

# 4X4 CULTURE

4x4 Adventure | Travel | Lifestyle

Issue 49

## UNDER COVER

FIND OUT WHY WE'RE HOOKED ON CANOPIES



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Check out  
our new Winter  
Apparel Range

*Pg 28*





# Over View

**Matthew Frost**

National Sales & Marketing Manager

After a three-year design, development and manufacturing program, we're absolutely over the moon to see stocks of the all-new ARB Elements fridge freezer start to arrive in ARB stores around the country. If there's one thing we really pride ourselves on at ARB, it's our ability to design products that are truly suited to use in remote and harsh environments. Several decades of engineering expertise building accessories for off road vehicles have come together in this new product, making the fridge perfectly suited to spending its life on the back of a ute, trailer or even on the deck of a boat. To read all about the new Elements fridge, check out issue 48 of ARB's 4X4 Culture magazine or hop onto our website.

To celebrate the arrival of this significant addition to ARB's range, we've teamed up with another specialist in their field, Spotters sunglasses, to deliver a cracking incentive to purchase one of the new Elements fridges or any other fridge model from the ARB range.

Spotters first popped up on our radar when they took delivery of a new Ford Ranger and dropped it off at our Kilsyth office to be outfitted with accessories. This Melbourne-based company – about a kilometre from our Kilsyth head office – hand builds high-end eyewear specifically intended for people who fish, hike and 4WD. A decent set of sunnies are worth their weight in gold if you spend a lot of time in the great outdoors, particularly given Australia's extreme UV, intense light and glare. Good quality eyewear will significantly reduce fatigue while driving and is a worthwhile investment in promoting good eye health.

Details of our fridge promotion can be found in this edition of 4X4 Culture but, in a nutshell, if you purchase any ARB fridge during August and September, we'll throw in a free pair of these awesome Spotters sunglasses.

Our mates at Spotters were one of several new sponsors at the 2017 ARB Eldee Easter Event. There were lots of fresh faces and stages at the event this year, which created a really terrific atmosphere over the few days. With many companies already pledging their support for 2018, this event will be back again next year, bigger than ever. Dean Mellor, the former long-term editor of 4X4 Australia magazine, was along for the first time this year and puts a new spin on our favourite family-friendly off road event in this issue of our magazine.

If there's one article you can't miss in this issue, it's the feature on long-range fuel tanks. Over the 24 years I've worked at ARB, and as a spirited adventurer before that, I've travelled in remote areas all over the world. I've met many fellow travellers who have seen their trips brought to an abrupt halt due to major mechanical failures or, in extreme cases, vehicle roll overs. Most of these have been as a consequence of poorly loaded vehicles.

The very nature of remote area travel, particularly in the Australian outback, necessitates carrying fuel way beyond a 4WD's standard capacity. Poor fuel economy as a consequence of demanding driving conditions, long distances between service stations and fuel often being unavailable at these locations dictates the need for carrying extra fuel. The most common solution many folks resort to is carrying jerry cans of fuel on the vehicle's roof. While a couple of fuel containers

securely stored on a well-built roof rack is generally regarded as acceptable, it's vital that you adjust your driving style to suit both the road conditions and the manner in which the vehicle is loaded. Exceeding the vehicle manufacturer's recommendations and carrying too much weight up top will alter a 4WD's centre of gravity, which can severely destabilise it and increase the likelihood of an accident.

A long-range fuel tank, on the other hand, is installed down low underneath the vehicle and, depending on the model, will often double a 4WD's fuel range. In the case of the vehicle I now drive, a LandCruiser 200, replacing the factory sub tank with an ARB Frontier tank will give an additional capacity equivalent to about half a dozen jerry cans. This provides the vehicle with an immense fuel range, allowing you to venture to the most remote parts of the outback with complete confidence.

Finally, for those that know me, that last paragraph will come as a bit of a shock. I having been driving Land Rovers since 1999 and have always been a big advocate for the brand. However, with the next generation Discovery moving up several notches in terms of its luxury SUV type characteristics, we're not convinced that there is a place for it in the ARB stable. We will, of course, watch this vehicle roll out closely and would love to hear from any customers who would like to see ARB develop accessories for the new Discovery.

In the meantime, I look forward to continuing my off road adventures with that mighty Toyota V8 diesel under the bonnet.

# WHAT'S NEW



## ARB'S LATEST GVM UPGRADES

Whether you're carrying tools of the trade or packing up your 4WD for a year-long trip, your vehicle can become dangerous, and even illegal, if it breaches its allocated gross vehicle mass (GVM).

GVM is the maximum a vehicle can weigh when fully loaded, as specified by the vehicle manufacturer. Everything on or in your vehicle adds to this overall GVM including fuel, bull bar, tow bar, recovery gear, the tray body for cab chassis models and even your passengers.

Exceeding your 4WD's GVM can result in costly fines, voiding your vehicle insurance and putting yourself and your passengers at risk.

To combat these issues, ARB offers Old Man Emu GVM upgrades in line with ADR requirements for a number of new vehicles. Our new vehicle GVM upgrades are only granted by the Federal Department of Infrastructure and Transport after detailed tests have been carried out by qualified suspension engineers and engineering consultants.

## NEW AND EXISTING GVM UPGRADES AVAILABLE

ARB has successfully obtained a Department of Infrastructure and Transport approval to increase the GVM on the following new and unregistered vehicles.

### Ford Ranger PXII

- 3,330kg & 3,500kg

### ISUZU D-MAX 2016-on

- 3,220kg

### Mazda BT-50 2011-on

- 3,330kg & 3,500kg

### Nissan Patrol

(rear leaf spring models)

- 3,700kg & 3,900kg

### Toyota LandCruiser 200 Series GX (5 Seater)

- 3,500kg & 3,580kg

### Toyota LandCruiser 200 Series GLX, VX, Sahara (7,8 seater)

- 3,580kg

### Toyota LandCruiser

70 Series Dual Cab

- 3,780kg & 3,950kg

### Toyota LandCruiser

76 Series

- 3,660kg

### Toyota LandCruiser

78 Series (troop)

- 3,780kg

### Toyota LandCruiser

79 Series (tray)

- 3,780kg & 3,950kg

### Toyota HiLux 2015-on

- 3,150kg & 3,465kg

For more information on GVM upgrades, why they matter and how to measure your 4WD's GVM, see Issue 47 of 4x4 Culture.

## J DECK SPORTGUARD

The sleek ARB Sportguard ute liner incorporates many features that have been tailored to suit the needs and requirements of both trade and touring customers. Toyota HiLux J Deck Dual Cab 2015 and later model owners will be excited to learn the ARB Sportguard is now available for their vehicle.

A standout feature is the anti-slip floor, which means no longer will you be guessing where your cargo is when you arrive at your destination. The simple snap-fit installation allows the multi-piece tub liner to be easily installed in separate sections with no drilling required and retention of factory tie down points.

The ARB Sportguard has been designed to integrate with many other vehicle tub accessories such as Sportlid, Sportlid Tango, OE Sportbars and the full range of ARB canopies.



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## CRUISER CONSOLE



The Toyota LandCruiser 79 Series Single Cab is certainly a formidable 4WD on the tracks. It's the simplicity and ruggedness of the 70 Series that makes it stand out from the pack. However, this can cause a challenge when it comes to an accessible location for UHF radios and creating additional storage. Many vehicle owners who have already handed over a chunk of their hard-earned cash are hesitant to then start cutting holes in their dash to try to retrofit these accessories.

The Outback Roof Console is the clever solution to this conundrum. It provides a neat and practical location for additional storage and UHF radios. The integrated high powered LED cabin lighting, seamlessly connects to the vehicle manufacturer lighting system and still incorporates all the functionality of the on, off and door ajar settings.

Positioned in line with your rear-view mirror, the UHF face is clearly visible from the driver's or passenger seats and

keeps your eyes on the road as much as possible. The Outback Roof Console's drop-down storage locker is perfect for wallets, sunglasses, maps, mobile phones or anything else you don't want sliding around the cab, and the handy location ensures these items are always in easy reach for the driver.

# ADDED ELEMENT



**ARB HAS DEVELOPED A RANGE OF INNOVATIVE NEW ACCESSORIES TO SUIT THE ALL-NEW ELEMENTS WEATHERPROOF FRIDGE FREEZER.**



## FRIDGE SLIDE

The base of the new Elements fridge slide is similar to the existing ARB fridge slide but it incorporates four raised, semi-circular, laser-cut plates that are designed to keep the fridge in place, preventing it from moving around even if the straps loosen over time.

**"The retainer system will stop the fridge from moving backwards and forwards with any sudden jolts in the vehicle or even just when opening and closing the fridge slide," explains ARB Engineer Stephen Lawn.**

"The straps might stretch over time, due to moisture and weathering, so we've incorporated this retainer system into the fridge slide.

The fridge slide kit comes with four laser-cut brackets that are held down by stainless steel screws.

"The brackets retain the fridge's rubber feet and stop any movement, this retainer system ensures it won't move around on the slide."

As with the slide for the classic fridge range, there are also holes for owners who wish to mount the fridge permanently. "You can remove the socket head screws that are located inside the fridge's feet and then bolt through the fridge slide base into the fridge to permanently fix it onto the fridge slide," explains Stephen.





## TIE-DOWN KIT

Fitment of the Elements fridge tie-down kit is quick and easy; simply remove the four fasteners that secure the fridge's handles and replace them with the provided stainless steel bushes.

"There's a flat plate at the top of each strap and they have a cut-out in them that hooks onto the bush that you've screwed into the fridge," says Stephen.

**"The Elements kit uses the same strap as the existing tie-down kit and if you want to take your fridge out you just release the strap and unhook the plate from each corner.**

"A bottle opener is incorporated into each of the plates, so every

fridge tie-down kit comes with four bottle openers!"

Another innovative feature of the tie-down kit is the cable retention strap. One of the straps at the rear of the fridge has an H-shaped stainless steel piece that can be unhooked on one side so you can pass the power cables through the strap.

"When you pass the cables through, you just clip the stainless steel piece back over the strap, then when you tighten the strap it compresses the two nylon strap sections and holds the cables in place so they don't get tangled," explains Stephen. "As the cables are now fed through quite high, when the fridge is slid in and out, the power cables don't get caught underneath."

## PERMANENT FIXING SYSTEM

For those who wish to permanently mount their Elements weatherproof fridge freezer, there's a permanent fixing system that consists of two laser-cut and powder-coated U-shaped brackets, along with all the relevant fasteners.

**"The U-shaped brackets are permanently mounted to the bed of your ute or wherever you want to mount them," says Stephen. "These brackets have slots in them so they can be easily mounted, even if the ute bed or tub has drainage channels or other uneven shapes in the surface."**

The brackets have cut-outs that accept protruding fasteners fitted on the side of

the fridge (two per side near the corners). And if you want to remove the fridge at any time, there's a small opening in each bracket, so you can release the screws, slide the fridge forwards and lift it up.

The fasteners in the kit have security heads with a unique tool bit supplied, so you can rest assured your Elements fridge won't be knocked off when left unattended in the back of a ute. There's also a nylon spacer for each fastener, so the powder-coated bracket is not hard up against the stainless steel fridge cabinet where it could otherwise cause damage. Bolts to mount the brackets to the tray or ute tub are also supplied in the kit.

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4X4 ACCESSORIES





# UNDER COVER

A quality canopy offers much more than weather protection for your cargo. Let's take a look at what makes canopies so versatile, as well as how they're designed, how they're made and what's available to suit your ute.





## Canopy Advantages

One of the fastest growing segments of the new vehicle market in Australia over recent years has been the 4WD ute, and it's little wonder when you consider just how versatile these vehicles are. Popular with commercial users, tradies and recreational four wheel drivers alike, modern 4WD utes offer unequalled load-carrying capacity, good on-road performance and comfort, robust construction, good off road capability and, importantly, the safety benefit of keeping cargo separate from passengers.

**THE BENEFITS,  
THOUGH, FAR  
OUTWEIGH THE  
NEGATIVES.**

But utes also have their downsides; most notably, cargo is "out the back" where it's susceptible to the elements including dust, water and mud. Even a tonneau cover won't entirely protect cargo, either from the elements or from sticky fingers.

The ideal solution for many ute owners is to fit a canopy, which not only offers unequalled weather protection and security but many other benefits as well.

Bear in mind that once a canopy has been fitted to a ute, it essentially alters the vehicle's functionality. For example, you'll no longer be able to haul dirt bikes in the tub or shift a large fridge the next time your mate is moving house (but that isn't always such a bad thing, right?). So you'll need to be prepared to sacrifice a little bit of traditional ute versatility if you go down the canopy path; the benefits, though, far outweigh the negatives.

On the plus side, once a canopy has been fitted, your ute will present you with a cavernous weatherproof space in which to haul large items including those that aren't immune to the effects of water and/or dirt. And thanks to tinted and lockable windows, you'll be able to leave valuable items in the tub without fear of them being knocked off.

A canopy also presents ute owners with plenty of options when it comes to tailoring their vehicles to suit their needs. Think ute liners, drawer systems, shelving, tie-down points, fridge slides and more. Canopies made from inert ABS plastic and fitted with sliding windows and vents are also an ideal set-up for those who want to safely transport animals in the tub.

Optional roof rails and roof racks can also be fitted to many canopies, further enhancing vehicle versatility by allowing a ute to carry long items such as ladders or building materials, excess gear such as swags and jerry cans or to fit touring accessories such as a rooftop tent or an awning.



## Then and Now

The popularity of the ute canopy is by no means a new phenomenon; in fact, canopies have been available since the mid-1970s. Back then, most ute canopies were manufactured from fibreglass and brands included the Hollowform Topkat and Brahma. ARB used to sell both of these brands, but, when Brahma went bust in the 1990s, ARB decided to produce its own canopy, which was first launched in 1997. Today ARB offers a wide range of canopy models to suit just about every dual-cab ute on the market, as well as various single-cab models.

Unlike their fibreglass forebears, most modern canopies are made from ABS, which is a thermoplastic polymer material. This material is ideally suited to canopies because it can be formed into complex shapes, it's relatively light, it's very strong and it's UV stable, so it won't deteriorate in even the harshest weather conditions.

The first step in creating a modern ute canopy is the research and design phase, which is performed using computer-aided design (CAD). Prior to CAD, the design phase

was very much a hands-on operation, with a foam mould that was handcrafted on the back of the vehicle.

"From an R&D perspective, as the years have progressed we've made some changes in the way that we develop a canopy," explains Rhys Brown, ARB Product Manager. "We used to create a foam mould and work backwards, whereas now we scan the vehicle – the whole tub and the rear of the cabin – so that we can create a 3D CAD model."

A major part of the design process is to make sure the canopy mounts correctly to the vehicle and doesn't simply clamp to the top edge of the vehicle's tub. "We ensure that we minimise the impact that the canopy has on the vehicle," explains Rhys. "With the mounting system, we mount down to the structural hard points of the vehicle tub and therefore any load bearing is down through those structural mounts and not on the top of the tub (which is not necessarily classed as a structural part of the tub). This mounting method is based on a lot of research and testing that has allowed us to come up with

the best way to minimise any fatigue on the tubs that could lead to cracking, thereby eliminating any warranty concerns."

As well as making sure the canopy perfectly fits the vehicle throughout the design process, there are important aesthetic considerations to ensure the canopy suits the vehicle for which it's being designed. Other design priorities include using common components (such as windows) where possible and maximising the canopy's front window aperture so as not to hinder the driver's rearward view and also to aid cleaning of the ute's rear window when necessary.

"We try to use common parts where possible," says Rhys. "Our Classic canopies, for example, all share the same side windows (whether sliding or lift-up) and many of the front windows are also common. That's also the case for the Ascent canopy. But there are a couple of vehicles where, due to the design of the vehicle's cabin and the tub, and the way that they integrate, this is not possible." An example of this is the Mitsubishi Triton, which has a small rear window due to its high tub and tapered cabin.





**TODAY ARB OFFERS A WIDE RANGE OF CANOPY MODELS TO SUIT JUST ABOUT EVERY DUAL-CAB UTE ON THE MARKET, AS WELL AS VARIOUS SINGLE-CAB MODELS.**

## Making a Canopy

Once the design has been finalised, the 3D CADs are sent to the plant where the shells are produced. Using the 3D CAD, a tooling mould (or buck) is made. "The buck is essentially the component that creates the form of the canopy shell itself," says Rhys. "When the canopies are manufactured, they're manufactured in one piece from vacuum-formed ABS material."

"They're manufactured from a tri-layer, co-extruded ABS material that consists of an ABS-virgin, which is the interior, and that's what we class as cool grey in colour. We then have what's referred to as ABS-regrind, which is the core layer, the middle layer. And then there's the outer layer, an ASA capping, and that's for UV stability.

"The canopy shells are extruded at quite a substantial heat. The ABS sheet itself is heated and then, once it's at the required temperature (it's on a rotational machine), the buck comes up into the heated sheet and then cooling jets cool it down enough so that it will hold its form.

"So that's basically how the process works to create a canopy shell. From

there it goes onto a robot trimming machine and that creates all the cut-outs – all our side windows, the front window and the rear door – and it trims the base line for the canopy as well."

Once the shells have been made, those destined for sale in Australia are sent to various locations around the country for assembly. Canopies are also manufactured in overseas plants for sale to the international market.

"For domestic use, we assemble canopies in Western Australia, South Australia, Victoria, New South Wales and Queensland," says Rhys. "With the Classic canopy, the process starts with the raw shell, which is prepped and painted, and then it goes down the assembly line. They're built from the ground up. We start with base rails and then build up to putting in the window frames and the windows."

Making an Ascent canopy is somewhat more complex and there are several extra steps involved before it is prepped and painted, then sent down the assembly line.

## CANOPIES, CANOPIES AND MORE CANOPIES

With four canopy designs in its range, ARB has just about every ute on the market covered (pardon the pun). There are high and low roof versions of the Classic canopy (with textured or smooth finish), there's the Classic Plus canopy and the top-of-the-range Ascent canopy.

### CLASSIC

Textured Classic canopies can be supplied in a raw finish (which is white) or they can be colour coded to match the vehicle to which they're being fitted for a more integrated appearance. All smooth-finish canopies are supplied with a colour-coded painted finish.

The exterior of the ARB Classic canopy features a weatherproof design with a UV-rated finish and an easy-to-clean smooth interior that's made of an inert material to ensure there are no odours. A lift-up front window provides access to the vehicle's rear window for easy cleaning and the lockable side windows are either sliding or lift-up items depending on the option chosen, with tinted 4mm-thick tempered safety glass, which also features on the lockable rear door. An internal light and high-mount LED brake light are included standard. Canopy options include a roof vent to pressurise the canopy area to prevent dust ingress, fly screens, metal screens, roof bars and steel or alloy roof racks.

### CLASSIC PLUS

The Classic Plus canopy has all of the features and options of the Classic, with the addition of a centrally locked rear door that is operated by the vehicle's OE key fob. The Classic Plus doorframe incorporates strikers into which the glass door's rotary latches open and close, operated by a central one-touch electronic handle. There's a manual override in case the vehicle experiences a flat-battery scenario. The obvious advantage of the Classic Plus is that it allows for easier access to items stored in the tub of the vehicle, as well as a far more convenient method of locking the canopy.

### ASCENT

The top-of-the-range ARB Ascent canopy has vehicle-integrated central locking for the side windows and rear door, and it features a vanishing edge design so there's no visible weatherproofing seal where the canopy is mounted to the vehicle. The result is a seamless finish that complements the design of the vehicle to which the Ascent canopy is fitted. Additional features include a standard roof vent, frameless slam-shut windows made from 5mm-thick tinted and tempered safety glass, electronic unlatching of the windows and door, a rear mounted spoiler that incorporates a high-mount LED stop light, an LED interior light and an anti-entrapment dial so the canopy can be manually unlocked from within. Options include a range of roof bars and alloy or steel roof racks.





## CLASSIC

Tried and tested in some of Australia's most rugged environments, the Classic canopy provides secure storage space for a wide range of dual cab, single cab and extra cab vehicles.

## ASCENT

Featuring the latest in design, technology and functionality, the Ascent canopy provides additional storage capacity, while keeping your gear secure and protected from the elements.



## New Models

The range of ARB Classic Plus canopies continues to expand and as well as the Toyota HiLux, Ford Ranger and Isuzu D-Max, this innovative new canopy is now available to suit the 2012-on Holden Colorado, the 2015-on Mitsubishi Triton and the 2010-on Volkswagen Amarok.

With its convenient integrated central locking (via the vehicle's OE key fob) and

one-touch electronic handle, the Classic Plus offers superior security and simplified access.

Manufactured from 9mm ABS plastic and fitted with 5mm-thick tinted and tempered safety glass, the Classic Plus offers weather protection and security. It's available with a textured finish (in raw white or optionally colour coded) or colour-coded smooth finish. It's also fitted with a lift-up front window so owners can easily access the

vehicle's rear window for cleaning.

Options for the Classic Plus canopy include sliding or lift-up windows (or a combination of both), an internal frame set, a roof bar mount kit, roof bars and alloy or steel roof racks.

A Classic Plus canopy to suit the Nissan NP300 Navara is also under development and will be available in the near future.

# THE OUTBACK WAY PART II

WORDS AND PHOTOGRAPHY BY **STEVE FRASER**

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Steve Fraser continues his journey through outback Australia.

Grab your copy of 4x4 Culture Issue 48 to read Part I of Steve's journey, where he captures the sunset over Lake Lefroy in Kalgoorlie, explores the unique town of Gwalia, 4WDs through Warburton, photographs Uluru at the crack of dawn, has an incredibly close call at Kings Canyon and experiences the majesty of the West MacDonnell Ranges.



See Issue 48 for Part I of The Outback Way

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Alice Springs is a great place to stop after exploring Uluru, Kings Canyon and Glen Helen. Camping for a few weeks was fun but it was a treat to stay in a hotel for a couple of days.

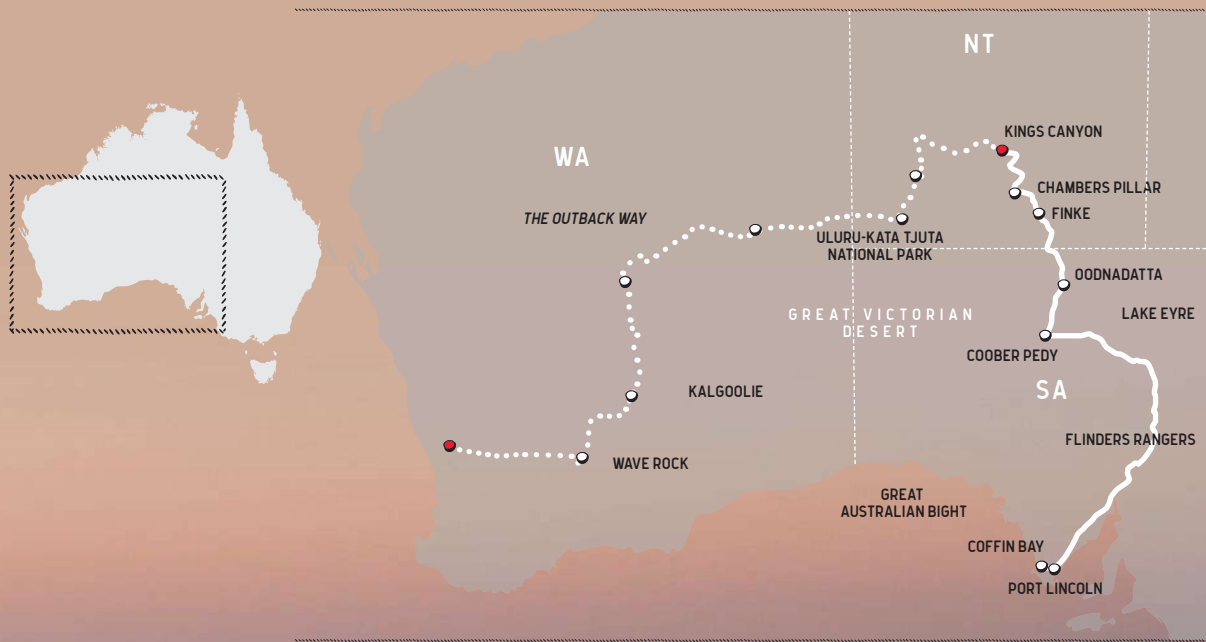
The comfort of a soft bed, a warm shower and a few visits to the local cafe felt like luxury, but it was time to head towards South Australia.

