

ARB

4X4 ACTION



FEATURE ARTICLE ON

ARB'S TWO-PIECE AIR LOCKERS

FEATURES > HEAD INTO THE FLINDERS RANGES WITH THE CREW FROM THE USA'S OVERLAND JOURNAL MAGAZINE
> TRAVEL TO YURAYGIR NP AND EL QUESTRO
> TYRE PRESSURES EXPLAINED

LATEST NEWS > NEW REAR BAR FOR THE FJ CRUISER AND ARB'S NEW ROOFTOP TENT UNVEILED

**WIN
AN ARB
RECOVERY
KIT**

HIGHLIGHTS

ASK ARB	8
AIR LOCKERS UNLOCKED	14
KAKADU ROOFTOP TENT	22
WIN AN ARB RECOVERY KIT	28
NEW ARB STORES	30
VISIT EL QUESTRO	34
TYRE PRESSURES EXPLAINED	40
ARB KIDS	46
OPERATION OUTBACK ADVENTURE	54
RFDS DONATION	69



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ARB SNAPSHOT

Cool new 4x4 gear, Outback travel, product reviews, tech articles and free stuff... welcome to another bumper edition of ARB 4x4 Action.

It was immensely satisfying to be part of an industry group who recently presented a \$22,000 cheque to the CEO of the Royal Flying Doctor Service, as featured later in this newsletter. The 4WD community has a very close affiliation with the RFDS, which is only natural given the remarkable service this organisation provides to people living and travelling in remote areas. The donation came about as a consequence of the recent bull bar user survey that was conducted, which had a huge response and was key in influencing government decision making on the future of bull bars. The Ban-It brigade appears to have moved on from bull bars, with their attention now turned towards other issues. It is inevitable that the matter will resurface at some stage in the future however, and four wheelers everywhere need to continue to be vigilant.

Part of the marketing department's role at ARB is media and public relations. Typically this involves answering questions, providing information on our product lines and a certain degree of sucking up. Every now and then, though, we get to go have some fun and work with some really great people. I've been very fortunate in the past to travel with John Rooth (aka Roothy), who writes for Australian 4WD Action magazine. He's a hugely popular character in the magazine but is even better in real life, with an endless library of yarns to spin around the campfire, guaranteed to keep you entertained for hours.

Pat Callinan is another excellent ambassador for 4WD enthusiasts, who cares passionately about our rights to explore this great land. The main motivation for him starting his highly successful TV show was that he wanted to portray four wheelers in a conscientious, responsible and accurate manner, as opposed to



the hoon minority the mainstream media is so often drawn to.

Most recently I got to work with Scott Brady, who is another brilliant ambassador for our recreation, and is featured in one of our cover stories, Operation Outback Adventure.

Scott runs a US media group dedicated to remote area adventure travel. His vehicle knowledge, technical driving skills, safety practices and willingness to share his knowledge are on a level I've not previously encountered, making him a hugely valuable person to spend time with.

Sadly, there is one person I never got to meet, and regrettably never will. Tom Kruse is a name I started hearing back in the early nineties on one of my first trips up the Birdsville Track. Initially I struggled to understand the connection between a Hollywood actor and Outback Australia, but on learning people weren't talking about the Top Gun star, I became quite fascinated with the bloke. Known as the Mailman of the Birdsville Track, Tom's stories of getting the mail in and out of Birdsville from the 1930s-50s is one that will fascinate and entertain any four wheel driver. I am not a big reader, but I reckon Kristin Weidenbach's book about Tom is an absolute must for anyone who drives something with a low range lever (or button). Tom Kruse MBE, passed away in June 2011.

See you out on the tracks, hopefully driving something way more capable and refined than the Leyland Badger and Ford Blitz that Tom used to run around in.

**Matt Frost, Marketing Manager,
ARB 4x4 Accessories**



BACK UP

ARB'S REAR BAR FOR THE TOYOTA FJ CRUISER IS COMING SOON.



Following the launch of a heap of ARB gear for the Toyota FJ Cruiser earlier this year, ARB is continuing to expand the range of available products with the release of a new rear bar.

Manufactured from steel for optimal strength, the rear bar has been engineered with maximum functionality in mind and features optimised departure angles and tapered wings to provide protection for vulnerable rear panels.

A centre recess allows fitment of various size tyres on the factory door-mounted tyre carrier. Low slip tread within the centre recess also allows easy access to the roof or inside the FJ Cruiser.

When designing the rear bar, the engineers recognised the various requirements of FJ Cruiser owners and made the bar versatile both on the road and off. Incorporating recessed brake and indicator lights, the rear bar also allows for the full functionality of parking sensors.

The rear bar includes a heavy duty bolt on tow point for camper trailers and boats, and Hi-Lift jacking points, making it ideal for recovery situations when off road.

Finished in a millennium grey powder coat with the option to colour code, the rear bar for the Toyota FJ Cruiser will be available soon from your local ARB store or stockist.

// Contact ARB for part numbers and pricing

WATER WONDERLAND

Words & photography by Mark Allen

FISH, SURF, SWIM, WALK, BOAT AND 4WD
ALONG 60KM OF PRISTINE COASTLINE.

Imagine having three destinations in one, each offering beautiful, isolated beaches accessible by 4WD. You could toss a line into the crystal clear Pacific Ocean with full expectations of catching lunch or dinner, or you can lace up your hikers and hit the scrub for a relaxing, healthy walk through the many miles of single tracks up and down the coastline.

Yuraygir National Park offers three beautiful locations in its northern, central and southern sections, each of which can be a complete holiday – leaving the other areas for next time – or you could do the drive between all three to take in 60km of pristine coastal views.

The national park was created in 1980 with the renaming and combination of Angourie NP and Red Rock NP. Extra deposits of land have since been added over time to create one of the longest stretches of undeveloped coastline in NSW.

You can't drive (4WD or otherwise) directly from one section to the other. Rather, a trip back out to the snaking Pacific Highway is needed, which can take a little of the shine off as it's a fair drive between all three once you've completed the loops in and out. If you're on a mission to see as many great spots as possible, do it. If you're more after plenty of rest and relaxation, then pick one, explore all it has to offer and return on your following holiday to the next section. Each has its own unique scenery, some with more access to facilities and some where you need to be totally self sufficient.

Be sure to take all your toys when visiting Yuraygir NP – fishing rods, canoe, surf board, camera, binoculars, scuba or snorkelling gear – and allow plenty of time to use them all.

Boats (either roof toppers or trailer) can be taken into most areas, as can camper trailers or off road vans.

The only place where you may have difficulty towing is in the southern section while trying to get to Pebbly Beach campground, as there is a tidal water crossing to tackle with a steep sandbank on the northern exit. Wait for low tide and walk the water and sandbank first so you'll know what you're up against, as it will change regularly.

NORTH

The northern section of Yuraygir is the longest section and has to be accessed from two points to fully appreciate it. Head in through Yamba (another great stopover in itself) and you'll drive through Angourie for a dip in Blue Pool and Green Pool – both of which are quarries that became disused after their natural filling of water many years ago. Both pools offer brilliant swimming within the rocky coastline.

There's Mara Creek picnic area, with a walk to Dirrangan Lookout

PEBBLY BEACH IS FULL OF SMALL, SMOOTH, FLAT STONES THAT ARE JUST PERFECT FOR SKIMMING ACROSS THE WATER'S SURFACE



and Little Shelley Beach, but no vehicular beach access and no camping up here, other than back in Yamba.

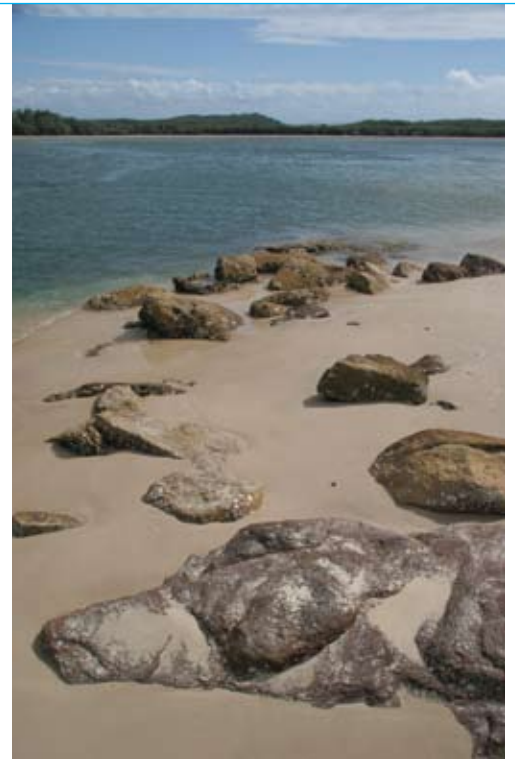
Heading into this northern section through Maclean and Gulmarrad, you'll then have a few camping options within Lake Arragan, Red Cliff and Grey Cliff which are all to the north of Brooms Head. Alternatively, head south of town to Sandon River camping area. All of these camp areas offer beach access for your 4WD, basic

facilities, as well as plenty of beach and inland walks. In years gone by, the red cliffs of this area were used by sailors to get their bearings while at sea, and it's from on top of these (and at Grey Cliffs) that you can find great viewing points to spot dolphins and whales during the season.

When heading to the historic fishing village of Sandon, be sure to walk across to Plover Island at low tide. Boating up the Sandon River will provide more scenic delights as

well as the chance to fish for fresh water species and (providing you have an adequate boat) the option of heading into the open waters of the Pacific to land the salties. There's also a campground here that overlooks Plover Island.

It's the Sandon River that prevents vehicular traffic heading south into the central section of Yuraygir NP, and the best spots for top-ups of fuel, food and drinks are at Yamba or Brooms Head.



CENTRAL

The central section of Yuraygir NP is accessed from Wooli Road (from Ulmarra), then Minnie Waters Road (to Minnie Waters) or Wooli Road (to Diggers camp and Wooli). One camping spot in the central section is at Diggers camp, which has basic facilities. From here you can walk south across Bare Point, Wilsons Headland and along the beach all the way to Wooli. There's beach access for your 4WD just south of the picnic area at Wilsons Headland.

Heading into Minnie Waters, there's another camp spot just north of town at Illaroo camping area, which is where the Angophora Grove Walk can be found. There's plenty of beach to explore north of the headland, which takes you back to the southern side of the Sandon River.

There's also a caravan park at Minnie Waters, which offers plenty of facilities at good rates and you'll still be close to all the natural beauty of the area. In fact, the park is nestled right amongst the bushland with easy beach access and better facilities than the national park. There's a general store where you'll be able to refuel and stock up on basic food, drinks and even a selection of fresh seafood takeaway if you haven't been able to bag your own.

SOUTH

While the southern section is the smallest of Yuraygir NP, it offers one of the better campgrounds at Pebbly Beach. Once you've left the bitumen of the Pacific Highway and driven the generally good dirt roads of the Barcoongere Forest Way, you'll exit onto the main beach. Heading north, you'll be stopped by Station Creek, which is tidal, so you may have to be patient while you wait for a suitable wading depth to gain access into Pebbly Beach camp area. If you do need to wait, it's a great spot for a swim or canoe upstream. If you turned south at the main beach exit, you'll get to the small town of Red Rock.

Once through the water crossing and up the steep sandy bank, the campsite is just a few hundred metres away and offers plenty of flat, grassy spots to pitch tents or set up camper trailers. There are good toilet facilities here and plenty of shade to relax in. As the name suggests, Pebbly Beach is full of pebbles or small, smooth, flat stones that are just perfect for skimming across the water's surface – a great pastime that'll fill many hours with searching for that perfect stone to throw.

