus gymnast, the legs of an octopus and want to go extremely fast from A to B in a straight line, the Mirage 22s may be the boat for you.