On the way to the Northern Territory-South Australia border, there were a few spots I wanted to get the 4WD into and chase some unique photographs. The plan was to head out on the famous Finke Track and take some detours here and there.

The Finke is famous for the annual desert race and you can see the attraction – the open road changes to rough tracks over dunes and is an off road mecca. It's harsh

yet beautiful country and not the quickest route to the South Australian border, but it sure is fun for those of us who love the bush.

We stopped after an hour or so and fired up the kettle. It was still cool and the wind ensured a warm brew was very welcome before heading further down the track.



## CHAMBERS PILLAR

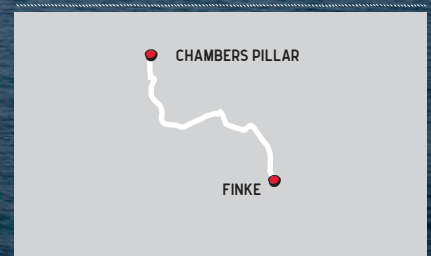
The plan was to camp overnight at Chambers Pillar. I'd never been there before and I was keen to get a photo of this unique formation. The Pillar would be more at home in Arizona amongst the Mittens of Monument Valley, but here it stands tall in the Aussie outback.

Apart from the stunning landscape, the thing I remember most about this spot was that the flies were friendly. When I say friendly, I mean they were all over me and not in a good way. For the first time in my life, I used a fly net over my hat.

As the sun began to sink towards the horizon, I waited, with my camera at the ready, for the right light. It's always the same challenge to capture a subject at just the right moment. The colours of the outback are at their best at sunrise and sunset and it's a waiting game. The sun touched the horizon, the Pillar lit up, the spinifex glowed golden, the red ochre dirt blazed and the sky blushed. These are the sunsets you dream of.

The flies disappeared with the sun, so it was time for a good dinner cooked on an

open fire. There's nothing like steak, baked potatoes and salad around a campfire with your mates.



155KMS



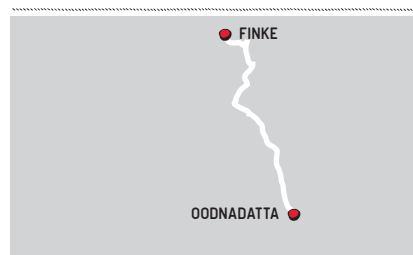
## FINKE

Sunrise cast a gentler glow on the Pillar and we ate breakfast in its mauve and pink glory. Before the flies got too busy, we packed up and headed towards Finke.

The roads were in pretty good condition and it wasn't long before we made it to Finke. We grabbed some fuel and a quick drink and headed out of town. We decided to look for a nice creek bed to set up camp. We found a beautiful spot with a nice sandy surface, lots of shade and, importantly, plenty of firewood.

The fire cranked up as the sun went down. It was a good thing as it was pretty cold. We kept adding to the fire and it was a ripper. There is nothing like crawling into the swag with the fire gently flickering.

I lay there looking up at a million stars, nice and warm in my sleeping bag with my girl next to me. Can life get much better? I don't know about you but life can end up so busy with so much stuff and a night in the bush makes all that seem pretty unimportant. It's a reminder that I need to do this more often.



291KMS

## OODNADATTA TRACK

After the Finke, the plan was to head for the Oodnadatta Track. Driving the Oodnadatta Track is a strange sort of experience. The landscape is barren, almost moon-like. There are very few trees and sparse vegetation, yet this empty vastness is strangely captivating.

The roads were pretty good and the troopy ate up the miles. Before we knew it, we were sitting in the famous Pink Roadhouse at Oodnadatta enjoying a great meal. One thing about travelling the outback in Australia is that you will find a good feed in most towns. The next job was to find a place to camp away from the dusty track and the big road trains that thunder past.



I got up to catch a photo at sunrise, followed by a lazy breakfast around the campfire. It was pretty cold but the warmth of the fire made us linger a little longer. We packed up and headed out to the Painted Desert. It'd been on my list to visit for some time and I was pretty excited about the thought

of photographing it. The range of colours is intense – from vivid outback reds to beach-like yellows to shades of orange and white. The hills in the area are so rich in texture as the top layers of soil dry out and fall away to reveal the beautiful rich colours underneath.

## LAKE EYRE

We arrived at Lake Eyre not long before sunset and the flies were even more friendly than at Chambers Pillar. I trudged out on the lake and found myself up to my knees in mud. As the sun sank, the whole lake turned fifty shades of pink and I took shot after shot. We camped at the lake but took off first thing before the flies invaded.

The next part of the track has several attractions, including the Mutonia

Sculpture Park in Alberrie Creek and Coward Springs where you can enjoy a natural hot tub.

After a couple of stops, we headed off the Oodnadatta Track, gave the main roads a miss and went cross-country towards the Flinders Ranges. The chance to give the 4WD a serious workout is always my idea of fun.



318KMS

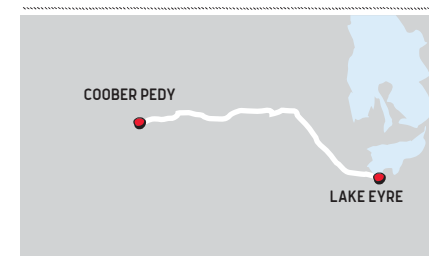


## COOBER PEDY

The next day we headed to Coober Pedy and it's like nowhere else on earth. Homes are drilled into the hills and mine shafts dot the landscape. The setting for movies like Mad Max, The Adventures of Priscilla, Queen of the Desert and Red Planet, this unique landscape is harsh and only the

tough last the long haul. You could never say it's pretty but a day or two visiting the local attractions and mines is fascinating.

Along the way, the Oodnadatta Track passes Lake Eyre and you can stop for a quick beer and bite to eat in William Creek.



280KMS



## FLINDERS RANGES

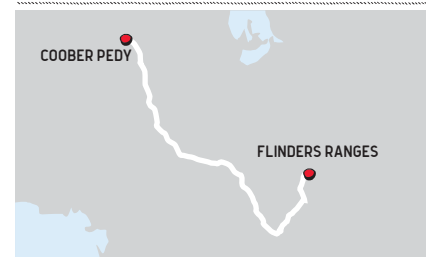
Warraweena Conservation Park boasts over 25kms of tracks and some beautiful country as a backdrop. A few mates have told me that the Mt Gill Track is one of the most challenging tracks in the Flinders and I wanted to conquer it.

It has been described as "a 36km drive through narrow creeks with steep slopes to the heights of over 900m above sea level with breathtaking views. This track is not suited for the faint-hearted and requires a high level of 4X4 driving skills.

One of the best tracks in South Australia. A must-do if you are in the Flinders Ranges." (www.warraweena.com/4x4tracks)

It was time to engage the diff locks and have some fun. The description was very accurate and it took most of the day to get around the track, especially when you add lots of stops to take in the view, capture a few images and enjoy a spot of lunch. It was definitely the best track I'd been on in a long time.

After a few weeks in the bush, we decided the coast was looking pretty inviting, so we made our way south through the rest of the Flinders Ranges and to Port Lincoln on the Eyre Peninsula.



712KMS

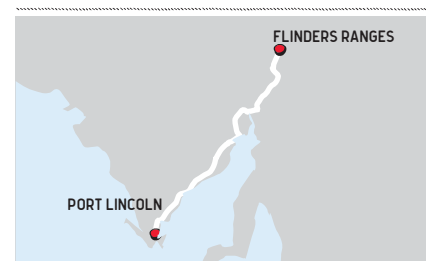
## PORT LINCOLN AND COFFIN BAY



Port Lincoln is well known for its spectacular coastline and stunning national parks. Coffin Bay National Park was first on the list. Overnight rain added to the challenge of getting into the pristine northern beaches in the park (you'll definitely need a high clearance 4WD). When we hit the beach, the white sand and towering dunes made

it a great spot for a day trip. If you want to explore a bit longer, there are lots of great camping spots.

The Lincoln National Park is close to Port Lincoln and is also worth checking out. It's a dramatic coastline with lots of rocky outcrops and sandy beaches. The day we



515KMS

visited, the swell was up and, as the big waves crashed against the rocky coastline, it was spectacular. Just remember to stay back far enough to be safe when a really big wave hits. I managed to get a few good images and a really wet camera. What a great day!

We'd been on the road for a few weeks, so it was time to turn the troopy around and head west towards home.



## THE BIGHT

The drive back across the Nullarbor is not the most exciting and trying to get a good coffee is impossible. The upside is The Great Australian Bight.

Camping on the side of the bight is as good as it gets – whales swim past and the sunsets are spectacular. I deliberately put the swag near the edge so I could enjoy the view (see opening image). It's a bit like the world's best infinity pool.

After fuelling up at Balladonia, we took the back road to Cape Arid. It turned out to be slow going as lots of the road was

under water from recent rains. On a few occasions, the water was up over the bonnet.

We had to stop at one of my favourite spots on the planet – Esperance. We have holidayed there for years. Our kids learnt to sand board there, I've surfed lots of the great breaks and, on one not-so-great day, nearly drowned there, but Esperance still holds a special place in my heart.

Big sections of the main road into Esperance were under water. After a long day, we arrived in town and ate fish and

chips on the beach. This gave us all a chance to reflect on an outback trip that started 10,000kms ago in Perth.

It reminded me how great our vast country is and how much more I want to explore it.

At that point, a seagull stole my fish. Only in Australia!





# MAX OUT

**Earlier this year Isuzu updated its popular D-MAX ute, giving it a styling makeover as well as introducing a new, Euro5 compliant turbo-diesel engine, revised transmissions, and improved sound and vibration insulation.**

The Euro5 compliant, 3.0L turbo-diesel engine, developed exclusively for the Australian market, has significantly increased torque output, now peaking at 430Nm at 2,000-2,200rpm. Peak power output is a claimed 130kW at 3,600rpm. Changes include a new variable geometry turbocharger, ultra-high pressure common rail fuel injection with new injectors and a new fuel pump, revised pistons, a larger Exhaust Gas Recirculation (EGR) cooler,

new EGR bypass valve, the introduction of ceramic glow plugs, intelligent battery sensor (IBS) and a diesel particulate filter (DPF). The engine upgrades are said to result in lower emissions and improved fuel economy.

Both the six-speed manual and automatic transmissions are also new. The manual now has closer ratios and scores triple cone synchronisers for a smooth shift, while the new Aisin auto has an adaptive learning function to adjust gear shifts to suit driving style and conditions, such as on or off road, laden or unladen, and with or without a trailer. The auto's lock-up torque converter now operates in gears two to six and the transmission also has a sequential shift mode for manual gear selection.

On the styling front, Isuzu has given the D-MAX what it describes as "a new face with a heavy-duty and purposeful appearance". The bonnet, grille and headlights have been redesigned and the D-MAX now has LED daytime running lamps.

The D-MAX is now equipped with hill descent control (HDC), improved NVH levels, a seven-inch touchscreen (on some models) and a total of three USB ports.

ARB's engineers have been hard at work developing new frontal protection equipment to suit the updated MY17 D-MAX, including an all-new Commercial bull bar and a new Summit bull bar.

"We've taken the opportunity to update the Commercial bull bar styling for the new D-MAX," says ARB Product Manager Steve Sampson. "We've upgraded to a 60.3mm outer tube and a 76.1mm centre tube, whereas the previous bar had a 47.6mm outer and a 60.3mm centre.

"We've also introduced fog light surrounds, so there's now the option of fitting fog lights into the Commercial bull bar. It now has LED clearance lights and indicators, and the under-wing panels come standard with the bar."



The Commercial bull bar features an engineered, airbag-compatible mounting system and a split pan design for maximum strength and airflow to the vehicle's cooling system. It can be adapted to both winch and non-winch applications and has two Hi-Lift jack points, two antenna brackets, provision to accommodate a range of ARB Intensity, Bushranger and IPF driving lights, as well as optional fitment of a range of Warn, Magnum, Bushranger and Smittybilt low-mount electric winches.

Like the Commercial bull bar, the new Summit bull bar for D-MAX features an airbag-compatible mounting system capable of withstanding winch loads up to 10,000lb, both angled and in line with the vehicle.

The D-MAX Summit bull bar features 60.3mm outer tubes and a 30.0mm radius curve on the wings and centre section, giving it a modern look that complements the updated styling of the D-MAX. Other practical and design elements include buffers, optional fog lights and surrounds, LED clearance lights and turn signals, winch compatibility, mounting points for driving lights and antennas, and Hi-Lift jack points.

ARB has also developed new Summit side rails and steps with a 60.3mm tube, making them compatible with both the new Commercial and Summit bull bars for the D-MAX.



**NEW**



Make sure you're prepared this winter with ARB's latest additions to their apparel lineup.



## CARBON STEEL

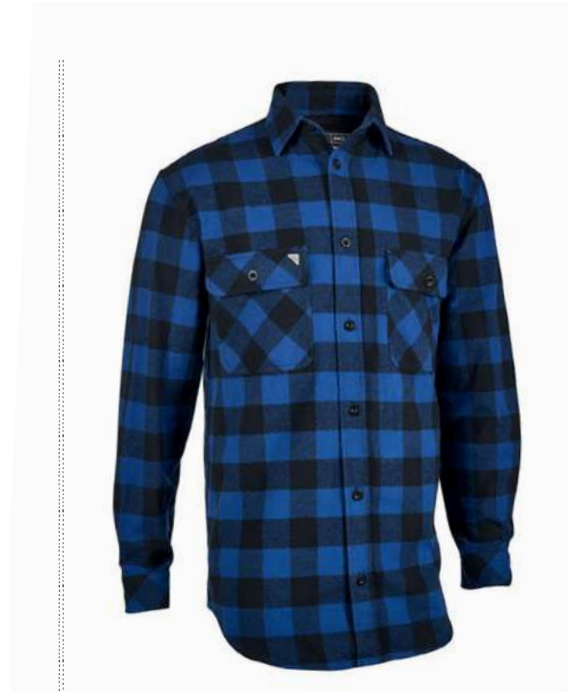
**ARB's new Carbon Steel softshell jacket is the off road love child of style and practicality.** Ensuring you stay dry on the tracks shouldn't come at the expense of looking like you're wearing a plastic poncho at a music festival, and the fashion forward people at ARB have utilised their extensive off road experience to design a must-have accessory for your next adventure.

The clever thermoplastic polyurethane (TPU) membrane technology of the Carbon Steel jacket boasts a waterproof (WP) rating of 8,000mm, which means the material is able to support a column of water pressure up to eight metres before it penetrates the fabric. A breathability moisture vapour perspiration (MVP) of 4,000 ensures that the Carbon Steel jacket will still remain comfortable and warm without sacrificing its ability to keep you dry. An MVP rating is how many grams of moisture the fabric will allow through to

the outside of the jacket, so in the Carbon Steel's case, 4,000 grams of moisture will be dispersed through approximately one square metre of fabric, and most importantly, away from the body.

The Carbon Steel jacket is constructed of melange and solid softshell, bonded with microfleece for maximum comfort. A subtle printed black ARB logo on the back and thin red line piping complements the black and grey design. The jacket has convenient chest and twin lower pockets, all incorporating YKK zips with moulded 3D ARB rubber badging zip pulls. Not only keeping you safe thermally, the jacket is also finished with stylish reflector strips on the lower pockets and a reflector ARB logo on the chest to ensure you are visible at night.

*Don't get caught in the rain this winter without one. Available in-store now.*



## NOMAD FLANNY

**Just in time for winter, the Nomad flanny is bold, bright and extra thick, keeping you super toasty on the tracks.** Wear it on its own, or layer it under your favourite jacket, the Nomad flanny is so versatile and the perfect staple piece in anyone's wardrobe.

The Nomad flanny is created from a soft 100% cotton flannel, incorporating a cobalt blue and black check pattern, with contrast black inner cuff and yoke.

Subtle branding is engraved on the buttons, both on the front of the shirt and on each of the two front pockets. A triangular metal, debossed logo badge appears on one of the two front pockets and an embossed badge on the back shoulder completes the stylish design

The Nomad shirt comes in sizes XXS to 3XL.

*Contact your local ARB store for part numbers and pricing.*

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## COMFY CLASSICS



If you don't already own these winter warmers, you need to get in-store and stock up!



Stylish and warm, the ARB Edge beanie will keep your head toasty, whether you are out on the tracks or out with friends. Made from a premium wool and polyester blend with a Thinsulate™ lined interior, this beanie will be a welcome addition to your winter wardrobe.



**Adding to ARB's extensive apparel range, these Overland Hoodies are ideal for all your outdoor adventures.** Gunmetal grey brushed fleece with a subtle black ARB logo across the chest, these stylish jumpers include bonded mesh panels and signature 'ARB red' hood lining. With YKK zips and rubber moulded logo zip pulls (zip-up version only), these threads will complement just about everything in your wardrobe.



**The ARB Blue Steel jacket is out to prove that style does not have to be compromised for functionality.**

Made from a Cordura 500D nylon oxford with TPU membrane, this jacket has a waterproof rating of 10,000mm and breathability of 5,000. The inside of the jacket has a nylon taffeta coated lining for extra warmth and durability and each of the zips are high quality YKK zips.

All of the seams and stitches are taped to avoid water seeping in on those dreary days and to keep you dry and toasty warm.

# FOLLOWING IN THEIR FOOTSTEPS



**Nugi Garamara called her book  
Follow The Rabbit-Proof Fence  
and Sarah said, "OK!"**

In July 2017, Sarah Hyde and a small group of women will walk 1,300kms along the Rabbit-Proof Fence in the footsteps of Molly (14), Gracie (11) and Daisy (8).

For these three brave young girls, the fence was a symbol of hope and love. It was their lifeline home.

Nothing can undo the damage done to the Stolen Generations and their families, but walking the fence is one way of raising awareness of the part we all play in the journey towards reconciliation.

## The Walk

In 1931, three young Aboriginal girls escaped from the Moore River Native Settlement in Western Australia, following the Rabbit-Proof Fence across the state to return to their families in the Jigalong community in the Pilbara, who they'd been forcibly removed from as part of the Aborigines Act of 1905.

"Our walk will depart from the Moore River Native Settlement (now known as the Mogumber Mission) on 15 July, arriving in Jigalong in mid-September, where we will connect with Molly, Gracie and Daisy's family and community. We will walk following the pace of the girls, who averaged 20-30kms per day, towing a cart with water, food and shelter."

THE RABBIT PROOF FENCE ————  
 RETURN JOURNEY, 1931 ————

Sarah will walk the "Return Journey, 1931" route.



Sarah and Shari Pilkington; the Great Granddaughter of Molly

## About Sarah

Sarah Hyde (32) is an Australian woman of colonial decent. She was born on Kuringgai country in northern Sydney. Sarah has lived and worked in the Australian outback including Alice Springs and Karijini. Sarah has links with *Grandmothers Against Removals* and *Mudgin Gal Aboriginal Women's Centre*.

She is a member of *Desert Discovery* and spent five weeks in the desert learning about Indigenous science and tracking from the women rangers of Kiwirrkurra, Australia's most remote community. Sarah is learning Pintupi-Luritja and Mardu. She is from a Scouting family and is currently

an adult volunteer on camps with Scouts Australia NSW. Sarah lives in Manly and works as a Speech Pathologist and Associate Lecturer at Sydney University. "I listened to the stories of the *Grandmothers Against Removals*," says Sarah. "I learnt from the women rangers at Kiwirrkurra Community. When I read Doris Pilkington's book, *Follow the Rabbit-Proof Fence*, it was a command. I trusted by following the fence it would lead me home as a non-Indigenous Australian woman. I committed to following the fence, not only physically but to dive into the girls' story and this part of Australia's history."

**"THIS WALK IS ABOUT WOMEN CONNECTING WITH THEMSELVES AND WITH EACH OTHER AS THEY WALK THIS SIGNIFICANT STORY IN AUSTRALIA'S HISTORY."**

### When and How

On 15 July, the local community at Mogumber Mission Aboriginal community, the Yued people, will conduct a ceremony and "Welcome to Country".

On 16 July, the walk will begin, reaching Jigalong in mid-September (approximately 13 September).

Sarah has spent the past year mapping, planning and preparing for this challenging expedition. She will carry up to 100kgs of supplies on a custom-made cart and will be supported along the way with occasional food and water drops.

The traditional owners of all regions being journeyed through have granted permission to pass through their country. Sarah has also liaised with station owners along the route and the Western Australian Department of Agriculture and Food, who manage the Rabbit-Proof Fence, and obtained all relevant permits.

The Mogumber Mission Aboriginal community will conduct a Welcome to Country ceremony for the walkers, friends and family to launch the walk.





## The Story

Molly, Gracie and Daisy were taken from their families in Jigalong, in the Pilbara, in 1931 and sent to Moore River Native Settlement near Perth 1,300kms away. This was part of the government's policy to "assimilate" half-caste children into white society.

Desperate to escape their imprisonment at the settlement and return home, Molly (14) left the camp carrying her youngest sister Daisy (8) and with her cousin Gracie (11) in tow. Soon after arriving at Moore River, Molly recognised that the vermin-proof fence at the settlement was the same fence that ran alongside her

Jigalong community. After just one night, she hatched the plan to follow the fence home.

Under the direction of Chief Protector of Aborigines A.O. Neville, the authorities tracked the girls across the desert but the girls outwitted them at every step. After three months and 1,600kms, Molly and Daisy made it to Jigalong where they were reunited with their families.

Many years later, Molly's own daughter Doris was taken from her at the age of four while Molly was in hospital having surgery. With her sister Anna, Doris was interned at Moore River Native Settlement, just like their mother, aunt and cousin.

After reuniting with her family, Doris was told by Aunt Daisy of the girls' escape in 1931. After interviewing Molly and Daisy for several years, Doris wrote *Follow the Rabbit-Proof Fence*, which was published in 1996.

Screenwriter Christine Olsen immediately obtained the film rights and in 2002, Hollywood-based Australian director Phillip Noyce directed *Rabbit-Proof Fence*. Daisy is the last surviving of the three girls; she lives in Port Headland and is 96 years old.