Walking to the northern end of Pebbly Beach is where you'll find

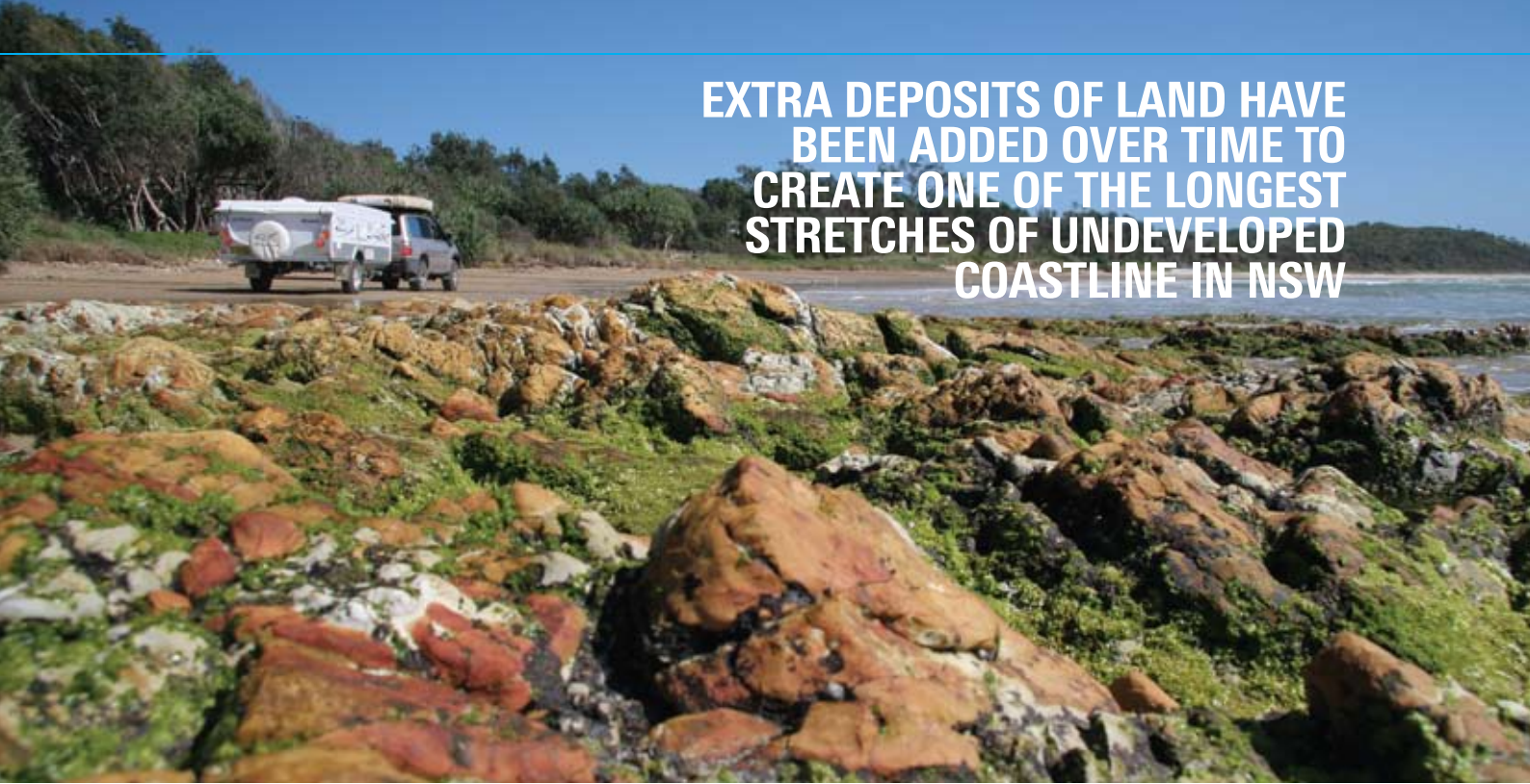
the best sand and the best spot for a swim and fish from the beach, as it's protected by the headland. Take a picnic from camp and you'll easily spend the day in this beautiful little corner of paradise.

For those with roof toppers or trailer boats, there's beach access via a small sandy track halfway between camp and the river crossing. Alternatively, you can cross the river and launch off the main beach.

No matter which section you head into, Yuraygir offers campers and 4WDers a great place to get away from it all while not being too far off the beaten track – perfect for a family getaway, a hiding place for couples and even a place for the boys to set up camp, fish and surf the days away while enjoying the soothing effects of an open fire at night.

While you don't have to pack for an epic Outback journey to get to Yuraygir NP, once you've laid claim to your patch of ground, you'll no doubt feel like you're a million miles away from the big smoke – what more could you ask for... other than to actually land one of those ripper fish your mates always talk about?

EXTRA DEPOSITS OF LAND HAVE BEEN ADDED OVER TIME TO CREATE ONE OF THE LONGEST STRETCHES OF UNDEVELOPED COASTLINE IN NSW



FAST FACTS

GETTING THERE

In northern NSW, Yuraygir National Park stretches along 60km of coastline, from just south of Yamba down to about 45km north of Coffs Harbour. Depending on which of the three sections you head into, it'll only be a short to medium drive off the Pacific Highway. If you're coming from the west, Grafton is the place where you'll have to decide whether to head north or south to get into your desired section of the park.

STAYING THERE

There are camping grounds in all three sections of the national park. The towns of Yamba, Brooms Head, Sandon and Minnie Waters also offer caravan parks. The national park campsites are generally adjacent to the beach and most have toilets.

FUEL AND SUPPLIES

Yamba to the north, Grafton when coming from the west, or Coffs Harbour and Woolgoolga down south are the prime shopping spots

before getting into the smaller towns of Brooms Head and Minnie Waters. Minnie Waters has a beautiful little general store that also sells lollies the old fashioned way in paper bags at a couple of cents each, as well as takeaway food, alcohol and a few other knick-knacks.

CONTACTS

Grafton's NPWS North Coast region can be contacted on (02) 6641 1500 or visit www.npws.nsw.gov.au for more information.

LETTERS TO ARB



Hi there ARB,

I have recently purchased a 2010 Mitsubishi Challenger and I'm very happy with the vehicle. It performs very well off road and having a factory rear diff locker gets me places that other cars can't!

But on occasion, when I push my luck, I get stuck. As with any car, there are factory 'tow points' on the car, but the prevailing opinion amongst other 4WD owners is to never use factory tow points for recovery purposes.

I've asked at a number of places, only to be told that it's not possible to put front recovery points on the vehicle. I've also been told that it's a common problem on many modern 4WD vehicles.

So what is the deal? What's the low-down on recovery points? Do you have any suggestions on how we are able to make it safe to recover our vehicles from the front?

Thanks for your assistance!

- Ross

CONGRATULATIONS TO **ROSS**, WHO IS OUR PORTABLE AIR COMPRESSOR KIT WINNER FOR THIS ISSUE.

EVERYONE ELSE WHO APPEARS ON THESE PAGES WILL RECEIVE AN ARB SPEEDY SEAL PUNCTURE REPAIR KIT TO REWARD THEIR EFFORTS.

Hello Ross,

Thanks for that excellent and topical question.

It is an unfortunate fact that no 4x4 vehicle available in Australia comes with a factory recovery point. There is a good reason for this that all owners should understand.

When we talk of 4x4 vehicle recovery, we are referring to the use of either winches or kinetic energy recovery (snatch) straps. Winch recovery using either single or double line pull methods exert significant forces on mounting and recovery points, however the loads exerted by recovery straps are far more significant.

If you consider the engineering challenge here, you begin to understand what sort of recovery point we should all be looking for. That challenge is to ensure that the recovery strap is always the weakest link in the 'recovery train' as we call it.

We definitely do not want anything the strap is attached to (or with) failing and being catapulted about at high speed. Many people have unfortunately been killed around the world from such failures.

A recent death in Queensland saw their government legislate a set of standards for recovery straps, and these have now been

PRIZE FOR LETTER OF THE MONTH

This issue, we're giving away another portable air compressor kit, so here's your chance to win one! Simply write to us and ask us anything you'd like to know about ARB and our products. The letter of the month will be published in the next edition of ARB 4x4 Action, along with our reply. The winner will need to pick up the compressor from their nearest ARB store.

Send your letters (250 words or less) including your address and daytime phone number to:

› Post: ARB 4x4 Accessories
Marketing Department
PO Box 105
Kilsyth VIC 3137

› Email: marketing@arb.com.au

While we will endeavour to reply to all letters, due to the volume received, it may not always be possible. Please note that all entries for this section are only reviewed on a quarterly basis. Should you have a question that requires a more immediate response, please direct it to sales@arb.com.au. We reserve the right to edit all letters for clarity.



adopted nationwide and are now a mandatory standard all straps must comply with.

All very good, however, there remains no such standard, guidelines or regulations on which manufacturers or users can base an appropriately rated recovery point. Typical of governments who want to be seen to be doing something, they chose the wrong product to regulate. It's what the strap is attached to that is the issue.

Thankfully, there are standards for the shackles we all use to attach straps, however their rating system is based on lifting gear standards, and the safety factors in lifting gear mean that the rating is one fifth of the failure point. If we apply that rule to recovery points for even the lightest snatch strap, we need a recovery point that will survive a load of 40 tonnes. And I can tell you there is no vehicle body or chassis that could ever survive the test load of 40 tonnes. Furthermore, nobody could afford to buy the recovery point even if it was possible.

For many years ARB incorporated recovery eyes on our bull bars or their mounts and tested these as part of the winch load test process we go through on every bar.

Unfortunately we had to steer away from that concept as we found too many users were buying the larger truck application recovery straps in the mistaken belief that a bigger and harder to break strap was better. This raised the risk of breaking these points in careless recovery operations.

Yes, there are small numbers of commercially made rated recovery points, but rated to what? They themselves may be strong enough to pass a load test in a laboratory environment, but what about the structure of the vehicle they are mounted on? The fact is that modern 4x4 vehicles are ever more lightly built and some present real challenges to mount bull bars on, let alone a recovery point that could be subjected to loads over 10 tonnes and an angled direction of pull at that.

Some two years ago ARB began a process of examining this perplexing subject with the goal of establishing a new Industry Standard and a range of correctly engineered and tested, correctly rated recovery points. And to make things even harder for ourselves, we set out to test both the recovery points and the chassis section they are mounted to.

These will be substantial devices, unique to each model vehicle and no two will look alike.

This program has been a long and gruelling one, with several chassis and prototypes destroyed in the process, but a lot of valuable information has been gathered.

Having said all of this, there's good news and bad news for you, I'm afraid. At the time of writing we are producing the first production run of the range and it is for the Ford Ranger, and following that will be Toyota 70 Series LandCruiser, Nissan GU Y61 Patrol and Toyota HiLux.

We will launch with this range and gauge reaction before beginning the development of further applications.

If it goes as I hope, the product will be well received by the market and we will quickly be under pressure for more applications. The next stage would include the Triton (L200)/Challenger (Pajero Sport).

Sorry for the long-winded answer, but I hope you now have a better understanding of the issues surrounding this subject.

**- Greg Milton, Manager
National Products & Services**



Hi ARB,

I always look forward to getting my copy of the ARB mag and also your catalogue, but I have to ask – why don't you use recycled paper? We need to protect the forests we still have here in Australia, and I really don't like the thought of losing my favourite 4WD tracks to the logging trucks.

- Gareth

Hi Gareth,

Since the arrival of our new catalogue we have had a handful of enquiries into our printing practices, particularly in relation to recycled paper. While the topic of printing and the environment is one that is quite in-depth and complicated, we have tried to cover as much as we can in a few paragraphs!

ARB is always looking at ways to improve our environmental practices, and print media has long been, and still is, the most effective form of communication for many of our customers.

To alleviate environmental concerns, ARB uses Offset Alpine Printing when printing ARB 4x4 Action and other print media, including the catalogue. Offset Alpine Printing is among the top printers in the industry for environmentally friendly practices, having attained Forest Stewardship

Council (FSC) accreditation and using a Programme for the Endorsement of Forest Certification (PEFC) to ensure clients are utilising one of the best forms of environmentally friendly printing.

I have been in contact with Ajith Gomes, ARB's account manager at Offset Alpine Printing, to give you further information on their environmentally friendly printing practices when printing ARB 4x4 Action and other ARB print media.

"Many common myths exist about paper and printing and how it affects the environment, the most common being that it destroys forests," Gomes says. "In the case of Offset Alpine Printing, all paper is supplied from a certifiable source, meaning paper is obtained from a managed, sustainable forest where new trees are re-planted upon cropping. The main cause of deforestation in the world is for agricultural or domestic fuel requirements, and occurs mainly in the tropics and not our own backyard. On a side note, a used and replanted forest with young trees absorbs more carbon dioxide than a mature forest consisting of older trees."

Gomes points out that another common misconception is that recycled paper saves the harvest of trees. While using recycled paper is environmentally friendly, the fact is

that virgin fibre (new trees) is almost always needed to create recycled paper. In fact, up to 40% new fibre is needed in recycled paper.

