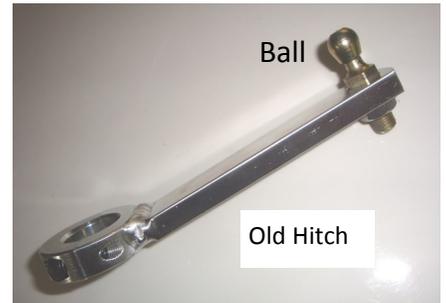


## Ball Joint Upgrade (trailers without brakes)

- ◇ Update the hitch/ball joint system on a wishbone shaped tow bar.
- ◇ If you have **brakes** on your trailer, purchase just a ball joint and a hitch nut which are sold separately in Parts and Accessories at [cycletote.com](http://cycletote.com).



### Removing the Old Hitch and Ball Joint

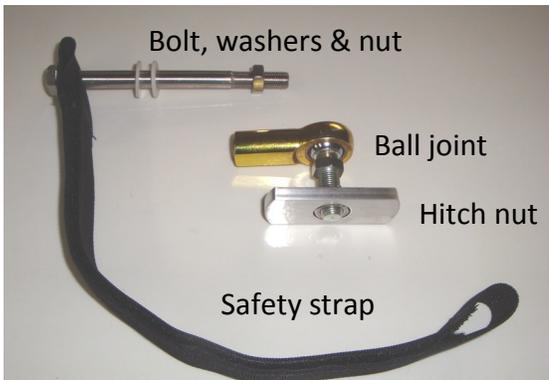
1. Unthread the receptacle from the bolt using a vice grip on the receptacle and a 9/16 wrench on the bolt.
2. If it doesn't loosen, try heating it with a butane torch to soften any Loctite that may be on the threads.
3. Once removed, these pieces can be discarded.
4. Remove the ball from the hitch and recycle the ball. Once again, you may need to use heat.
5. Save the hitch.

If the tow bar is T-shaped, as in the photos to the right, this upgrade will not work. Please contact CycleTote for more help.



## Attaching the New Ball Joint to the Tow Bar

Assembly instructions: Please add hardware to the tow bar before attaching the tow bar to the trailer.



1. Remove ball joint, nut and one nylon washer from the bolt. Leave on the safety strap and the other nylon washer.
2. **Apply a film of grease to the bolt** (grease not included).
3. Slide the bolt through the head of the tow bar, sliding from back to front.
4. Add the second washer and the nut. Tighten firmly **by hand**.
5. Screw on the ball joint. Tighten firmly by hand. When tightening, the nut should be tight against the ball joint so that the bolt doesn't wiggle which would cause a rattle, but loose enough to allow the ball joint to rotate. This is the trickiest part, so take your time.
6. If it is still on, unscrew the hitch nut.
7. Attach the hitch to a bike. Attach the tow bar to the trailer. Drop the threaded ball joint into the small hole in the hitch. Loosely wrap the safety strap around the seat post. The strap shouldn't bind when going around corners. Tightly screw hitch nut to ball joint, teeth side up.
8. Over time it may be necessary to readjust the tightness of the bolt in the tow bar to prevent rattling.

