

Over the last month or so, the writer has been involved in a number of different boat trailer issues, concerning boats ranging in size from 7.6m LOA, down to the 4.40m Mako Craft Frenzy and its country cousin, our sweet, Honda 60 powered Horizon 445 Northern Fisher that we like very much.

It's not that we aren't fond of the Mako, either – but it's not finished yet, and hasn't been launched. At the time of writing, its scheduling has been put back due to delays in getting its strapless bimini frame completed and powder coated (a couple of reader-purchased frames and biminis had to go through first) so that our fitting-out team at KLM Marine can complete this interesting boat's fit-up.

Travel wise, they are both on similar capacity trailers, although the Horizon has a very sophisticated Mackay trailer which we featured previously in T&T, whilst the Mako Craft has one of the latest Dumbier trailers – but without a number of the 'super options' fitted to the Mackay trailer.

Heading our work list last month, however, were the preparations for the tandem Oceanic trailer for its long trip down to SA when its new owner came across to pick it up. Part of our job was to make sure the Oceanic trailer was ready for a 3,000km trip from the Gold Coast back to the Eyre Peninsular in SA (via Broken Hill, NSW), and this meant quite a deal of time preparing the tie-downs, straps, checking wheel bearings, tyre pressures etc, for the long haul. Everything went according to plan, and Brian (the new owner) had a pleasing, hassle-free run back to SA.

Turning Back The Clock

The fourth leg of the month with trailers was fascinating – we were able to study one of the original project boats the writer built back in 1982 (true!) for *Australian Boating*, the Star 25 diesel sports cruiser.

Back then, this was considered a ginormous trailerboat, and we put together a very special trailer with a trailer company that's no longer around, involving oversize circular axles for the tandem, load-sharing set-up, vacuum-powered disc brakes (that really did work) and a capacity to put serious weight on the tow bar.

Set up behind our trusty Landcruiser 60 we had back then (didn't everybody?), we towed this big platey

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Big 'n Bulky Issues . .



from Sydney to all points right around eastern Australia, from Port Lincoln in SA to Port Stephens NSW in the north, over a two year period.

As we've written several times over the years, this boat, called *Tracey J-3*, was easily one of our most popular and successful project boats, racking up hundreds of hours on its ultra reliable and very economical Volvo AQAD-40 diesel sterndrive – one of the first of its type ever installed in Australia.



For it to surface again in 2011 was a matter of great interest, and of course, begged the issue about towing such craft in this day and age – not with our old Landcruiser(s), but with the much more sophisticated Jeep Grand Cherokee Laredo we now have for our work vehicle.

It's particularly interesting to the writer because this touches on a subject that's been a hobby horse of mine for many years – that is, it's not so much the dead weight of the BMT package that matters, as it is the length, bulk and the balance that's been achieved on the trailer.

Here we had a situation where the craft originally weighed just 3.29 tonnes on its trailer, with 100L of fuel left in the tank and all its service equipment. So in other words, it was fully found at 3.29 tonnes.

On top of that, we would regularly add about quarter of a tonne of camping, fishing and photographic equipment laid out on the floor of the ultra-long cockpit, and more often than not our faithful hound Rastus, who travelled many thousands of kilometres, happily snoozing in the boat.

The question then emerged last month, how would the Jeep handle this rig, given that it is only a 2.3 tonne 4WD, and whilst that's about the same weight as the old Landcruiser, it's a significantly lower and more compact vehicle.

Horsepower isn't the issue. We purchased the Jeep Laredo specifically because it was one of the last ones in Australia with the beautiful 3.0L Mercedes diesel and gear box sitting in the Jeep's Quadra-Trac 4WD suspension and drive system. These RH drive vehicles were built in Austria by Magna Steyr, and offered, in the writer's humble opinion, a very rare combination of European diesel expertise and American 4WD off-road and towing knowhow.

This has proved to be an accurate assumption thus far, and we are, it must be noted, delighted with the vehicle. With 500nm of torque from its 3.0L common-rail turbo Merc diesel engine, we have ample power – considerably more in fact than we had in the old Landcruiser(s) we used to tow *TJ-3* originally.

