

THE WATER'S EDGE

Whether you're new to beach driving or an old hand, here are a few tips that will get you further!

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By: **AshleyD** | September 1st, 2011



Go to any popular drivable beach area during the school holidays and you'll swear you are driving around at peak hour, especially when you are talking about places like Fraser Island. Literally every conceivable 4WD and camper trailer combination will be running up and down the beach when the tide is right. And then there are the inland tracks. More like a traffic jam if the lead 4WD gets bogged, blocking the one lane, one-way tracks that litter the island.

Driving on sand is an experience that everyone should try, and many believe that it can teach you more skills in one day than you could get in a whole week while driving around over other terrain types. If beach driving is what you need to experience, then we've just found an excuse for you to take a trip to Fraser Island, Stockton Beach or even Lancelin.

TYRES AND PRESSURES

Sand offers up resistance by the bucket load, and as soon as you feel your 4WD starting to lose momentum, it quickly becomes apparent how quickly as your 4WD comes to a stop. Sand creates a small mound in front of the tyres as it pushes the loose top layer forward, and your tyres are always trying to ride up and over it. This isn't too bad on hard or moist sand, but soft or loose sand can be a tough slog.

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Tyres play a big part in it, with the best sand tyre being a highway terrain or all terrain. They have a less aggressive tread pattern meaning that they are not always trying to rip down this small mound of sand in front of the tyres with those nice, big aggressive lugs. Instead, the smoother tread surface helps to 'ride' the tyre up the mound, reducing the resistance as it goes.

Aggressive tyres like your muddies can also get you moving along the sand. Reducing your tyre pressures allows the carcass to bend and mould itself to the shape of the sand mound, reducing the tyre's desire to dig into the sand like the edge of a hot knife into soft butter. Rather than pushing through the sand, the leading edge will flex and try to ride the sand instead. Muddies can also do this, though letting the tyres down to an even lower pressure starts to bring in new concerns.

When driving on sand, your tyre pressures need to be set for the conditions: 80km/h down the beach at Fraser Island doesn't need 14psi, because all you will do is heat up your tyres and delaminate them from the inside out until they destroy themselves.

Steve Vickers from Exclusive Tyres has seen countless tyres destroyed while driving on sand, and he has put each failure down to using the incorrect tyre pressure, speed and vehicle loading. Steve recommends that you set up your tyre pressures correctly, and this will be determined by a number of factors unique to your 4WD. Remember, the lower you go, the more speed you wipe off, and pump up your tyres before that short run to the servo because even a very short trip on the blacktop will cause damage.

When adjusting your tyre pressures, start with the rear tyres on your 4WD first. Once lowered, measure the actual footprint of the tyre where it sits on the ground, then adjust your front tyres until the footprint is the same size. Because most of the weight in a 4WD is over the rear, the pressure in the front is likely to be higher than the rear. If you have a camper trailer, do the same with those tyres or you will feel like you are towing a boat anchor behind you.

Of course, air pressure holds the tyre's bead firmly up against the rim, so if you are moving a little too fast and you turn a little too sharply, your chances of rolling the tyre off the rim just grew handsomely. Slow down, ease into the turn, and you should be right.

DRIVING TIPS

If you are driving through barren sand dunes behind the beach, you are probably going to be a pioneer over this shifting mass, whereas in most circumstances someone has driven the beach line before you. That beauty of going second down the beach is that you can use other 4WD tracks to your advantage.

There are a number of tell-tale signs that you can learn from other wheel tracks, such as where the hard and soft sections are, sudden direction changes where the previous driver saw something that you haven't yet, plus where heavy braking occurred that may indicate danger ahead.

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Momentum is the key, and moving from a standstill can sometimes be very difficult, especially if the sand is soft and your tyres are too hard. If you have ever tried to push off in sand while in 2WD, then you'll know what it's like, though moving again may not actually be that hard. With your truck in 4WD, ease the throttle on ensuring that you don't spin the wheels, because all this does is rip the sand out from under the tyres. It may start to move before it stops again, so all you need to do is to start rocking the 4WD back and forth to get a firm pack under the tyres, then ease on the power and regain your lost momentum in the process.

If that hasn't worked, get out your shovel. You know, the one you take with you whenever you head off to the beach in case you need to dig yourself out? Now, get rid of some of the sand in front and behind the wheels before you give it another go.

Gearing also plays a part in your efforts to traverse the sand with the least amount of stress to your fourby. High range may help you to maintain a reasonable speed when the conditions allow, but if your fourby begins to labour, selecting low range may be the better option. Holding high range when the going gets tough will only bring on the onset of high engine temperatures as you try to push forward. Each 4WD is different, so select a gear that allows the 4WD to drive comfortably, and this could be 2WD, four high or even low range.

UPS AND DOWNS

If you are leaving the beach and heading for the dunes, be sure not to drive over the fragile vegetation that is holding the coastline together. Heading off the beach can be half the reason why you are there, so it is important to remember not to stop in any sand gullies where the soft wind-blown sand has gathered, or you will get stuck good and proper.