## The Fence

The State Barrier Fence of Western Australia, formerly known as the Rabbit-Proof Fence, the State Vermin Fence and the Emu Fence, is a pest exclusion fence built between 1901 and 1907 to keep rabbits and other agricultural pests from the east out of Western Australian pastoral areas.

Molly's father was a white construction worker on the fence in her home town of Jigalong. The fence is managed by the Western Australian Department of Agriculture and Food and is currently used to prevent pests such as wild dogs from moving into agricultural areas.

ARB is proud to be supporting Sarah and her support crew in her expedition to raise awareness for this harrowing story and the part we all play in reconciliation.

More information at  
[www.rabbitproofencewalk.org](http://www.rabbitproofencewalk.org)

# GOING THE DISTANCE

**If you're heading into remote locations or travelling long distances, you'll need to carry additional fuel and the safest way to do that is to fit your vehicle with a long-range fuel tank.**

Australia is a big country and anyone who's travelled to the more remote parts of this wide brown land will know that the standard fuel tank capacity in most 4WDs is woefully inadequate.

And it's not just the long distances that can catch you out; the variables of off road driving, such as unexpected muddy conditions or super soft sand, can result in

a dramatic increase in fuel consumption, which in turn can see you caught short if you haven't correctly calculated how much fuel you'll need for your journey.

The solution is to carry additional fuel and while there are several options to do this, the best way is to equip your vehicle with a long-range fuel tank.





## WHAT ABOUT JERRY CANS?

Jerry cans are a popular way to carry additional fuel, but there are several reasons this traditional container is not as practical or safe as a long-range fuel tank.

The jerry can dates back to WWII and was originally developed by the Germans. It was much better than the fuel containers used by the Allies at the time and so it was reverse engineered and dubbed the jerry can due to its origins. The jerry can is still a convenient way to occasionally carry extra fuel, which is why the original design has been copied again and again, and you can now buy a variety of steel and polyethylene jerry cans.

There are, however, several drawbacks to carrying fuel in jerry cans, the first of which is finding somewhere suitable to carry them. Even if you have available space inside the vehicle, fuel containers should never be transported in the cabin where fumes can affect vehicle occupants. If you drive a ute, you can always carry them

in the tub, but keep them away from any potential ignition sources such as fridges and other electrical equipment, especially when carrying petrol.

The best place to carry jerry cans is in a dedicated jerry can holder, preferably at the rear of the vehicle. While up on the roof is a popular place for jerries, it's hardly convenient when you consider a full jerry can weighs about 20kgs; not only are they difficult to put up on the roof, too many raise the vehicle's centre of gravity, which has an adverse affect on handling.

But wait... there's more! Transferring fuel between jerry cans and your vehicle's fuel tank can be a messy and dangerous operation. There's even the possibility of fuel contamination when refuelling from jerries, particularly in dusty or wet conditions. Finally, as they're manually handled, there's a far greater chance of damaging a jerry can than a long-range fuel tank; a split jerry can on a remote area trip might not be noticed until it's too late, leaving you stranded well short of your destination.

*WHEN IT COMES TO CHOOSING THE RIGHT LONG-RANGE FUEL TANK... THE DECISION PROCESS SHOULD START BEFORE YOU'VE EVEN BOUGHT YOUR VEHICLE.*



## LONG-RANGE FUEL TANKS

Without a doubt, the best way to carry extra fuel in your 4WD is by fitting a long-range fuel tank. Regardless of what kind of tank you opt for (steel or poly, replacement or auxiliary), a long-range tank provides the maximum amount of fuel capacity, it ensures weight is kept down low in the vehicle where it won't adversely affect handling, it eliminates the need to manually handle and transfer fuel between container and vehicle, and it doesn't eat into valuable cargo space.

There are long-range fuel tank options available for most 4WD vehicles on the market and in some cases you will have a choice between tank construction and whether you want to fit a replacement tank, an auxiliary tank, or both.

The two main types for tank construction are aluminised steel and polymer; the former is suitable for both petrol and diesel vehicles, while the latter is currently suitable only for diesel vehicles.

When it comes to choosing the right long-range fuel tank, Ric Black, Production and Design Manager at The Long Ranger, advises that the decision process should start before you've even bought your vehicle.

"There are some vehicles out there that it's actually going to be very hard to extend the range on," says Ric. "For instance, the new Ford Everest, it's got an AdBlue tank under it and the factory fuel tank is already quite low, so it might not be possible to put a long-range tank in it."

Ric says it's pretty easy to do your research beforehand. "If you look at our website, we have lots of pictures to illustrate how the tank hangs, and there's a FAQ section so you can check out whether the tank is compatible with other accessories."



## STEEL TANKS

The Long Ranger has been developing and manufacturing long-range fuel tanks for many years and these days the company offers a huge range of both replacement and auxiliary tanks to suit most 4WDs.

The tanks are designed and manufactured using the latest CAD/CAM processes and are constructed from 2.0mm aluminised steel. The tanks are tailored to suit each vehicle and they incorporate features including internal baffling, an anti-surge dam, an in-built expansion chamber and fully sealed brackets.

"Sometimes there is a replacement or auxiliary decision to be made," says Ric. "When we design a long-range fuel tank we look for the best bang for buck, so we look at where we can put the most amount of fuel under the vehicle; sometimes that is a replacement and sometimes it's an auxiliary tank. So if we can only get an extra 30L in a replacement tank but we might be able to get a 50L or 60L auxiliary tank, then that is often the deciding factor on which is the best place for us to put more fuel under the vehicle.

"Generally, a replacement tank will be a more affordable option than an auxiliary tank, as it's not necessary to incorporate a pump and associated equipment to transfer fuel between tanks.

"A replacement tank is often a little cheaper and it's quicker to fit. An auxiliary sometimes gives you more fuel, but then you've got to consider how you're going to fill the tank and how you're going to get the fuel out of it into your main tank. So an auxiliary traditionally has extra costs associated with it but you can often get more capacity in there, too."

When an auxiliary tank is fitted, fuel transfer is a simple process; when the main tank is down to about 25 per cent, the driver activates a pump that automatically turns

off when fuel transfer is complete. "One thing that separates us from the pack with our auxiliary fuel tanks is that our pump automatically turns off," says Ric. "The user doesn't have to worry about turning the pump off. All they've got to do is turn it on when the main tank gets low and away they go."

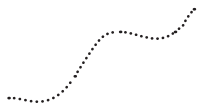
In some cases, such as with the Isuzu MU-X, the auxiliary tank doesn't need a pump for fuel transfer. "On the MU-X, the auxiliary tank is up high above the spare wheel, so it's a gravity feed arrangement with no pumps or switches; it's just like having one big main tank," explains Ric.

For many vehicles, including all of the 4WD utes on the market, The Long Ranger offers a choice of replacement tanks to suit the owner's specific requirements; an "S" (small) tank with slightly less capacity but with minimal impact on a vehicle's ground clearance and an "L" (large) tank for those simply after as much fuel capacity as possible.

"The 'S' has slightly smaller capacity but still has really good ground clearance for the guys who are doing hardcore off road driving or the fleet people where they might be worried about every Tom, Dick and Harry driving the vehicle and not being quite switched on with the 4WD aspect of it," says Ric. "Then we've got the 'L' tank and that's for the guys who are just doing general outback touring, towing a caravan around, and they're getting on some dirt and dusty roads, but they're not really doing any hardcore stuff, and they want maximum fuel capacity. They might be towing a horse float or a car trailer or a motorbike trailer or a fishing boat up and down the coast. By having the two versions, a small one and a large one, we're more customer orientated; they can pick and choose exactly what they want."

### FUEL CHECK

Toyota HiLux  
Adelaide > Darwin



Driving from Adelaide in a new Toyota HiLux fitted with an ARB Frontier tank, you'd get to Darwin and only have to fill up three times. If you'd left home with just your 4WD's standard fuel tank, in three fuel stops you'd have barely made it past Alice Springs.\*



## PLASTIC TANKS

The ARB Frontier tank is the world's first polymer long-range diesel fuel tank for 4WDs. Manufactured from a resilient cross-linked polymer, the Frontier tank is significantly lighter than a traditional steel tank (30 to 60 per cent, depending on model) yet is still extremely tough.

With a wall thickness between 7.0 and 9.0mm, the flexible polymer used in construction of the Frontier is able to handle impacts without damage and it's also UV stable as well as resistant to chemicals, fire and heat. If you were ever in doubt about the strength of a plastic fuel tank, just take a look underneath any modern car on the road today; just about all OE fuel tanks are plastic. As for the strength of the Frontier, check out ARB's now famous video of a 60 tonne Centurion tank running over a Frontier long-range fuel tank at [www.arb.com.au/frontier-long-range-fuel-tank/](http://www.arb.com.au/frontier-long-range-fuel-tank/).

Strength is not the only advantage of making a long-range fuel tank from a polymer material; in addition, intricate shapes can be formed so that as much space as possible under a vehicle can be utilised, therefore maximising the capacity of the tank.

The Frontier tank is fitted using existing vehicle mounting points and utilises a non-rigid mounting system that allows for movement of the tank within the chassis. It has a one-piece construction, so there are no welds or seams, resulting in exceptional strength and durability. Features include a vehicle-specific fuel pump module, a fully machined filler neck and a breather with one-way valve to prevent fuel leakage in the event of a vehicle rollover.

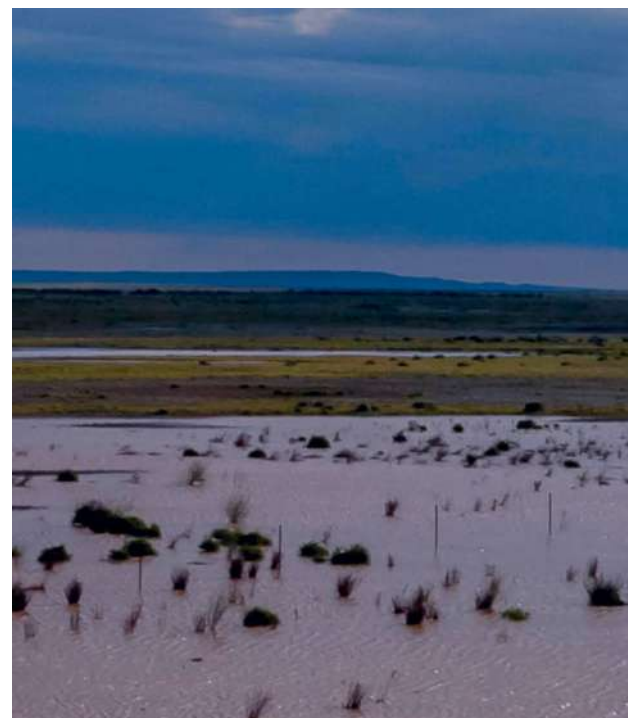
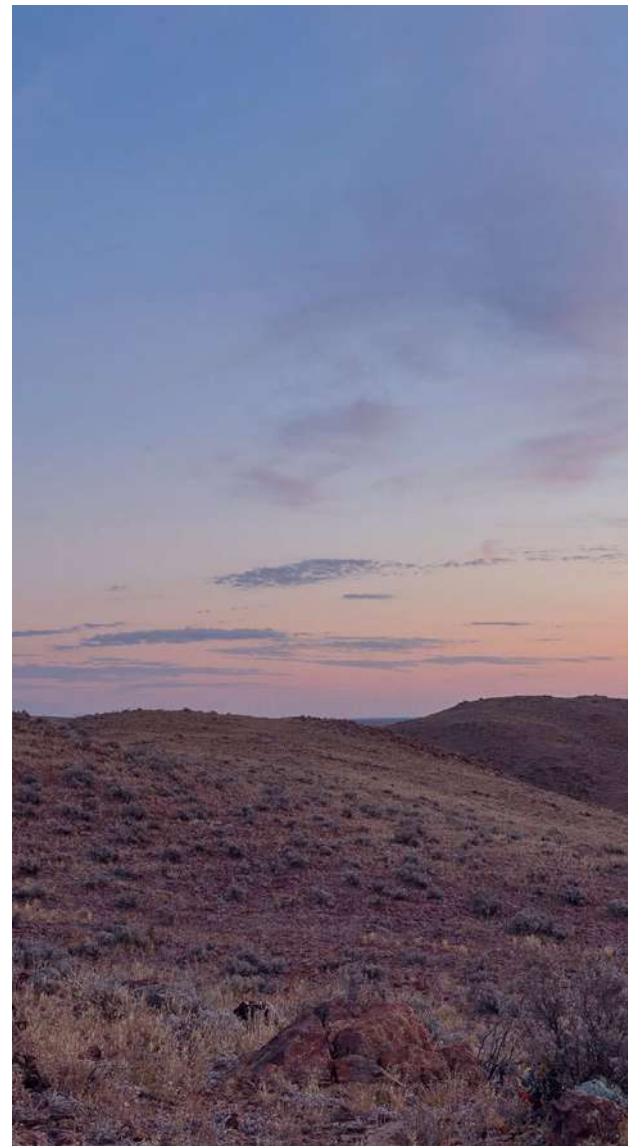
Where required, ARB Frontier tanks have an engineered baffle system solution integrated into the design of the tank. This baffle system dramatically reduces the movement of the fuel within the tank, enhancing the driving experience for the occupants within the vehicle.

### FUEL CHECK Ford Ranger Sydney > Birdsville



A road trip from Sydney to Birdsville in a new Ford Ranger equipped with an ARB Frontier tank would get you to your destination with only one fuel stop. With the standard Ranger fuel tank, you'd be looking for a service station three times before you got there.\*

\*Results of HiLux Fuel Check and Ranger Fuel Check based on 14L per 100kms with an increased fuel capacity of 60L and calculated by overall distance. Results of 200 Series Towing Fuel Check based on 18L per 100kms with an increased fuel capacity of 140L and calculated by overall distance. These results should be taken as a guide only; contact your local ARB store for information on Frontier tank upgrades and fuel consumption estimations/advice.

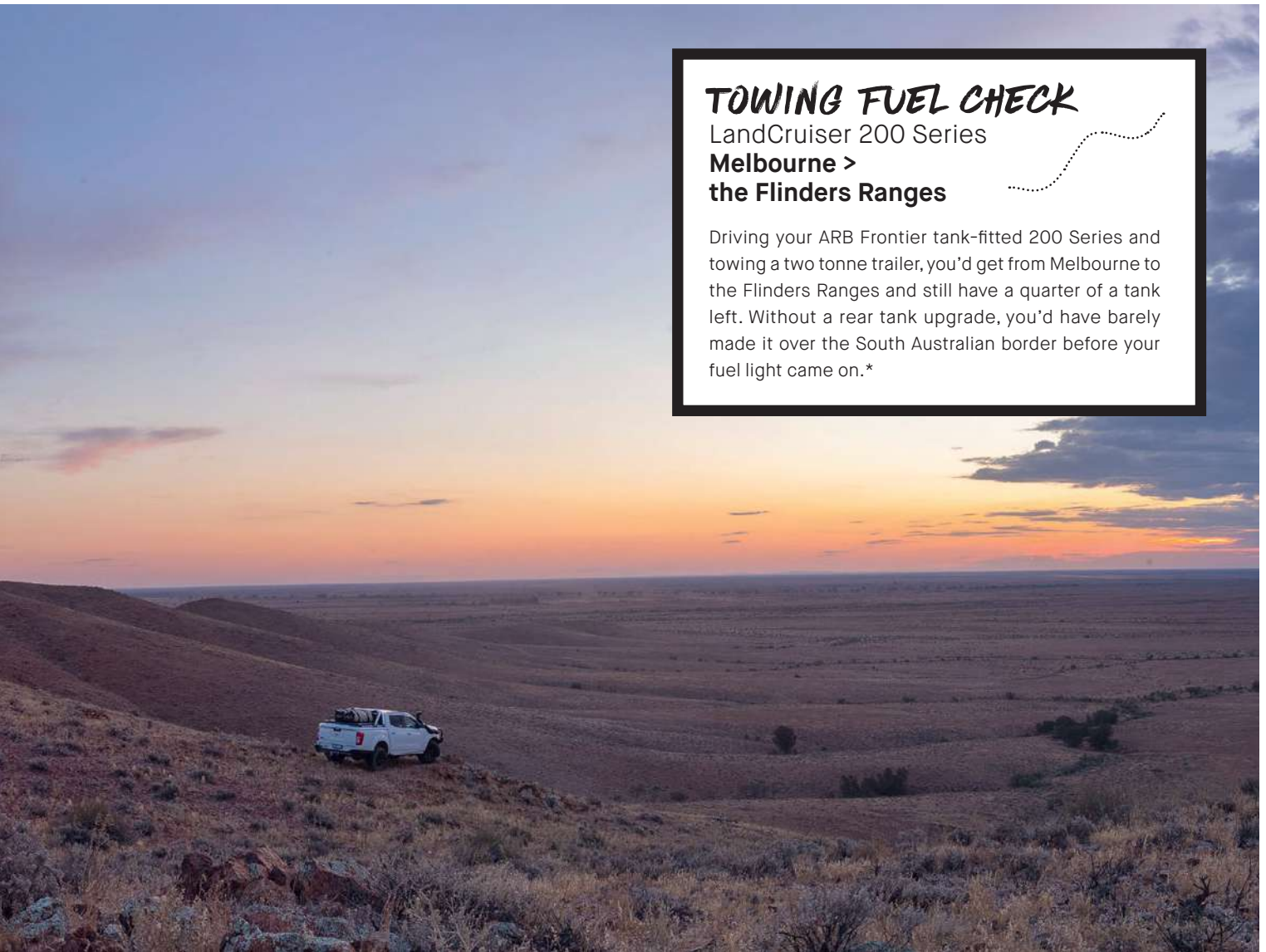


## TOWING FUEL CHECK

LandCruiser 200 Series

**Melbourne >  
the Flinders Ranges**

Driving your ARB Frontier tank-fitted 200 Series and towing a two tonne trailer, you'd get from Melbourne to the Flinders Ranges and still have a quarter of a tank left. Without a rear tank upgrade, you'd have barely made it over the South Australian border before your fuel light came on.\*





# Armoured Amarok

Hot on the heels of the release of a supplementary kit to allow fitment of the ARB Deluxe bull bar and ARB Sahara bull bar to the new Amarok V6, comes the development of an all-new Summit bull bar to suit the popular Volkswagen utility.

When Volkswagen launched the potent new Amarok V6 last year, they ensured it offered the most powerful turbo-diesel engine in the class, pumping out an impressive (claimed) 180kW of power and 580Nm of torque in "overboost" mode. They also revised the styling of the Amarok slightly, giving it a redesigned bumper that resulted in ARB developing

a supplementary kit to allow fitment of existing Deluxe and Sahara bars. But the redesign also presented ARB with the opportunity to develop a new Summit bar to suit the V6 model.

The new Summit bar features the latest styling from ARB including the 30.0mm radius on the wings and centre section, 60.3mm outer and 76.1mm centre tubes, press-formed cover straps, larger fog light and surround, two-piece split pan grille with access door for winch operation and a recessed winch control box for a sleek appearance. It also incorporates antenna mounts and Hi-Lift jack points, provision

for fitment of a range of driving lights and can be used in winch or non-winch applications. The original Volkswagen screw-in tow point is retained thanks to a laser-cut hole in the centre of the Summit bar's under panel.

While developed primarily for the facelifted model, ARB Product Manager Steve Sampson has great news for owners of pre-facelift Amaroks: "The bar mounts are based on the previous generation of Amarok, so the Summit bar also fits the pre-facelift model," he says.

It should be noted that due to the revised



bumper profile, when the Summit bar is fitted to pre-facelift models there will be slightly more of a gap (when looking from above) between the wings and the bumper itself, while there will be slightly less of a gap between the grille and the centre pan. This does not affect correct fitment of the bar.

By the time this issue of 4x4 Culture lands in ARB stores, Steve advises that the engineering team will also have completed development work on Summit side rails and steps to suit the Amarok, and he says work is also well underway on a Summit rear step tow bar.

"We're also doing a Summit rear bar for the Amarok," says Steve. "It's similar to a normal Summit rear bar, in that it still has press-formed wings, but the centre tube goes up on each side of the vehicle and in the centre part it drops down so there's enough clearance for the number plate. We've made a few tweaks for this particular vehicle."



### Classic Plus Canopy

ARB has also completed development work on a Classic Plus canopy to suit all dual-cab variants of the Volkswagen Amarok. Available in textured and smooth finishes, the Classic Plus canopy has the traditional manually operated side windows of the Classic canopy as well as a rear door that operates in conjunction with the vehicle's central locking system via the OE key fob.

The one-touch operation of the Classic Plus canopy's central electronic handle and the door's slam-shut operation add convenience when using the canopy, while compatibility with the vehicle's central locking has obvious security benefits.

ARB also offers a traditional Classic canopy to suit the dual-cab Amarok, as well as the top-of-the-range Ascent canopy.

# TRICKED OUT TACOMA

→→

**Toyota "Taco" 2016  
and later model owners  
now have a full range of  
products at their disposal  
to prepare their pride and  
joy for the tracks.**

*Check out Issue 47 for details  
on the ARB Summit bar and  
Old Man Emu suspension for the  
Toyota Tacoma and read on for the  
latest off road applications.*

→→

## **SUMMIT SIDE RAILS & STEPS**

ARB's recently released Summit bull bar for the Toyota Tacoma can now be fitted with Summit side rails and steps to suit. ARB's side protection range guards your vehicle's lower panels from rocks and road debris encountered in remote area travel.

Summit side rails and protection steps offer a vehicle specific attachment system, larger steel tubing and anodised aluminium tread plates encompassing the very best side protection. Manufactured from 60.3mm tubular steel for added strength and durability, they come complete with a tough nylon cover sleeve to provide an integrated look between the bull bar and side rail.



## SUMMIT REAR STEP TOW BAR

To complete the ARB Summit protection package for the Toyota Tacoma, the Summit rear step tow bar has been developed. With the growing popularity of the dual cab pick-up, ARB's engineers were tasked with designing a modern, integrated and aesthetically pleasing rear bar. From the press-formed wings to the lower diffuser panels, each component of the Summit rear step tow bar has been designed to complement the vehicle's design in a stylish and practical manner, with no compromise to the level of protection.

The rear bar retains the original equipment (OE) tow bar assembly, including the trailer wiring and licence plate illumination. Press-formed wings have been introduced to provide improved levels of protection in comparison to the original equipment tow bar and rear bumper. The bar also incorporates Hi-Lift jack points in both the wings and the lower tube section.

One centre piece of anodised extruded aluminium is fitted on the centre panel and wings, providing a solid gripping surface and step. The backbone of the rear bar is a 60.3mm x 2.6mm Electric Resistance Welded (ERW) tubing main frame. The tubing is finished in a zinc-rich primer with textured black powder coat.



## ARB UNDER VEHICLE PROTECTION

Engineered to shield vulnerable under body components such as the steering sump, transmission and transfer case from off-road debris, Toyota Tacoma 2016 and later model owners can now benefit from ARB's under vehicle protection (UVP).

