

## Single Versus Tandem: The Debate Continues . . .

**T**his is one of the perennial debates in the world of trailerboats, and it's one the writer has been dealing with for more years than I'd care to remember, but the questions are always the same, the circumstances have varied very little - and the conclusions are just as inconclusive as they've ever been.

Over the years, we've had single axle trailers, tandem (two) axle trailers and tri-axle trailers (three) underneath the bigger boats we've towed around the country.

We've had all sorts of axle and brake combinations, but some of the basics haven't changed in 30 odd years.

Single axles fitted with hydraulic over-ride brakes are still a favourite, although the writer respects the fact that conscientious owners will maintain cable actuated brakes to achieve nearly the same efficiency as they can with the slightly more expensive hydraulic over-ride brakes.

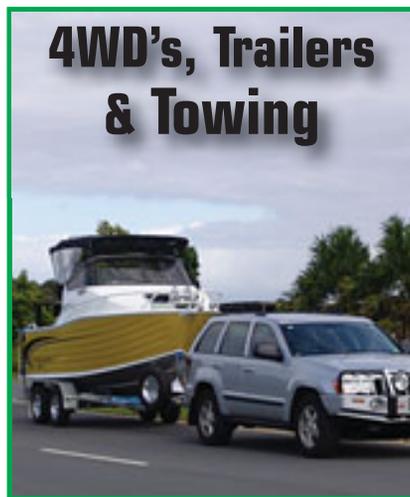
Similarly, as you go up in boat size and the trailers get heavier, the next issue is whether you have brakes on the leading (front) axle only, or have brakes on two axles, as in the case of a tandem. It gets worse when you go up to three axles because technically, you could have powered brakes on just one or two axles, let alone three.

Over the years though, some standards and commonsense has evolved to produce a basic set of "standards" that apply to most trailers purchased from a professional dealer.

All single axle trailers over 750kg all up, must have brakes, and they are either cable or hydraulic actuation with, as noted, hydraulic a bit more expensive.

When we go to tandems, it's almost universal to have tandems fitted with brakes only on the front axle in the case of BMT (boat/motor/trailer) rigs up to 1.999 tonnes. But when the BMT rig goes over the 2 tonne mark, it becomes virtually a standard to have both axles with brakes ie, 4 disc brakes under the trailer.

That works through to about 3.5 tonne loads, at which point, the discussion gets serious about whether tri-axles are warranted, or how big the disc brakes can be in a tandem set-up.



Without getting very technical here, suffice to say that if the boatowner needs a tri-axle to carry a load that's therefore going to be up in the 4.0-4.5 tonne class, then it behoves him to have the best possible braking system and that means something like the big Trojan discs we had under *Dusty Rover* and *Far-Away*, with power actuation from AL-KO's Sensabrake system from NZ, or the increasingly popular Hydrostar system from the States. There are others, but they are of fairly minor consequence in Australia at the moment.

### Starting Over

We've been studying boat trailers very carefully in the last couple of weeks because we had to sort out the best type of trailer for the inbound Trailcraft 560 we're currently fitting out as this magazine is produced.

Because we were working with Phil and Warren at Oceanic Trailers here on the Gold Coast, we virtually had open slather as to what sort of trailer we were going to put under the Trailcraft.

This is one of the great things about Oceanic. They're not necessarily wedded to one supplier's products, and tend to buy according to the needs of the boatowner and the trailer.

In other words, if you've got a seriously heavy rig that's maybe not that long, they would almost certainly advocate a load sharing spring set-up, with tandem axles and 15" or even 16" wheels depending on the owner's tow vehicle wheel size.

In our case, the issue was more tenuous, because we didn't really need a tandem trailer under the 560 because it's only going to weigh (we think!) under the 1.5 mark ready for the highway.

It's easily possible to build a single axle trailer with high quality wheels and tyres to carry 1.5 tonnes with a big margin in reserve.

The last round of Kuhmo 15" tyres we had, carried a rating of 1250kg each, so that just two of them provided a 2.5 tonne capacity and that's plus inbuilt safety margins. Two of these could easily handle the load of the Trailcraft 560, and set across a really good quality AL-KO IRS suspension axle, this gets pretty close to the state of play in high quality single axle trailers.

Especially for the sort of work we've got in mind ie, a complete mixture of long distance highway touring, quite a few dirt roads and the general 'give and take' nature of Australia's highways. And after the recent floods, there's going to be a lot more 'giving and taking' than ever before over whole sections of highway for a couple of years.

After a great deal of thought, we decided that we'd opt for the safety, and frankly, convenience in the event of wheel or bearing failure *en-route* to our target destination.

Of course, that sort of failure is possible with a single, tandem or tri-axle trailer, too.

