

Things That Go Wrong in the Bush

These are the things most likely to go wrong in the scrub – and for which you must be prepared.

Tyre Troubles

Tyres continue to cause the most difficulty, despite numerous ads, articles and videos pointing out the importance of correct loading and pressures. The main problem tyres are the ones fitted to modern 4x4 wagons - nearly all of them now 70-profile or even lower.

The profile shape doesn't have much to do with the relative fragility of low-profile tyres; it's just that these particular tyres are much more lightly constructed than light truck and 4x4 ute tyres that are at least 70 profile.



Even worse, some of the latest 4x4 wagons roll on 18-inch rubber that's virtually unprocurable outside cities and major bush towns. The larger diameter is necessary to fit bigger brakes inside the wheels of 4x4s that are progressively becoming high-performance machines.

Why do 4x4 wagon makers fit lightly-made tyres to new vehicles? Most new 4x4s are purchased by people who never go off-road and that's the determinant for the tyres that are fitted. The brief from the 4x4 wagon maker to the tyre supplier is for rubber that can run cool at high speed, with good on-road grip, has low noise, wears almost forever and delivers good fuel consumption.

Because these tyres are lightly constructed they use car-type pressures, not the higher pressures commonly used in LT tyres. The maximum pressures recommended by 4x4 makers in today's new wagons vary from around 190kPa up to 280kPa. Light truck tyres used on the same makers' commercial 4x4s can handle pressures as high as 600kPa.

The problem many new 4x4 wagon owners face is that the standard tyres don't look right when the vehicle is loaded up for an Outback trip. With only 220kPa in the rears, in particular, they often bulge and it's tempting to over-inflate them to make the sidewalls 'stand up' better.

It's also easy to overload today's 4x4 wagons, because payloads are only in the 500kg-750kg range and it doesn't take much in the way of freight and people to exceed those figures. It's understandable that owners increase pressures above the makers' upper limits and in many cases there's no obvious penalty for doing so. Provided the tyres are run on smooth surfaces there's often no distress, other than the ride quality deteriorating. The big troubles start when over-inflated, low-profile tyres are run over stony roads.

Lightly-made tyres are designed with treads that must flex to absorb the distortion caused by the tyre running over golf-ball-sized stones. Over-inflation makes the tyre too firm to deflect and casing damage or a tread puncture is likely. The damage doesn't always show up instantly, but a slow leak begins, dropping the pressure. The driver doesn't feel the pressure drop, because there's too much rough-road input happening. When the pressure gets very low the tyre overheats and a 'zipper' blowout usually results.

The confusion isn't helped by tyre fitters who regularly over-inflate 4x4 tyres in the interests of lighter steering and better tyre wear and handling on bitumen surfaces.

Minor punctures en route can be temporarily repaired by using your tyre plug kit.

Wheels

Bent or damaged wheel rims are common on bush trips - usually as a result of going too fast for the prevailing conditions. Another cause of rim damage is drivers not noticing a flat tyre and running for too long on the wheel.

Most steel rim damage can be repaired by the simple expedient of belting the curled-over bit back into line. If a tubeless tyre can't be resealed it's handy if you have a suitable-sized tube to put inside the tyre as a last resort option.

Aluminium wheels are not so easily repaired and smacking one with an axe may make things worse.

As part of your trip preparation give serious thought to a set of five or six steel wheels, shod with light truck rubber, to replace your aluminium ones and their street tyres.

Keeping Water Out

Water in engines, differentials and gearboxes is a common bush trip problem. It takes only an errant splash into the engine air inlet for an engine to 'take a drink' and the result can be disastrous. Petrol engines and direct-injection diesels have some air space in their cylinders that can accept a little ingested water, but indirect-injection diesels have no space at all. Trying to compress water doesn't work and a destroyed engine is likely.

A snorkel is the best splash insurance.

If you're planning a trip that involves water crossings – and that can be The Simpson in a wet winter – you should consider fitting extended breathers. Even then, water can get past oil seals if a hot axle or transmission housing is plunged into cold water.

Keeping Coolant In

Your cooling system needs to be top shape for a bush trip – even deserts in winter - because day temperatures can get quite high, you're bound to be fully loaded and you're running on soft surfaces that make the engine work harder.

It's important that you have a non-damaging way of keeping insects and grass seeds out of your radiator. Mesh is good, if it's approved by the vehicle maker.

It's our habit to change coolant every year and hoses, thermostat and radiator cap every two years - and carry spare hoses.

Shock Absorbers

Shock absorbers are regular bush trip casualties. Many 4x4owners don't appreciate that shockers take much more of a pounding on long bush trips than they do in town running, with the odd weekend trail or beach foray thrown in. Even quality shock absorbers have a limited life and most will not do more than two Kimberley or Cape York journeys.

Trip preparation should involve an examination of your shock absorbers and their bushes – as new condition is desirable – and you should carry spare front and rear shockers, and a set of bushes.

Wheel Bearings

Wheel bearings are another common failure in the scrub. Sometimes it's a lack of proper maintenance - how long since you last had your bearings inspected and repacked? At other times it's just old age. It's cheaper and more convenient to have old bearings replaced at home

rather than on a hot, dusty roadside. Mostly, though, wheel bearings fail because the vehicle is overloaded and/or being driven too fast for the conditions.

Roof Racks

Roof racks can cause many difficulties. The best types for Outback journeys are purpose-built 4x4 ones. Roof-rail rack systems with baskets that clamp to simple transverse bars don't usually survive for long when hammered over corrugated roads for days on end.

Many Outback travellers insist on putting too much stuff in roof racks - sometimes to the point of cracking gutters and even door pillars.

Roof rack fasteners need to be checked for tightness during a bush trip.

Aerials

CB aerials die like flies on corrugated roads. The weakest types are those that have a distinct change of section a short way up the stick. The most durable ones are single-piece, FRP, thumb-thickness units with sprung bases.

Refrigeration

Fridge troubles are all too common, compounded by the difficulty of doing repairs en route. Keeping vibration out of the workings is a good idea - we've had no troubles with fridges that travelled on sprung bases in utes or were strapped without sprung bases into the back of wagons.

Battery Isolators

Dual-battery isolators are other regular casualties, so if yours is suspect or old, replace it before you go. Fortunately it's easy enough to bypass a failed isolator with a connector, but you need to separate the connection when you stop for the night, or there's a risk of the fridge flattening both batteries.

Trailers

Even well-towed and well maintained trailers can have dramas - particularly those with electric brakes. Trailer brake systems don't like dust and water, both of which Outback Australia has in abundance. The most common problem is trailer brakes coming on when they're not wanted, burning out pads or linings and boiling hub grease.

Do your homework and you're bound to have a better trip!