Laser-cut, press-formed and folded 3mm sheet steel is used to provide superior strength and protection. The UVP for the Toyota Tacoma consists of four carefully designed panels. The front, engine oil pan, transmission and transfer case panels bolt directly to the chassis and cross-members to provide continuous under vehicle protection from front bar to the transfer case.

All panels are zinc-plated and powder-coated in a silver textured finish. Mounting bolts are recessed for added protection and are easily removable for servicing.

## SAFARI SNORKEL

Protecting your engine from dust and water ingestion is essential for keeping your 4WD on the tracks. A Safari snorkel will ensure that clean, dry air is always available, regardless of the conditions. The Toyota Tacoma can now benefit from a stylish Safari snorkel, relocating the engine's air intake from a low, vulnerable position to a safe location up high.

Featuring the new ARMAX design, the Toyota Tacoma snorkel is part of a new generation of raised air intakes from Safari. Tested and verified on an airflow bench, each ARMAX design ensures that the airflow through the snorkel meets or exceeds that of the factory inlet design. This ensures that if you wish to increase your engine's performance, the ARMAX snorkel will provide the necessary airflow required.







# FAMILY FIRST

WORDS AND PHOTOGRAPHY  
BY **EMMA GEORGE**



TRAVELLING TO REMOTE AREAS AND  
**GETTING OFF THE BEATEN TRACK**  
**IS ONE OF THE GREAT THINGS**  
ABOUT CAMPING AND 4WDING BUT  
**IT REQUIRES A LEVEL OF**  
**RESPONSIBILITY AND PLANNING**  
**TO DO IT SAFELY, PARTICULARLY**  
**WHEN TAKING CHILDREN.**

Simple things like needing Panadol for a temperature when the nearest pharmacy might be hundreds of kilometres away, or not having the right communication equipment can easily ruin a trip and put people in dangerous situations. With some extra planning and common sense, taking kids on a big adventure doesn't have to be any riskier for them than jumping on the trampoline in the backyard. There are a number of items we pack and precautions we take when going off road to prevent us running into trouble but if it does happen, we have the necessary resources to deal with it.

## PREVENTION

Accidents can happen anywhere and anytime. When I was at the hospital getting one of my boy's stitched up (yet again), I was told the biggest reasons children need stitches is from hitting their heads on coffee tables or falling off scooters. While we can't stop accidents at home or in the bush, it is important to minimise hazards and prevent some before they occur.

Campfires are great, but establishing boundaries such as no running near the fire, walking behind camp chairs instead of in front and not waving around sticks with hot marshmallows are a must.

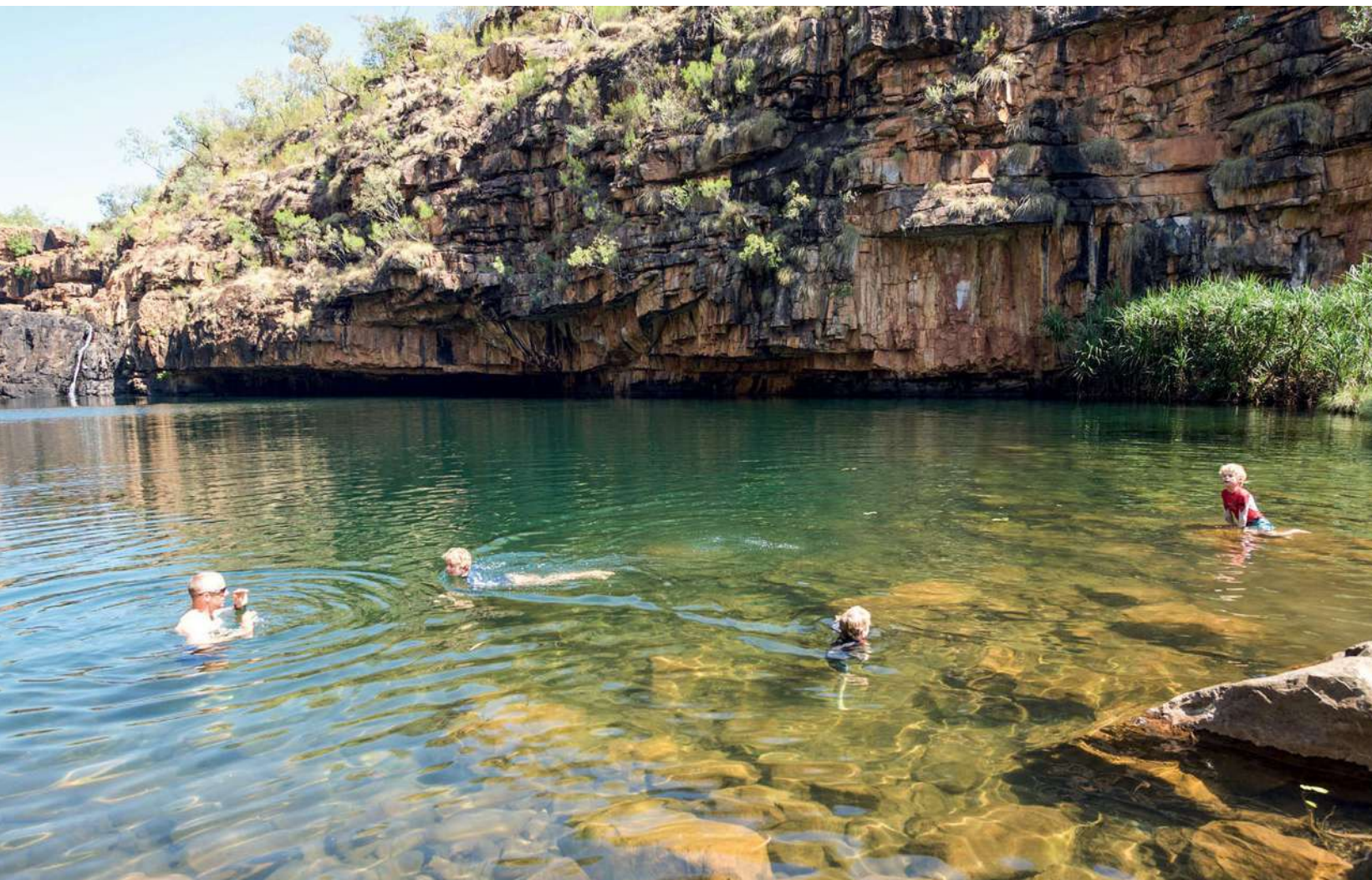
Dehydration can happen quickly with children, particularly in hot areas. We have spent a month on the Gibb River Road hiking into gorges and some days in 35°C heat. Getting enough water into busy kids can be hard, but one of the best investments we have made is buying each child their own hydration pack. They carry their water and they drink a lot more as they suck continuously through the mouthpiece, which means they don't get thirsty or dehydrated.

A good pair of hiking boots can prevent sprained ankles as they provide a lot more support than normal shoes, particularly on rocky tracks and uneven surfaces.

## SETTING UP CAMP

Arriving in daylight hours makes it easier to have a good look around, find the best spot and check out any potential dangers before setting up camp. Simple things such as avoiding ant nests, staying clear of water with young children and avoiding cliffs or steep areas are all important. Although this type of terrain may be fine for adults, it can be extremely risky with children. And though shade can be a blessing on hot days, always look at the type of trees and never camp underneath ones that could potentially fall or drop heavy branches. Camping is definitely more fun when you know the kids are safe and everyone can have a good time.

GETTING ENOUGH WATER INTO  
BUSY KIDS CAN BE HARD BUT ONE  
OF THE **BEST INVESTMENTS WE  
HAVE MADE** IS BUYING EACH CHILD  
THEIR OWN HYDRATION PACK.





IT IS BEST NOT TO GO CAMPING WITH SICK KIDS BUT IF THEY DO BECOME UNWELL, **IT IS IMPORTANT TO KNOW** WHERE THE NEAREST HEALTH FACILITY IS.

## PACK SMART

There are plenty of things you need to take off roading and overloading the car can happen quicker than you think, so carefully considering what you leave at home can make all the difference. Travelling with kids requires extra paraphernalia, particularly if you have young children needing porta cots, hiking packs, nappies, etc. With other non-essential items, you may need to be a little ruthless. Take the time to think about what is a necessity and a "nice to have" and don't fill every available space just because it is there. It is easy to end up carting more gear than you need, which takes longer to pack and unpack, and it may create problems with an overloaded vehicle. In the past, I have been guilty of packing too many toys for the kids and all those extra things we just might need but I have learnt my lesson. When kids are in the bush they have plenty of fun things to do to keep themselves entertained and I try to leave behind all those "maybe" items. Working out what to leave at home is harder than actually just throwing everything in the car.

## FIRST AID

In the bush, you don't have access to a 24/7 pharmacy and you need to carry first aid equipment for a range of scenarios and travelling with three boys, I seem to be reaching for the first aid kit daily, although it is mostly for Band-Aids and Stop Itch. Even if you carry the most comprehensive first aid kit, it still may not help if you don't know what to do in a medical emergency. I did a first aid course before we embarked on our current six-month trip because I wanted to be confident I knew what to do if someone was injured. I carry two first aid kits, a comprehensive one that covers most situations and a second bag that caters for minor ailments and little kids. Things like Panadol and Nurofen (for both children and adults), antihistamines, antiseptic cream, numerous Band-Aids and tapes for scratches and grazes as well as a thermometer. I also carry special burn packs just in case we ever have any issues around the campfire.

Bandages for snake bites are a necessity, as is educating our kids on what to do if anyone gets bitten. They know to bandage from well above to below the bite area and to keep still and lie down if bitten. Although I keep the first aid kits away from the children, they are stored in the rear of the car, which my husband and I can easily access.

It is best not to go camping with sick kids, but if they do become unwell, it is important to know where the nearest health facility is. We were camping with our six-month-old and he got a temperature and wasn't well. I didn't want him to get really sick and be doing a hospital run late at night, so we decided to get him checked. It ended up being an ear infection. We returned to camp with antibiotics and although it was a six-hour round trip, he got the treatment he required before it turned into something serious.

## COMMUNICATION

With any trip, it is important to let someone know where you are going and when you will be home. It is also essential to carry reliable forms of communication equipment, so spend the time to select the right option for the type of travelling you intend to do. There are many communication options such as UHF radios, HF radios, satellite and mobile phones. However, before embarking on a remote trip, ensure they will work where you are going. If travelling to isolated areas, it would be risky not to carry a satellite phone, EPIRB or HF radio. When we crossed the desert with our young children five years ago, I did a lot of research and purchased an Iridium satellite phone. Although we already had an EPIRB, we felt it was important to be able to have voice-to-voice communication if we encountered a problem. The last thing I wanted was for one of our kids to get burnt or bitten by a snake and not be able to get the medical help we required.

Purchasing a satellite phone and plan is expensive but, in the context of setting up a vehicle and going on holidays, we felt it was money well spent. I view it as a safety investment and having a satellite phone makes me feel confident when travelling to remote places as I know that if we run into trouble, we will be able to call and get the assistance we need. It is kept in an orange, waterproof case for easy identification and we have taught the kids how to use it in case something happens to us.

THE LAST THING I WANTED WAS FOR ONE OF OUR KIDS TO GET BURNT OR **BITTEN BY A SNAKE** AND NOT BE ABLE TO GET THE MEDICAL HELP WE REQUIRED.



## FOOD & WATER

These are critical items as having plenty of drinking water and food is imperative, particularly when visiting remote areas. You never know when you might get stuck or might want to stay longer, so packing extra food and water is a good safeguard. I find my kids are hungrier than usual when camping as they are off exploring and are very active. After running low on supplies when we were staying at Bachsten Gorge (one of the more remote bush camps in Australia and a six-hour-drive off the Gibb River Road in WA), I had to ration food supplies so that we could stay a couple more days. It is an experience I have learnt from as the kids got grumpy because they couldn't have more than two sandwiches for lunch and four Weet-Bix in the morning. I got sick of the "I'm hungry" complaints, but we were lucky to have been carrying enough supplies to do the unplanned detour as it was a fabulous place to visit.

We carry 180 litres of water in our camper and also have another 40 litres stored permanently in the car. If we leave our trailer behind, we have water with us at all times. On a past trip, we got bogged in soft sand on an isolated track in the Great Sandy Desert. Although we managed to get ourselves out, I felt reassured that we had a minimum of four days of food and water that would have sustained all five of us easily if we had to call and wait for assistance.





## RECOVERY GEAR

Perhaps one of the most versatile tools to bring is a shovel. Not only can it dig the car out of sticky situations but there are also many occasions around camp when a shovel is handy. For the rest of the recovery gear, an ARB recovery bag is an easy solution as it keeps everything all in one place and has all the essentials such as a snatch strap, winch extension strap, winch block, tree trunk protector, gloves and shackles.

Knowing where you are going and the facilities available helps when packing, in particular the availability of water and the distance to a store. Taking paper maps as well as electronic charts are important and I always research the location of the nearest town or medical centre just in case we need it. The last thing you want is to have someone injured or sick and not know which direction to drive. Once you have your car, camping and safety gear all kitted out, touring is easy; all you have to do is pack some clothes, food and water, and enjoy the adventure. Forget five-star resort holidays, camping is a favourite in our household and it gets five stars for fun and excitement from our kids every time.



## ARB FIRST AID KITS

ARB's extensive range of first aid kits are the perfect vehicle companion, allowing you to be prepared for life's unexpected accidents.

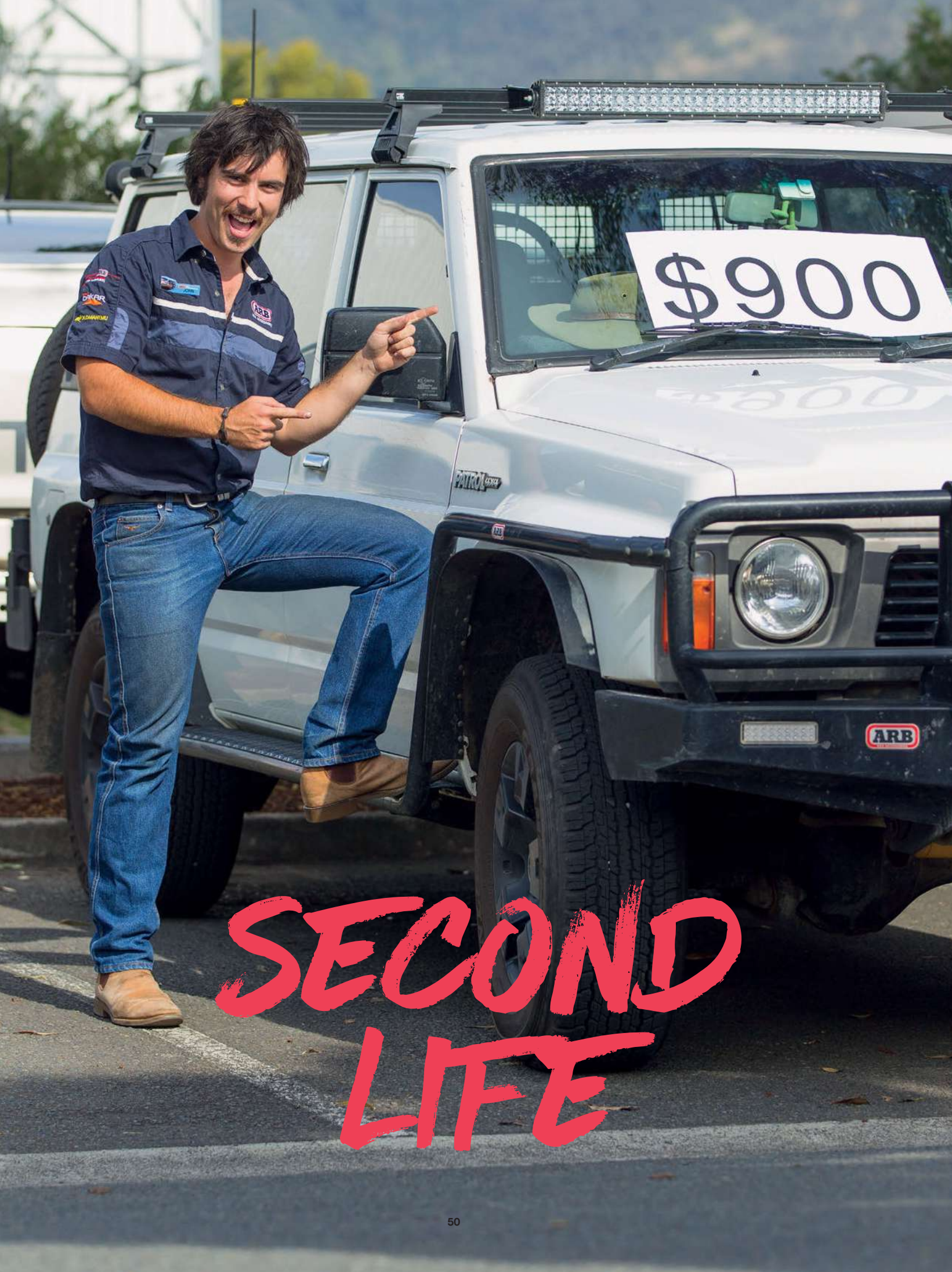
Each kit is supplied in a soft case made from heavy duty PVC-backed nylon, specifically designed for convenient storage and easy access in an emergency situation.

The first aid kits are available in three sizes, feature clear pockets for easy identification and fold-out compartments for convenient access.

The two larger kits have been designed with a sturdy carrying handle, and the Snake and Spider Bite Kit has a convenient belt strap, keeping your hands free when bushwalking or on the go. All three first aid kits include a contents list for easy replenishing.

### Available kits:

- Family First Aid Kit (includes Snake and Spider Bite Kit)
- Personal First Aid Kit
- Snake and Spider Bite Kit



\$900

# SECOND LIFE

There are many reasons to buy a second-hand vehicle instead of a new one. The most obvious is price, but other factors include a desire to buy a particular vehicle that is no longer available new or wanting to buy a specific 4WD that has already been set up perfectly for outback touring or weekend rock crawling.

Regardless of the reason, if you choose the right used vehicle to fulfil your requirements, you're certainly going to save money compared to buying new.

→ **Depreciation:**

Except for rare collectibles, nearly all vehicles can be safely described as depreciating assets and they lose most of their value as soon as they're driven off the new car dealer's lot, so even for those thinking of buying a new vehicle, it's certainly worth checking out what's available on the second-hand market.

→ **Big savings:**

Take a look at a few online classified sites and you'll soon be amazed at the savings that can be had on some very low-mileage, almost new vehicles. Imagine picking up a kitted-out 76 Series LandCruiser GXL with less than 25,000kms on the odo for less money than a new base-spec 76

Workmate or saving more than \$10,000 on the purchase of a Y62 Patrol just because it's a year old and has a low 20,000kms on the odo. These are just a couple of examples we spotted while researching this story.

→ **Under cover:**

Over the last few years, vehicle warranties have improved significantly and many new cars are now covered for five years/100,000kms or more. This is great news for the used 4WD buyer because it means there are plenty of second-hand vehicles on the market that are still covered by factory warranties.

## CHOOSING THE RIGHT RIG

→ **Price:**

Do your research. One of the best resources for checking used car values is [redbook.com.au](http://redbook.com.au). You can look up any vehicle of any year and see the private price guide, trade-in price guide and price when new. It even lists average kilometres for the vehicle depending on age, gives a general description of the vehicle and lists its specifications. When it comes to prices, have a look at comparable vehicles on sites such as [carsales.com.au](http://carsales.com.au), [carsguide.com.au](http://carsguide.com.au), eBay and Gumtree.

→ **Seating:**

There are plenty of things to consider when looking for the ideal used 4WD. If you have to take half the footy team down to the park every weekend then you're probably going to need a wagon with seven or eight seats. But if there are only two of you and you want to head off on an extended outback adventure, then a single-cab heavy-duty

ute with a canopy/tent set-up on the rear could be the ideal rig.

→ **Load capacity:**

No matter what vehicle you choose, make sure it has the load capacity required to carry all of your gear. Utes obviously have a higher payload than wagons but they're not for everyone.

→ **Towing:**

Towing a caravan or a boat? Look for a vehicle with a towing capacity greater than the weight of your laden trailer. Generally speaking, the longer a vehicle's wheelbase and the wider its track, the more stable it will be when towing a heavy trailer. Also consider a vehicle fitted with electronic trailer sway control.

→ **Fuel type:**

The next thing to consider is fuel type: petrol, diesel or LPG. If you're likely to be driving long distances in the outback, then a diesel vehicle will be the best option due to better fuel economy (particularly in trying conditions such as soft sand) and the fact that diesel fuel is safer to transport and transfer than petrol. If most of your off

road driving takes place closer to urban areas, then perhaps a petrol-powered 4WD will better suit your requirements. LPG is really only suitable if you live in an urban area; don't expect to be able to refuel in remote areas.

→ **Manual or auto:**

Modern automatic transmissions are far more advanced than they were just a few years ago, with up to seven or eight ratios, and in some cases they are far better on the road (and off it) compared to a five-speed manual gearbox. But bear in mind that if you're looking at a used vehicle that's more than five years old, it will likely have a less advanced four or five-speed auto, which might not offer adequate low-range reduction for steep off road descents, and it certainly won't have the shift quality of a more modern auto. Traditionalists will likely opt for a manual gearbox, which they feel offers more driver control (as well as the ability to jump start the engine if the battery goes flat), but if you're driving in stop-start traffic all day, then you're probably better off with an auto.



→ **On road:**

On road performance, ride quality and handling will (and should) play a big part in a vehicle purchase decision. Do your research, look for trustworthy reviews in respected 4WD publications and, most importantly, take the vehicle for a decent test drive. Drive the vehicle in as many conditions as possible before making an offer; what feels good on a billiard table-smooth surface might feel downright awful on a bumpy road.

→ **Off road:**

It's unlikely that you'll be able to test a vehicle's off road capability before making a purchase so, again, arm yourself with as much information as possible by reading up on 4WD tests and looking at feedback from other owners through various online resources such as 4WD club websites and social media pages.

→ **Accessories:**

Finally, research what accessories and equipment is available for the vehicle you intend to buy. After all, there's no point in buying a vehicle that you can't get a bull bar for if you intend to take it to Central Australia. And see what else is available for it, such as suspension systems, roof racks, long-range fuel tanks, dual-battery systems and snorkels. Oh, and check the tyre size; you'll need to make sure you can buy decent tyres for it if you intend to drive it off road – you'll be looking for a light truck (LT) construction in an all-terrain or mud-terrain pattern with a decent amount of sidewall.

If you think you've almost found the perfect vehicle but you still have a few reservations, don't feel as though you have to settle for second best. There are plenty of vehicles out there and you'll eventually find the one that ticks all the boxes... and at the right price.

## DEALER, PRIVATE OR AUCTION

→ **Dealer:**

There are a few advantages of buying a used vehicle through a licenced dealer rather than a private sale. The title of the vehicle is assured, so you won't get a knock on the door from Mr Plod telling you that your used 4WD is stolen property. Secondly, you'll know that you're not buying a rebirthed vehicle or one that's been listed as a statutory write-off. And thirdly, (in some states) the vehicle will be covered by a 5,000km/three-month warranty, so long as it's less than 10 years old and has less than 160,000kms on the odometer. Finally, if you have a trade-in, you won't have to go to the effort of selling your existing vehicle.