"Offset Alpine Printing has been at the forefront of many environmental initiatives," Gomes says. "We were one of the first companies to be ISO 14001 accredited. We are also PEFC and FSC accredited – all paper we purchase is from a certifiable source and Offset Alpine adheres to a strict paper buying policy. As well as this, the NSW Government runs a sustainability program designed to continuously monitor and lessen the environmental impact of business, and Offset Alpine has reached the silver status in this program."

Quite a few years ago Offset Alpine also changed the ink used on all presses from a solvent-based product to a vegetable-oil-based product, while all glossy paper used by Offset Alpine is made so by polishing and adding clay fillers that are then recycled in the recycling process.

Preserving our natural environments is always a concern for 4WDers and of course ARB, and by using such an environmentally aware printing company and paper sourced from managed forests, we can be assured that our printing practices are not harming our favourite touring tracks.

- Rebecca Goulding
ARB Marketing Assistant



Dear ARB,

I am awaiting delivery of my first 4x4. It's a VX Prado 3.0D – I can't wait and I am looking forward to exploring some remote places that I have never been able to access before.

What modifications and accessories should I purchase for safe four wheel driving? Can you recommend some interesting destinations around Victoria? I am only interested in easy to moderate tracks because I would like to look after my investment as much as possible.

- James

Hi James,

Setting up your vehicle for safe travelling really depends on the destination and how you want to travel. As Victoria is your first choice, you are lucky to have some of the best mountainous areas in the country at your doorstep that cater for everything from pleasant touring-style driving for the beginner to steep rocky tracks and river crossings that will challenge even the most experienced

drivers. Historic destinations such as the old mining towns of Walhalla and Woods Point are a great step off point into the High Country that can be explored in a day, weekend or a week, depending on how much time you have.

The VX Prado is one of the more capable vehicles on the market today, packed with safety features such as ABS and Traction Control that will see you climbing tracks you never dreamed of in no time at all. But there are quite a few accessories you can add that will make travelling to the High Country even safer.

Water crossings are something you'll find even on the easy to moderate tracks, especially after heavy rains. If you plan to be fording a few of these, then you can't go past fitting a Safari Snorkel to protect your diesel engine from water intake and possible damage. A snorkel raises your air intake well above the fordable depth of your vehicle, reducing not only the chances of water ingress but also a lot of the dust that accumulates in and around the standard air intake. If you find yourself travelling in convoy through the High Country in summer,

you'll soon learn about the choking dust and how quickly it can clog your air filter.

Steep tracks mean steep descents, and if your vehicle is packed roof-high in the back with cooking, sleeping and camping gear, then it won't be long before something comes loose on a downhill run and finds itself in the front seat. Worse still, it could hit you in the back of the head, causing injury or accident. This is when a cargo barrier is an invaluable safety item and can also make packing easier. A good cargo barrier complies with the Australian/New Zealand Standard AS4034, is vehicle specific and designed to remain intact when impacted by a single mass load of no less than 60kg at a force experienced in a 48kph frontal crash. That's an impact of a whopping 1200kg. With a barrier fitted, you can spend more time looking at the track and scenery and not the rear vision mirror.

A bull bar and driving lights are among the first accessories 4WDers purchase to help protect their investment. Late Friday night getaways into the High Country are common, and a decent set of driving lights will help you avoid the many breeds of wildlife found on Victorian country roads at night. If you are unable to avoid an animal strike, having a bull bar fitted can give you the peace of mind that you and your vehicle are protected.

Of course, the list of accessories to start off can include many more items such as winches and recovery gear, suspension upgrades and roof racks, dual batteries and fridges etc, but it's best to get out there and get a feel for your vehicle and the type of touring and 4WDing that suits you and your family before choosing the accessories that best suit your needs.

- Mark Lowry, Manager
Product Development & Evaluation

A red Land Rover Defender is shown from a front-three-quarter view, driving through a river. The vehicle is splashing water, and its headlights and roof-mounted lights are visible. The background consists of green trees and foliage.

WATER CROSSINGS

WHEN IT COMES TO RIVER CROSSINGS, YOU CAN'T BE TOO PREPARED.


As the High Country tracks reopen after winter closures and our desert tracks after flooding rains, the chances of coming to a river crossing with higher than normal water levels is very likely. But are you and your 4WD prepared to cross it?

SURVEY THE RIVER

There are a number of things to consider when crossing rivers, and the first is surveying the river itself.

Questions to ask yourself are: Is there a defined track both into and out of the river? Are the entry and exit points washed out with steep banks? How deep is the water and how fast is it flowing? Are there any obstacles under the surface? Are there any winching points if the vehicle becomes stuck?

High Country rivers are normally blessed with a rocky bottom and hence the likelihood of becoming bogged during the crossing is



reduced. But an obstacle like a large rock or log that's been dislodged by winter flows is an unseen danger that can stop a vehicle midstream. On the other hand, you may make it across the river only to find the opposite bank so washed out that the only option is to winch.

It may be that the depth of the water varies across the breadth of the river and without first walking it to check, you may never know until it's too late. By walking the river you will get a feel for how fast the body of water is moving. Modern vehicles are very well sealed and if the water is above knee-deep and you struggle to stand firm, then there is a good chance your vehicle may just float away with the other debris.

Rivers and creeks in desert areas pose some additional problems. It may not have rained within hundreds of kilometres of the crossing, so the entry and exit points may be firm with well defined tracks. But what lies beneath the surface can be a mix of stone, sand and clay, all of which will happily claim your vehicle at any point in the crossing. Walking the crossing first and searching for the firmer ground and having an exit strategy is a must. Winching points are not always easy to come by, so having another vehicle on hand to snatch you out is a good idea.

Many desert waterways can rise and recede in a few days and often flow out into salt or clay pans that can be as hard as a rock one moment, or a bottomless bog the next. Without a proper survey, knowing the safest route and following the original track can be near impossible.

VEHICLE PREPARATION

So you've done your survey and you think the river can be crossed, but is your vehicle properly prepared?

There are a number of items that

will make your crossing safer and more achievable, and so you should ask yourself: Does your vehicle have a snorkel? Have you fitted a water crossing bra or tarpaulin? Do you have extended breathers fitted to the differentials and gear/transfer box? Are the engine electricals protected from water and have you let your vehicle cool down? Do you have the right recovery equipment and a winch?

Adding a snorkel to your vehicle raises the air intake from under the bonnet or inner guard to a level well above the fording depth of your vehicle, reducing the likelihood of engine damage from water ingress. Keeping as much water as possible out of the vehicle engine bay is important for many reasons. For example, if the radiator cooling fan hits the water, there is a chance the blades can break off and exit through the radiator core, leaving your vehicle stranded and overheating. Most modern vehicles have thematic or clutch fans that only operate as the engine reaches higher running temperatures, and for this reason allowing your engine to cool before entering the water is a good idea.

Fitting a water crossing bra or tarpaulin wading sheet allows the vehicle to create a bow wave as it enters the water. As the car moves forward pushing this wave, the water level drops within the engine bay, again reducing the likelihood of cooling fan damage while also keeping water out of vital electrical components like the alternator and ignition systems.

Whether or not you've fitted extended breathers to the differentials and gear box isn't going to stop you crossing a river, but this simple modification can make the world of difference to your hip pocket come servicing time. And it's a good idea to let your vehicle's drive train cool down, too, as a hot differential hitting cool water has a tendency to suck in an amount

of water before the breather valve closes. Raising the breather has the same effect as fitting a snorkel to the engine and prevents the possibility of water contaminating the oil which over time can destroy bearings, seals and create rust within the housing.

Carrying the right recovery equipment is as important as knowing how to use it. When it comes to river crossings, a good start is to have your equipment accessible – and that doesn't mean in a drawer in the back of the vehicle, as once you stop midstream you don't want to be opening doors. If you are travelling as a single vehicle and have a winch fitted, then when initially walking the river it won't hurt to carry your tree protector strap, snatch block and shackle and attach it to a suitable recovery point. Checking your winch is in working condition and attaching the remote is a good idea, too. When travelling with other vehicles, attaching a snatch strap to both the front and rear of the vehicle will make recovery easier and quicker without the need for a diving certificate to find your recovery points.

THE DRIVER

The final point to mention is are you, the driver, prepared? Just having a well prepared vehicle and the right recovery equipment doesn't mean you can cross any river.

Ultimately, the driver is responsible for the safety of the vehicle and its occupants, and river crossings and recovery situations are inherently dangerous. A thorough understanding of both driving and recovery techniques are a must, and knowing how your vehicle handles in water of varying depths can only be gained by experience.

The above tips are intended as a brief guide. If in doubt, find an alternative route. Don't make your first water crossing a deep one...



UNLOCKED

FOR THE PAST FEW YEARS, ARB HAS BEEN QUIETLY MOVING FROM A THREE-PIECE AIR LOCKER DESIGN TO A STRONGER TWO-PIECE MODEL WITH SOME HEAVY-HITTING INNOVATIONS INSIDE. FIND OUT WHAT THIS MEANS FOR YOU WHEN YOU NEXT ATTEMPT THAT IMPOSSIBLE OFF ROAD CLIMB.



ARB's original three-piece Air Locker design has proven credentials. Since the 80s, it has constantly evolved and improved to become the mainstay traction aid for 4WDers across the globe. At a flick of a switch, you can climb out of bog holes, get a grip in sucking sand and rock climb with the best of them. ARB Air Lockers have been the silent partners in winning many off road competitions as well, from the W.E. Rock in the US to the Malaysian Rainforest Challenge.

So why change a winning formula?

Daniel Bongard, head of ARB's Air Locker division, was hired in 2000 to design and implement improvements to a small number of Air Locker models that, while featuring all of the components that have made Air Lockers so reliable, were found to underperform when compared to the rest of the locker range.

But redesigning these models proved difficult, as Bongard explains. "We found that there was a delicate balance in regard to attaining optimal strength. When we increased the strength in one area of the locker, a different area or component was weakened. After four complete design options had been explored and dismissed, we knew it was time for something radical. So we put aside the existing Air Locker design and started from scratch."

What followed was six months of computer-generated concepts involving an original two-piece



design, new components and a unique 'timed' gear set that showed exciting improvements in strength, durability and locking speed.

"We're not talking about improvements in strength of 3 or 4%, which any engineer would be proud of," Bongard says. "The lab results indicated a phenomenal 40% improvement in static torque strength compared to the equivalent three-piece design. It was huge."

A further six months was then spent proving and refining the design. This meant destructive testing both in the lab and with prototypes fitted to vehicles driven through obstacle courses and across all types of terrain. "It was all about trying to break the prototypes and improving the design," Bongard says. "But the two-piece Air Locker came out on top."

In fact, the two-piece Air Locker was such a leap forward in strength, durability and locking speed that ARB immediately commenced a program to implement the new design across the Air Locker range.



'TIMED' GEARS

A key element of the new two-piece design was the creation of 'timed' gears. In the three-piece design, the gears stop and 'lock' in arbitrary positions whenever the Air Locker is activated, which means the gear teeth are not always in positions which ensure the best locking strength.

With the two-piece design, Bongard and the team engineered new patented gearing technology which ensures that no matter when the Air Locker is activated, the gear teeth will always 'lock' into predetermined positions that offer the greatest surface area between the gear teeth. This ensures that optimal locking strength is attained every time the Air Locker is activated.

The only downside with these new 'timed' gears was that no machine in the world could manufacture them. So Bongard worked closely with a gear manufacturer to modify existing machinery in order to make the gears a reality. This machinery remains exclusive to the manufacturing of ARB Air Lockers.

NEW COMPONENTS

Among the many advantages of the new two-piece Air Locker is the elimination of one third of components compared to the three-piece design. This ensures increased precision and compliance among the components, making

for a more cohesive finished differential that delivers a much firmer and responsive grip in terrain for the end user.

The new two-piece design also features a number of 'shared' components which can be used within a diverse range of differentials – the components are so flexible that a Nissan differential can now

THE REDESIGN OF EXISTING COMPONENTS HAS ALSO MEANT A MUCH MORE EFFICIENT USE OF SPACE, WHICH HAS RESULTED IN AN INCREASE IN LOAD BEARING CAPABILITIES AND A SIGNIFICANT REDUCTION IN ACTUAL LOCKING TIMES.

be fitted to a Toyota vehicle with very little retrofitting required. This type of design flexibility has proven particularly useful for modified vehicles with specialist applications such as drag racing, competition rock crawling and heavy tank-track type snow equipment.

