

Introducing a series of emails from a long term reader who runs a very interesting platey, with a wife and two beaut kids who share Dad's passion for boating and fishing in some of Sydney's beautiful waterways.

The emails were all about the troubles the reader (back to camera, we'll call him "Tony" because that is his real name) was having with the cable brakes on his otherwise well set-up and maintained alloy trailer. The correspondence went back and forth over a few days, and was interesting in various ways for other readers to share.

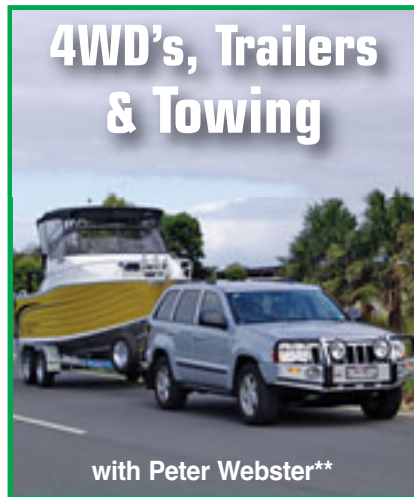
It starts with Tony explaining the problem, then PW responds - and then we have interwoven (in the blue type) Tony's responses.

G'day Pete, you have made a big impact on my boating life – a good impact – very happy. I am turning to you because I don't have the confidence in my local trailer guys to help me with a problem. You are a guru of many years experience and I value no-one's opinion greater than yours.

I have replaced the calipers and brake pads on my alloy trailer.

Why? Well, the old pads never wore out. The disc pad backing plate (the steel part of the pad to which the actual pad is stuck to) actually rusted after 6 years.

How can this be? I live 200m from my boat ramp and the pads never got used much and hence never wore out. Instead, the disc pad mounting plate rusted, expanded and thus pushed the



Q&A About Those Cable Brakes . . .

pad onto the disc causing the brakes to be applied permanently.

Of the 4 wheels, the brake pads of 3 were locked solid and I couldn't move the trailer.

I decided to replace all 4 calipers as well as all the pads. In hindsight, the calipers were OK but I replaced them anyway.

I lanolin oiled the calipers and I dare say I did the same to the brake pads mounting plate. I'm sure a good dose of lanolin oil got in between the pad and the disk.

When I adjusted my trailer cable brake turnbuckle, I did it fairly tight.

I locked the trailer hand brake on as tightly as I could. I connected the

tow ball onto the trailer tow hitch and put the car in drive, albeit at idle revs (800rpm – Nissan Patrol).

The trailer still slowly moved forward. I could feel the brakes grabbing to some degree but they were not holding the car back.

Is this supposed to happen?

I'm unsure if the lanolin oil is causing the brakes to slip or if I need to tighten the caliper adjustment bolts or the trailer turnbuckle. The trailer turnbuckle is quite tight and I thought the caliper adjustment bolt of each caliper were all fairly tight.

What do you think?