→ **Private:**

The advantage of buying privately? The vehicle will generally be cheaper than buying through a used car dealer. Remember, if you do buy privately you'll need to do your research; get a VIN check to make sure the seller has title of the vehicle, to make sure there's no money owing on the vehicle and to make sure the vehicle has not been written off.

→ **Auction:**

You can often pick up absolute bargains at second-hand vehicle auctions, but make sure you have a good look at the vehicle you're going to bid on because you won't be able to test-drive it prior to the auction. You'll also be up for the auction fee and, in some cases, GST, so make sure you factor that into your budget.



## BORROWING MONEY

There are several finance options available to purchasers of used vehicles but if the vehicle is more than five years old, your options become more limited. If the vehicle is more than 10 years old, you can forget a traditional secured car loan; you'll have to opt for a more expensive unsecured personal loan.

## CHECK IT OUT

If you're not mechanically minded, then you should always get an expert opinion before handing over cash for a used vehicle. If you don't personally know someone who can check out a vehicle for you, there are plenty of mobile mechanical services you can pay to have a look, some through state motoring bodies and others through private operators.



## INSURANCE

When buying any vehicle, used or new, make sure you have your insurance sorted before you drive off after making the purchase. Even if you only have a short drive home, it's not worth taking the risk of driving an uninsured vehicle.

Once upon a time, insurance companies would offer cover notes, which offered insurance coverage for a couple of weeks prior to finalising payment for the policy; this allowed buyers extra time to shop around for a better insurance deal after they had purchased a vehicle.

These days, with instant over the phone and online payments, insurance companies no longer offer cover notes, so it pays to shop around for the best insurance deal before you buy a vehicle. It should be noted, however, that most insurance companies allow a cooling off period in which you can cancel a policy for any reason, including if you find a better deal with another insurer.



# THE BUMP STOPS HERE

Prado 120 owners can now experience the industry-leading racing technology that is BP-51 suspension. The BP-51 range of high-performance, bypass shock absorbers is the result of an exhaustive development process aimed at delivering the ultimate in both comfort and control.

## BP-51 SUSPENSION

Designed, developed and tested entirely in-house by ARB's team of Old Man Emu Ride Control Engineers, BP-51 shock absorbers are vehicle specific and utilise existing mounting locations to provide easy installation without the need for additional vehicle modification.

Unlike most other adjustable shock absorbers, which provide adjustment for compression only, the BP-51 range allows on-vehicle, independent adjustability of both rebound and compression to offer class-leading ride customisation that can be tailored to individual vehicle or trip requirements.

## PRADO 120 APPLICATION

The Prado 120 BP-51 package consists of two front coil over dampers, two rear dampers and two fit kits. As a result of the difference in the sway bar saddle hole pitch of the Prado 120 to the Prado 150, a new front kit needed to be developed. In order to create clearance and accommodate the BP-51 front coil over, the sway bar requires relocation forward and down. A new sway bar spacer block has been specifically designed for the Prado 120.

Extensive vehicle-specific testing and engineering means that no fitting modifications are required to your Prado 120. The BP-51 range is backed by a nationwide network of more than 100 authorised outlets and a three-year, 60,000km warranty.

# UNSEEN POWER

The largest component of a dual-battery set-up is the auxiliary battery, and this is traditionally located somewhere in the vehicle's engine bay. In the case of many modern 4WDs, however, there's simply not enough space to fit a second battery under the bonnet.

One solution is to locate the auxiliary battery somewhere in the rear of the vehicle – in the tub/tray of a ute or the cargo area of a wagon – but the obvious downside to this is it eats into valuable cargo space. So ARB's engineers looked to the industrial sector when developing a better solution and the result is the Under Vehicle Battery Tray (UVBT).

**"We drew inspiration from the trucking industry where they mount their batteries on the side of the chassis,"** explains ARB engineer James Luke.

"You don't actually need access to the battery," adds ARB Product Manager John Bamfield. "What you need is the power that the battery provides. So if that battery can be stored somewhere out of the way that's not otherwise used and you still have access to the power that it provides, then that's the perfect alternative."

The UVBT is manufactured from tough 3mm-thick powder-coated steel with zinc-rich primer. It's been press-formed for additional strength and features drain holes to prevent water pooling. As the name suggests, it's mounted under a vehicle where it can't be seen but once wired up,



accessory plug sockets can be installed in convenient locations around the vehicle for powering electrical equipment.

The UVBT has been designed to work specifically with a range of Optima batteries and REDARC battery chargers. **"It is designed to accept the Optima range of batteries; the D25/75 Yellow Top, D34/78 Yellow Top, the D35 Yellow Top and the D34M Blue Top,"** says John. "It's also designed to work specifically with REDARC BCDC battery chargers, which are mounted on the battery tray."

While John admits there might be a perception in the marketplace that fitting an auxiliary battery under a vehicle could make it prone to water and dust ingress, he insists that's not an issue. "The inspiration for this program was taken from the industrial sector and their batteries are bolted to the chassis, so they're exposed to a heck of a lot of road grime and dirt and dust and weather issues under there," he says. "So we're totally confident there are no issues with an under-vehicle battery location. There's a perception, yes, but we've spoken to REDARC in regards to the positioning of the charger and they have no issues with them being mounted under there... and with Optima there's no issue."

The UVBT is currently available to suit all dual-cab utes except for the Toyota HiLux and the Volkswagen Amarok. (In the case of HiLux, there's enough space under the bonnet to fit an auxiliary battery,

while in the case of Amarok, there's simply not enough room under the vehicle for a UVBT solution, so a tub fitment is the only option.)

Despite its impressive strength, the UVBT is fitted as high up under the vehicle as possible where it has minimal impact on ground clearance. "There's a fair bit of work involved to make it actually fit," says James. "You stick your head underneath the vehicle and you think there's a fair bit of room under there but until you actually try to fit a battery, you realise there isn't a lot." Despite these challenges, the UVBT sits higher up and out of the way than other vehicle components, such as gearbox mounts, suspension mounts and fuel tanks.

An added benefit of fitting the auxiliary battery under the vehicle is centralised weight distribution; the UVBT is located close to the ground, inboard of the chassis rails and between the front and rear axles. "Batteries can weigh 20kgs, plus the tray, so you're talking up to 25kgs-plus and that weight, if higher up, has an effect on the vehicle's handling," says John. Additionally, the central location means the battery is close to most electrical accessories such as the fridge, which is usually mounted in the rear of a vehicle.

**"The UVBT is up under the vehicle and out of the way,"** says James. **"It's a set and forget product."**



# Somerton Special



**ARB Corporation Ltd, Australia's leader in 4x4 accessory design, engineering and manufacturing, has welcomed several new ARB-branded stores into its distribution network.**

ARB's National Sales & Marketing Manager, Matt Frost, has seen the ARB store network more than quadruple in his 23 years with the company, which he believes is a reflection of the popularity of off road vehicles and their owners' desire to equip them properly for remote area travel.

**"Whilst ARB's network continues to grow, we're more focused on the quality of our stores than the quantity. All of our latest sites have extensive showrooms that really showcase ARB's ever-increasing range, most of which is manufactured and/or designed in house,"** Matt explains.

In mid-2015, ARB embarked on a project to further strengthen its retail network with a new look and feel for ARB-branded stores. The first concept store opened in Geelong, Victoria in late 2016 including new livery, technology and custom joinery. This new design includes category signage on the building and pylon signs, and a modern industrial interior style.





Kerry Ling, General Manager for ARB Somerton relates "ARB Thomastown has a long history approaching 20 years, proudly servicing the 4WD needs of Melbourne's northern suburbs, with a rapid growth corridor to our north. Our new, larger Somerton store will continue meeting those needs and striving towards high levels of customer service for many years to come."

Located on Cooper Street in the busy industrial/trade area, ARB Somerton is a shining example of the new ARB store

concept design. Opening in April 2017, ARB Somerton has 10 service bays each with a hoist and fully fitted-out workshop.

Matt McConaghy, Victorian/Tasmanian Stockist Representative has high hopes for this new addition to the ARB updated look. "The opening of ARB Somerton represents a new standard for ARB stores across the country, we are excited and proud to have it right here in Victoria, manned by a team already trusted by our existing customer base" he says.

So next time you are in the northern suburbs of Melbourne, pop into ARB Somerton and say g'day.

**Store contact details and opening hours are available at [arb.com.au](http://arb.com.au).**

Wouldn't Read About It

WOULDN'T READ ABOUT IT

# TERRITORY TRAGEDY

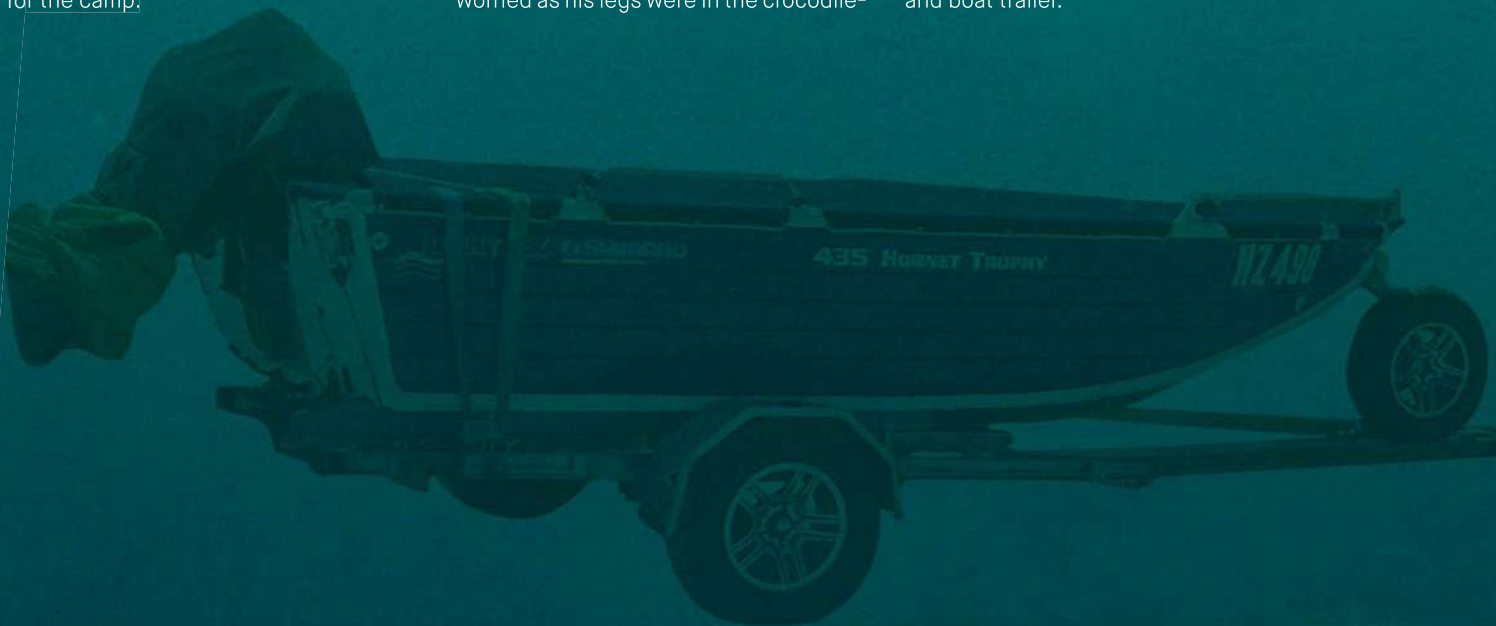
**It was October 2016 and we were on our annual barramundi fishing trip in Port Roper, Northern Territory. Me, my mates (10 blokes in total) and four boats camped up at Port Roper boat ramp, 350kms from Mataranka. With plenty of barra lures, rods, reels and other necessities (beer and food), we set up our swags and fridges ready to go fishing the next day.**

Reports that the barra fishing had been poor that year didn't deter our group, and we departed in different directions on the river in search of the elusive barramundi. First day, no barra; in fact, no one caught any fish. On the second day, my mate Ian caught a couple of undersize barra, threw them back and didn't have any more luck. On the third day, Ian caught a 60cm fish, his first keeper and that night's dinner for the camp.

The fourth day of our trip, we were the last boat back to the ramp with the tide running out fast. Just as we'd done on the previous three days, I dropped Ian off and he reversed my LandCruiser 79 series down the ramp with the boat trailer. After putting the handbrake on, he jumped out to hook the winch strap onto the boat and I drove the Hornet onto the trailer. Ian hooked on the strap and that was the moment everything went pear shaped. The ute rolled backwards, Ian was jammed between the boat and ute and we were washed off the boat ramp and began floating downstream. The ute started diving to the bottom in six metres of water, pulling the boat down with the winch strap. Thankfully, the strap broke and the boat floated free with Ian hanging onto the front. Ian's face was somewhat worried as his legs were in the crocodile-

infested waters of the Roper and he is a poor swimmer. Thankfully, he worked his way around to the back of the boat and I pulled him in. After ingesting a gut full of muddy Roper water and a sizeable coughing fit, up it came, along with his false teeth, shooting straight over the side to join the LandCruiser and boat trailer below. The river at the ramp is half a kilometre wide with strong tidal currents; the ute and trailer disappeared fast.

We ran the boat onto the muddy bank and walked back to camp in the 40°C heat, reporting our loss to the blokes who were cooling their throats with a coldy. I called my wife on a sat phone and told her the story, asking her to contact our insurers. The result? No help to get home! I decided to hitch a ride to Darwin to buy another ute and boat trailer.



## “The river at the ramp is half a kilometre wide with strong tidal currents; the ute and trailer disappeared fast.”

After arriving in Darwin, I began shopping. Eventually, I bought a ute, trailer and some recovery gear from ARB Darwin, hoping to try to recover the sunken ute with a grapple and cable, using my ute and the others' to pull the wet one out, hoping to recover its valuable contents at least. Many other essential items had to be purchased as I was left with no clothes to change into. Meanwhile, the other fishermen in my group had found the ute on their fish sounders, locating it about 50m from the ramp and 40m from the shore.

When I arrived back from Darwin with another ute, decked out with an ARB bull bar, driving lights and a winch, and the new trailer three days later, I found the boys still cooling their throats and they informed me that the ute in the water had shifted with the tide and they couldn't find it on their sounders anymore.

So out the window went my idea of recovery. After another couple of days fishing (finally got some!), we all packed up and drove the 3,600kms back home to Victoria.

Not an ideal fishing trip! My advice on boat ramps? Switch the motor off, engage a low gear and don't trust the handbrake.

Murray Bond,  
Gippsland Lakes



Have an unbelievable off road story?

Let us know in 700 words or less, and you could win an ARB Essentials Recovery Kit worth \$320.

Email: [promotions@arb.com.au](mailto:promotions@arb.com.au)



# A Snorkel is Born



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**Safari 4x4 Engineering is the biggest name in 4WD snorkel systems in the world. With a focus on quality, it's little wonder this innovative Australian company is such a success story.**

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Safari Automotive has been manufacturing snorkels for 4WD vehicles since the 1980s and in that time has built a reputation for producing the best quality snorkels on the market. The key to the company's success is that all important focus on quality, which starts at the design stage and continues right through to vehicle fitment.

We spoke with Safari 4x4 Engineering's Purchasing Manager David Luxon and Development Manager (4X4 Products) Dean Wickes to find out how a Safari snorkel is born.



## Design

"To start off with, we 3D laser scan the vehicle," explains Dean Wickes, who has been working at Safari Automotive for 23 years and is the man responsible for all snorkel development. "We scan all the important aspects: the guard panel shape and profile, the A-pillar, air cleaner position, internal inner guard area... We scan more than we have to so we get a good visual of the car when we're designing on the computer. We get very close to a full 3D image of the vehicle after we've finished scanning."

"We also scan things like bonnet open, bonnet closed, door open, door closed," adds David Luxon.

"Yes, and door mirror forward, just to make sure that when the door's open on the vehicle that the mirror clears the snorkel body," says Dean.

Of course, there's much more to designing a quality snorkel than just making sure it fits the vehicle. "In the CAD designing phase we're also looking at cross-sectional areas of the snorkel body; we're making sure it's large enough for adequate airflow," explains Dean.

To ensure there's plenty of airflow, Safari first checks the factory air intake system. "Before we go to the tooling process, in the design and verification phase, when we first get a vehicle, we flow the factory air intake system on our flow bench to get a benchmark for the airflow performance that we need to achieve," says David.

## 3D Printing

When the CAD work is complete, the design can then be 3D printed.

"Once we've got everything designed, we not only print the snorkel body in the 3D printer but we also print a model of the connection hose onto the air cleaner, and any other necessary parts," explains Dean. "From there we can put it onto our flow bench and flow test it, and make sure that it's flowing the same if not greater CFM (cubic feet per minute) figures than the original OEM air intake."

"We've been using a 3D printer for more than five years now; we've got our own in-house machine, which is worth around a quarter of a million dollars!

"Prior to 3D printing, it was all hand modelled by a pattern-maker. It was a solid timber model, with bog and whatever else he used to get our shapes, and from there we'd start the tooling process. But now we 3D print a 100 per cent model, try it on the vehicle for fitment, flow it and sometimes we'll even run it on the road fitted to the vehicle for a few months while we're getting the tooling organised."

Dean adds that there's sometimes a fair bit of tweaking to be done to the design before everyone is completely happy with the way the 3D printed model looks.

## Flow Testing

“Once we’ve finalised the look of the 3D printed model, it’s all tested through the flow bench again to verify that we’ve achieved the right airflow figures,” says David. “It’s at least got to be equal to OEM but we always try to achieve a greater airflow.”

“For our new ARMAX range, we try to set a target of between 30 and 40 per cent greater airflow than the standard air intake, and that’s because ARMAX is our new performance range that can be utilised with performance ECUs and exhausts to get better performance gain.”

“In addition to the flow bench, we also run all of our 3D models on our all-wheel chassis dynamometer whilst on the vehicle so that we can get accurate performance figures from the engine to make sure that we’re not interfering with the factory vehicle’s performance figures.”



## Tooling & Production

“We then start a tooling process,” says Dean, “which is still done by a pattern-maker.”

First, a percentage-increased model of the snorkel-body is created to allow for contraction in the aluminium [tool] castings and the plastic itself. Then the snorkel body moulds are cast.

Dean says the casting process is one of the most efficient methods to create the tooling. “We can have a sample within six weeks of pushing the go button and it’s all cast locally,” he says.

The next step is to produce a moulded sample of the snorkel.

“The snorkel is rotationally moulded, locally again, and then we’ll have some off-tool samples delivered to us to trial fit on the vehicle,” says Dean.

“There’s a little bit of tweaking that goes on to make sure we get it fitting the vehicle as close to the 100 per cent printed model as possible. We are talking about plastic, which wants to contract and expand, but at the end of the day, with the years of experience that we have, we always come up with something that’s very close to the 100 per cent model.”

“The tool will then be delivered to the moulders to be created as a production tool and the toolmaker will do a final preparation before it goes into final production,” adds David.

“And from there we always get another set of samples to sign off on,” adds Dean. “We

make sure that whatever tweaks we’ve done have worked and that we’re happy that what we’re going to be packaging is a 100 per cent quality product.”

While the body of the snorkel is made from rotationally moulded plastic, the hoses are manufactured from a high quality EPDM (ethylene propylene diene monomer) rubber. EPDM is a synthetic rubber with good elevated-temperature resistance and excellent ozone-weathering properties. It also has an increased rating in regards to acid and general chemical resistance.

The rest of the snorkel kit consists of top-notch stainless steel fasteners, including all brackets, studs, nuts, washers and hose clamps. The upper snorkel brackets are also powder coated for aesthetic purposes.



## Final Testing

Once all of the snorkel components have been manufactured, the kit is fitted to a vehicle for final testing.

"The snorkel then goes through its final road tests," says David. "Once again we perform a flow test to ensure we've still got the right flow figures and then the test vehicle fitted with the snorkel is driven for several weeks to ensure things like induction noise and the look of the vehicle is right."

## Fitting

While Safari supplies comprehensive fitting instructions (including photos) with every snorkel kit, along with a template, David suggests that having your Safari snorkel fitted at an ARB store can be far more convenient. "That's what we'd recommend," says David. "A snorkel is normally fitted as part of a package with other components that people buy at the same time and obviously the ARB store is the best place to get all that done."

He adds that the significant research, design, manufacturing and testing effort that Safari puts into each and every snorkel kit separates it from the competition.

"With our accurate templates, the customer [or professional fitter] has the ability to pull the product out of the box and fit it to the vehicle each time; that's the biggest difference between a Safari product and an imitation or a Chinese copy," says David. "The biggest complaint that we get from people who have unfortunately purchased one of those [imitation or Chinese] products is that they've pulled the body out of the box and it doesn't line up with the template that's been provided and that's because of a lack of quality control in the manufacturing process."

"If it's not 100 per cent right at the start of the development process, we don't let it go any further; we adjust it so that the snorkel body fits the guard perfectly."

"I drive David and Sheryl crazy," laughs Dean, "not releasing a product until I'm 100 per cent happy with the template, how the upper mounting bracket fits onto the vehicle, the way the body [of the snorkel] fits on the vehicle... and if I need to tweak it a bit more and get more samples, that's what happens; it doesn't go out the door until it's right."

## Safari and ARB

Safari 4x4 Engineering was born just four years after ARB and when the company opened its doors in 1980, it was called Luxon's 4WD Equipment.

"At that time, it was really more of a 4WD preparation workshop, which was also starting to sell some suspension upgrade systems and do service work," explains David, the son of company founders Peter and Sheryl Luxon.

"It was in the early 80s where the idea of producing a snorkel came about," says David. "ARB and Safari, or Luxon's at that time, were already doing some work together and had already formed a relationship. Then, some years later, Safari started focusing on the snorkel business and as a result of that existing relationship, ARB became a very, very early distributor of the Safari snorkel, dating back to the mid-80s."

"ARB went down the path of focusing on accessories and Safari went down the path of focusing on forced induction products, engine performance products and air intake systems, and over the years ARB has been a very, very good customer of Safari, and as they've grown, Safari has grown with them."

"ARB is still a very important ally and we have a great relationship."

"We feel that there's a good synergy between the quality levels of our two companies' products. ARB is seen as the premium product in the marketplace and we believe that Safari is as well, and I think that's why we've had such a great relationship because we have the same focus on quality."

# DRIVE 4 LIFE

Words and Photography by Mark Berger







## MOUNTAIN HUTS, MAGIC VISTAS & COUNTLESS RIVER CROSSINGS

Five days touring the Victorian High Country is something that should be near the top of every four wheel driver's bucket list. But with hundreds of tracks ranging from beginner to borderline competition spec, it's worth considering leaving the navigation, itinerary and sightseeing to someone who knows where they're going and what they're doing. Imagine exploring some of the best 4WD tracks Australia has to offer and knowing that for every track you climb, every campsite you visit, every mountain hut you photograph and every river you cross, you are helping children and families around Australia with disabilities.



### 4WDING TO MAKE A DIFFERENCE

Have you found yourself dreaming of the mountain top vistas of the Victorian High Country, promising yourself that one day you would get there, meanwhile running your eyes over the hundreds of tracks that infiltrate the range, bemused and bewildered as to which tracks to take, where to go and how to get out?