The redesign of existing components has also meant a much more efficient use of space, which has resulted in an increase in load bearing capabilities and a significant reduction in actual locking times. The gears within the two-piece are now less than 0.5mm from the locking mechanism, whereas the three-piece had to travel at least 3mm before locking. While this might not seem like much, the end user will feel a much quicker response

when the Air Locker is engaged and disengaged.

OFF ROAD

While the three-piece Air Locker has long proven its credentials as the premier traction aid worldwide, 4WDers activating the two-piece Air Locker for the first time will immediately feel the difference.

The level of 'grip' in terrain is now noticeably tighter. The 40% increase in strength translates to even greater control and reliability, allowing vehicles to be driven in a slower and safer manner when climbing difficult terrain. Reliance on momentum is reduced, and the Air Locker also requires less air consumption, meaning there are more actuations before the compressor must start up. This makes it much more efficient and responsive even in the most extreme hill climb competition scenarios.

The changeover to the two-piece design has been quietly occurring since 2000, and with 95% of all ARB Air Lockers now operating with this design, it has already proven the difference to over 88,000 four wheelers worldwide.



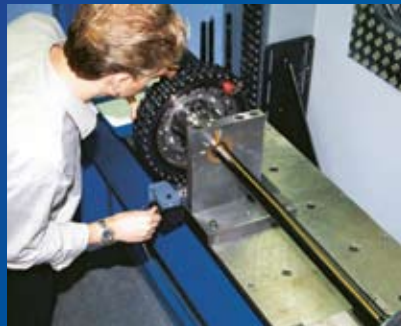
AUSTRALIAN MADE

As most people know, ARB has a core manufacturing plant in Melbourne. Measuring in at 4.1 acres it's the place where products including bull bars, rear bars, under vehicle protection and even snatch blocks are manufactured from base materials. It's also where the majority of Air Locker components are manufactured and assembled. Of the 24-26 components required for each Air Locker, every metal-based piece is manufactured in-house except for the gears. These gears, while not made at

ARB, arrive at the plant as blanks, and so it's up to the Air Locker production team to complete the finishing processes to customise them to Air Locker applications.

It's this commitment to Australian made, combined with aerospace grade materials and state-of-the-art machinery, production processes and quality control measures, that has earned the Air Locker's reputation for quality and reliability.

THE AIR LOCKER LAB



SOFTWARE

ARB's Air Locker division utilises the latest software programs, including Solidworks, CAD, Cosmos and Finite Element Analysis (FEA), to design and test the lockers in simulated applications. These programs can highlight stress concentration areas and potential weaknesses long before the physical prototypes are created.

Among the many advantages is the ability to simulate scenarios that are impossible to duplicate in the real world. An axle shaft, for example, can be computer simulated at twice its real strength, allowing for far greater stresses to be applied to the Air Locker before the axle breaks. Going to such extremes ensures the lockers can handle terrain that the real-life axle itself cannot.

TEST RIG

A key element of developing and testing the new two-piece design was the creation of ARB's Air Locker test rig. The only one of its kind in the world, it was engineered from the ground up to statically test the Air Locker's strength against the vehicle's axle. Incorporating a 10,000psi hydraulic system capable of generating up to 30 tonnes of force, it is used to accurately measure the force required to break something within

the differential or axle, and also the amount of flexing or bending that took place before that breakage.

Among its many benefits is the ability to accurately quantify the strengths between two prototypes in order to ascertain the best end product. In the final stages of development, this can mean ascertaining strength variations of as little as 1% between potential models.

CRASH LOCKING RIG

The crash locking rig does what we don't recommend customers do – engage and disengage the Air Lockers under engine torque.

The purpose behind this is to discover what happens to various components, materials and heat treatments when the Air Locker is activated while under torque, which is pretty much the equivalent of changing the gears in a vehicle without putting in the clutch or taking your foot off the accelerator.

The rig itself is a vehicle axle driven by a large, industrial three-phase motor and heavy flywheel to produce lots of torque. Components are optimised as much as possible following years of analysing crash locking rig testing, but ARB still recommends customers never engage the Air Locker while under torque.

KNOWING THE DIFF

SCORED A CHEAP LOCKER ONLINE? YOU'VE LIKELY JUST LOST YOUR MONEY TO AN INFERIOR OVERSEAS COUNTERFEIT.



The past few years have seen the beginning of a new industry – the production of cheap lockers coming out of China and India. These lockers either claim outright to be ARB Air Lockers or use patented ARB designs in breach of Australian and international law.

Utilising ARB's patented three-piece design, these lockers look legitimate on first inspection. However, a closer look reveals a distinctly rough surface finish and very poor overall condition of the entire diff assembly. While this is in part due to inferior machinery and manufacturing processes, of key importance is the use of extremely poor materials consisting mainly of case hardened mild steel.

Case hardened mild steel is the cheapest form of steel to manufacture and produces a hardened outer surface. In terms of strength, the counterfeit lockers with case hardened mild steel measure in at 250 megapascals (MPa), while the genuine Air Locker comes in at

1200MPa – it is literally five times as strong.

The attraction of the Chinese and Indian lockers is their cheapness in price for the end user, however these lockers are incredibly weak, untested, prone to breakdown and have absolutely no warranty, spare parts or back-up service.

Ultimately, many of these counterfeit lockers are destined for the scrapheap, and your hard earned money with them.

The best way to protect against counterfeit and imitation lockers is to contact your local ARB store or stockist and purchase the genuine item. Not only will you be supporting local Australian industry, you'll be getting the original ARB Air Locker, which remains the best and strongest locking differential on the market worldwide.

For a visual comparison of the ARB Air Locker at work versus the imitators, visit www.arb.com.au/interactive/videos to see what happens when each unit is placed under torque stress on ARB's test rig.



THE FACTS

- Chinese and Indian lockers are manufactured from case hardened mild steel incapable of consistently handling the torque stresses experienced in locking differentials.
- Counterfeit and imitation lockers exhibit poor production tolerances, resulting in high levels of runout in the two key ring gear mounting surfaces. This causes premature wear on ring and pinion sets and can possibly destroy them.
- Chinese and Indian lockers utilise seals with inferior materials, resulting in premature wear.
- ARB Air Lockers are manufactured from aerospace grade materials specifically engineered to be the strongest part of the complete axle assembly and must always exceed the strength of a vehicle's axle.
- All ARB Air Lockers are designed, manufactured and assembled in-house in Melbourne and all parts and components remain exclusive to ARB.
- ARB does not supply any parts or components of ARB Air Lockers to Chinese or Indian factories for the production of cheap lockers.
- Counterfeit and imitation Air Lockers are in breach of Australian and international law by using patented designs to which ARB has exclusive rights.
- Components in Chinese and Indian lockers are inconsistent, noisy, fast wearing and brittle, resulting in backlash and unreliability in terrain.
- ARB Air Lockers have undergone nearly 30 years of constant design and improvements to ensure they are the ultimate traction aid worldwide.
- Chinese and Indian lockers do not have spare parts, warranty or aftersales support.
- ARB Air Lockers all come with a two year warranty, spare parts and nationwide sales support.



IT'S A WRAP

The new ARB strap wrap solves the problem of recovery straps becoming unravelled whilst being carried or while in storage. Manufactured from 50mm wide polyester webbing and measuring 85cm long, the strap wrap is fully adjustable to ensure a firm fit on all ARB recovery straps. A sure-

grip buckle similar to those found on ARB's recovery bags makes adjusting the strap to size simple.

Available in single packs, the strap wrap is also the perfect storage solution for sleeping bags, camp blankets, tarpaulins and so on.

// Part no: 10100380

ARB SPORT SEAT PROTECTOR

ARB's popular ARB Sport slip-on seat protector has just been redesigned to offer even greater comfort and style. Manufactured from polyester and fully washable, the seat protector is a temporary shield against dirt, staining, pets and general wear and tear. Coming in a stylish dark grey, the new seat protector offers a universal fit for most non air bag equipped bucket

seats, and incorporates a foam backing for added comfort and reduced slipping.

Designed to be very user-friendly, the ARB Sport slip-on seat protector can be fitted in seconds and easily removed and stowed under the seat when not required. It's available from ARB stores and stockists now.

// Part no: 08500020



STILL TIME TO WIN!

We've had some amazing entries to our Fridge Freezer competition, which was launched in the Winter 2011 edition of ARB 4x4 Action. But there's still time for you to get into your ARB socks and win.

So here's a rundown of what you need to do – simply get hold of a pair of ARB's Socks In A Can, send in a funny, clever or interesting photo of yourself wearing them, and you could win a 47L ARB Fridge Freezer. Time's running out, as entries close 27th October 2011.

Post: ARB 4x4 Accessories
Marketing Department
PO Box 105, Kilsyth
VIC 3137

Email: marketing@arb.com.au
(with 'Soxy' in the subject line)

Please include your full name, state and email address or telephone number with your entry. Include an SSAE if you want your photos returned.



SLEEP EASY IN KAKADU

ARB'S NEW KAKADU ROOFTOP TENT MAKES OFF ROAD CAMPING COMFORTABLE AND CONVENIENT.

Sharing many of the features and components that have made the ARB Simpson III rooftop tent so popular, the new Kakadu model tent has been designed for warmer climates where maximum ventilation is required.

Incorporating a simpler set up to the Simpson, but without the extendable veranda, the Kakadu is ideal for fitment to the rear of utes and trailers where the floor level can be mounted lower to the ground.

For increased ventilation during the summer months, the Kakadu tent features large side window openings without a canvas awning over the window. Not only does this grant greater airflow throughout the interior, it allows for an increased view and natural light. Internal canvas shutters are fitted to the windows to provide protection during inclement weather. The extended fly sheet also provides more protection to the entire tent.

Compared to the Simpson, the Kakadu features a lighter, high density single layer extruded foam mattress, which reduces the overall weight of the tent and allows for

easier folding of the tent during pack up. The mattress includes a removable 300D Oxford weave polyester cover for easy cleaning and prevention of moisture penetrating the mattress.

The base of the Kakadu utilises an ABS laminated aluminium ladder frame for superior floor strength and incorporates polystyrene infill panel insulation to help reduce under-mattress condensation. The roof support bows are manufactured from 25mm OD anodised aluminium tube, which offers greater structural stability to the entire tent in adverse weather conditions. 4mm plated steel hinges, along with extruded aluminium tongue and groove base edges, lock the bases together when erected to ensure minimal flex and superior strength.

Externally, the Kakadu utilises 300gsm poly/cotton ripstop canvas with a polyurethane coating for superior water resistance. The coating also helps prevent condensation from permeating through the canvas and is easily wiped dry and clean, reducing the likelihood of mildew and staining.

All seams throughout the tent are sealed with welded seam tape to prevent water ingress through thread stitching holes. This also negates the need to season (wet down and dry repeatedly) the tent before initial use like most canvas products to ensure water resistance.

With an anodised aluminium retractable ladder and Oxford polyester flysheet with optimum water shedding ability, the Kakadu also features quality insect screen mesh on all doors and windows that can be rolled up when not required.

The Kakadu incorporates a UV stabilised, 900gsm laminated PVC cover for use when the tent is packed up, with all seams externally welded to prevent water ingress. Utilising a heavy duty YKK zipper and three tie down straps, the cover also resists billowing and is less prone to wear and tear.

Coming with a two year warranty, the Kakadu rooftop tent is available, along with the Simpson III model, at ARB stores now.

// Part no: ARB4101



CHECK OUT WHAT'S HAPPENING IN 4WD WORLD IN THE MONTHS AHEAD.

For the latest up-to-date info, head to the Calendar of Events link on the ARB website.