The *out-in-the-bush* difference, however is profound. With a single axle, if the wheel disintegrates (it happens) and the stub axle drops to the ground, whether you're got a spare tyre is irrelevant - by the time you bring the screeching mess to a halt, assuming you've been able to do that safely, trust me, there will be stuff-all left of the stub axle and there's no way you'll get the mess off the end of it without a 'hot' spanner (!) in order to somehow get the spare wheel over it - and working. It doesn't happen.

This is the single biggest problem with a single axle trailer. It's not so bad if the bearings just run hot and fail, providing the wheel keeps going around reasonably happily as you bring the rig to a halt.

Then you can get out, jack it up and start doing your well practiced wheel bearing replacement on the side of the road, hoping to God that no B-Double semi comes too close, when you've got the thing jacked up and are stuffing around with the red hot wheel bearing.

More often than not, the writer has skull-dragged the trailer right off the highway just so that I can take it a bit

more calmly, and more safely, if 'it' hits the fan and I have to sit down and repack or replace the bearing, or just replace the wheel, etc.

If it's on the highway side of the trailer, this can be a scary process, and more often than not, it's better to half park the rig in a ditch than stay out near the highway.

The solution is a tandem axle and another wheel on that side, with the obvious codicil that each wheel must have sufficient capacity on each side to easily carry the rig *on its own* i.e. as if it was a single axle trailer.

In this way, if you do drop a wheel or mangle a bearing, with a tandem axle set-up, there should be plenty of support in the remaining wheel on the damaged side, to let you wash the rig's speed off slowly without drama, whilst you look for a good 'landing spot' to get off the highway safely.

*(You'll still know about it, because of the clouds of smoke, scraping and banging coming from the back of the trailer, plus a definite braking affect on the rig!)*

The difference is extraordinary – if you can slow down sensibly and make your way off the highway, you usually don't have to go too far before you can find somewhere that can happen safely.

When you've only got one wheel on each side and you drop one (especially the wheel itself) you just don't have that time. More often than not, you're an accident looking for somewhere to happen unless you are fairly skilful and have quick reflexes and/or you just get lucky enough to pull off the highway safely, and out of everybody else's way.

In my experience, Murphy's Law dictates that wheels will only collapse when you're driving through a mountain range, you can't pull off the road for probably 300 miles, there's a cliff face

on either side of the highway, a Kenny coming at you and a tourist coach up your arse - so you have to grin and bear it, dragging the boat down to a safe area.

I don't think I've ever had a wheel fail (and Lord knows over the years we've had enough of 'em do that) where there was a convenient, grassy, nicely mowed spot to pull in to, so I could sit my delicate little bum on the ground and have a coffee while I contemplated changing the tyre.

**“ If it's on the highway side of the trailer, this can be a scary process, and more often than not, it's better to half park the rig in a ditch than stay out near the highway. . . ”**

No way *Jose!* It's always been on the side of a culvert, on a flat-out highway and with the boat rocking on the jack as the B-doubles thunder by about 5cm off my backside.

But that's life, and the best way to circumvent these problems is to make sure you've got two wheels on each side and not one.

***Time-out: Vital for single axle trailer owners: before every trip, and then every couple of hours (minimum), carefully re-check your hub oilers, rock the wheels hard and look for signs of the bearings displacing the bearing grease. Look for oily streaks over the tyres, around the hubs themselves – and regularly check – every time you have a loo stop, for the hubs building up excessive heat.***

## Horizon Situation

Interestingly enough, we've been going through this very debate with the Horizon 445 Northerner too, a much smaller craft than the Trailcraft 560, with a lot less weight.

The good thing about small boats like the Horizon is that:

(a) There's never as much weight in them.

(b) Well maintained bearings will last for thousands of clicks.

(c) If they do start going, it's pretty easy to tell when it's going to happen because you can actually rock the wheel to check it every day i.e. you can attend to a repack or a replacement of bearings before you leave home or the camp site.

It's just one of those lovely things that seem to happen with small boats – properly packed bearings, good quality grease, Durahubs on the stub axle and you'll almost never have problems with small, light, well maintained trailers.

At press time, we still hadn't decided on the trailer for the Horizon, as both Ruth and I were a bit amazed at the size of this boat. Our “small, soft water creek and estuary boat” has grown in the process to be virtually identical to the 475 Trailcraft we had back in 2003-05. Nothing wrong with that either, but it has changed the way we're going to do things, and the application of the boat will change slightly too, as we are really getting very close to a true all round, entry level fishing boat that should be just as capable on Lake Eucumbene as it is off the Sir John Young Banks, or fishing out of 1770.

This new Horizon is a very versatile craft indeed, so it's back to the drawing board with the trailer and we'll have more on that in the next issue.

**F&B**

*First pics taken during Stage One of setting up the Oceanic trailer behind the new Jeep diesel. Here, the boat has to come forward, the tow bar raised about 25mm - but we won't change anything until all the bits and pieces - and our big Woolf anchor winch - are bolted on.*