Time to register for Drive 4 Life. For your entry, you can pack as many people into your 4WD as you deem reasonable (and legal). Allocated to a group leader, you will journey for five days visiting some of the most renowned 4WD destinations the state of Victoria has to offer including the mysterious Wonnangatta Station, the historical Talbotville, the heralded Blue Rag Range and countless rivers, mountain huts and challenging 4WD tracks. Along the way, you can expect to enjoy hours of UHF-delivered history, driving advice, points of interest and a heightened level of cheek and backchat.

The entry fee per vehicle joining the tour is \$1,000 and no vehicle is exempt. The calibre of volunteers involved says a lot about the organisation and this year 14 organiser vehicles contributed \$14,000 for the privilege to guide a group of people they didn't know across places they had travelled many times before.

Registrant and volunteer fees don't touch a bank account in the name of Drive 4 Life; all funds are deposited directly into Northcott's account. Meanwhile, ARB, Cooper Tires and IGA supermarkets contribute all additional funds that are required to keep Drive 4 Life operating, with any (and often many) surplus dollars being redirected to one-off deserving recipients.

### CHOOSING A CHARITY

As a large Australian brand, ARB is naturally invited throughout the year to support many worthy charities and fundraisers. Each proposal is given serious consideration and, where possible, we lend ourselves to those people and communities that we believe the ARB brand can have the most positive impact on.

One of our longest standing relationships has been with Drive 4 Life. In 2007, a small group of passionate four wheel drivers wanted to establish a means that would allow the group to donate their time and 4WDing experience to the greater off road community while raising funds for those in need.

David and Debra Dennis are the proud parents of Ben, who – with his love for all things sport – lives positively each day despite the burdens of being born with Arthrogyrosis Multiplex Congenital. The condition has left him only with movement in his head and neck and a slight movement of one shoulder, which he uses to operate his daily wheelchair. Ben also operates a sports wheelchair, which he controls with his chin.

Throughout Ben's childhood, his family would have struggled to get by without the support of Northcott. Northcott is a not-for-profit organisation that offers programs, equipment, training, care and more to families living with disabilities. Drive 4 Life and Northcott supported Ben's entry into the Powerchair Soccer World Cup in Paris where he vice-captained the Australian team.

Together with Chris Bates, Mick Whitehead, Norm Needham and Matt Raudonikis, David and Debra became founders of Drive 4 Life.



every which way; proudly sporting the title of Group 6, we were heading south. An afternoon of your standard High Country tracks saw us arriving at our first notable destination: Lake Cobbler and the primitive Lake Cobbler Hut.

**A gorgeous man-made lake sitting at about 1,000m above sea level adorned by a small log cabin was the perfect location for lunch.**

Lunch, like breakfast and dinner, is a BYO program. The Drive 4 Life tour is just like hitting the road for five days with your mates, only your mates might not be so well behaved. Just don't expect the support volunteers to pack your lunch, collect your firewood or turn down your swag.

## THE 2017 TRIP

It was a stinking hot Sunday in March as 40-odd 4WDs and 80-odd bodies accumulated in the middle of the Harrietville Recreational Reserve. Fires in the weeks leading up to the event had heavily impacted the initial route plans of the organisers, with roads including the famous Billy Goat Bluff Track closed. All route plans were scrapped and group leaders, with an unwavering air of confidence, concluded that we'd just have to "wing it".

The paddock of fourbies was divided into six groups, then welcome packs filled with stickers and paraphernalia were handed out before we retreated to our Sunday abodes to freshen up for the obligatory commencement meet-and-greet at the Harrietville Hotel. (And if you find yourself on the trail for one of Australia's best Chicken Parma's, let me assure you, this is one not to be missed.)

From the threat of fires to the threat of storms, Monday saw the groups disperse

As the convoy rolled into King Hut camping area at about three o'clock for afternoon tea, it was quickly suggested that this was a campsite not to be passed. Unanimous votes were cast that this was stumps. Rooftop tents were set, swags unrolled and happy hour commenced. Taunting the evening skies, we set up a fire only to literally pick it up, still burning, piece by piece and move it into the hut while the heavens opened. It was a wet night with small rivers running through camp.





Tuesday was the first camp pack up, a little behind schedule with some drivers learning the ropes on their new rooftop tents. A short drive had us arriving at Craig's Hut, the most recognised of the High Country huts, which was built for its part in The Man from Snowy River movie from 1982.

A great little track called Clear Hills separates Craig's Hut from the cross-country ski fields of Mount Stirling. The day, however, was far from clear and the track, given some recent 4WD traffic and rain, provided quite the challenge with decent muddy step-ups. Our Group 6 leader, Dave, stood in the rain appropriately attired in his cargo pants, thongs and non-waterproof jacket as he guided drivers of differing experience through the rough terrain. Arriving at the peak of Mount Stirling, one of the most beautiful Victorian views was hidden behind a thick covering of cloud.

A quick run to Mansfield offered one vehicle (not fitted with a long-range tank) the opportunity to fill up, while the rest of the group revelled in the culinary burger experience that was the Merrijig Motor Inn Resort. The afternoon offered an easy climb up into a cloud-bound Bluff Hut. The rains came in as we sat down around the solid hardwood table, warmed by a generous fireplace under the glow of LED camp lights.

With low cloud still hovering, Wednesday took the convoy up for a quick check-in to Lovick's Hut before a rough climb on King Billy Track across to the Howitt Plains and down Zeka Spur to the mysterious Wonnangatta Station campground.

The Wonnangatta is rich with history and tales of unsolved murders; complete with a family graveyard and the ruins of the old homestead, the Wonnangatta Valley offers picturesque panoramas with flat campsites along the river.

Thursday's planned route was a short trip up and out of the valley into the historical town site of Talbotville, though given the time available and the proximity of the Dargo township (with the promise of a cold tap beer), Group 6 charged Dargo-bound across the endless river crossings of the Crooked River.

Returning to Talbotville that evening, five of the six groups had found their way to the popular campground with familiar plans to visit Blue Rag Track on the return route to Harrietteville. Around the large camp (bon) fire, stories of the past four days circulated with hardships of late night winching and appalling behaviour like hiring out cabins along the way.

Untamed as the weather was, four days of touring had offered some fantastic

4WDing but, sadly, little in the way of High Country views with low cloud masking most of the range. Friday saw each group, one by one, climb the pinnacle that is Blue Rag Range.

**While the low cloud refused to surrender, the sheer height of Blue Rag, at 1,700m above sea level, elevated the convoy above the white fluff for 360-degree views of the area.**

A short link track delivered us back to the Dargo High Plains Road and then down the side of Mount Hotham to return to a welcoming Harrietteville Hotel where the hosts provided all participants with a roast meal, some live entertainment and a great social evening to commemorate a great week exploring the Victorian High Country, all the while raising an admirable \$38,500 for the Northcott Society, bringing the total tally to \$870,000 to date.

# Great Southern Land

**The Variety ARB 4WD Explorer is a 14-day adventure taking 4WD vehicles and their drivers off the bitumen and onto challenging, yet fun, dirt roads and tracks. This year, the Variety ARB 4WD Explorer event is running in Tasmania from 21-24 November.**

With an emphasis on the road less travelled, 4WD Explorers will navigate a safe, mapped and exciting course – soaking in the scenery, meeting the locals and having plenty of fun along the way. Suited to anyone with an adventurous spirit, this event has been a hit in previous years with places filling up fast! The Variety ARB 4WD Explorer caters for 4WD enthusiasts of all abilities with plenty of experienced drivers on the course ready to help out if the need arises.



## **The Aim**

While this event is designed for those longing to explore the great outdoors, the purpose of the Variety ARB 4WD Explorer, as with all Variety events, is to raise funds for children who are sick, disadvantaged or who have special needs. Variety Queensland is committed to having a positive impact on the lives of not only children we meet along our travels but all children who require assistance to live, laugh, learn and reach their full potential. Variety ARB 4WD Explorer participants will visit schools along the way and experience firsthand the help their fundraising brings to local children, families and communities.

## **The Cost**

Participants in the 2017 Variety ARB 4WD Explorer will pay an entry fee of \$550 per vehicle and each vehicle is required to raise a minimum fundraising target of \$5,000 prior to the event. An additional provisions levy, payable per person, covering meals, accommodation/camping fees and special events is set at a later date.

## **Be Part of the Action**

To secure your place or for more information please contact Variety – the Children’s Charity of Queensland:  
W: [www.variety.org.au/qld](http://www.variety.org.au/qld)  
P: 07 3907 9300  
E: [info@varietyqld.org.au](mailto:info@varietyqld.org.au)





# OFF ROAD ESPRESSO ESSENTIALS

**In the modern era of 4WDing, we can travel across the continent in dual zone climate control, wireless connectivity throughout the cabin while our vehicle's traction control technology provides us with greater, more usable traction... so why shouldn't we enjoy cafe quality coffee!**

We've done the research and were impressed with these three very capable off road espresso options delivering the perfect espresso, macchiato, latte or cappuccino.

Many thanks to the team at [espressounplugged.com.au](http://espressounplugged.com.au) for supporting our research and coffee addiction.

## THE ROK ESPRESSO MAKER

Delivering up to a genuine 10 bars of water pressure, the ROK Espresso Maker requires nothing more than 60ml of boiling water and a light application of muscle to draw a power-free, strong 18g espresso shot. Sold complete with a travel tin, which will easily hold any accessories, the ROK Espresso Maker is suited to the coffee lover with a bit of extra space for the "essentials"

**RRP: \$219**

## THE MINIPRESSO

As compact as they come, the Minipresso equally delivers a reputable eight bars of pressure and, taking up only a fraction of the space, operates by the function of a simple hand pump to extract a hot 8g shot of espresso (8g is around the capacity of modern pods).

**RRP: \$78**

## THE BELLMAN CX25P STOVETOP ESPRESSO & CAPPUCCINO MAKER

If a milk-based latte or cappuccino is more your style, this is a great option. Extracting strong espresso style coffee from just 1.2 bars of pressure, the Bellman is a stove-top appliance and requires no additional hot water source as it heats the water, extracts the espresso AND (with its built-in steam wand) creates a micro-foam ready for your attempts at latte art.

**RRP: \$279**

## PORLEX TALL HAND GRINDER

If we're taking our espresso seriously, then we know that there is only one way to have your coffee beans and that is freshly ground. Introducing the Porlex Tall Hand Grinder, capable of grinding in excess of 40g of ground coffee perfect for your ROK or Minipresso for the perfect extraction.

**RRP: \$59**

## JETBOIL FLASH

Perfect for boiling water in a flash (or powering your Bellman Stovetop Milk Steamer), the JetBoil Flash provides a cooking and water heating solution that is both compact and versatile for duties far beyond your morning cup of joe.

**RRP: \$199**

# FAMILY WHEELIN'

## 4WD ENTHUSIASTS FROM ALL OVER AUSTRALIA CONVERGED ON ELDEE STATION IN OUTBACK NEW SOUTH WALES AT EASTER FOR AN ADVENTURE-PACKED WEEKEND OF OFF ROAD COMPETITION AND FAMILY FUN.

The ARB Eldee Easter Event 2017 proved to be one of the highlights of the family 4WDing calendar, with the seemingly unbeatable Panasiuk family taking top honours for the fourth year in a row in their Mitsubishi NP Pajero.

There were 22 teams competing in 2017 and of those, 21 made it through to the end of the final stage with no serious mechanical issues. The one DNF was Team Popper, driver Wayne damaging the bull bar on his dad Ron's Toyota Prado after completing just three driving stages.

Ron wasn't overly upset by the incident, commenting on how much fun he was having as a spectator. "Everyone's having a ball," he said. "The people, it's just great. Everyone's friendly and it's great to be around like-minded people".



Event winner James Panasiuk agreed, saying he just loves bringing his family along to Eldee Station each Easter. "It's a great family event," he remarked. "Dad has fun, and the wife and kids have fun, too!

"This year's event has a relaxed feel about it and it's very friendly... everyone makes you feel welcome.

"The event itself... awesome! I like it how they changed it a little bit [from previous

years] and running some of the stages twice was great; you could almost recce on your first run and really go for it on the second," enthused James.

It's this friendly family atmosphere that sees ARB continue its long support of the Eldee Easter Event. A keen four wheel driver and family man himself, ARB's National Sales and Marketing Manager, Matt Frost, once again made the journey to Eldee Station this Easter.

"This is ARB's sixth year as a sponsor and my fifth year coming up here," said Matt. "With any of these sorts of events, our primary motivation is the fact that this is what our customers like to come out here and do with their spare time, so effectively we see this as a means of supporting our customers to get out and about and have a bit of fun in their 4WDs.

"This particular event has a very strong family emphasis and that's what makes it particularly appealing to us as well, to see so many young kids coming here and having an absolutely cracking time...

"It's not the sort of event where people are going to break their vehicles, providing they drive sensibly. So it's just an all round great, family-orientated off road event."



## DAY 1

The action kicked off on Easter Saturday with a variety of driving stages that had been set up in the dry creek bed not far from Eldee Homestead, including the ARB Mini Dakar, the Spotters Blind Man's Run, the Cooper Tires Motorkhana, the REDARC Back and Forth, and the RFI Paddy Melon Challenge.

The ARB Mini Dakar consisted of a bunted course in and out of the creek bed, with several very soft sandy sections and a few step-ups. The Ford Maverick of Matt and Renee Burns and their kids, Harry (9) and Chayse (4), posted the fastest time on the



stage, despite this being their first time competing in an off road event. Matt and Renee are very familiar with Eldee Station – this was their fifth visit and in fact, they tied the knot here a few years ago.

Recording the fastest time on the tricky Spotters Blind Man's Run was the Land Rover Defender pairing of Craig and Sarah Pender, competing in the event with their kids, Ebony (11), Jorja (8) and Hunter (6). For this event drivers were blindfolded while their co-drivers tried (sometimes in vain) to direct them through the tight bunted course.



Kurt and Dior Johnston, competing in a 100 Series LandCruiser with their kids, Tempe (6) and Seeley (4), could hardly stop laughing after their drive through the Spotters Blind Man's Run. "We're usually hopeless at this one," admitted Dior, "but this year we were pretty good. We didn't even argue!"

The Cooper Tires Motorkhana was a quick run through a sandy course and again Matt and Renee Burns posted the fastest time. Not far behind were Ash and Maree Berry with son Samuel (11) coming home second in their Toyota 100 Series LandCruiser. Third on the stage was the team of Matt and Rhianna Sheridan in their 76 Series Cruiser with their kids, Bailey (10) and Darcy (7), in tow.

The REDARC Back and Forth required teams to reverse into several small boxes without touching the bunting and the father and son pairing of David and Chris Skinner proved very adept at the challenge in their Toyota 4Runner, posting the fastest time. Angus and Suzanna Sands, along with kids Mia (10), Jesse (7) and Indi (3), were competing in their Toyota Fortuner, a new

vehicle they'd only had for a week! At the end of the stage, Jesse exclaimed: "It's a good way to break your car!" Fortunately, they didn't.

It was team Panasiuk that triumphed in the RFI Paddy Melon Challenge. While James drove around the stage, his wife expertly balanced the paddy melons on poles that were placed around the course, before retrieving them and throwing them into a bucket at the finish line.

Neale Postlethwait kicked wife Judy out of the passenger's seat for the Paddy Melon Challenge, opting to instead employ the skills of son Daniel. Daniel and his Year 12 mates apparently spend their school lunchtimes throwing tennis balls into a bucket, so he was perfectly suited to this event. They picked up third on the stage.

The Panasiuks took out two of the three Saturday afternoon stages (the ARB Broken Hill Swag Roll and Setup and the Hema Outback Navigation Challenge), while placing second in the other (the Mannell Motors Stump Up).

Two teams at a time competed in the ARB Broken Hill Swag Roll and Setup, which required competitors to set up swag, jump in, get out and roll it up again. With other teams gathered around to watch, there was a lot of cheering and laughing as well as plenty of sledging.

The Hema Outback Navigation Challenge was a two-hour drive around Eldee Station via a series of checkpoints with clues at each checkpoint allowing competitors to crack a secret code. The course, set up by Hema Maps' National Sales Manager Wayne Madge, could be completed with or without a GPS receiver because competitors were given a basic map with gridlines as well as detailed instructions.

"This is the sixth year Hema has sponsored this event and I've been up here four times in the last six years," said Wayne Madge. "The biggest attraction for Hema is we're connecting with a lot of potential end users of the product and also the fact it's just a real family friendly event.

"Easter is a good chance to get away and just wind down and it's a great property. You can get out here and relax and have fun and it's become an Easter tradition for us for the last four or five years," said Wayne.

The next event, the Mannell Motors Stump Up, was a test of driving skill that required drivers to place a front tyre atop a post and then stop the vehicle before backing off and doing the same with the opposite front wheel. David and Chris Skinner proved they were up to the challenge, taking out top spot on the stage ahead of the Panasiuks and the Johnstons.

At the end of the day's stages, competitors drove in convoy across the Mundi Mundi Plains and up a challenging rocky climb into the Barrier Ranges. Once at the top, they were rewarded with a magnificent view over Eldee Station along with a delicious barbecue dinner.

## DAY 2

**Easter Sunday kicked off with the Eldee Station Easter Egg Hunt, which took place in the dry creek bed behind the homestead. Once the kids had their fill of chocolate, they were back in their parents' 4WDs for two more timed driving stages: the ARB Penrith Sheeppark Shenanigans and the Oricom All Terrain Challenge.**



The Oricom All Terrain Challenge was the event's final timed driving stage and all competitors gathered at Eldee's creek to watch teams (one at a time) drive through the water, then up a rocky track, turn around and return to the start point. It was fitting that the Panasiuk team took out this final stage on the way to another well-earned event victory.

The ARB Penrith Sheeppark Challenge saw two vehicles at a time race through parallel courses within Eldee's sheepparks. Drivers had to go through a series of gates that were opened and closed by their navigators, all while being shouted at by the very vocal crowd. The Cobar pairing of Luke Taylor and Sandy Wildman, with kids Zoe (10) and Summah (6), took out the stage in their V8-powered Nissan Y62 Patrol. This was their third Easter Challenge in the big Y62 Patrol and they said they're attracted to Eldee "because of the people they meet and the great family atmosphere".

Sharon Baker stepped into the driver's seat of the family Isuzu D-MAX for the All Terrain Challenge. This was her first time at Eldee and she was here with husband Wes and daughter Kristen (11). A member of the Werribee 4WD Club with her husband, Sharon said, "We've just been on club trips to date. This event has been really good fun. It's well organised, kid friendly and family orientated. And I get to compete against my husband; women should be better represented in 4WDing."

Prior to the prize presentations on Sunday afternoon, the kids made good use of a jumping castle that had been set up near





## PRESENTATIONS

The top three place-getters at the end of the ARB Eldee Easter Event 2017 were Kurt and Dior Johnston in third (100 Series LandCruiser), David and Chris Skinner in second (4Runner) and, of course, James Panasiuk and family in first (NP Pajero). The teams were loaded up with some fantastic prizes from the event sponsors, which were valued at around \$20,000!

After the prizes were awarded, Eldee Station's Naomi Schmidt took to the stage, thanking competitors for making the trip to Eldee and thanking the sponsors for their support of the event and for helping with logistics and organisation. "I hope you've all had a really good time and I hope to see you all again next year," she said.

With the completion of another very successful Easter weekend at Eldee, hosts Naomi and Stephen Schmidt are looking forward to next year's ARB Eldee Easter Event with naming-rights sponsor ARB confirming its continued support into the future. "Eldee can count on ARB's support so long as the competitors have a great time," said ARB Sales and Marketing Manager Matthew Frost. "So I'd like to pledge ARB's support as naming rights sponsor for next year's event."

the homestead before having a drive in the challenging Hobby HQ Remote Control Car Mini Rally. Many then had a go at the Shimano Sharp Shooter casting event (alongside the adults), the prize for which was a brand new ARB 60L Fridge Freezer.

The Hobby HQ Remote Control Car Mini Rally was held over a challenging RC course with obstacles such as Chook

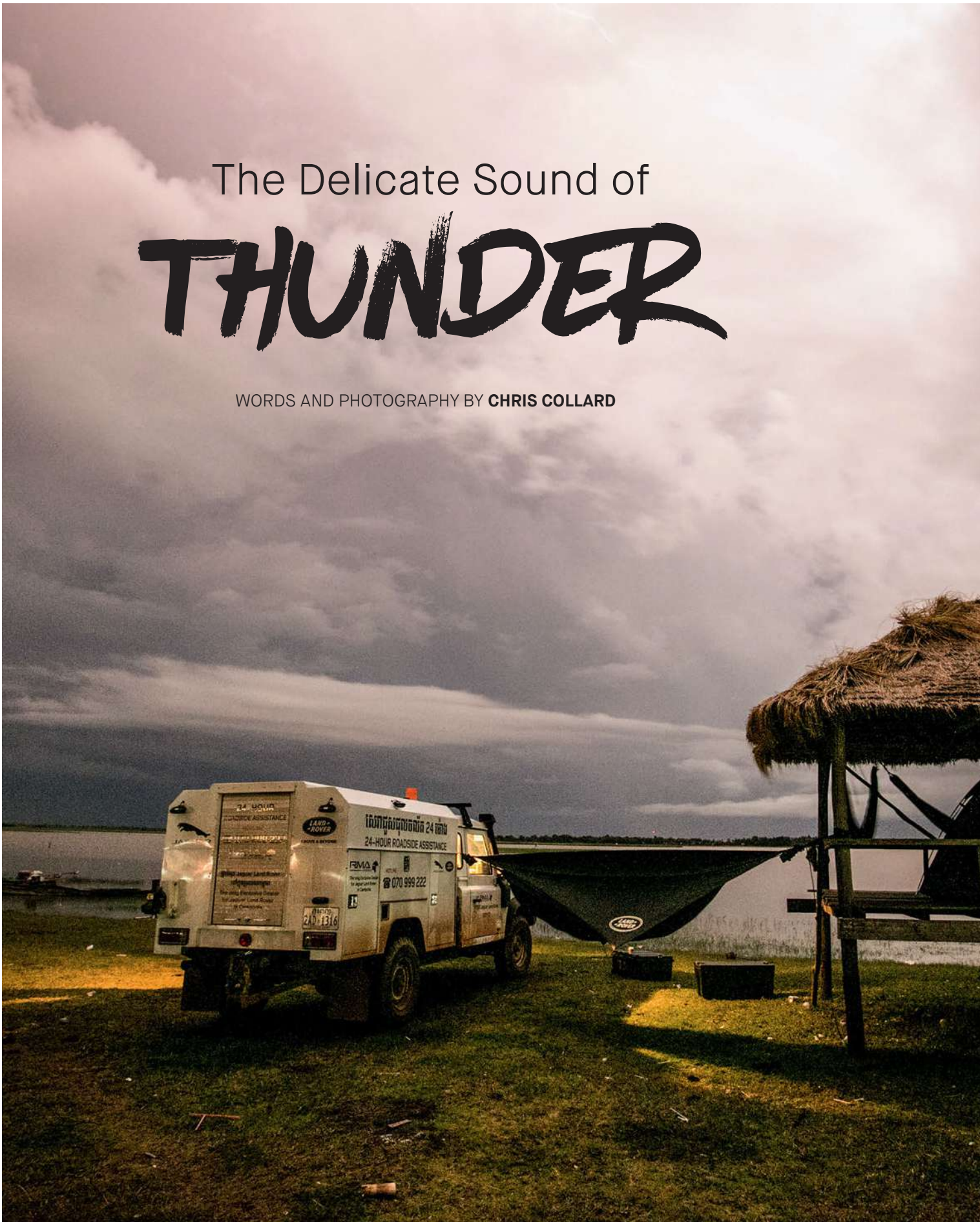
Rock, Bilby's Tunnel, Wraith Pass, Rabbit's Crossing and Air Locker Hill. Competitors ranged in age from just three years old to early teens, so to even out the playing field, at the end of the event a random time was drawn from a hat and the kids whose times were closest to it took home the goodies, which included some fabulous remote control prizes supplied by The Hobby Headquarters.