OCTOBER

Elmore Field Days

October 4-6

48 Rosaia Rd, Elmore
www.elmorefielddays.com.au

Melbourne Leisurefest

October 6-9

Sandown Racecourse, Springvale
www.melbourneleisurefest.com.au

ARB Launceston Open Day
October 15

48 Holbrook St, Launceston
 Ph: (03) 6331 4190

Australian National Field Days
October 18-20

563 Borenore Rd, Borenore
www.anfd.com.au

Canberra Times Home, Leisure, Caravan, 4WD & Camping Show
October 21-23

Exhibition Park, Mitchell
www.rncas.org.au/homeshow/site

SA 4WD Adventure Show
October 21-23

Adelaide Showgrounds, Wayville
www.saboatshow.com.au

NOVEMBER

Mud, Bulls & Music

November 3-6

LandCruiser Mountain Park, Jimna
www.mudbullsandmusic.com.au

ARB Wentworthville Open Day

November 12

355 Great Western Hwy, Wentworthville
 Ph: (02) 9631 7889

Bendigo RV & Camping Leisurefest

November 18-20

Bendigo Racecourse, Epsom
www.leisurefest.com.au

Perth 4WD & Adventure Show
November 18-20

McCallum Park, Victoria Park
<http://perth.4wdshow.com.au/index.phtml>

DECEMBER

ARB Kilsyth Open Day
December 3

42-44 Garden St, Kilsyth
 Ph: (03) 9761 6622



WIN AN ARB RECOVERY KIT

WANT TO BE PREPARED FOR ANY OFF ROAD RECOVERY?

All you have to do is send in a photo of your fourby well and truly stuck, whether it's in sand, snow, water or mud, and you're in the running to win ARB's Premium Recovery Kit, valued at \$495. Entries will be judged by ARB marketing, and we'll print a selection of our favourite photos

in an upcoming edition of ARB 4x4 Action. The winner will be contacted directly. Entries close Saturday, 31st December 2011.

› Post: ARB 4x4 Accessories Marketing Department
 PO Box 105
 Kilsyth VIC 3137

› Email: marketing@arb.com.au
 (with 'Recovery' in the subject line)

Please include your full name, state and email address or telephone number with your entry. Include an SSAE if you would like your photos returned.



A GUIDE TO BETTER PHOTOGRAPHY



Please let me introduce myself as the guy behind the lens creating imagery for ARB's catalogues, website and adverts. I work with a fantastic marketing team at ARB and really enjoy creating images which showcase their product in your ideal environment. I guess that I could be considered fortunate to be able to travel across Australia into some of our best photographic locations for business, but it does come with a price. It really is hard work, as you only get out of photography what you put into it.

But there is a photographer in all of us and through utilising your camera, big or small, you can create some awesome images for you and your friends to share.

Photography is an artform which is accessible to all ages and all walks of life. With today's technology, the ability to create an image which tells a story is available to all of us.

I've learnt a lot over the years, so here's some info and advice for when you're next out on the track with a camera in hand.

- Michael Ellem
Offroad Images



WATER CROSSINGS

Water crossings should be approached with care in both vehicle preparation as well as photographing the actual crossing. I have a few tips here for you on the photography side.

Firstly, are you going to stand on the riverbank with a long lens and photograph the vehicles from a distance, or are you going to get wet? This guide will hopefully assist you if you decide you want to get wet.

Put on some wet shoes that will grip the slippery pebbles better than bare feet, as you don't want to fall over with a camera in your hand.

Obviously, you need to have an idea as to what the vehicle will do and what depth the water is in the river, so talk with the driver of the vehicle regarding what gear, speed and line he or she will approach the crossing and stick to that plan. And of course, if the vehicle does get stuck, you are probably the closest to the recovery points, so it

would be a great idea to familiarise yourself with each vehicles' recovery equipment. Take a radio to assist in communications.

You will probably be utilising a wide-angled lens for these shots, so if you have the option, prepare your camera for this. You will also likely have your camera set for multiple shots, in a sports mode, to assist in freezing the action as the water droplets splash from the front of the vehicle. If all goes to plan, the vehicle will proceed through the water past you with no real dramas.

But keep in mind that the drivers sometimes get a little excited with a camera in front of them and either they don't want to get stuck, or maybe they just want the best shot. So don't stand in their way, as visibility can be minimised by a wet windscreen.

Hopefully, you have been able to create some really interesting results without too many dramas. But one last thing – your camera may be just a little damp, so ensure you dry it well before packing it in its camera bag.

Happy shooting!



USING DIGITAL CAMERA ISO

Basically put, ISO is a measurement of the sensitivity of your digital camera's image sensor to create an image in the available light.

The ISO on today's digital cameras allows you to explore photography in lower light more than back in 'the old film days'. It really is amazing what can be achieved using a digital camera's program modes under low light conditions, when most people would never have even bothered taking a film camera out of its camera bag. I would never have dreamed of using a film greater than 400 ISO. But using 800 ISO and higher is actually quite common today.

HIGH ISO

Look through the camera's program modes and you will find a setting for night photography. This automatically adjusts the ISO to something which will allow the average photographer to achieve reasonable results quickly and without the camera shake typical to those low light conditions.

But be aware of the negatives of these high ISO settings. It will definitely introduce digital artifacts, or noise, to an image much like the grain in an old photograph, except that most people find the coloured pixels to be a distraction. It will also reduce the quality of colour and detail in the image compared to what you would normally achieve in good light.

But as the photographer, this is where you get to make the decision. Using the higher ISOs

available, you can capture an image which will be fantastic to share over Facebook or email – it's just probably not going to work so well as a poster on your wall.

LOW ISO

I must confess that I am not a fan of using the higher ISOs available in digital cameras but still find them intriguing. Technology really is making a photographer's ability to create a good image in low light easier than ever before.

Now, to introduce the complete opposite approach to achieving a similar image with a low ISO. Grab your tripod and set up the camera with the intention of capturing the scene using a long exposure.

To start, set the ISO manually to the standard lowest setting, probably ISO 100 as an example. Each camera will be set up so



that the ultimate ISO is the lowest in this standard setting. Beware that some cameras allow for you to push ISO settings outside the norm, which isn't ideal.

Ensure that the tripod is sturdy on firm ground and compose the image to suit. Set your shutter to a self timer. You can experiment with different program modes if you wish, but in general, what you are trying to achieve is for the camera to take the best image possible.

So the camera is positioned, you press the self timer and move your hand away from the camera and tripod to avoid movement. The shutter opens and light feeds in through the lens to the sensor, gradually building the image over time.

It's true – good things really do take time so enjoy the results.

ISO IN FOCUS



This duck was captured in low light at an ISO of 800 on a professional DSLR (Canon 1DMkIV). I was amazed by the results and believe that the low level of noise in the image is acceptable. The higher than normal ISO allowed me to run a faster shutter speed, assisting me in freezing motion.



This image was captured in low light at a low ISO setting while using a tripod. Instead of utilising the sun to highlight the vehicle's characteristics, we used time to provide a soft contrast between the water flow and the hard lines of the vehicle. Exposure was at two seconds (i.e. the camera's shutter was open for two seconds), allowing the highlights from the water's movement to expose to the camera's sensor.



It was actually raining whilst this image was captured. The higher ISO setting allowed me to freeze the motion of the water wrapping around the bull bar, which looks great. But when you look closer, you will notice the increased noise in the image. But it is important to understand that without the high ISO, this image would not have been possible to achieve.



SEE WHAT'S IN STORE AT ARB

ARB'S RECENT GROWTH AND EXPANSION CONTINUES WITH A NEW STORE AND TWO BIG RELOCATIONS.

It's been a busy time at ARB, with the opening of a new ARB store in Orange, NSW and the relocation of two stores – ARB Penrith in NSW and ARB Mandurah in WA – to larger and better premises.

ARB Orange, located at 3 Cameron Place, is officially open for business. Offering expert knowledge and ARB's extensive range of products, the store is perfectly set up to prepare 4WDers for any off road adventure. Store manager Len van Vloten has been a familiar face at ARB Newcastle for many years, managing the successful store before heading west to take up the ARB Orange post. Len and his experienced team understand not only your 4WD's requirements but the demanding conditions that ARB products are expected to work in.

Having outgrown their previous locations due to customer demand, ARB Penrith and ARB Mandurah have moved to larger premises to allow each store to carry a more comprehensive product range and offer even greater service. ARB Mandurah is now located at 69 Gordon Road in WA, while ARB Penrith has enlarged to a new superstore at 60-62 Regentville Road in NSW.

ARB Mandurah, headed by manager Joe Maccarone, now features a bigger showroom, expanded fitting facilities and an even greater range of ARB products, while ARB Penrith owner Nick Mannell is extremely excited about his new superstore.

"The state of the art facilities and fantastic displays covering all of

ARB's sensational 4WD products is set to take the ARB Penrith store to a new level in service and product range," Nick says.

These new and expanded stores will bring even more expertise into ARB's large network of stockists around the country, offering outstanding service by friendly and experienced staff, many of whom are 4WD enthusiasts.

So whether you need a complete vehicle fit out, some gear for a weekend getaway or just a few travel tips, head into your nearest ARB store for all your 4WDing needs.

WATERING HOLE



CHECK OUT THE INNOVATIVE NEW FLEXIBLE WATER BLADDER THAT TAKES ADVANTAGE OF REDUNDANT SPACE ON CARGO BARRIERS AND IN THE TOYOTA HILUX DUAL CAB.

Flexitank's new 50L water bladder offers a secure location for fresh drinking water without compromising valuable space within your vehicle. Utilising a new 'hanging' design, the flexible water tank can be hung from cargo barriers in any vehicle and also from the back of the rear seats within the HiLux dual cab.

Fitted in less than 15 minutes, the Flexitank bladder utilises existing seat supports in the HiLux to cleverly take advantage of space that would otherwise be considered unusable. Measuring 1300mm x 110mm

x 580mm, the bladder is double baffled inside to reduce bulging of the tank and to alleviate excessive water movement.

The 50L bladder is manufactured from Flexitank's exclusive FT305A PVC fabric, which exceeds Australian Standards for drinking water in contact with plastic, and features an additional polyethylene outer skin to protect the bladder from chafing while in transit. It also comes with inlet and outlet hose attachments, Teflon tape and hanging attachments for the back of the HiLux dual cab seat and for cargo barrier installation.

The Flexitank 50L bladder is available now from ARB stores and stockists.



// Part no: PW50H

DRIVE 4 LIFE 2012 TOUR



Heavy rains, high winds and impassable tracks had resulted in the cancellation of the 2011 tour of the Victorian High Country, but not for profit organisation Drive 4 Life is now gearing up for the 2012 tour.

By running 4WDing tours in iconic Australian locations, Drive 4 Life raises funds for low-profile charitable organisations that have difficulty raising sufficient funds to achieve their annual objectives. Each year the Drive 4 Life tour aims to raise \$100,000; this year

it is to assist Northcott Equipment Services, which provides services to people with disabilities, their families and carers. The tour also helps reinforce with the general public that the majority of 4WDers are caring, responsible members of the community.

The 2012 tour, which runs from the 22nd to 27th of April, will set out from Harrierville to explore the Victorian High Country. Each group of up to 10 vehicles will have experienced 4WDers in leading and tail-end support vehicles to provide

assistance. Although some off road experience is recommended for participants, the tour is aimed at people who have either not had the opportunity to be expertly guided when driving off road or who do not have the experience to navigate in the Victorian High Country.

Every participating vehicle is asked to make a donation of \$1000 to Northcott, with every cent going directly to the charity. Places are still available for the 2012 tour, so visit the website for details (www.drive4life.com.au).

WEDGE-TAILED EAGLE

LOCATION: Simpson Desert

An early morning photoshoot at the well known sand dune, Big Red, had just been wound up. I was on my way back to a camp on the western side of the dune when I noticed a couple of Wedge-tailed Eagles on top of the dune further north.

So I grabbed the big lens with a 2 x extender and headed their way, half expecting that they would take to the air prior to my arrival. There was nothing for me to hide behind, and these guys have the best eyesight around, so I literally kept the dunes between us to allow me to get as

close as possible. I figured that I was doing ok as I hadn't seen them take flight, so I raised my head above the dunes to inspect the situation, only to find two crows had landed on the dune directly between the eagles and myself.

So I would have to show myself and traverse the dune in order to get an angle which would work for the shot. I knew that the eagles would notice me and figured they would drop over the sharper edge of the dune and fly off out of perceived danger. The first dropped away and

headed north away from me. Would the other be more inquisitive? When it took to the wing, I knew that there was only a brief opportunity if it did actually turn south in front of me... and that was what it did. I managed to rattle off 4 frames of this superb Wedge-tailed Eagle.

What made this more unique at the time was the green grasses on the east side of Big Red, captured here as a wash of colour. This is my favourite image of an awesome bird of prey.