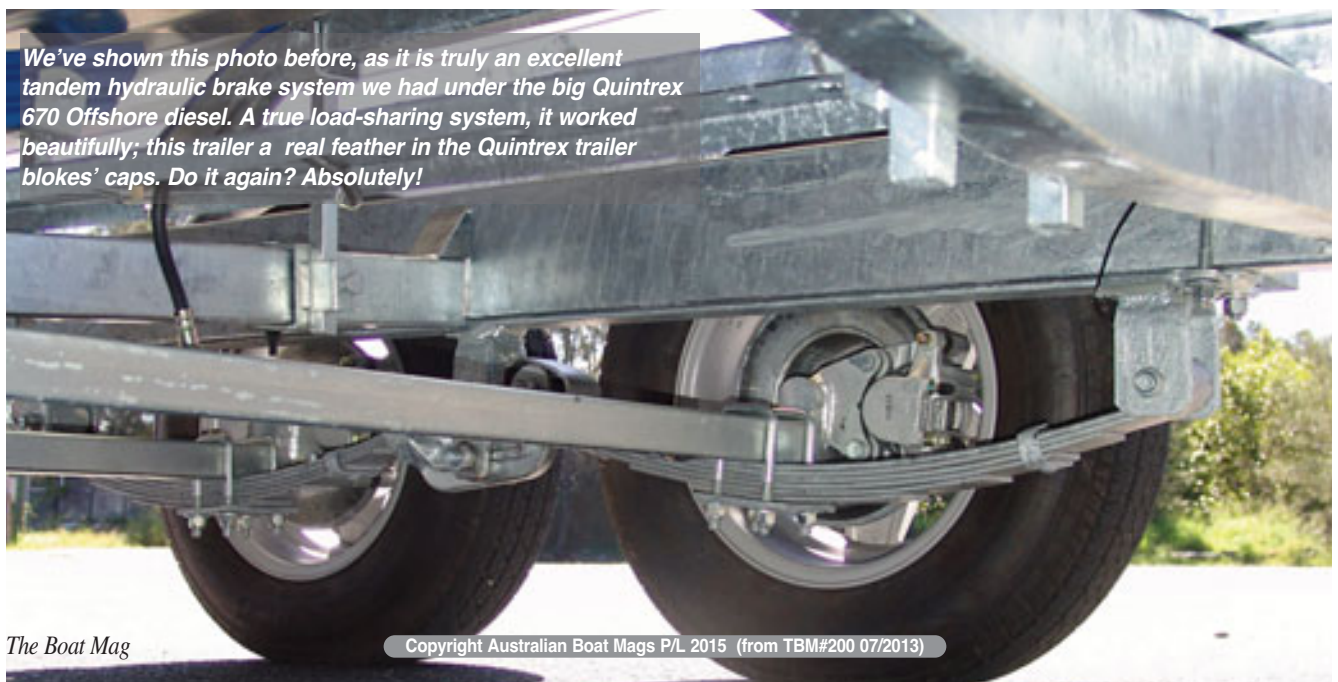
Tony,

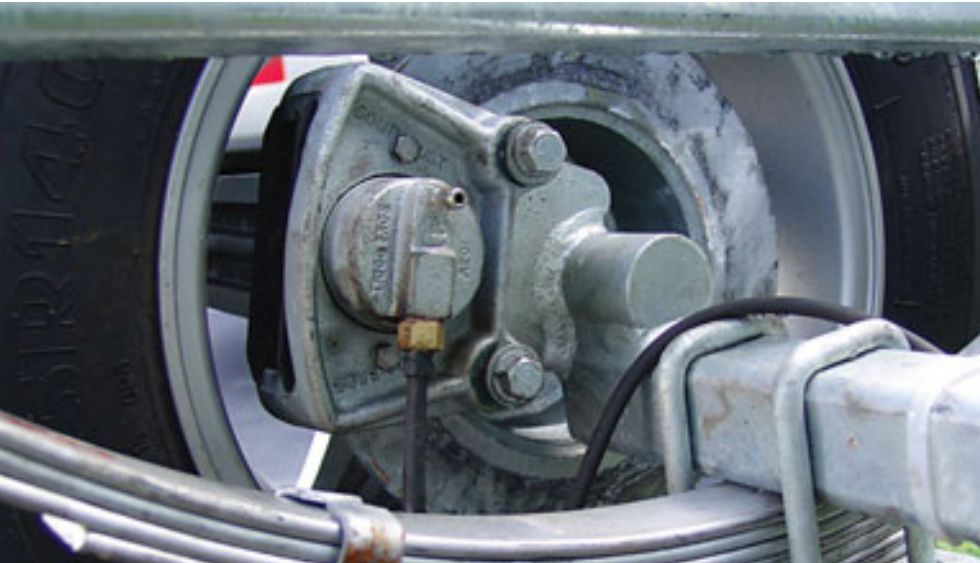
Sorry for the delay coming back to you. Busier than a one arm wall paper hanger at the moment, but I volunteered, didn't I?

The situation volunteered YOU, i.e., when someone said "who volunteers to do this, please step forward", everyone else stepped back. But I'm sure the anticipation and excitement of entering the virtual world stage online will keep you interested and excited, especially now there is no paper involved anymore or the logistical headaches that went along with that.

Task at hand - ungarished, unedited, uncensored; just between you and me, and about 9,000 readers.

First up, I hate cable brakes with a passion that borders on pathological, and you've just re-ignited my passion about the b . . . y things.





How can anyone seriously compare the elegance, efficiency and reliability of this level of hydraulics with a cable system? This is the Mackay Trailer system we had under the Horizon 445 Northerner.

I promise you, on or off the record, you will never get them to work properly, or consistently. Even if the whole system is done up with the sensitivity of the Tooth Fairy, and it is all working PERFECTLY, the very first time you apply the brakes hard - or just firmly, the bloody cable will stretch one and half pooftenths. By the time you've braked half a dozen times, the cable will have stretched so far the brakes will only be about 70% effective unless you hit 'em so hard you'll eject those beautiful little tackers of yours out of their seat belts, clean through the windscreen. And of course, next time after that, they'll be even less effective, won't they?

