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Snowys' resident caravanning expert Kevin is fit for the rough and tumble of off-road travel...

all thanks to his fool-proof fix-it kit of trusted tools and tricks! In this episode of the Snowys Camping Show, outdoor enthusiasts Ben and Lauren hitch a ride with Kev to learn what he keeps in his spare part compartment.

From the shackles and buckles, to the spares for repairs – Kev reveals all that allow him a quick-sticks recovery in those tricky off-track stitch-ups!

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Welcome, Kevin!

Among many others, Kev last joined Ben and Lauren in Episode 60 where he detailed his journey along the Oodnadatta Track. This week, we welcome him back to take us through the spare parts that save him potential hassle during any adversities he may experience off-track.

Kev's List

The motive behind Kev's list of caravan parts is to provide some sort of temporary aid when travellers have no access to a mechanic or service station off-road. As most vehicles will have repair kits of their own, these kit bits are more specific to a caravan.

Kev describes this list as his 'basic' default... despite how many items it includes! For short trips, it can be modified, though he maintains that all components are necessary for extended touring or travelling to remote areas.

In compiling this list, Kev has considered every possible failure that could eventuate on an off-road trip. Some issues can be fixed on the road, such as a loose hose or a set of bearings, but others may require leaving the van to find help. Nonetheless, these spare parts are easily accessible in the spur of the moment.

Hose Clamps

These are required for caravan plumbing in feeding the water supply from the tank/s. As they come in different sizes, Kev recommends looking underneath your caravan to identify what you may require.

If your hose is split or cracked and requires a joiner, a hose clamp is essential here too. That said, the same approach can be taken with cable ties and tie wire, especially if your hose comes loose or is left hanging. When this happens, clamps can break off, resulting in a loss of water – so replacement pieces are recommended.

That said, Lauren queries whether taking a spare hose itself is an easier solution. To this, Kev states that he would simply carry a standard water hose for the purpose of hooking up to a mains, and cut pieces from that as opposed to taking additional hoses. For instance, you wouldn't replace a filler hose with a waste hose, as this would send muck into your tank. Instead, if a hose is damaged, Kevin simply suggests cutting the damaged section out and using a joiner to reconnect it.

Most hose clamps are metal with a Phillips head screw and a loop; as you screw, the loop tightens. These are more versatile and can be sourced from hardware stores. Kev reassures that caravanners needn't keep a large range, but should have a few spares given how little room they occupy.

Insulation Tape, Duct Tape, and Cable Ties

Duct tape – commonly known as the silver plastic tape, and roughly 50mm wide – is capable of withstanding stress, so is effective for use on a broken window or cracked glass. For leaky



radiator hoses too, simply wrap the tape all the way around the split as a temporary seal. On the other hand, insulation (or electrical) tape is narrower, better utilised for broken wires. Each tape has its purpose, so Kev recommends bringing along both. Lastly, cable ties are a given and useful for many purposes that involve securing components or keeping loose parts contained for temporary periods. Ben agrees to keep a handful with your spare parts on all off-road adventures.

Fuses, Electrical Wire, and Electrical Terminals

Many caravans have either glass (inline) or blade fuses – and with many models featuring electrical appliances, this has become more common. An electrical terminal is usually crimped onto an electrical wire, which thus has it unusable if it comes off. For this reason, Kev keeps a couple of spares on hand to keep him out of trouble.

As the size of the fuses will vary from one caravan to the next, Lauren asks whether it's worth taking a couple of each size. To that, Kev confirms that this depends on the caravan itself. Older caravans use a glass or inline fuse with 10-15Amps, while a more modern style will use battery chargers or solar panels. Kev recommends determining what your van requires and take a spare of each. As they take up minimal space, he recommends looking into buying packets of various sizes and taking a multitude.

Lauren also queries whether there are any fuses that fail more regularly than others. Kev confirms that solar panels use a large fuse, so if a wire comes loose – namely a live wire from the battery – and makes contact with something immediately, it will trip. There isn't a specific size, but Kev suggests mediating these potential issues by carrying a handful of the bigger fuses available.

Wheel Bearings

These should go hand in hand with right tools, as it can be headache depending on the component. Part of the bearings are pressed into the hub, and both the tools and know-how are also required to remove the cone from inside the hub if cracked or heat-affected. Keeping wheel bearings as a spare part is an advantage for caravanners, as they can be difficult and time-consuming to source from elsewhere – often taking several days.

If a bearing has collapsed completely, and you're in the middle of nowhere – towing the van isn't an option, as the wheel will both damage the axel and come loose. For this reason, Kev recommends partaking in a car maintenance course prior to any extended tours, to develop the skills and knowledge to change a wheel bearing easily and independently. That said, having a spare without the knowledge to fit it yourself still allows the opportunity for somebody else to do it for you.