- Michael Ellem





PHOTOGRAPH SPECIFICATIONS

Camera: Canon EOS-1D Mark II
Lens: Canon EF 400mm f 2.8 IS USM
(plus Canon EF 2x Extender S II)
Exposure: 1/250 second at f / 5.6
ISO: 100

QUEST FOR ADVENTURE

Words & photography by Mike & Anita Pavey

LOOKING FOR THE ULTIMATE EAST KIMBERLEY EXPERIENCE? MIKE AND ANITA PAVEY SHOW US ONE OF THE BEST.

Carving across the black soil country of the East Kimberley after the worst wet season on record, you can't help but ponder what the conditions were like just a few weeks earlier. Across the clay pans, the earth is dry and crusty, but the locals warn us to be wary – the area turns into quicksand at the first sniff of rain.

Hmm, better stick to the wheel tracks!

The Kimberley is looking a little worse for wear this year. At the time of travel, Bell Gorge to the west is closed, as is Mitchell Plateau, and the road to Kalumburu isn't likely to reopen until late in the year. The river crossings have

been flogged with many riverside campsites washed away by the torrential downstream current, cutting a massive swathe through the countryside. Boabs and paperbarks fell like tin soldiers, collecting anything in their path. Even the palatial Chamberlain Suite at El Questro that overhangs the river copped a beating, losing five struts to passing Boabs, with the whole room falling 40cm. To put the wet season into perspective, the water level in Chamberlain Gorge normally rises five to seven metres each wet season. This year it rose by over 20 metres.

The Karunjie Track loop in the East Kimberley is up there with the



**SO DID THE EAST KIMBERLEY LIVE
UP TO ALL OUR EXPECTATIONS?
YES AND YES!**



best four wheel drive tracks in the region, showcasing spectacular views of the Cockburn Ranges. El Questro Station manages the track and provides an information sheet as a guide. A loop track links the Old Karunje Track to the King River Track, cutting across the eastern side of the ranges to King River. These days, the track is marked as a private road on most maps, reserved for the 6000 plus head of cattle from the El Questro Station. However, it's open for private tours organised through the station.

Fortunately, the western loop along the Karunje Track is still open, circumnavigating the Cockburn Ranges from the intersection of the Gibb River Road and the Pentecost

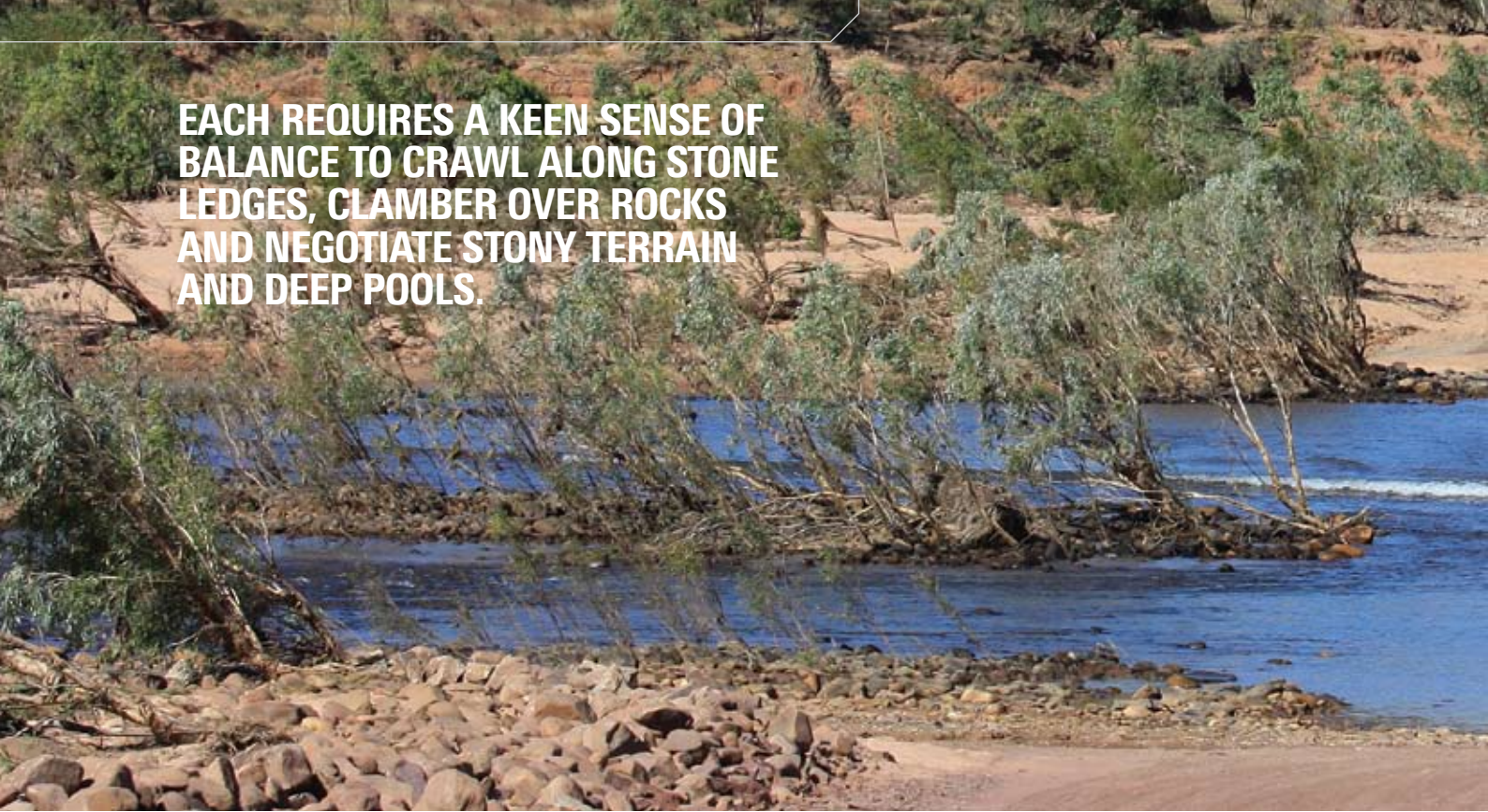
River to the outskirts of Wyndham along King River Road.

From the Great Northern Highway on the outskirts of Wyndham, head west on the King River Road to Diggers Rest. The unsealed road is bumpy but easy going, initially passing through black soil tidal flats before traversing salt marshes and farming pastures. It passes through the King River Reserve, a 910 hectare parcel set up to protect the saltwater crocodile breeding habitat. The area is managed by the Department of Environment and Conservation and includes barriers to protect wandering stock and recreationists from coming into contact with the crocs.

Further on and just a few kilometres off the track, an aboriginal site shows evidence of earlier habitation with rock paintings. It requires clambering up a rock wall to explore the site. The next point of interest is the Prison Boab where prisoners were once held. Dilapidated picnic tables amongst waist-high grass surround the tree.

Not far from the Diggers Rest turnoff, the road swings onto the boundary track and through private property. Diverting off the track is prohibited, as is camping. The real fun kicks off from here as the track deteriorates, slowing progress considerably. To compensate, the best vistas of the Cockburn Ranges are on offer. Be warned – there are

EACH REQUIRES A KEEN SENSE OF BALANCE TO CRAWL ALONG STONE LEDGES, CLAMBER OVER ROCKS AND NEGOTIATE STONY TERRAIN AND DEEP POOLS.



a number of diversion tracks to skirt erosion damage that take you well off the charted GPS maps.

Eventually, the track finds its way to the Pentecost River through soft, sandy terrain. The river is home to a number of saltwater crocs, so act accordingly when scoping out the depth of the river crossing if travelling further west. A couple of motorbike riders we met along the way conceded that pushing their bikes through the Pentecost was one of the most frightening experiences of their travels.

Photography enthusiasts will be blown away at the river crossing with the magnificent backdrop of the Cockburn Ranges. It makes an awesome screen saver for your laptop and top bragging rights with your mates.

Not far from the eastern side of the crossing is El Questro Station, a working cattle station, commercial tourist operation and Wilderness Park. It is easily the pick of the accommodation options along the Gibb River Road for its sheer diversity of activities and accommodation options. Apart from cabins or the palatial homestead suites, campers can bed down in the central campground or one of the private camps located between





the main campground and the homestead on the Chamberlain River. Most private camps back onto the Pentecost River and are sufficiently spaced out to earn their privacy tag. The only time you should hear or see another camper is at one of the impressive high rise long drop eco-loos or back at the central camp area. Flushing toilets and showers are available from the central area.

In addition to camping fees, a Wilderness permit entitles visitors to access the extensive hikes, gorges, springs and four wheel drive tracks around the station and at Emma Gorge to the east. A bar, restaurant, fuel, workshop and store complete the facilities.

There are a number of walks to stretch the legs, with El Questro and Amelia Gorges being two of the more challenging hikes. Each requires a keen sense of balance to crawl along rock ledges, clamber over rocks and negotiate rocky terrain and deep pools. The reward is a deep, chilled swimming hole.

Many of the four wheel drive tracks are quite steep, affording magnificent vistas across the station and mountain ranges. Some require high clearance to safely navigate the rocky terrain.

Zebedee Springs amongst the palms is popular with the tourist buses and the elite visitors staying at the palatial homestead. The buses swing in from 8am, so any time before then is best to avoid the crowds.

We dined at the famous BBQ and Barra Saturday night feast and enjoyed happy hour at the bar with entertainment on more than a couple of occasions.

The condition of the Gibb River Road will always vary depending on the time of year and when it was last graded. Following the floods, the grading was underway during our stay, yet the roads deteriorated over the week of our visit with the peak season traffic. It doesn't take long.

So did the East Kimberley live up to all our expectations? Yes and yes!

We took over 2000 photographs during our two week stay, with the majority at El Questro and surrounding landscapes. While the floods ensured we missed some of the key attractions, it opens the door for a return journey in the not too distant future.

FAST FACTS

AMENITIES AND ACTIVITIES

El Questro Station: accommodation includes private campsites, general campground, cabins and homestead suites, plus flushing toilets, showers, bar, restaurant, fuel, workshop, store, walks, drives and fee-based activities.

Diggers Rest: accommodation, barramundi fishing and horse riding.

PRICES

\$18 per adult for a Wilderness Pass (valid for 7 days).

\$18 per adult per night for camping.

CONTACT

El Questro Station: www.elquestro.com.au or phone 1300 863 248.

Diggers Rest: www.diggersrest.com or phone 08 9161 1029.

GETTING IT DOWN PAT

Words by Ian Glover. Photography courtesy of Pat Callinan's 4x4 Adventures

IAN GLOVER SHARES HIS INSIGHTS WHILE ON LOCATION WITH PAT CALLINAN AND HIS CREW FROM PAT CALLINAN'S 4X4 ADVENTURES.



Dawn at a perfect camping spot on a bend of the Darling just south of Tilpa... there's flat sandy ground, plenty of shade trees, even its own beach!

We'll be here all day, but there won't be any of the usual camping holiday experiences – no chucking in the lines to lure yellowbelly, no yabby nets in those slow-moving waters, no time for a quiet read on the beach. This is work and it's time to get up. And time for a cold coffee in a carton straight out of the ARB Fridge Freezer. We arrived too late last night to have a campfire to rekindle this morning, and Tilpa isn't so much a camping spot as a place to throw down the swags by torchlight.

We're here on location for the new series of Pat Callinan's 4x4 Adventures, and tonight we'll be driving to somewhere else, dodging roos and hoping we'll reach wherever it is in time to grab a meal that someone else cooks.

Peripherally, I've been involved with television almost right from the start of my writing career, both in front of the camera and behind the scenes, doing docos, current affairs programs, Qantas in-flight segments, and even Top Gear Australia. So

there aren't too many surprises, but every shoot is different depending on the director and crew.

Some directors are dictators (and some crew are whingers), but Pat's just like you see him on TV – affable, patient when things go wrong (and they do go wrong with monotonous regularity), good-humoured and good at what he does – and better than many I've worked with at getting his PTCs (pieces to camera, or 'stand-ups') right first time.

But he's human and sometimes stuffs up, so what you see on TV might be a second take, a third take, whatever it takes, because there are other random factors involved as well, such as a fly buzzing around the sound mike, a dog barking or a camera battery running out of juice. Shooting on location involves a lot more time than shooting in a studio, so the days are almost always long.

Pat travels in a Patrol, and so do our two cameramen, Nathan Barlow and John 'Deej' (he used to be a DJ) Smetana, who also multitasks as soundman. They're really good mates and go bowhunting together in Deej's HiLux, and also enjoy camping, four wheel driving and the



outdoors in general. Good blokes, and also good at what they do.