The Delicate Sound of

# THUNDER

WORDS AND PHOTOGRAPHY BY **CHRIS COLLARD**





## The Khmer people renounce a stormy past to forge a new chapter in the chronicles of Southeast Asia's most tormented country.

Lifeless eyes stared back at me from the other side of the glass, their hollowed and blackened recesses screaming out in anguish, begging me to listen, to understand a tortured existence. A web of fissures radiated from coin-sized holes in their stained and hairless temporal lobe, terminating at the rear of the parietal bone. My peripheral vision detected a second pair of empty sockets to the left, then another to the right, another above and yet another below. Stepping back revealed thousands of soiled, oatmeal-coloured skulls, each defaced in similar fashion – the physical remains of entire families and villages. Beneath my feet, bone fragments, teeth and clothes leached up through the muddy soil, gruesome evidence of a horrific chapter in the annals of this small country in Southeast Asia. This was Choeung Ek, the most notorious killing field of the Khmer Rouge and the final resting place of 8,895 souls.

24 hours earlier I had landed in the capital city of Phnom Penh and spent the day with Mr Red, my tuk-tuk driver and new friend. As a teenager, he had survived the hell of the Khmer Rouge by living in the jungle, eating insects and roots to survive, and crawling into villages under the cloak of darkness and at the risk of being shot to steal food. His family had been taken away to one of the extermination camps; most were never seen again. They may have ended up in Tuol Sleng, a secondary school that Pol Pot, the sociopathic Khmer Rouge leader, wrapped in razor wire and

converted into an institution of torture. Of the tens of thousands that entered, only 179 survived. I had come to Cambodia not to dwell on its decades, centuries and millennia of strife and subjugation but to embrace where it is today, absorb its vibrant and animated culture, explore its rich back country and delve into what the future holds.

That evening, Kurt Smolek, an American working in the region, and I were navigating a maze of narrow, tuk-tuk-choked streets in the red light district. We made our way to Larry's 110, an expat bar and one of the only in the area that didn't hire their waitresses out by the hour. Overland Journal contributor Sam Watson arrived fresh off the plane from Cairo and then Jason Thatcher, an Aussie entrepreneur who leads dual-sport motorcycle tours in Cambodia's hinterland. Rounding out the group was Rudi Smith, a larger-than-life medic who sauntered in like he had just stepped off the set of Gunsmoke. Pushing our cans of Angkor beer aside, Jason pulled out a map and stretched it across the long, wood-plank table. He dragged his finger south along a thin red line, then east into a green area void of roads – at least roads large enough to merit reference. "This will be our route," he said, "to a village called Wat Phnom Tamove. There is an ancient temple there that is rarely seen by outsiders." We set plans for an early departure and slipped out past a row of beer bars and massage parlours.



## TEMPLES AND WINCH LINES

We turned off the red line on the map and into a world far removed from the 21st century. These were the lowland plains of a region that receives up to 150 inches of rain each year. The two-track was elevated above lush green rice paddies; to either side were clusters of women ankle-deep in water and attending to their crops. Periodically, we passed a thatch-roofed hooch (hut or small dwelling) suspended a metre above the mud by rickety bamboo columns. Their residents, barefoot and shaded by broad straw hats, squatted on their haunches and quietly observed us, devoid of expression – the result of life in a world where it was better to go unnoticed, to blend in with the ordinary. The awkward moments were breached by the universal gesture of a smile and the wave of a hand. At each encounter, our offering was reciprocated tenfold.

Life in this remote and forgotten enclave is simple: cultivate enough rice to feed your family, honour Buddha and hope that your children experience a better life than you.

Although most Westerners would consider this existence the epitome of poverty, it holds an air of contentment. There is little need for an iPad, hoverboard or electric dog walker; life is better served by a well-honed machete, a healthy water buffalo to pull a plough and a dry place to sleep.

At midday, we found ourselves stringing out winch lines and recovery straps to pull each other through a heavily rutted section on the way to our lunch stop. Shutting down the engines in the village of Wat Phnom Tamove, Jason pointed to an area of dense foliage and a well-worn path that dissolved into a cleft in a blackish granite precipice. I followed it for a few hundred metres, winding my way up a series of carved steps to a small temple. Inside were several statues, a plaster water buffalo and hand-painted murals of rural Cambodian life, each veiled in a dusty patina. I wondered for how many centuries the inhabitants of this village walked these steps to find solace and share the lessons of their culture with a new generation.

## POL POT AND RICE PADDIES

The next morning, I was near the coastal town of Kep standing under a bullet-riddled stone archway and stepping over the tattered remnants of a Khmer Rouge stronghold. Just a half mile away, white sand beaches dipped into the Gulf of Thailand and restaurants served copious quantities of seafood to vacationing tourists. From the beginning of the 20th century and Cambodia's French colonial period, this was a thriving resort area, a destination for the country's upper echelon and ruling party. It represented the golden age of French-Cambodian culture and architecture. But in 1975, when Pol Pot gained control and began his genocidal sweep, Kep – as well as many other posh resorts – were put into service as military retreats. Although it is making a comeback, the scars of small arms fire on many of its buildings provide a glimpse into a troubled past.

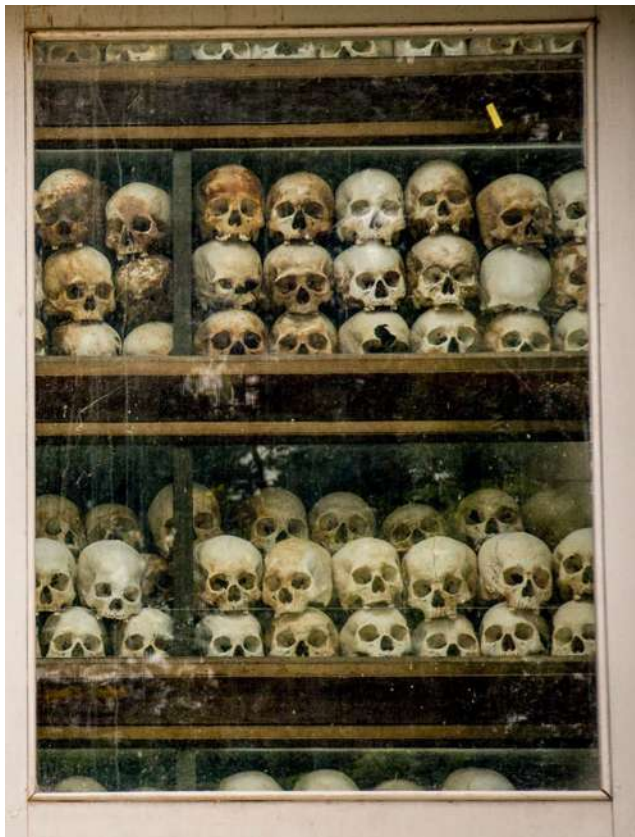
Heading inland, our company of Defenders found itself slogging – two tyres on a levee and two in a rice paddy – through

Cambodia's expansive agricultural lowlands in the Kampot Province. It was an area where Jason had led moto treks but to accommodate 4WDs we deviated from the known route. Finding ourselves at a dead end, we asked a farmer if we could cross his land. He was quite agreeable, pointing his finger toward an extensive grid of paddies and suggesting we might be able to make it through. What ensued was a four-hour, hit-and-miss guessing game of mud madness, dodging cattle and water buffalo, and addressing overheating issues on Kurt's 110. He had shipped it from Cairo (his previous assignment) when he moved to Phnom Penh and the motor (along with pretty much everything else) was suffering from a case of the Third-World rebuild blues.

We eventually found high ground and made our way to a small hooch near the village of Wat Por. It was similar to the thousands we had passed in recent days: semi-enclosed with a porous thatch roof, supported by rickety stilts and with a doorless entry at the top of wobbly wood stairs. What was different was

the new, modern-looking structure next door. The other difference was that the family immediately approached us and embraced Jason. We were witnessing the results of human compassion and good will: one man's desire to help the poorest of the poor in his adopted country. After observing so many hardworking families living in squalor during his moto treks, he took it upon himself to change the world, one hooch at a time.

Jason's non-profit foundation, Global Village Housing, works with local churches to identify worthy families. They then show up unannounced and build them a new home (see *Overland Conservation*, Fall 2016). While visiting with the family, we learned that the grandmother was having some health issues. Rudi pulled out his medical kit, examined her and deduced that her condition mandated a visit to the local clinic. We loaded her up and took her to the hospital, and Rudi gave her money for a tuk-tuk ride home. It is moments like this that restore my faith in the human race.



## FISH MARKETS AND DEAD ENDS

It was still dark when my alarm went off at 5.00am. We had grabbed a room in the riverside town of Kampot and I wanted to catch the local fishing fleet returning from their night's work. The eastern horizon was just waking up when I stepped onto the muddy banks of the Praek Tuek Chhu River and into another world. Boys carrying baskets of small fish marched by, a woman picked through an aluminium trough of squid, and men, women and children of all ages offloaded their haul from a kaleidoscopic fleet of wooden fishing vessels.

It was obvious that few tourists ventured into their realm and I felt the presence of every eye upon me as I slowly walked by. "Sues-dey, soum, sues-dey, soum," I said as I raised my camera in request and extended a smile and respectful bow of the head. "Hello", "please" and "thank you" were the extent of my Khmer vocabulary but the attempt and courtesy it conveyed granted me the permission I was hoping for. "Orkun cheraown, orkun cheraown," I thanked each of these beautiful people as I composed them through my viewfinder and captured snapshots of their toilsome lives. This moment in time was over in less than an hour. Trucks piled high with their slimy, odiferous loads rattled onto the street heading for markets and food processing plants. Jason and his wife, Vu Trang, showed up looking for me and it was time to move on.

Our convoy turned onto a semi-established levee track along an unnamed river and we followed it for several hours. Boys did backflips from the top rails of two-story boats and young children peered through the doorways of tin buildings. It was yet another frame of rural Cambodian life but this one centred around the country's primary crop: rice. Beyond the elevated metal and thatch homes, many feet below the road, rice paddies extended as far as the eye could see.

During one of our stops, I met two men who appeared to be about my age. Weathered well past their years, their hands showed evidence of decades of hard labour and

their faces bore the penetrating fissures caused by exposure to the subtropical sun. In a reflective moment, I realised that the three of us were teenagers when the Khmer Rouge swept through their country. While I was focused on girls and obsessed with getting a new dirt bike, these two men were most likely just trying to survive, blend in with the masses and not be exterminated. On the other hand, they may have been recruited into one of Pol Pot's killing machines and forced to kill or be killed. It was a sobering moment. But whatever ghosts lay in the dark recesses of their closets, it didn't really matter – their wide smiles were contagious and welcoming.

The levee road we were following was intended to be a loop that would take us to a paved road. After half a day we came to the end, only to find a sturdy metal grate had been cemented into the middle of our escape route. One of the crew walked to the next village to locate a key for the lock. Several hours went by; we watched boys fishing nearby, took a nap and conversed as best we could with a local buffalo. Villagers passed on bicycles, scooters and "iron buffaloes", funky hybrid walking tractors converted to wagons, trucks and even buses. They shared with us that the roadblock, which was recently installed by someone in the village, was conveniently placed to allow for iron buffaloes, tuk-tuks and bicycles – but not vehicles. We waited as the sun slipped closer to the horizon; the guy with the key was nowhere to be found. Our goal was but a few hundred metres away and rather than driving all the way back, we found an alternate path.

The last stop on our tour of the southern lowlands was Bokor Hill Station, a palatial hotel and collection of royal residences built on Bokor Mountain in the 1920s. As with many of the country's landmarks, its past is infused with strife. Dark clouds began to develop over the station during its construction when more than 900 labourers perished in a period of nine months. It was abandoned during the Indochina War of the 1940s, then reopened and expanded in the 1960s. But this heyday was also short-lived as it was commandeered by the Khmer Rouge in





the early 1970s. It remained a stronghold, one of their last, until the 1990s and has been dark since.

The next morning during our drive back to Phnom Penh, the bonnet of Kurt's Land Rover was up more than it was down. Although the Landy's cooling problems persisted, we had a more pressing concern. Sam had arranged a short-term loan of the Defender we were driving through RMA Land Rover in Phnom Penh. The issue was that we had to return it and we were to borrow Kurt's 110 for the second leg of the trip... and it was dying.

We sheepishly made our way into RMA with the vehicle squeaky clean and topped off with fuel. Sam, with all the British charm he could muster, posed the question to the general manager, Paul Varley, "Another week with the car?" This was their dedicated service truck fitted with

an air compressor, welder and shop tools; I could tell it was going to be a hard sell. Paul disappeared for an hour while Sam and I pondered the idea of hiring a tuk-tuk and going local. Although Siem Reap, our next destination, was 300kms distance, the so-called "highway" is a chunky thoroughfare choked with semis, scooters and iron buffaloes – speeds rarely exceed that of a runaway goat. If we could source a tuk-tuk with a full canvas enclosure to fend off the monsoon thundershowers and avoid being flattened by a rogue truck, plan B might work. Plus, it sounded like more fun than three monkeys riding an irate crocodile. Paul eventually returned and the news was good: we had a car.

The road north from Phnom Penh to the Siem Reap region allows for full immersion into Cambodian culture. My usual modus operandi is to take it slow, turn left or right when something catches my eye and stop

for a bite when the savoury aroma of street food draws my attention. The chaos of the city faded as we crossed over the Mekong River. On the roadside, artisan stonemasons carved larger-than-life Buddhas, farmers guided ploughs behind lumbering water buffaloes and tuk-tuks zipped north or south overloaded with baskets, beds and passengers. Along the rivers, boys prepared their afternoon meal of rice atop rustic wood fishing boats. The sweet smell of roasted something persuaded us to pull over at a roadside cart where a young woman was removing sections of bamboo from a grill. She peeled back the husk of one and handed it to me. I dug my fingers into its centre, pulled out a chunk of rice and delighted in its nectarous flavour. I had found my favourite Cambodian street food.

*PART III of Chris Collards Cambodia Journey continues in Issue 50.*

# A World First



**Based in South Australia, one of ARB's subsidiary companies, SmartBar, continues to progress the 4WD aftermarket vehicle accessory category with its recent release, the StealthBar.**

The team recently celebrated being awarded gold for the Most Innovative New Aftermarket 4WD Product at the 2017 AAAA Innovation Awards.

Organised by the Australian Automotive Aftermarket Association (AAAA), the globally recognised Innovation Awards are the industry's most prestigious and acknowledge creative new products and marketing strategies in the highly competitive automotive aftermarket industry.

Designed to suit the Ambiente and Trend Everest models (not suitable for Titanium), and the XL, XLS, XLT, Limited (Europe) and WildTrak Ford Ranger PX MKII models, the StealthBar is engineered to be the lightest and one of the safest bumper replacement Vehicle Frontal Protection Systems (VFPS) available.







## Mission Impossible

As a leader in providing innovative and pedestrian-friendly VFPS options, the team at SmartBar set out to achieve the seemingly unachievable at the inception of the StealthBar's development: to create the first VFPS that complied with the European Regulation for Pedestrian Safety. Since the introduction of Regulation EC No 78/2009, there has been an insatiable void in the market for aftermarket VFPS available throughout Europe and other parts of the world. Stringent standards relating to acceptable force and bending moment strain measurements caused through pedestrian impacts with motor vehicles have resulted in what could almost be seen as a "ban on bull bars" throughout Europe. This is largely due to the fact that, until now, no manufacturer has been able to produce a product that complies.



## R&D

Research was conducted by SmartBar's Design and Engineering team on the effect that different wall thicknesses and geometry of the VFPS front surfaces had on pedestrian impacts, particularly relating to force and bending moment. Utilising the data gained from the research undertaken, development began on the first ever polymer-based, full bumper replacement (with no top bars) VFPS to meet the rigorous performance requirements of the European Standard for Pedestrian Safety. The performance requirements mean that, upon sustaining an impact with a velocity of 11 metres per second through the centreline of the bar, the instantaneous sum of forces does not exceed 7.5kN and the peak bending moment strain remains under 510Nm. Testing conducted by the Centre for Automotive Safety Research (CASR) at their facility in Adelaide verified that under these impact conditions, the sum of forces peaked at 4.321kN and the maximum bending moments for the StealthBar was 117Nm, both well under the required limits.

## StealthBar to Market

This world first has seen the StealthBar introduced to the 4WD vehicle accessory market throughout Europe and 13 other countries (including Australia), pioneering vehicle protection and pedestrian safety in this previously untouched sector.

Accommodating the fitment and installation of a myriad of supplementary accessories that aim to aid vehicle, occupant and pedestrian safety, customers can fit the bar with spotlights, fog lights, daytime running lights (for improved visibility to other road users during daylight hours), antennas for communication in remote areas and winches for vehicle recovery, and it is compatible with other accessories such as ARB under vehicle protection and ARB rated recovery points.

All the vehicle's original safety systems such as airbags, adaptive cruise radar and parking sensors are maintained and uncompromised in their operation with the fitment of the bar. This has been substantiated by ANCAP, who after independent assessment have confirmed that the StealthBar does not affect the five-star ANCAP safety rating when fitted to the Ford Ranger PX MKII.

**This world first has seen the StealthBar introduced to the 4WD vehicle accessory market... pioneering vehicle protection and pedestrian safety in this previously untouched sector.**



## Added Benefits

Not only is the StealthBar an innovative and unique product that delivers outstanding vehicle protection without compromising pedestrian safety, it also delivers value to consumers by way of convenience and cost saving. The lightweight properties of the specifically engineered polymer and the one-piece hollow construction (consequent to the rotational moulding manufacturing process) minimises the weight added to the vehicle when fitted, mitigating the effect the VFPS has on Gross Vehicle Mass, which in turn has long-term positive effects on fuel consumption, along with reduced wear and tear on tyres and suspension components. This benefits not only the customer's pocket but the environment as well.

Additionally, the hollow construction provides outstanding impact absorbing characteristics; rather than transferring the energy through to the vehicle chassis upon impact, the bar deforms to absorb the forces and returns to its original shape. This is particularly important in accidents with large animals that would otherwise cause substantial damage to the vehicle, its vital engine components and cooling systems. The Linear Low-Density Polyethylene (LLDPE) polymer material is extremely UV stable and corrosion resistant, a very important feature in Australian beachside locations and in Europe where applying salt to prevent ice forming on roads is common practice.

## Expanding Range

Given the immediate positive attention that the StealthBar has received both in Australia and abroad for its aesthetic appeal and superior functional performance, the team at SmartBar has begun developing new StealthBar models to accommodate a wider range of popular 4WD vehicles to ensure that more users are able to take advantage of the latest 4WD accessory innovation.

Australian manufacturers have long been recognised as the leaders in the 4WD accessory category, evidenced further with this ground-breaking product. Its release has unlocked numerous export market opportunities for SmartBar, adding considerable value to ARB's growth strategies in the fleet, mining and emergency services sector. Since its release in September 2016, the StealthBar has contributed enormously to the SmartBar company's growth and profitability, becoming 17% of total bar sales in this time with 66% of the StealthBar sales being to export customers. It is revolutionising the SmartBar business and is aiding the company in achieving further development that has recently seen the business increase its workforce considerably and invest heavily in new production equipment.

# Orange Chocolate Cakes



## Ingredients:

1 packet of chocolate cake mix  
eggs, milk & butter (amounts as per cake mix)  
6 oranges  
aluminium foil  
or  
1 camp oven with trivet

## Method:

Prepare the chocolate cake mix as per packet instructions.

Slice the top off each orange and scoop out the pulp. Fill each orange with chocolate cake mix and replace the top or lid of the orange.

Wrap each orange in two layers of foil and place in the coals of a campfire.

or

Place each orange on a trivet in a camp oven and place the camp oven on the coals of your campfire.

Cook for 30 minutes or until cake is cooked through.

Feeds six hungry campers.

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*Want to see this recipe in action? See the video online now at [4x4cultured.com.au](http://4x4cultured.com.au)*

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# Box Oven Cooking



Ever been out camping and had a real craving for oven-baked goodness? Think lasagne is impossible to make without an oven? So did my fellow campers on our latest end-of-year break. That was until we introduced them to the wonder of the box oven. With this easy to construct off road addition, we managed to feed a group of 18 hungry campers a delicious Italian feast.

## Materials:

1 cardboard box (large enough to fit over a cake cooling rack)  
1 square or rectangle cake cooling rack  
1 aluminium foil tray (smaller than the cooling rack to fit underneath)  
1 roll of heavy duty aluminium foil  
4 empty beer or baked bean cans  
1 meat thermometer  
Campfire coals

## Method:

Line the cardboard box with at least two layers of aluminium foil, ensuring you wrap the foil around to the outside of the box at the base to protect the cardboard. We wrapped the box while it was flat and then constructed it back into its shape. Duct tape can be used only on the outside of the box; if it is inside the box, it will burn. Once the box is complete, use the meat thermometer to stab some holes through the walls of the box to encourage airflow.

Place the aluminium foil tray in a safe, clear area. Fill the tray with campfire coals. Place the four cans under each corner of the cake rack (we half-filled the cans with soil to weigh them down and make them more sturdy). Place the foil-lined box over the coal tray and rack, using a rock or flattened can to prop up the corner of the box to ensure air flow is maintained. Insert the meat thermometer through one of the holes and preheat the oven to around 180°C.

Once the oven has reached the desired temperature, place your meal on the rack and use as you would any oven. The temperature needs to be closely monitored and when the temperature begins to drop, simply lift the box, slide out the aluminium tray, replace the coals and return to the oven. Ensure you use gloves when handling the coal tray as it will be very hot.

If you want to get fancy, we have seen box ovens with side doors cut out for easy coal replacement. Try not to open the box too often as it loses heat very quickly. We found the cooking time of our lasagne was extended by about 20 per cent purely because of the heat lost with checking the meal and replacing the coals.



## ARB Accessories from the dealer

### Did you know?

You can have your new 4x4 decked out with an arsenal of ARB gear straight from the dealer?

### Why order your ARB gear with your new car from the dealer?

Unleash the full potential of your new rig with premium ARB protection and serious off road gear, all bundled with your new car finance.

### Where do you start?

Get the ball rolling by having a chat with your dealer, or drop into one of our ARB stores for the right advice and a printed quote to take with you back to the dealer.