The procedure of changing a wheel bearing involves first removing the grease cap from the hub, the split pin holding the hub nut on, the hub nut itself, and finally the hub from the axel. It's also required to take the tyre off the wheel and the wheel off the hub, before attempting to punch out the cones within the hub. This can be done by turning it upside down on a piece of wood, knocking the cone out, and fitting a new one back in – though this process also requires the adequate ability. In addition, the hub seal is usually damaged after removing the inner bearing, so this is likely to require replacement too. YouTube content is a helpful



platform that provides basic knowledge on how to approach the procedure of changing a wheel bearing.

As car bearings tend to be more durable, Kev only brings one set of bearings for the van. He has encountered other caravanners with collapsed wheel bearings, which can be a result of how tightly they've been secured. This can cause overheating and turn them blue, before they collapse. While this is unlikely to happen, it is expected to more with a caravan than with a car.

Nonetheless, Kev reassures that it's unlikely for two sets of bearings to collapse on a trip away. For this reason, he only keeps one set of wheel bearings for one wheel – plus a hub seal, grease that withstands high temperatures, or any form of lubricant to ensure temporary support.



It's unlikely for two sets of bearings to collapse, so Kev only keeps one set of wheel bearings for one wheel in his kit. Credit: Kevin Leslie

U-Bolts

The use of U-bolts depends on a caravan's suspension system. For those with leaf springs, or who plan to travel along bumpy, rough terrain, U-bolts should be spring-bolted to the axel. While Kev has only ever experienced his U-bolts breaking off his 4WD while traversing rough surfaces, he's nonetheless heard of occasions where they have come loose from caravans; butts will come free, bounce off, and break, leaving the axel suspended without security. While this is unlikely to happen, it's not uncommon for U-bolts to be moved or released after your caravan has been serviced.

Kev confirms that U-bolts must be specific, depending on the length and size of the axel – for



example, rounded/cylindrical, or square/angular. In other words, Bunnings isn't the answer!

Grease and WD40

Grease is used when applying wheel bearings, as well as on the tow-ball of a car. While greasing wheel bearings need only be done by using your fingers from a tub, greasing a coupling in a compressible system requires a grease gun.

As for the trusty WD40 – Ben, Lauren, and Kev each agree that this is a necessity, and a basic component for all road trips.

Split Pins

Yes, Lauren – these are just like giant bobby pins.

Split pins work by inserting a bolt through the point of connection, and a pin through the bolt itself. They're available in a range of sizes and packs, and relatively inexpensive too. As they tend to be a common spare part to carry off-road, most nuts feature a hole for a split pin too. Among many things, tire wire can be used for the same purpose – though it's always ideal to have access to the correct part.

Screws and Bolts

These needn't be too big, as screws, nuts, and bolts that are become harder to replace. Kev recommends sizes from between 3mm and 6mm, and screws such as PK and Phillips. Keep an assortment of compatible nuts and washers as well, including wheel nuts.

Puncture Repair Kit and Second Spare Wheel

Lauren suggests Zoosh – like an aerosol can with an inbuilt hose, attached to the end of a tyre. The hose empties the can of foam into the tyre; as the vehicle drives, the foam coats the tyres interior and repairs any slow leaks.

For larger punctures or holes though, Kev recommends a plug. In his experience, a plug allows a temporary fix of the flat tyre before it can mended properly at a later time, where the spare is used to replace it in the meantime. Sometimes, cars can drive on plugs for years, and this strongly indicates their high durability. That said, Kev maintains to take the tyre to a mechanic at the earliest opportunity to be fitted properly with an internal plug.

As for wheels, Kev carries four spares – which is enough to give our minimalist adventurer, Ben, a heart attack! While it may be a lot of weight, Kev explains that after once shredding a wheel and replacing with his spare, he was left with nothing else in the event of another tyre-related issue throughout the trip. On the other hand, Ben's approach is to invest in good quality tyres to begin with, carry only one spare... and hope there are no issues! All considered, both Kev's and Ben's tactics are as valid as each other.



Chain, Turn Buckles, and Shackles

In the 30s and 40s, interstate trucks would be undriveable if a significant part was broken – such as a suspension arm or spring, leaving the axel floating freely about without anchorage. A temporary fix is to chain the axel to the chassis. This is usually done by wrapping steel cable around both the spring and the axel, linking it up to the chassis, applying a turn buckle, pulling it tight to keep the axel in place, and continuing to drive slowly until a more permanent fix is obtainable. That said – like most things – this requires know-how.

Should you find yourself in a similar situation – which, albeit, is an extreme circumstance – Kev recommends a 1.5-metre length of chain, purchased from a hardware shop, with a turn buckles and shackles. Again, tie wire can also be used to hold the chain in place, while a turn buckle features a hook and eye on each end to help tighten it.