Pat's no city boy pretending to be at home in the bush. He grew up in places as remote as Brewarrina and later on a cherry farm at Young, learning to drive in Holden utes and a two-stroke Suzuki LJ50 with a very touchy clutch. So the trademark Akubra Longhorn isn't an affectation, but something that sits naturally. I'll let you in on a secret – it also houses his remote mike when he's doing those stand-ups!

He really looks after his crew, too. While I'm willing to compromise when I'm in the Outback (i.e. drink cask wine at the end of the day instead of bottled and have chips – animal, vegetable or mineral – every day for lunch), Pat provides good quality food every day. A typical lunch is bread, salads and cold meats, and if we can't make a town for dinner, he gets cracking with a roast, a curry or whatever. No wonder we're mates!

I'm travelling the long days of the shoot with stills photographer Tommy Salmon, aged 28 with the ebullient enthusiasm and musical tastes of an 18 year old. He's cranked his iPod into the vehicle sound

system but plays tracks he knows I'll like – jazz-influenced female singers, R&B, Stones, Clapton... 'mouldy oldies', I guess he'd call them, but maybe not, because if so, why would they be on his iPod?

But why is a stills snapper and a writer way out in Outback NSW with a TV crew? Well, we're helping Pat put together a spin-off magazine titled *Pat Callinan's 4x4 Adventures*. The magazine will be extremely high quality, using the best writers and photographers, top shelf paper stock, and printed here in Australia. Keep your eye out at newsagents or check out the website for details.

Tilpa's at the tail end of a ten day trip that effectively began at Mungo National Park. Four wheel drive journo Alan Whiting happened to be staying in the campground when we were there and dropped by for an after-dinner drink or three with old friends, saw we were still filming a campfire interview with a local Aboriginal guide and quietly faded back away into the dark.

Pooncarie passed in a flash of deliciously thick, pub-cut ham and pickle sandwiches, our stay at Bindara Station on the Darling (great accommodation ranging from swag

to tent to staying in the 19th century homestead) went blindingly quickly, and my most recent memories of Menindee morphed into Broken Hill, Silverton and Mad Max memorabilia.

Mutawintji National Park was different – a magical place where time stands still within the Dreamtime. This is somewhere all Australians should visit; a place where you can sit on a rock outside the sacred caves at sunset and hear the Kadaitcha men ask what you're doing here.

Then it's on to White Cliffs (great underground accommodation), Wilcannia, Tilpa, Louth and Bourke with its fantastic Back O'Bourke Centre where we're guided around the attraction by a former mayor. It's all a blur, but a marvellous one.

Travelling with Pat is a memorable experience, and the new episode on Outback New South Wales should be just as great.

For details of the screening times of the next Pat Callinan's 4x4 Adventures plus the latest info on the magazine, check out www.mr4x4.com.au.

THE LOWDOWN OFF ROAD TYRE PRESSURES

PUT ON YOUR THINKING CAPS AS WE TACKLE SAND, ROCKS AND A CALCULATOR TO SHOW YOU THE ADVANTAGES OF LOWERING YOUR TYRE PRESSURES OFF ROAD.

Words & photography by Mark Allen





It's an often-argued point: does your tyre's footprint get wider or longer with lower tyre pressures and what advantage does this lower pressure provide while driving off road?

While it's easy to see that most tyre side walls 'bag or bulge out' as you lower tyre pressures, try viewing these side walls from ground level and you'll note that the side wall bagging often doesn't touch the ground, so its effect on traction and floatation is very minor when compared to the increased footprint length.

What generally goes unnoticed is the change in length of the actual footprint of your tyres as the tyre pressure decreases. It's this increased footprint length that is the biggie in calculating the overall area of the tyre footprint touching the ground. This area provides gains due to the reduction in kilograms per centimetre of force that the vehicle exerts on the ground surface.

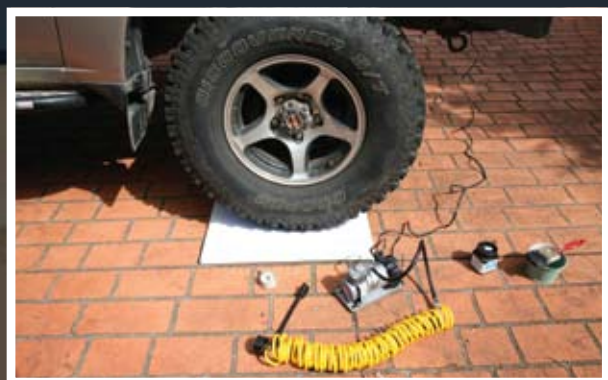
There are a few other advantages of lowering your pressures while off road – so read on and be sure to keep your thinking caps on as we delve into a few calculations to prove the point.

PROCEDURE

The ink images you see on the following pages have been made by jacking up one wheel of the LandCruiser, painting ink over the surface of the tyre tread and slowly lowering the tyre onto the cardboard. At no time did we roll the vehicle forwards or backwards or drop the tyre quickly on the jack.

We then measured the length and width of the ink image to calculate the kilograms per square centimetre the Cruiser is exerting on the ground. We've then repeated the exercise at 5PSI increments to show the differences in tread width and length.

The only 'guesstimating' we have done is to quarter the overall weight of the LandCruiser (2240kg) – half for equal front and rear, then half again for left and right to give 560kg. While technically this is not the exact weight distribution, we used the same 'quartered' weight in all calculations, so the actual overall weight makes



no difference in proving the point of elongation of the tread surface in contact with the ground.

If you should try to simulate this at home, you should take into account the added load of camping gear, tools and all luggage you take away with you, as the overall weight your 4WD is carrying will change the weight per tyre and hence the kilograms per square centimetre of pressure on the ground... geddit... goddit... good! Now let's get calculating.



WARNING

It must be noted that we are only talking about and recommending tyre pressures being lowered while off road and at lower speeds, NOT driving on sealed roads or at higher speeds. Please consult your manufacturer's handbook to be sure you are inflating your tyre pressures to a safe pressure for on road use.

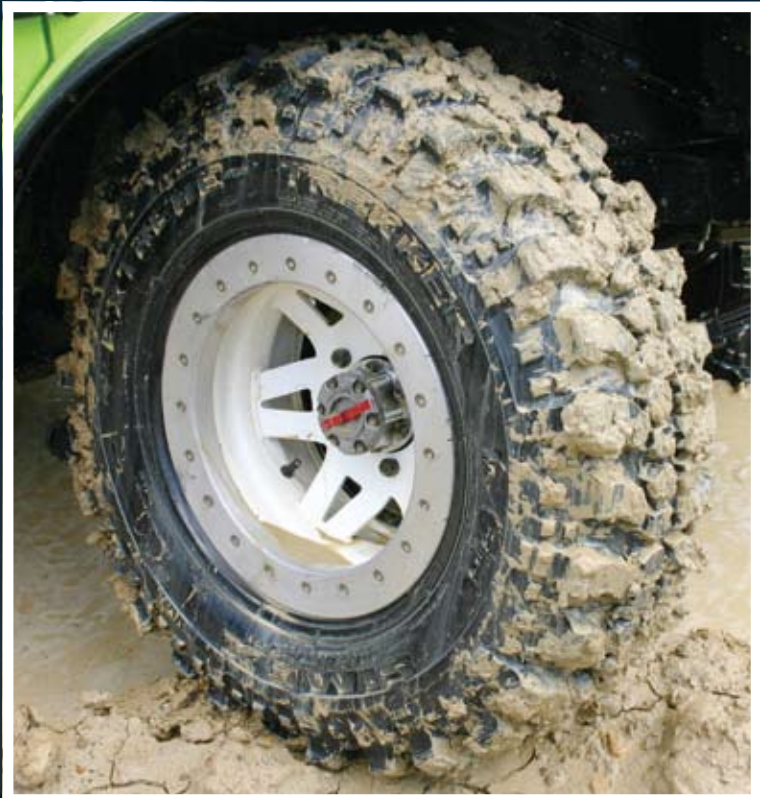
Driving at speed with under-inflated tyres may cause heat build up which may lead to premature failure – you've been warned!

HOW LOW CAN YOU GO?

There is no single answer to cover all 4WDs. The larger and heavier your vehicle and the more load you are carrying, the more care should be taken not to roll a bead off the rim.

As an example, with quality aftermarket tyres I often run 34 to 38PSI in the Cruiser when empty on road and will initially drop down to about 20 to 22PSI on soft sand. If the going is still tough, I'd be happy to drop down to 10 to 12PSI to get out of trouble but would be extremely careful not to drive too fast or turn too sharply to prevent tyre damage or rolling a tyre off the rim.

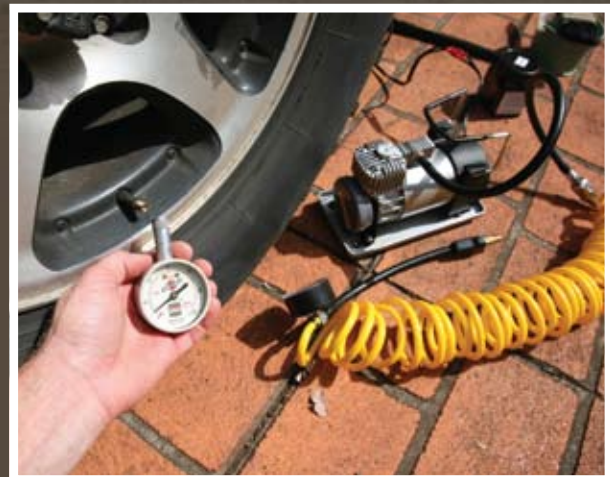
With competition 4WDs fitted with bead locks, 0 to 5PSI is achievable... but don't try that on your touring 4WD!



GAUGES

Don't try guessing the pressures in your tyres with a quick glance or kicking them with your boot. One brand of tyre will look different to the next even though they may be set at the same pressure. Different side wall construction, profile and weight in the vehicle cause brands of tyres to look different in the side walls.

Keep a quality gauge in your 4WD at all times. The more often you check and adjust tyre pressures the better. Don't rely on the gauges at service stations; they don't exactly get treated with respect and their readouts can vary greatly.



TIME FOR THE CALCULATOR



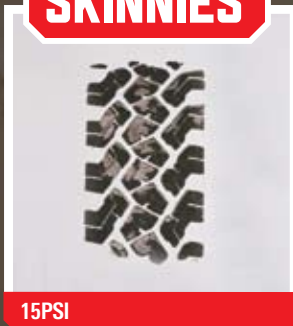
	40PSI	35PSI	30PSI	25PSI	20PSI	15PSI
Tread length (cm)	19	21 (+2cm)	23 (+4cm)	25 (+6cm)	29 (+10cm)	33 (+14cm)
Tread width (cm)	23.5	23.5	23.5	23.5	23.5	23.5
Tread area (cm)	446.5	493.5 (+47)	540.5 (+94)	587.5 (+141)	681.5 (+235)	775.5 (+329)
% of tread area increase on ground as tyre pressure decreases	-	+10.5%	+21.1%	+31.6%	+52.6%	+73.7%
Pressure tread places on ground (kg/cm)	1.254	1.135 (-0.199)	1.036 (-0.218)	0.953 (-0.301)	0.822 (-0.432)	0.722 (0.532)
% decrease of ground pressure as tyre pressure decreases	-	-9.5%	-17.4%	-24.0%	-34.4%	-42.4%

This is the bit that requires concentration and a huge thinking cap to follow our fast tapping fingers on the calculator.

As can be seen from the table, the tyre length has increased from 19cm at 40PSI to 33cm at 15PSI – an increase of 14cm, which is just shy of double the tread length. Comparatively, the tyre tread width that actually touches the ground stays the same at 23.5cm right through the pressure range.

Using the length and width measurements combined with the weight of the 4WD at one wheel (560kg), we've calculated that the pressure the LandCruiser tyre is putting on the ground has decreased from 1.254 to just 0.722kg/cm, representing a 42.4% decrease in pressure being applied to the ground. This is what allows us to seemingly 'float' over sand, climb slippery surfaces and crawl over rocks with improved floatation, more grip and less tyre damage... cool huh?

SKINNIES



15PSI

FATTIES



35PSI



15PSI



40PSI

FATTIES VS SKINNIES

So how about skinny tyres? Do they exhibit similar tread changes when aired down?

