Kayak Bike Trailer Kitset Instructions

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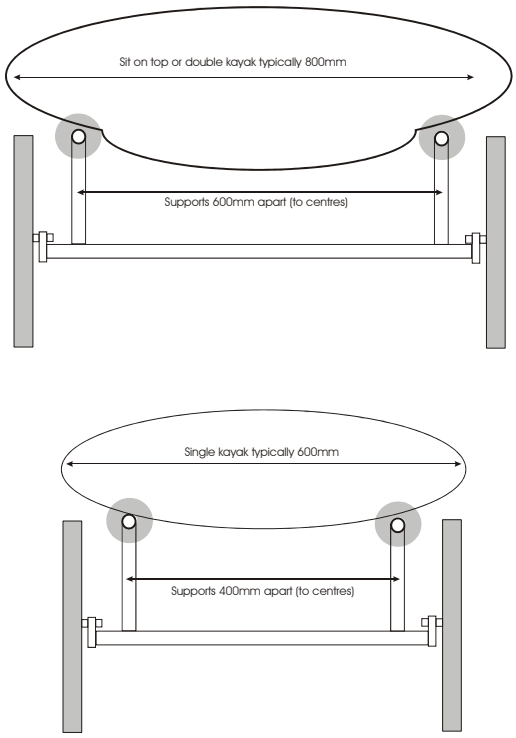
Introduction

Take a look at my website www.cyclingchurch.org.nz for details of the hilarious book I have written called PROSACC – Profound Revelations of Sunday Afternoon Cycling Church. Articles on bike trailer design, bike trailer workshops and supermarket challenges are available on www.cycletrailers.co.nz as well as a half hour interview of me on Radio New Zealand. Also look at the world's first ever fossil-fuel-free multisport event on www.cycletrailers.co.nz/multisport.pdf

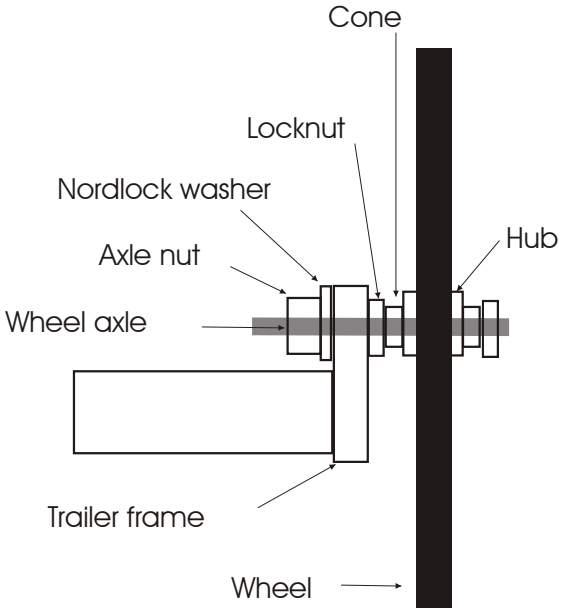
Kayaks can be carried successfully on a trailer with a very long towbar and I am happy to build you one, however the long towbar is expensive, and storing the trailer, when not in use, is difficult. Strapping the wheels & axle onto the kayak and using the kayak itself as the towbar is much simpler. A wooden extension on your carrier/pannier rack is usually required and the handle of your kayak can be tied on with a piece of rope or strap. The trolleys you buy from kayak stores are good for low speed walking 100m across sand, but tend to have small fat tyres and bushes rather than bearings, so will wear out quickly if you try to bike several kilometers to the beach/river with them, and be harder work to tow. Using bicycle wheels with good bearings is a much better solution for longer distances at speed. Furthermore, the store bought trolleys often have just one attachment point for the strap onto the trolley which means the trolley can rotate on the kayak if you hit a pothole or similar at speed. Having two attachment points a reasonable distance apart prevents this from happening.

Note: you must have some form of handle/tying point on the front of your kayak for this to work.



Step 1.

Decide on whether you require a narrow or wide trolley. This will largely depend on whether it's a narrower single kayak (narrow = 600mm kayak, 400mm between supports) or a wider double or a sit-on top kayak (wide = 800mm kayak, 600mm between supports).