So you were wondering “*what’s the problem?*”

Well, what gave rise to some doubt about towing capacity was actually a very old photograph in a 1982 edition of *Australian Boating* that featured a full test report on *TJ-3*. On the last page of the test, was a photograph taken at Bayview (Sydney) launch ramp showing from the front bumper bar of the old FJ-55 Landcruiser back to the prop on the Volvo, in a unusual wide angle photograph. (See reproduction, lower left. The LandCruiser Wagon was upgraded to the 60 Series just after this pic was taken).

There, it was easy to see the Star, on its big Girlock trailer, almost dwarfed the Landcruiser, given that the BMT rig was a shade over 30’ long (9.14m) overall, and the Landcruiser was probably about 16’ or 17’ (about 5.0-5.3m).

Mentally substituting the Jeep Laredo for the Landcruiser, it becomes very apparent that pulling something like the Star with the Jeep regardless of how powerful the engine is, raises a whole bunch of secondary, but none the less vital issues.

The Bulk Factor

“ . . we could stop the entire combination with just the brakes on the boat trailer alone . . . this is something every boatowner should make as his primary objective. . ”

I’ve written about this before, but I’d like to reiterate the point because I think many people overlook the importance of the issue.

The weight of the BMT rig is obviously a matter of great concern in terms of relaxed towing ability on the highway and in reverse, having the ability to bring the whole rig to a safe halt within desirable, if not legal limits.

That statement covers a multitude of sins, I realise, because what is acceptable to one driver may be totally unacceptable to another – but for the moment, let me pass on that by just stating that we’re talking about bringing any trailerboat to a halt within the same distance you would otherwise bring that tow vehicle to a halt - without the boat, motor and trailer on behind.

In other words, the boat trailer has sufficient braking power to maintain (at least) parallel performance with the tow vehicle.

You may well scoff at the possibility,

but I’m here to assure you, it can be done with today’s modern trailers and braking systems. Right across the boards too, with small trailers and large.

Recently, we tested the Horizon’s Mackay trailer with a BMT package that only weighs about 1.0 - 1.2 tonnes depending on its load – and the brakes (just override disc brakes with hydraulic actuation) worked superbly, with the result that the BMT package made no difference to the Jeep’s braking distance without the trailer attached. Entirely as it should be.

At the other end of the scale, with the huge 8.2m *Far-Away* cruiser sitting on the tri-axle Cairns Custom Craft trailer powered up by the ALKO power brake booster, driving hydraulically-actuated Trojan disc brakes on all three axles, believe me, by pressing the boat trailer-only activation switch on the dash, we could stop the entire rig – that is 3½ tonnes of Ford F-250 plus 4.5 tonnes of *Far-Away*, almost faster than the Ford could stop in its own right – and that was without using the Ford’s brakes at all!

It was one of our finest achievements, and a real credit to the engineering of CCC in north Qld, and further, to the power of the ALKO power brake system. But it’s true, we could stop the entire combination with just the brakes on the boat trailer alone – and this is something every boatowner should make as his primary objective.

Back To TJ-3

So, I was thinking about this at great

The Quintrex 680 Offshore Hardtop only weighed 2.5 tonne dressed up and ready to roll, but even behind the huge 3-tonne F-250, the rig stood well clear of the Ford’s wind shadow - imagine how much more drag or buffeting reaction would be created with a smaller, lower tow vehicle.



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length because if we accept that the Jeep could easily pull *TJ-3's* 3.29 tonnes (the Jeep is rated for 3.5 tonnes) what really was the issue? And the answer goes back to the issue of bulk and balance.

Although some of these big ally rigs are fairly light (and *TJ-3* is an excellent example) they are nevertheless, often long and very bulky – especially the larger models like *Far-Away*, *Dusty Rover*, *Genesis*, the *Quintrex 680* and in this other case, the old girl, *TJ-3*.

The bulk of these craft can present issues for the driver that can be quite hard to cope with.

Running towards a fast approaching passenger coach on the Bruce Highway (for example) where the road is just 2 lanes wide, can result in a wind wave in the front of that coach which is enough to send the boat several feet sideways as the wind wave passes along the side of the BMT rig.