ARB Accessories from the dealer

# ‘JUST GOTTA ASK’

[ARB.COM.AU](http://ARB.COM.AU)  
1300 ARB 4X4

**ARB's Product Range Includes:**

ARB Summit Bars  
ARB Deluxe, Commercial & Sahara Bars  
ARB Under Vehicle Protection  
ARB Side Rails & Steps  
ARB Summit Rear Step Tow Bars  
ARB Summit Side Rails & Steps  
ARB Rear Bars & Rear Wheel Carriers  
ARB Recovery Equipment  
Electric Winches

Old Man Emu Suspension Systems  
ARB Air Locker Locking Differentials  
ARB Air Compressors  
ARB Canopies, Ute Lids, Sport Lids & Ute Liners  
ARB, Thule & Rhino Roof Racks  
Outback Solutions Drawers  
ARB Intensity LED Lights & Light Bars  
IPF Lights  
ARB SkyDome Swags

ARB Rooftop Tents  
ARB Fridge Freezers  
ARB Auxiliary Batteries  
Safari Snorkels  
Fuel & Water Tanks  
Hayman Reese Tow Bars  
GME Radios  
Recaro Seats  
Cargo Barriers & More

# THE ADVENTURES OF FOURBY AND FRIENDS

WELCOME TO THE SIMPSON DESERT



FOURBY AND ARIEL ARE SUPER EXCITED TO BE HEADING BACK TO THE SIMPSON DESERT. IT'S ONE OF THEIR FAVOURITE PLACES TO GO 4WDING.

THEY SET UP CAMP AT DALHOUSIE SPRINGS...

C'MON FOURBY, LET'S HAVE A DIP IN THE THERMAL HOT SPRINGS, THE WATER IS A YUMMY 37 DEGREES!



DALHOUSIE SPRINGS

WHILE THEY'RE ENJOYING THE HOT SPRINGS, WATCHING THE SUN SET, RANGER OLLIE COMES OVER TO HAVE A CHAT.



HI GUYS, LOOKS LIKE THE WEATHER WILL BE GREAT FOR YOUR TRIP. DON'T FORGET TO FIT YOUR SAND FLAGS BEFORE YOU LEAVE, SO OTHER 4WD'S CAN SEE YOU COMING OVER THE DUNES!



AFTER A GOOD NIGHT'S SLEEP, FOURBY AND ARIEL PACK UP CAMP AND HEAD OFF INTO THE DESERT.



BECAUSE IT HAS BEEN RAINING SO MUCH, THE DESERT IS FULL OF GREEN BUSHES AND COLOURFUL FLOWERS.

ISN'T IT BEAUTIFUL!



AS THEY'RE HEADING OVER A REALLY BIG DUNE, THEY SEE ANOTHER SAND FLAG COMING THE OTHER WAY, SO THEY MOVE OVER TO THE SIDE OF TRACK.



IT'S SOPHIE THE SUZUKI AND HER FRIENDS!

THAT WAS LUCKY! THANK GOODNESS WE HAD OUR SAND FLAGS FITTED.

OVER THE NEXT COUPLE OF DAYS, FOURBY AND ARIEL SEE LOTS OF WILDLIFE, INCLUDING CAMELS, KANGAROOS AND LIZARDS, BEFORE MAKING IT TO BIRDSVILLE.



THEY ENJOY A COLD DRINK AT THE BIRDSVILLE HOTEL AND ARE SO EXCITED, THEY START PLANNING THEIR NEXT BIG ADVENTURE...

HOW ABOUT CAPE YORK?


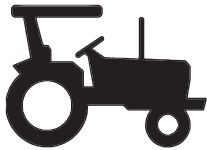



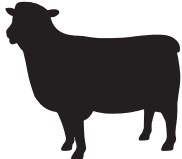









SOUNDS LIKE A PLAN TO ME!





# BACK SEAT BINGO

On your next holiday adventure, see how many of these you can spot!!

			
BRIDGE	TRACTOR	STOP SIGN	POLICE CAR
			
POST BOX	BICYCLE	SHEEP	DELIVERY TRUCK
			
FIRE ENGINE	CARAVAN	WINDMILL	SPEED CAMERA
			
NUMBER PLATE ENDING IN '1'	DOG	PLANE	MOTORBIKE
			
BAKERY	AMBULANCE	COW	CHURCH



# Capturing History

As a photographer, I have travelled to some incredible places and captured some amazing scenes along the way. Sometimes you come across something that is not yet part of nature and without the protective coatings, these man-made structures will dissolve into the earth, eroded by the elements. It can be absolutely amazing how quickly this process can reduce massive items to nothing... especially out in the elements of Australia's harsh landscape.

In 2005, I visited a remote coastal region of Cape York and was amazed at this huge structure before me. It was a light boat that had broken free from its moorings and ended up beached on the shore like a whale. It was massive, it was impressive, it was awesome! I had to do my best to capture this in its enormity and at the same time "preserve history" through the click of my camera.

When I photograph any old structure, I think about the fact that I am actually helping preserve its history. This is my way of assisting to tell a story to my kids

and other generations as the chances are that they will never actually see this structure for themselves in the future. After all, no group of people will be able to prevent the weathering effects that take place in these remote regions. And if they do come in, like at Farina where groups of volunteers are rebuilding the old town, I have still captured the history of where it was at that moment in time.

Some years after this photo was taken, I headed back to Cape York expecting that I would have another chance of capturing the same light boat and couldn't believe my eyes when I saw the barely-there remains of this massive structure. It had been reduced to an insignificant pile of scrap metal. So whilst I have to admit I was extremely disappointed with it falling into the sand, I was extremely happy that a few years prior I had gone to the trouble of capturing a moment in time and preserved history for the future.

**Michael Ellem – Offroad Images**

# GOING STEADY

We're aware that they have three legs and keep your camera steady but who knew there was so much more to this photographer's must-have accessory? ARB's Photographer and Director of Offroad Images, Michael Ellem, gives us his two cents when it comes to buying and using a tripod.

## What Are the Differences between Tripods?

Whilst all tripods have three legs, the biggest differences between tripods are in the heads. This is the adaptive component that mounts the camera and allows for swivel adjustments over different axes, either locking the camera into a fixed position whilst composing the shot or allowing for smooth camera movement, such as is often needed for video.

When choosing a tripod head, the difficulty is understanding what you actually need before heading into the camera store. In the long term, you might require more than one tripod to suit the individual camera set-ups and photography requirements. Starting out, I would advise choosing a set-up that will suit the majority of what you want to achieve.

There are some important considerations before you head out to purchase a tripod. Make sure you know the answers to these questions before you step into your local camera store.

## LEGS

### How low (or high) can you go?

Tripods come in all different heights and sizes. Some tripods will allow you to work from nearly on the ground, whilst others will take you higher than 1.5m off the ground. If you are shooting landscapes or seascapes, you need tripod legs to be very versatile.

Most importantly, keep an eye on the centre post construction of a tripod. If it is fixed, you will be limited on how low it can go.

### Where Do You Plan to Use Your Tripod?

Studio tripods are usually larger and more robust, sacrificing leg movement and limited low height set-up for extra support. For location photography, I would recommend legs that have an adjustable centre post, allowing the camera to be placed nearly on the ground. It is also important to make sure that you can send the legs in any direction; this will give you greater balance in rocky outcrops and on uneven ground.

### How Stable is Stable?

The stability of your tripod will be dependent on the weight of the camera and lens that you plan to use, as well as the environmental conditions (such as wind). If you want to use a heavy camera, you will need to ensure the legs of your tripod are

rigid and sturdy. Heavy-duty legs will be a must for extremely windy conditions. Tip: if you don't have a heavy-duty tripod, you can reduce the height of the tripod, which will help reduce movement of your camera in high winds.

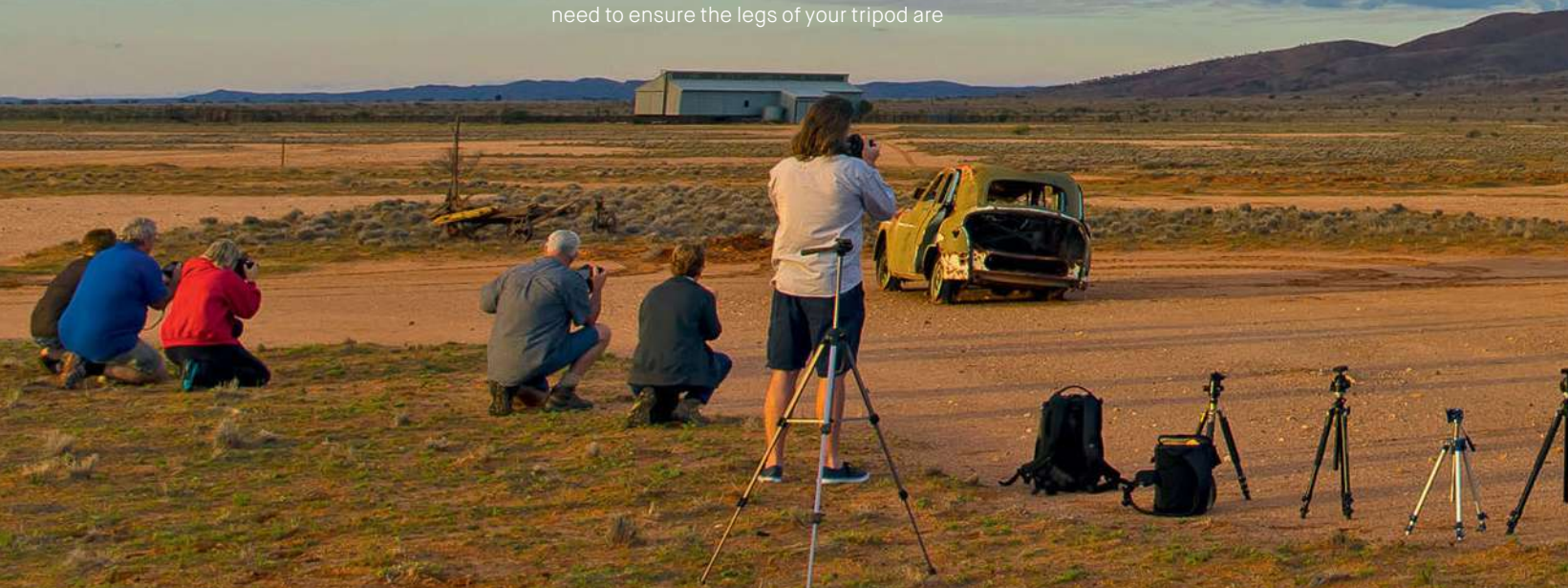
### What Weight Works for You?

Generally speaking, the more stable a tripod, the heavier it will be. If you don't mind carting heavy gear around or your gear spends most of its time getting from one place to another in the fourby, the larger tripods shouldn't be a problem.

Seriously reconsider a full-size heavy-duty tripod if you plan on carrying your gear on massive hikes. A smaller tripod will definitely be a better option in this case. Carbon fibre tripods will assist in reducing the weight of your tripod but at a premium cost.

### Is Carbon Fibre Better?

Most carbon fibre-built tripods are slightly more rigid and at the same time lighter but they also carry an expensive price tag. The downside of this option is that they are not as durable, especially when used in sand or mud. If you do choose a carbon fibre tripod, just make sure that you clean it well after each use and keep it in a carry bag.



## HEAD

### Video Head, Three Axis Head or Ball Head?

My advice is that if your primary goal is not to shoot video, stay away from the video head option. If video is something you plan to focus heavily on, you will need to look at getting a fluid video head as a minimum with an arm to allow for smooth movement control. Using a video head for stills only suits landscape orientation and therefore limits the type of photography it can be used for.

The three axis head has its own limitation. Each time you want to recompose a shot, you will need to rotate as many as three levers to get full movement of the camera. This can be quite time consuming and the three axis head is really more suited to product photography. It is an older style that I wouldn't recommend in a hurry.

The ball head will usually carry two adjustment knobs, one controlling swivel, the other providing full ball axis movement.

So for each new shot composition, with a single adjustment knob, the shot can be completely recomposed. I recommend the ball head for any photographer wanting the maximum result out of their time investment.

### Size Matters

I would suggest, when trying to choose a ball head size, you take your camera into the camera store. Mount the camera on the ball head and whilst pressing down on the top of the tripod (where the ball head mounts), try gently pushing the camera backwards and forwards and from side to side. If the quick release plate or the head is not the right size, you will feel movement.

The ball head size can also be dependent on the camera being used at the time (if you use more than one), the wind conditions and your budget, and you definitely get what you pay for in this instance.

## MIKE'S RECOMMENDATIONS:

### BEGINNER TO INTERMEDIATE PHOTOGRAPHER (SMALLER DSLR)

#### **Manfrotto 190XPRO Aluminium 3-Section Camera Tripod**

Weight: 2kg  
Safety Payload Weight: 7kg  
Minimum Height: 9cm  
Maximum Height: 160cm  
Closed Length: 59cm

#### **Manfrotto XPRO Ball Head in Magnesium with 200PL Plate**

**Weight: 0.5kg**  
**Safety Payload Weight: 10kg**

### INTERMEDIATE TO ADVANCED PHOTOGRAPHER (LARGER DSLR)

#### **Manfrotto MT055XPRO Aluminium 3-Section Camera Tripod**

Weight: 2.5kg  
Safety Payload Weight: 9kg  
Minimum Height: 9cm  
Maximum Height: 170cm  
Closed Length: 61cm

#### **Manfrotto 057 Magnesium Ball Head with RC4 Quick Release**

Weight: 1.528kg  
Safety Payload Weight: 15kg



# WINNER WINNER

**REDARC were recently awarded the 2017 Excellence in Manufacturing – Gold Award (Over \$10 million annual turnover) at the biannual Australian Auto Aftermarket Excellence Awards Banquet – a trade only show run by the industry for the industry.**



**REDARC were also recipients of this award in 2015 and now join a select group who have been fortunate enough to win the same award in consecutive years.**

The Australian Auto Aftermarket Excellence Awards are designed to recognise outstanding achievers in the Australian automotive aftermarket industry and are run by the AAAA. The Excellence in Manufacturing – Gold Award recognises organisations that invest in research, embrace innovation, predict future trends and have developed a competitive advantage through focusing on continual manufacturing.

There are two categories within these awards: one for businesses with over \$10 million turnover per annum and another for businesses with under \$10 million turnover per annum. AAAA Executive Director Stuart Charity said the AAAA Board of Directors congratulated all Excellence Award winners and thanked them for their contribution to the auto aftermarket industry.

The companies and individuals nominated for these awards have embraced the industry's continual quest for excellence, innovation and education in their

endeavours to secure the success of the automotive aftermarket industry in Australia. REDARC's Managing Director Mr Anthony Kittel said he was thrilled REDARC would join a special group of previous winners in being awarded the accolade in successive years, including Disk Brakes Australia, Bosch Australia, Walker Australia and SAAS Manufacturing. "Our pillars of success are shaped by continual innovation, a passion for learning

*"Our pillars of success are shaped by continual innovation, a passion for learning and a team-based culture shaped by collaboration."*

and a team-based culture shaped by collaboration. By using a cross-functional team approach to product development, we can continually deliver high quality, innovative products to the market."

"As an advanced manufacturer, we need a highly skilled and empowered workforce. The commitment of the REDARC employees to learn and embrace training is impressive. Without a highly skilled workforce, our manufacturing capabilities wouldn't be at the technological level they are," said Mr Kittel.

In order to achieve further growth and a focus on continual manufacturing, REDARC announced it will expand its manufacturing facility and house additional state-of-the-art machinery equipment in Lonsdale, South Australia. Completion of the upgrade is scheduled for 2018. The new equipment will enable REDARC to enhance its manufacturing capabilities and work closely with players in the automotive aftermarket industry.

The Excellence Awards Banquet was held at the Crown Palladium and attended by over 850 people. It formed part of the AAA Expo, which is Australia's most comprehensive exhibition of vehicle repair and servicing equipment, replacement parts, tools and accessories.

# PLUG 'N' PLAY

**Introducing  
the most versatile  
UHF CB communication  
kit – the GME TX3120S  
Plug 'N' Play.**

This product is easily installed into any vehicle within minutes and does not require any drilling, cutting or soldering. Aimed at the casual user, the TX3120S Plug 'N' Play is perfect for any convoy journey or rental vehicle. Designed and engineered in Australia, the TX3120S incorporates the widest LCD in its class size, twin rotary controls, speaker microphone and ScanSuite, GME's latest scanning technology to enable uninterrupted conversations. When no longer required, all accessories pack away into the travel case supplied ready for the next adventure.

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**Product features:**

- Slimline windscreen suction mount
- Improved compact magnetic antenna
- Convenient travel case
- ScanSuite – faster, smarter scanning
- Digital signal processing
- Voice inversion scrambler
- Dynamic speaker microphone
- Large LCD screen
- CTCSS, DCS privacy
- Full colour spectrum backlighting
- Warranty: UHF CB radio 5 years, accessories 1 year



# IPF XTREME



**Tough and lightweight, the new IPF Xtreme LED Sports 900XLS Series II lights feature high transparency, reinforced polycarbonate lenses for superior quality.** With advanced heatproof reflectors, these extreme performance lights also incorporate water and dust-resistant components for all off road conditions.

#### Features:

- Unique hybrid combination design using "TRI-WALL REFLECTOR™" delivers clean and powerful beam patterns
- Employs state-of-the-art CREE high power LEDs to deliver high intensity white light
- Internal mount high quality LED driver circuit fitted with waterproof Deutsch DT-6 connectors
- Super tough die cast alloy body incorporating finned heatsink
- Integrated lens and ring moulded in extremely tough UV stabilised and hard-coated polycarbonate resin
- Proven multi-directional mounting base using stainless steel cup, die cast alloy pedestal and M12 heavy duty mounting stud
- Submersible, sealed-for-life design using highly advanced, heatproof resin reflector incorporating water and dust-resistant membrane breather



# Bushranger Max Air III

**The Bushranger Max Air III is an inflation and deflation compressor for all your air supply needs, specially designed for quick and easy use without the need to constantly turn it on and off.** Fantastic for filling caravan, boat-trailer and trailer tyres, it is manufactured to the highest standards of quality and backed by a five-year, no-fuss warranty. The Bushranger Max Air III is also great for use in an onboard air system; you can simply hard-mount the compressor and fasten it to a tank as the pressure switch is already installed.

With an overall reach of 11.5m, the Bushranger Max Air III will always be right there when you need it.



## Features:

### Convenient compressor operation:

- Trigger style inflation gun with locking lever
- Built-in deflator button on trigger
- Large digital display
- Great for ease of use, use your compressor without needing to turn it on or off due to the built-in pressure switch (off at 150psi  $\pm$ 5% and on at 0-120psi  $\pm$ 5%)
- Easily adjust tyre pressures up or down to suit any terrain (road, sand, mud, rocks)
- Supplied with three additional nozzles handy for inflating footballs, basketballs, bicycle tyres, etc.

### Fast inflation to get you going as soon as possible:

- Powerful 12V motor and air pump, delivering 72 litres per minute
- Reliable unit – built to survive the toughest conditions
- Quality manufactured and accredited to International ISO9002 Standards
- Conforms to AS/NZS1044
- Thermal overload protection switches unit off if it gets too hot
- Rubber-mounted vibration dampening base-plate (can be removed for hard-mount applications)
- Supplied with hard-mount kit to permanently mount compressor, dry sump allows mounting on any angle
- Built-in on/off switch
- Heavy duty power lead and 40A inline fuse for compressor protection
- Backed by a five-year warranty

### Portable for use in any vehicle:

- Suits any 12V application utilising battery clamps
- Has a reach of 11.5m (2.5m power cord and 9m hose) to reach your vehicle, caravan, trailer, boat trailer and other vehicles
- Robust carry/storage bag for compressor protection and storage

In the Drink Competition



Jim Webber, Dargo VIC



Shannon O'Brien, Cape York QLD

# IN THE DRINK

## Competition Winners

We asked for your most intense water crossing moment and certainly weren't disappointed. Here is just a selection of the fantastic entries we received. Each published entry wins an ARB Weekender Recovery Kit worth RRP \$159.00.



Samuel James, Walhalla VIC



Dave Charlton, Wenlock River QLD



Allison Summers, Delegate River VIC



Mark Bupples, Cape York QLD



Rachel Eiser, North Stradbroke Island QLD

# CAPTION THIS!

Send in the best caption for this photo! **Winning entries will receive one of 20 ARB Adventure light 600s worth RRP \$89.00.**

Send your caption to:  
[promotions@arb.com.au](mailto:promotions@arb.com.au).



Entries close 30 September 2017.

## ARB STORES

### VICTORIA

Bairnsdale (03) 5152 1226  
Ballarat (03) 5336 4605  
Bendigo (03) 5445 7100  
Brighton (03) 9557 1888  
Dandenong (03) 9793 0002  
Echuca (03) 5480 2600  
Geelong (03) 5272 2611  
Hoppers Crossing (03) 9749 5905  
Keilor Park (03) 9331 7333  
Kilsyth (03) 9761 6622  
Pakenham (03) 5940 5500  
Shepparton (03) 5822 1877  
Somerton (03) 9460 9988  
Traralgon (03) 5174 9190

### SOUTH AUSTRALIA

Elizabeth (08) 8252 1599  
Morphett Vale (08) 8186 6101  
Regency Park (08) 8244 5001

### ACT

Fyshwick (02) 6280 7475

### NEW SOUTH WALES

Albury (02) 6021 2477  
Artarmon (02) 9438 4484  
Broken Hill (08) 8087 9250  
Brookvale (02) 8507 3073  
Dubbo (02) 6885 5777  
Moorebank (02) 9821 3633  
Newcastle (02) 4953 9555  
Orange (02) 6369 0700  
Penrith (02) 4731 1266  
Port Macquarie (02) 6581 2500  
St Peters (02) 9565 2455  
Tamworth (02) 6762 0541  
Thornleigh (02) 9980 8855  
Wagga Wagga (02) 6885 5777  
Wentworthville (02) 9631 7889

### WESTERN AUSTRALIA

Canning Vale (02) 9455 4366  
Geraldton (08) 9921 8077  
Mandurah (08) 9583 3200  
Osborne Park (08) 9244 3553  
Wangara (08) 9409 5764  
Welshpool (08) 9358 3688

### NORTHERN TERRITORY

Alice Springs (08) 8953 0572  
Darwin (08) 8947 2262

### QUEENSLAND

Biggera Waters (07) 5537 8800  
Bundaberg (07) 4153 2929  
Burleigh Heads (07) 5535 9223  
Caboolture (07) 5499 1955  
Capalaba (07) 3823 5900  
Cairns (07) 4035 3350  
Caloundra (07) 5491 4500  
Coopers Plains (07) 3277 2020  
Jindalee (07) 3715 6400  
Nundah (07) 3266 3255  
Mackay (07) 4998 6888  
Maroochydore (07) 5475 4011  
North Lakes (07) 3491 9600  
Rockhampton (07) 4922 7788  
Springwood (07) 3493 3030  
Toowoomba (07) 4632 1122  
Townsville (07) 4728 0900

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**4X4 ACCESSORIES**