So S316, 49 strand stainless steel cable will stretch? Hmmm, that's an issue isn't it. Even though I have brakes on both axles, yes it's still a problem. The ONLY place I ever tow my boat is to the boat ramp a few hundred metres away and the last 30m of road is at a 30 degree decline leading to a "T" intersection. This is the ONLY place I need to apply the brakes at all, but it is a crucial spot. If the brakes fail, it will be catastrophic. Still, they haven't failed in 6 years of use almost every weekend.

Trust me, You Cannot Win, not with a big rig like yours. With a pressed tinnie in the 750kg-1250kg league, you could probably put up with 50-70% effective brakes for most of the time - but making absolutely sure you did a good 100 km run up hill and down dale locally (NOT on a freeway) to get them ready for a holiday away; that's a best

case scenario. The rest of the time you just accept they are next to useless in the stopping department around the 'burbs.

So if the brakes are next to useless and the rig weighs just under 2T and the car weight just over 2T and the brakes are applied firmly, the rig should show some signs of a jack-knife, wouldn't it? I understand that the brakes may reach this stage of ineffectiveness but perhaps in my low-stress situation, it may take years for the brake cable to loosen up to that degree...but I do take your point of being vigilant and I should tighten the turnbuckle a bit every 3 months or so.

Jack-knifing is extremely rare IF you have 5-8% of the rig's fair dinkum weight on the towball, and the trailer has at least a 5°-7° down angle to the towball, over the length of the trailer i.e. the boat trailer has a discernable slope DOWN to the towball. I doubt the Nissan would have anything like enough stopping power to create a jack-knife situation. A far greater risk would come from the Nissan losing traction on a wet early morning road, trying to pull up four (+) tonnes in a hurry, and starting to slide through the

**Peter Webster has been at the forefront of boat trailer development and research for many years, culminating (until recently) towing the mag's 4.5 tonne 8.2m Salty 27 on a tri-axle trailer, plus the 3.3 tonne 6.85m camera boat (a CCC cat) on a tandem alloy trailer with a Ford F-250. He is now focusing on 4.5m - 7.0m trailers with a GCVM under 3 tonne, with The Boat Mag's Jeep Laredo. For more information about the latest trends, legislation and regulations affecting boat trailers, readers are reminded the definitive publication "Trailers, Towing & Rooftopping" is still available on-line through www.boatmags.com.au

intersection . . . doesn't bear thinking about!

The pad and backing plate problem is another universal issue. All over Australia - but especially in western Victoria, most of South Aussie, 90% of WA, lotsa QLD, most trailerboat owners actually remove the pads, calipers and backing plates altogether to prevent what is happening to you. In thousands of cases - but especially in regions where over-the-beach launching is common, or the facilities are very ordinary, the local police invariably take the common-sense view 'that old Charlie is just going down to the beach from his house at 10km/h' and as long as the trafficators, brake lights and night lights are working perfectly on the removable light board - they don't even notice that the rig has no brakes at all.

What to do: What you are doing. Except that Webster's famous brew, Chateau Linseed Oil & Turpentine works better than lanolin.

Mixed carefully (only on the dark side of the moon) to be precisely 50/50 (with a tolerance of about 20% either way) and delicately poured into a plastic Bunnings hand squirter (the sort of thing my wife Mary uses to squirt chemicals on her roses so they'll grow naturally better) this brew works superbly - you just have to remember to use it EVERY time the boat is pulled out and the brake discs are reasonably shiny. You just duck down with your hand squirter and give the brakes a nice gentle spray of the brew. Then move the rig forward just a foot or so - and do it again.

(Time Out: This is a great opportunity for a little father: son bonding - besides, he doesn't have to bend down as far, and can more easily get under to spray the discs properly). *(Damn - I just realised that is another misogynist, sexist comment. Bugger - start again: Get that cute-as-a-button little blonde daughter of yours on the job - SHE too can get down on all fours and squirt the damn brakes - okay?)*

Ah yes - I do remember that trailer moonshine of which you extolled the virtues some time ago. I had forgotten the recipe and I will distill some for the trailer ASAP. I don't know if the lanolin oil and moonshine will react chemically and create some kind of freaky acid that will eat the pads...Will