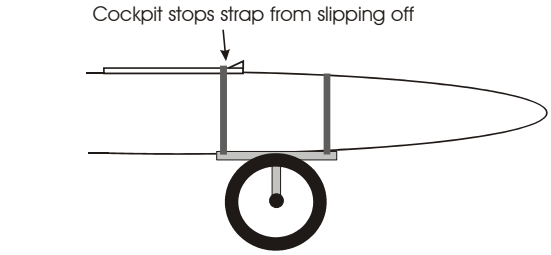


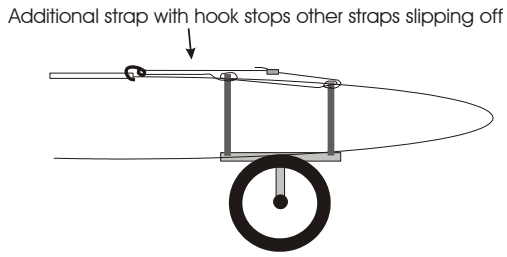
Step 2.

Find a set of two 16" wheels (new ones can be supplied). 12" will be ok but are slightly less efficient than 16". 20" wheels can be used but will need a custom built trailer with a higher support (270mm rather than 220mm) to give sufficient clearance between the kayak and the wheel. The advantage of a 20" wheels is that you can get very strong 14mm axle bmx wheels which are stronger for heavy double kayaks. If you are using 2nd hand wheels, the cones and locknuts may need to be offset to one side of the axle to provide enough thread on one end to do up the nut. A thin cone spanner is required for this, so if you do not have one available you may need to visit a bike shop to get this done. Some kids bikes have smaller front axles which can break under heavy loads (> 30kg) particularly if you are on rough surfaces.

Attach your wheels to the axle. Ensure the nuts are tight with a spanner tightening on **both** sides of the trailer frame, otherwise they may work loose.

Because the axle is only attached on one side, it is more likely the nut will vibrate loose over time. A 10mm Nordlock washer (Blacks Fastners) is the best thing to prevent this from happening.



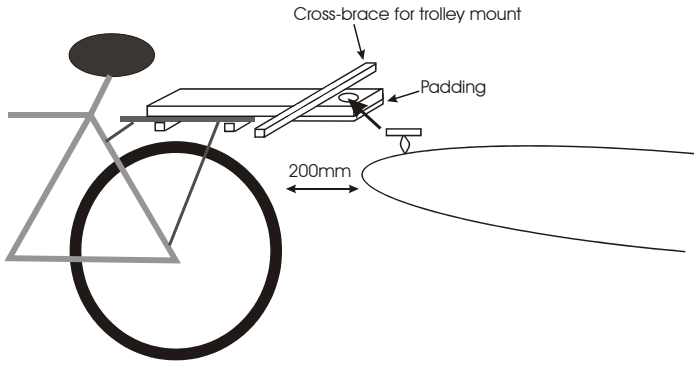


Step 3.

Attach the axle to the kayak to the rear of the cockpit using two cam-lock straps threaded through the kayak supports. Bungees are not sufficient to hold the kayak securely. Fitting it to the rear of the cockpit means:

- there is a small amount of downwards pressure on the attachment point which reduces the jiggling that can occur.
- It reduces the angle of the kayak and reduces the chance of the end of the kayak scraping on the road going over bumps. Clearance should be at least 200mm at the end of the kayak.
- The further back the wheels are, the less 'fishtailing' occurs. For kayaks over 4m long it is very important to have the wheels well back.

If you are hand pushing the kayak, the centralised wheels with better balance is preferable.



Step 4.

Attach a piece of wood (approx 75x25mm) to your carrier rack so that there is around 200mm clearance between your back wheel and the front of the kayak. The tyre can wear a hole in the kayak very easily even with just the occasional bump, so make sure it will never contact.

A cross brace makes a good point to tie off the kayak handle, and is also very useful if you wish to kayak down a river and jog back to collect your bike & trolley. The trolley can be strapped securely to the cross brace for cycling back to your kayak.

A large hole in the wood is useful to pass the kayak handle through to be tied off. Padding under the wood will prevent any possible abrasion occurring to the kayak. Try not to leave much slack in the handle as the jiggle that occurs is irritating. Take it easy if you go onto a cambered surface e.g. from the road onto a footpath. The combination of a bump and camber can cause the kayak to roll over.

Fossil fuel multisport action

Trolley strapped to wooden cross brace to retrieve kayak