If you are driving over a dune, keep a safe amount of momentum up and drive up and over the crest. Too little and your mates will start ribbing you, while too much might give nearby aircraft a scare. If you back off before the rear wheels crest over the top of the dune, get your camera out and you'll get one of those cool shots of a 4WD that's throwing rooster tails front and rear as it sits on its belly.

Descending a dune can be quite daunting the first time you do it. Unlike a dirt hill, a 45° sand dune is a walk in the park. Starting in low one, straighten your wheels, ease it over the edge, and let the 4WD walk itself down. No throttle and no brake. Remember that mound of sand? Well, this mound will be the size of a baby hippo and it actually helps to slow the 4WD. Probably the only time a mound of sand is your friend.

Oh, and don't turn side on or angle your 4WD across the face of a sand dune unless you want others to get a 360° view of it as it rolls down the dune face.

TRACKS AND TRACKS

There will be two things that can dictate where your tyres go: actual tracks that you drive along, and anyone else's tyres tracks in front of you. Inland tracks can be chopped out, deep under wheels, and have very tall centres on them. If it is soft and steep, then you really don't have too many alternatives apart from giving it a go. If the lead vehicle is stuck, you'll then be in for a wait as well.

Then there are wheel tracks, and this can be another story. While we often try to stay in someone else's wheel tracks because the sand has already been compacted for us, it can often prove a challenge if we want to steer out of them, especially when the sand is soft or the ruts are deep. In this case, it is often wise to slow down your speed, turn into the direction that you want to travel, and try to get the tyre to create that mound of sand that wants to push the tyre upwards. With less speed, you are also less likely to dangerously jump out of the tracks as well.

PITFALLS AND DANGERS

An easy trap for most beach drivers is complacency. Picture this: you're coming up on another creek like the ones you have crossed a 100 times over, but the question is what do you do? If you are a cautious and patient driver, you'll probably slow down and check it out before driving across it. If not, then you may be in for a dangerous surprise.

Beaches have a habit of changing, and this follows after nearly every tidal change. Bad weather with large waves, plus windy conditions all play their part in this never-ending cycle. Forget creeks that run back into the surf, as they will continuously change and become even more dangerous the higher you drive to escape the rising tide. The undercut could be as small as an inch or as big as a couple of metres, and if so, you stand no chance of getting out of this drop without some serious consequences.

Debris on the beach, either natural or manmade, can pose a danger to you. Bad weather and tide changes can hide or unveil a wealth of obstacles, so keep an eye out. You will also see a lot of debris at the high-tide mark, so if you are moving higher up the beach because the tide is coming in, be aware that there may be more gathered up there than just blue bottles. During strong winds, loose sand can also blow over the top of obstacles, hiding them from view.

RECOVERIES

Recoveries are most common when in sand. The most effective way is to snatch someone out, followed by digging them out. Since you have let your tyres down, you may want to reconsider the pressure and go a bit lower, though you will need to reinflate them eventually so you will need a good air compressor.

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Other recovery gear can include one of the traction boards available on the market, winching, even an exhaust jack. The most effective is the board, but you should never gun it because by going easy onto and up it your tyres will get maximum traction, and you won't melt the board because of tyre spin.

So, what do you need to conquer beach and sand driving apart from a 4WD and some knowledge to help keep you safe? Nothing really, but if you want to do it with more ease and protect your 4WD, then there are a few things you may consider.

Some modern traction aids can actually get you stuck as they try to resist a wheel from spinning, while a locker or the like will ensure that the tyre with better traction takes off even if the other one wanted to start spinning. They aren't necessary, but they can help.

Then there are the metal add-ons such as bullbars and bash plates. A bullbar or rear bar can help with your approach and departure angles, while a bash plate will stay in place should some inconsiderate sand castle decide it wants to rip out some of your plastic underbody protection. Low-slung 4WDs might struggle in deep tracks, but a 4WD with taller tyres and better ground clearance may sail through without any worries.

But if there is one thing to remember, all of these extra bits will catch sand and lots of it. Give your beast a good clean when you get home or you'll be looking for body filler in no time.

FOR MORE INFO

Exclusive Tyre Distributors www.coopertires.com.au

FIXING A ROLLED TYRE

- Remove the wheel from the 4WD
- Place the wheel on its back and clean any sand out from inside the tyre and along the bead
- Ensure that your tyre weights are sitting correctly
- Using a high-volume compressor, begin pumping up the tyre
- If needed, adjust the position of the tyre and rim to minimise the gap remaining
- Once the bead is seated and the tyre is half pumped up, stop pumping and listen for any air passing the bead
- If it's all good, pump the tyre back to the pressure that you want and replace the wheel
- Alternatively, use your spare if you cannot get the tyre to reseal itself

SAFETY TIP: Once you start pumping, keep your fingers away from the tyre's bead **Continued Page 6**

ESSENTIAL SAND RECOVERY GEAR

Long-handled shovel

Snatch strap

Traction boards

Recovery points

Rated D-shackles

Winch damper

Winch

BE SEEN AND BE SAFE

The best way to be seen on the beach or when cresting a sand dune is to stand out against everything else around you. Headlights help you stand out in the middle of the day, if the weather takes a turn, or when another driver cannot see you because they are driving into the sun. Large sand flags are another way to be seen, especially when the high-visibility flag at the top is seen before you reach the crest.

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