4WD's, Trailers & Towing

your brew dislodge the lanolin oil? As for the kids? See, if you had mentioned my daughter helping me in the first instance, you would have branded yourself a misandrist for not mentioning my son - can't win either way....and if I DID get them both to help me, my son Aaron would call his sister Trinity "Trinny the Poo" and she would call him "Aaron Sharon" (implying he's a girl) and her 6 year-old-sumo-wrestling physique would plough into his 12-year-old-skinny figure and it would be on for young and old. I would be left holding a squirty bottle of moonshine and banging my head on the reverse stepped chine in a feeble attempt to get up from under the rig and prize them apart with the crow bar. Then the wife would come down, survey the situation, see me with a battered forehead, holding a crowbar menacingly at the kids who are entwined in a WWF bout that Hulk Hogan would be afraid to be tag-teamed into, and my wife's sense of logic would be "See, I told you boats and fishing is bad for the kids.". I might end up DRINKING the moonshine instead

Is this a pain in the bum? Yes, definitely. Will it stop the probs you are having? Yes, definitely. BUT you'll also have to do a couple of other things.

Firstly, back the cables off so there is some slack right through the system, so there's maybe 15-20mm slack at the over-run head to take up before the brakes are actually applied. Think of it as pre-stretching! It also means when the brakes do 'come on' they DO come on with a little bit of a jerk - but this actually helps the process of knocking off any rust scale that's accumulating; it applies the pads a bit harder (ditto) and importantly, ensures they won't work at all when you are just crawling through traffic ie. with my brew carefully applied, they won't be grabby or worse, staying on.

I'd also preface my comments about Chateau Linseed Oil & Turpentine by suggesting that you give the rig a good run AFTER you've eased off the cables, AND sprayed the discs with plenty of the brew - take it for a good long run



One of the major advantages of a well set-up hydraulic system is a handbrake that actually works - and that can be very useful around the yard.

up, but particularly DOWN a few beautiful hills where you can apply the brakes for quite a way - and make sure the disc surface is cleaned up. Then, when you get home, get the 'B' team on the job with the squirter, so the rig is put away with a nice coating over the (hopefully) shiny discs.

Tony if all this fails - and ultimately, given the size of your rig and using cables it almost certainly will (be they stainless or gal steel), start saving.

Further down the track, take the trailer to your nearest Dunbier trailer branch, and invest in two new axles and stub assemblies, complete with their excellent new stainless calipers and discs, along with a retro fitted HYDRAULIC over-ride system.

If the BMT rig is under two tonnes which I'm assuming it is (but it must be awfully close to the 2-tonne limit for over-run systems) the hydraulics work beautifully, require very little maintenance beyond regularly checking fluid levels and making sure there are no leaks anywhere thru the lines (very, very rare) and enjoy the experience.

Pete, my previous rig (7.5m platey, twin yammy 115's, etc) was a 3.5T BMT package. It sat on a McKay gal roller trailer with electric over

hydraulic brakes. The brake system was new to me and I was very suspicious of it (being new technology). The brakes worked well, never missed a beat and I never maintained them for 9 years. Only the brake pads wore out and were changed prior to sale of the rig. For my current rig, I purposefully opted for an alloy trailer, not only for the anti-rusting properties, but also for the weight saving so as I don't have to spend that 5K (that I didn't have) on electric-hydraulic brakes. The current BMT cost me \$74K and the boat is underpowered (140 suzy isn't enough but that's another story) and it would cost another 5K to upgrade to a 150 suzy...let alone another 5K for the trailer brakes. I'm kinda stuck now. Wife hasn't gone back to work yet (but will have to soon), son going to private high school next year, etc, ad nauseum... So trailer cable brakes will stay for a while. I will get them adjusted by my local guys and get a receipt for their work. Then I'll spray the brakes because the disks are quite shiny albeit probably with an over-sprayed coating of lanolin oil. Once that is done, I'll have a shot-glass of the moonshine after each trip and the brakes might get some too.

But you know something? Even with the stainless steel (or bronze) caliper and disc systems, you should STILL give them a coating of Chateau Linseed Oil & Turpentine every time the rig is hauled out of the salt.

I know it is hard to believe, but today, we can make trailer brakes work perfectly, time after time, year after year, but like anything else that goes in and out of saltwater, they have to be looked after thoroughly. Once you get into the habit of giving them a quick spray after each trip, it will become second nature.

Yep - I'll spray the brakes myself after each trip so hopefully this will keep the pad backing plates from rusting, then adjust the brakes each season by tightening the turnbuckle a poofteenth. Your in-depth response is much appreciated, even if there is a pathological slant against cable brakes....

TBM