Unless the rig's properly set-up, this alone can create a 'tail wagging the dog situation' in the worse case, and even in a good case, for a moment, knock the trailerboat back off the main road by 300-400mm quite easily – at which point, the trailerboat, will hopefully flick back towards the middle.

They do, mostly.

Not Just Big Boats

In case you're thinking this is something that doesn't affect you, let me hasten to point out that if anything, smaller boats in the (say) 1.0 – 2.0 tonne range are probably even more affected by windage of this kind, especially if the tow vehicle is itself fairly light, not to say one of the new modern SUVs that are all gloss and glamour and not a heck of a lot of kerb weight or wheelbase.

Remember, today's automotive engineers are working overtime to get the weight out of their vehicles so that they can use less power to achieve a given level of performance and thus claim great gains in fuel efficiency – that's just another word for getting the weight out the vehicle so they can use a smaller engine.

Thus, many of the new SUVs coming through have lighter bodies with much



Ford Release New Ranger Series

"Designed from the ground up, this highly anticipated all-new model range, available in both 4x2 and 4x4, has been comprehensively developed to meet the specific needs of Australian ute and light truck customers," Bob Graziano, President and CEO of Ford Australia said. Australia will be the first of 180 international markets to release the all-new Ford Ranger when the first models go on sale locally in October. Three cab styles will be available: Double cab (four doors) Super cab (two conventional doors; two rear panel doors) and single cab (two doors).

An all-new family of engines will power the all-new Ranger model line-up. They are:

- 3.2-litre Duratorq TDCi five-cylinder

turbo-diesel engine with a maximum torque of 470 Nm and power rated at 147 kW

- 2.2-litre Duratorq TDCi four-cylinder turbo-diesel engine with a peak torque output of 375 Nm and maximum power output of 110 kW

- 2.5-litre Ford Duratec four-cylinder petrol engine producing 226 Nm of torque and an outstanding 122kW of power.

For the first time, turbo-diesel Ranger models will be available with either a six-speed manual or six-speed automatic transmission to provide reduced engine rpm and extend driving range on long highway trips or in city traffic. Petrol models will have a standard-fitment five-speed manual transmission.

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more plastic in them, smaller 4 cylinder engines (both petrol and diesel) with the end result that they are actually pretty dreadful tow vehicles – despite the brochure saying you can tow a 2.3 or even 2.5 tonne BMT package with it.

Well you might in a suburban environment, and even on short trips to and from the launchramp.

But if you've got your heart set on taking the new BMT rig north (or south or west) for that holiday of a lifetime, it behoves you to think very carefully about that vehicle's capacity to handle not just the weight of the BMT package, but the bulk of it as well.

Regular readers will know the writer is passionate about the bulk of the boat standing above the wind flow of the car or 4WD towing it.

You can have all the horsepower in the world, but if you're heading west across the Hay Plains (or south against the sou'easter from Townsville to Mackay, or Mackay down to Rocky, or similar places out in the bush) working against strong prevailing winds can pull you back 20-30kph. It's exactly the same as losing 20-30% of your available horsepower – simply because the boat is standing so proud, high above the wind flow of the towing vehicle.

Summary

So all these things were in my mind when I mentally imposed the picture of the Jeep in front of the Star and I thought to myself "Self, this would look like the *Queen Mary* behind a rowing boat: it would dwarf the Jeep. How things have changed . . ."

In turn, this would result in a major drawback in terms of swift highway towing. Towing fast and economically would (thus) only happen on a day when the wind is behind the rig, or it's a very still day.

Even if it is a still day, just pulling that rig through the air behind the Jeep would create massive drag, so once the rig gets up about 75-80km then the fuel consumption is going to go clean through the roof.

The moral of the story is that if long distance towing is envisaged and most of us still have the dream, it behoves each of us to think very carefully through the issues of windage, bulk, and finally weight – but as noted, weight is just one of the issues that you need to contemplate.

Frankly, in most cases the weight of the rig is not nearly as significant as its bulk.

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