

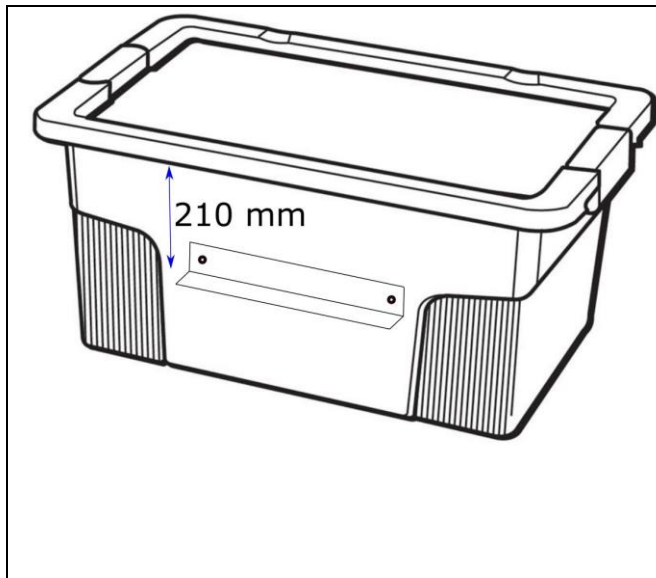
# Light Weight Cheating Camel Cycle Trailer Kitset Instructions

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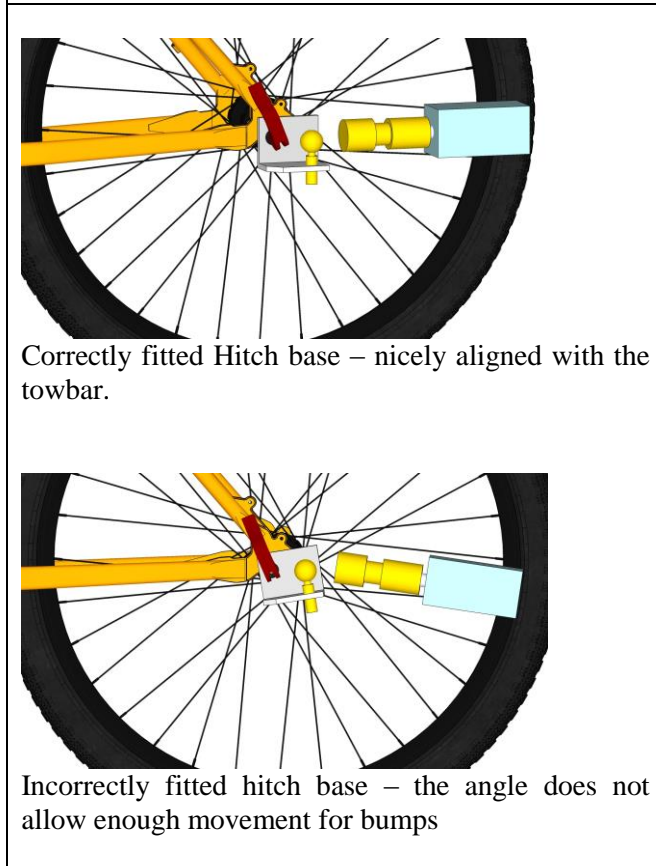
Follow the instructions below. Please note you are responsible for the safety of the finished trailer. While I endeavour to provide parts of good quality that should perform well for many years, you are the one to put it together and make sure it operates in a safe manner.

A technical diagram showing a side view of a wheel being mounted onto a metal axle. The axle is inserted through a hole in a metal frame. On the left side of the axle, a nut is being tightened onto a Nordlock washer. On the right side, a cone is being pushed onto the axle, and a locknut is being slid over it. Labels with arrows point to the Wheel, Nut, Nordlock washer, Locknut, Cone, and another Locknut.	<p><b>Step 1.</b></p> <p>16" wheels are ideal for the lightweight trailer, but 12" or 20" wheels are also acceptable. Anything larger than 20" is too prone to rolling the trailer. Using 20" BMX wheels with 14mm axle will increase the strength of the trailer significantly. 9mm axles of cheap kids bikes will not cope with heavy loads over time but can be used with lighter loads. Rear wheels or front wheels with 10mm axle are generally strong enough.</p> <p>Depending on your wheel axle length, 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. You can cut off any excess axle length with a hacksaw.</p>
A 3D perspective diagram of the trailer frame. The frame is made of metal tubing and has two wheels attached to the dropouts. The front wheel is on the right and the rear wheel is on the left. The frame has a curved front end and a flat top bar.	<p><b>Step 2.</b></p> <p>Attach your wheels to the dropouts on the trailer frame. Ensure the nuts are very well tightened or they can vibrate loose. The Nordlock washer should be under the nut and is important for preventing the wheel vibrating loose over time. Use two spanners, tightening on <b>both</b> sides of the trailer frame.</p>



### Step 3.

The bin should fit snugly inside the frame leaving around 120mm ground clearance with 16" wheels. There will be a little more clearance if you use 20" wheels. A thin aluminium angle is bolted to the side of the bin to hold it at the correct height. For the Jobmate 100 litre bin this is typically 210 mm from the underside of the top lip to the bottom of the angle. Check this before fixing the aluminium angle to the bin. Place the bin in the trailer and see where it fits snugly into the frame without bending the sides more than 2mm or so. Too tight will distort the bin and make lid fitting challenging. Too loose will mean the bin rattles a lot when empty. Alternatively you can permanently screw or rivet the bin to the inside of the trailer frame.



### Step 3.

Attach the hitch base to your bike underneath the rear wheel nut or quick release lever (left hand side). It stays on your bike all the time. It is important to align the tow ball with the tow bar and quick disconnect ball joint coupling to allow up/down movement over bumps. If there is a permanent angle on the tow ball relative to the tow bar, there may not be enough play and the ball joint may bend or break.

It is also important to make sure the quick disconnect ball joint coupling can rotate at least 90° on the bolt thread in both directions. It would pay to get in the habit of checking this every time you connect the trailer on as it can tighten up over time and will damage the ball joint if it cannot rotate freely.

### Safety Information

- A flag, reflector, reflective tape and rear lights are very good additions to make the trailer more visible.
- Every time you connect the trailer make sure the hitch can rotate freely in either direction on the thread.
- Check the wheel nuts occasionally to ensure they are tight.
- Be careful on sharp right hand turns as the tow bar can rub against the back wheel of the bike putting a huge strain on the tow ball. Most corners are fine but do any U-turns to the left.
- Don't overload the trailer. 70 kg is about the limit. Wheel axles will tend to break before the trailer frame.
- Don't use the trailer on a bike with disc brakes without thoroughly testing the towbar doesn't bend the disc under all turning/falling over movements. This is usually only an issue with extra-large discs.
- Be careful when going up curbs particularly with an unloaded trailer. If you get a wheel hitting the square edge of the curb they will flip very easily.
- If your bike is in the habit of falling over regularly this will burr the edges of the ball joint socket and can (over time) result in the ball slipping out. Check the ball joint socket occasionally to make sure the edges are not damaged and replace the ball joint if necessary or file any burrs off.
- If you are loading heavy loads, disconnect the trailer or lay your bike gently on the ground to prevent your bike falling at an awkward angle and bending the hitch base. Don't rely on a bike stand or balancing against a fence to keep your bike upright.