Snatch Strap, Tow Rope, Ropes, and Ratchet Straps

Where the first two are handy for towing, the latter are ideal for tying down and securing. Again, as neither take up substantial space, Kev recommends including each of them in your spare parts kit without question.

Ratchet straps can be used to tie a wheel to the bumper, or equipment to either the roof racks or underside of the caravan. Usually, if ratchet straps aren't on hand, these methods can't be applied as well. Simply ensure that whatever you have on hand instead is not too thin.

By the same token, using straps or rope for towing purposes must be properly and professionally rated.

D-Shackles

These are also required to be properly rated when used to chain anything up. While Kev's aren't rated, they're adequately strong and only used as a temporary fix. Like other spare parts mentioned, these are specific to the vehicle itself – usually requiring 4mm-8mm diamond pins – so aren't available from a standard hardware store.

The shackles of a safety chain also need to be rated, and this can be determined by a Working Load Limit (WLL) stamp on the product itself.

Tool Kit

Yep, just like that one in your tool shed.

Kev recommends including a basic Phillips and flathead screwdriver, a socket set, and a wrench. As a minimum, these can be sourced in ready-made kits comprising of various sizes, types of tools, and pieces.

Kev's tool kit is a little more comprehensive, also featuring pliers, open-ended spanners, and hammers. Regarding spanners, Kev reminds us that open-ended ring spanners are either metric or imperial. Most hardware stores stock imperial, though can also carry both. This is where an adjustable spanner is useful.



As a minimum, tools can be sourced in ready-made kits comprising of various sizes and types of tools. Credit: Shutterstock

Battery Drill, Drill Bits, Angle Grinder, and Charger

At some point, Kev suggests that caravanners will need to use a battery drill and so will require a spare battery too. While Kev has an inverter in his van, he recommends charging the drill at a powered caravan site as opposed to through an inverter.

Drilling typically isn't required too much in caravan maintenance, so Kev predicts that the battery won't be used excessively. That said, he recommends taking one along as a precaution. This goes for an angle grinder, mostly required in bush-camping scenarios when cutting away broken bolts that won't budge. Usually, those with a drill and an angle grinder can use the same battery across both.

Spare Water Connection

This refers to connecting to a water supply at the caravan park, calling for the fitting that's screwed into the water inlet on the caravan as opposed to a tap. This requires a spare, given it's not a unique thread. While American models feature imperial threads, all water and tap fittings sold in Australia are metric thread. Thus, purchasing a snap-on fitting, screwing it in, and turning twice will jam it. They're not easy to buy, so Kev recommends sourcing these – as well as tap connections – from a caravan accessory store.

Ultimately, it's suggested to keep spare fittings for connecting to both taps and hoses, as well



as ensuring you have the female and male adaptors appropriate for your caravan.

Spare Water Tank Barbed Tail

The barbed tail describes the hose that feeds into tank and to the pump. Kev relays how his brother-in-law once broke his barbed tail, which resulted in water draining from the tank. As a result, the tank was unusable and he was forced to resort to jerries instead.

On some tanks, the barb can be screwed back in. On the other hand, some are moulded as part of the tank itself – which means if it breaks off, the tank itself is broken too. The likelihood of this happening depends on how well the tank is protected.

Lauren queries as to whether buying and upgrading an older van should also mean considering a screw-in tank. Kev doesn't carry this, as all his barbs are protected – though in some vans, the tanks are fitted in a way that has the barb protruding from the side. This can leave it open to potential damage.

A strange but genius preventative strategy is cutting standard pool noodles (with a hollow core) into different lengths, and using as both hose insulation and protection. Ben seconds this method, where fitting the foam noodle onto roof racks too can prevent them from rattling.

Blue Plastic Tarp

Kev utilises his as a ground sheet in situations when he needs to get in and under his van. As well as this, a plastic tarp can aid in the case of a broken window; simply cut a piece out and tape it to side of van with duct tape to keep weather out.

A multi-use item, the tarp can also be tied to a roof rack as an awning and means of emergency shade, as well as to stop dirt, dust, and debris from damaging or soiling other equipment.

Further Thoughts

Kev re-iterates his understanding that not everyone can action the above repairs alone. For those determined, he maintains park-taking in a car maintenance course to cover the basics. These will assist in providing a temporary fix until further help is acquired.

While there are some things you can fix, there will be others you can't – so simply adapt to the situation and action what you feel you can. Likewise, if you ever encounter a fellow caravanner stranded in the middle of nowhere requiring assistance or spare parts, making human contact can be reassuring enough. If it's not direct assistance in mending their caravan, simply offering a lift to the nearest town or passing a message on to another group can still go a long way.

Thanks for listening, tune in again for next week's



episode!

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If you have any questions for Ben and Lauren, make sure you head over to our [Facebook group](#) and let us know as we'd love to hear from you.

Catch you out there!