You bet they do. We made ink imprints of a 7.50R16 inch tyre on a split rim. This time the length increased from 19cm (at 35PSI) to 27cm (at 15PSI), while the width stayed at 15.5cm.

SIDE WALLS

As can be seen from the side wall photo, the width of the tread actually touching the ground remains unchanged, although the side wall does flex out considerably as the tyre pressure drops. If driving in soft sand, this side wall flex (if it actually touches the ground) may help a little with reducing the pressure of the whole tyre footprint – but only marginally when compared to the increase in tread length in contact with the ground.

It's this side wall bulge at low pressures that can allow a tyre to be staked or cut from sharp rocks or tree roots, so be careful about wheel placement when picking your way through an obstacle.

On the other hand, this 'softness' of the tyre can allow the rubber to mould or conform to an obstacle's shape, reducing the chances of damage. It's 'six of one' and 'half a dozen of the other' in my mind when it comes to preventing damage to the tyre side wall.

My advice would always be to steer around an object if possible – no point chancing your expensive tyres. Remember that the inner side wall also bulges out, so watch out for both sides of your tyre!



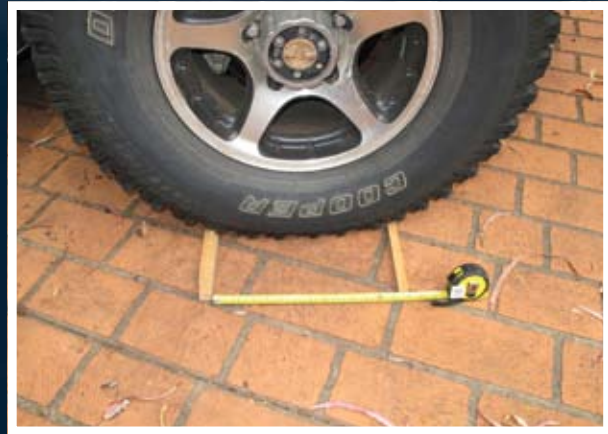
CRICKET BALL SIZED ROCKS

Here's another way of showing that the lowering of tyre pressures can help allow the tread to stay in touch with the ground.

We placed a cricket ball on our test board; at 15PSI the tyre completely wrapped around the ball, allowing the tread to touch the ground. At 40PSI, the tyre hardly deflected and sat on top of the ball – and yes the weight of the Cruiser is all on that little ball!



WHAT ABOUT THE TRAILER?



While you can find guides for your 4WD's tyre pressures for each given road surface, there's not a lot written about the poor old camper trailer's pressures.

Here's a rough guide to get you started:

- 1) Lower your 4WD's tyre pressures to suit sand, rocks, mud, high or low speed gravel... whatever your terrain.
- 2) Measure the length of your 4WD's tyre tread touching the ground at the lowered pressure (see photo for an easy way with two sticks and a tape).
- 3) Duplicate that measurement on your trailer's tyres by lowering its pressures until the same length in Step 2 is achieved.

- 4) Measure the pressure of your trailer's tyres that has given the required tyre contact length.

Now you've got a good starting pressure to go off road while towing a trailer, but don't be afraid to alter the pressures a bit. This trick will help greatly when towing your camper through deep, soft sand.

Remember that this is for off road applications only and you should inflate back up to on road pressures when you hit the bitumen.

DOWNSIDERS

Yep, there are downsides to lowering your tyre pressures – you lose ground clearance as your tyres are deflated, but the advantages far outweigh the loss of a few centimetres of clearance. Driving too fast on low tyre pressures will overheat your tyres, so keep the speeds down.

SAND ONLY?

No way – you can lower your tyre pressures on any off road surface to give your 4WD the best chance at getting through an obstacle. Lower pressures in sand provide superior 'floatation' and allow your tyres to remain on top of the sand instead of sinking in.

Lower pressures also provide increased grip and less risk of punctures in slow rock driving scenarios. Same goes for any slowly driven, uneven surface. Lower tyre pressures (but not as low as for slow rock driving) can also be of benefit when driving on faster

gravel or dirt roads by allowing the tread to conform to the individual stones or sharp protrusions to help prevent puncturing. Remember to keep in mind that the lower your pressures are set, the lower your speeds should be.

MORE GRIP, LESS PUNCTURES

Allowing your tyres to flex over the ground underneath, conforming to the shape of the rocks, bumps and hollows of the track will help your tyres maintain as much contact with the ground as possible. This provides plenty of grip and forward drive, helping you to keep your 4WD going where you've planned more easily. This is most evident in steep uphill climbs on loose, wet or rocky surfaces. With lower pressures, you'll also do less track damage.

Be sure to reinflate your tyres to recommended road pressures as soon as you leave the test site – you'll save on wear and tear on all surfaces.



HEY, KIDS, FOURBY HERE

Check out all of the awesome drawings and photos I've received! If you'd like to win some cool ARB prizes, why not get creative and send me something! I'm also getting ready for my summer holidays, so I've also got a great new competition for you to enter on the next page.



* Here is a drawing of Ariel coming down a steep slope in low range. My name is **Amy** and I am 8 years old and love going 4WDing with my younger brother Joe (3) and Dad in our Discovery 4. We recently drove from Brisbane to Perth on a big road trip and went off roading at any opportunity my Dad could. Love, Amy.



* Hi Fourby. My name is **Hayden** and I'm 10 years old. Here is my dream comp truck. It is a Suzuki. It has front and rear diff locks and Warn winches. It has a long range tank.



* My family and our friends went 4WDing on lots of tracks. There were lots of steep hills and water. In my photo we got to the top. We had lots of fun in the Flinders Ranges. From **Jayden**.



* 5 year old **Josh** sent in this great drawing. Nice work, Josh.



* The first time we went 4WDing we got bogged in the sand but after about 30 minutes we were free. I love going 4WDing. It's awesome. From **Cameron**.



* Hi, my name is **Ben**. I am 11 years old. This is a picture of my dad's Nissan Navara D40. This car has so much ARB stuff on it, it should be the ARB car! Over Christmas we went to Kangaroo Island for 5 days. So I have put in a photo of my dad and I at Scott Cove on Kangaroo Island.



* 11 year old **Matt** drew this picture of a Toyota HiLux with Cooper STT muddies, 6.5 inch lift, snorkel, spot lights, ARB bar and OME shocks.

WINNER!

Have a look at the amazing job 8 year old *Matthew* did of drawing his Pajero. Great work, Matthew, and congratulations on winning the Toys R Us gift voucher!

This is me and my dad driving through old opal diggings at White Cliffs in our 4x4 Pajero.



You could WIN an awesome **ARB** Kids' Pack



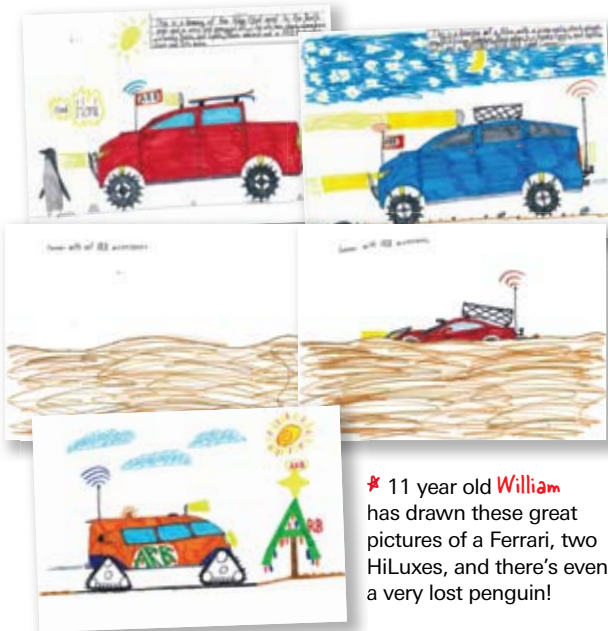
Every issue we'll give our favourite entry a Toys R Us voucher and Speedy Seal Tyre Repair Kit, and all other entries that are printed will receive an ARB Kids' Pack.

Please include your details on the back, or attached to your drawing or letter, as sometimes the envelopes go missing! If you want your letter or drawing returned, please enclose a stamped, self addressed envelope.

Send your letters, drawings and photos, including name, age, address, telephone number and t-shirt size to:

Post: ARB 4x4 Accessories
Marketing Department
PO Box 105, Kilsyth
VIC 3137

Email: fourby@arb.com.au



* 11 year old *William* has drawn these great pictures of a Ferrari, two HiLuxes, and there's even a very lost penguin!



* *Jackson* might not be old enough to draw pictures that make sense yet, but he loves playing with every gadget in his mum's car.



* My name is *Blake*. I like going on holidays. I am 9 years old.



* A big thanks to *Chelsea* for sending in this awesome drawing.



* Check out the great drawing five year old *Jayden* sent us.

COMPETITION

Where should Fourby & Ariel go on holiday?

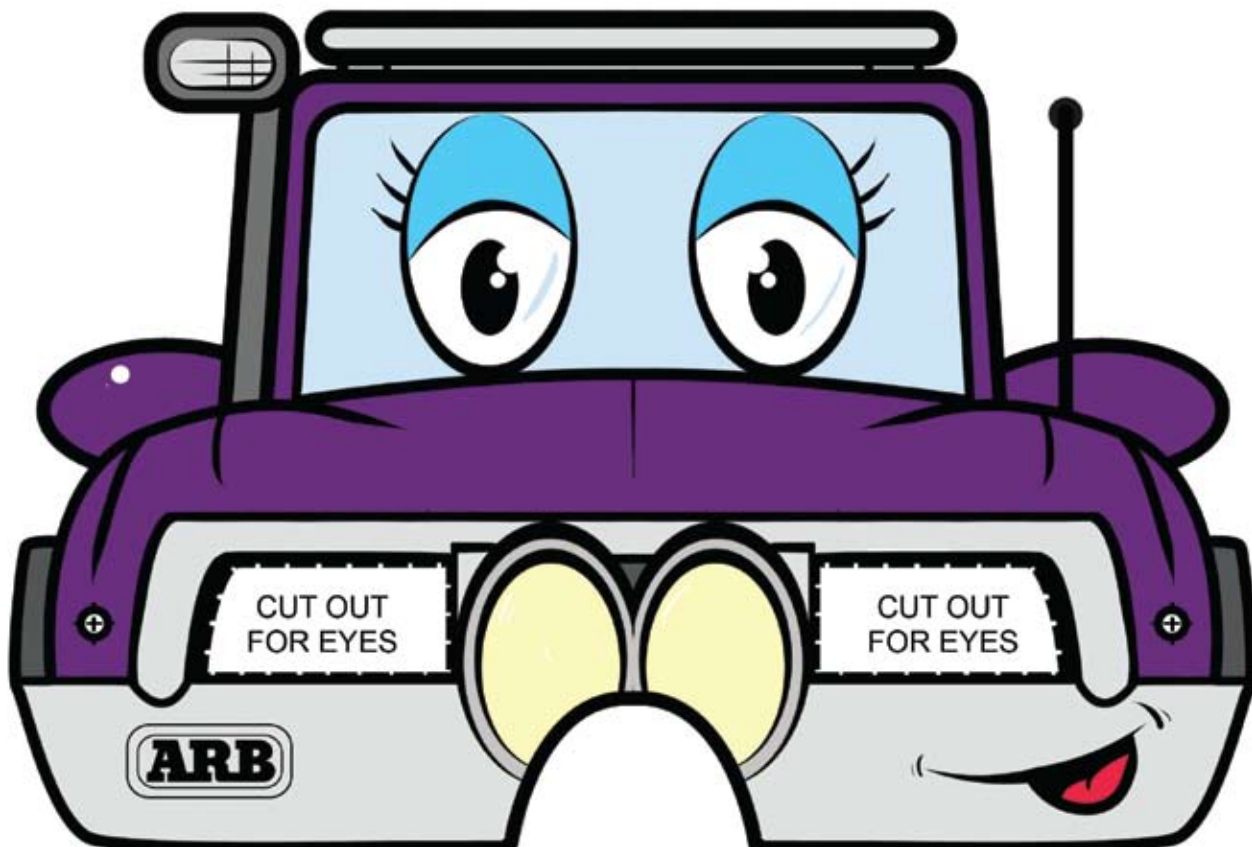
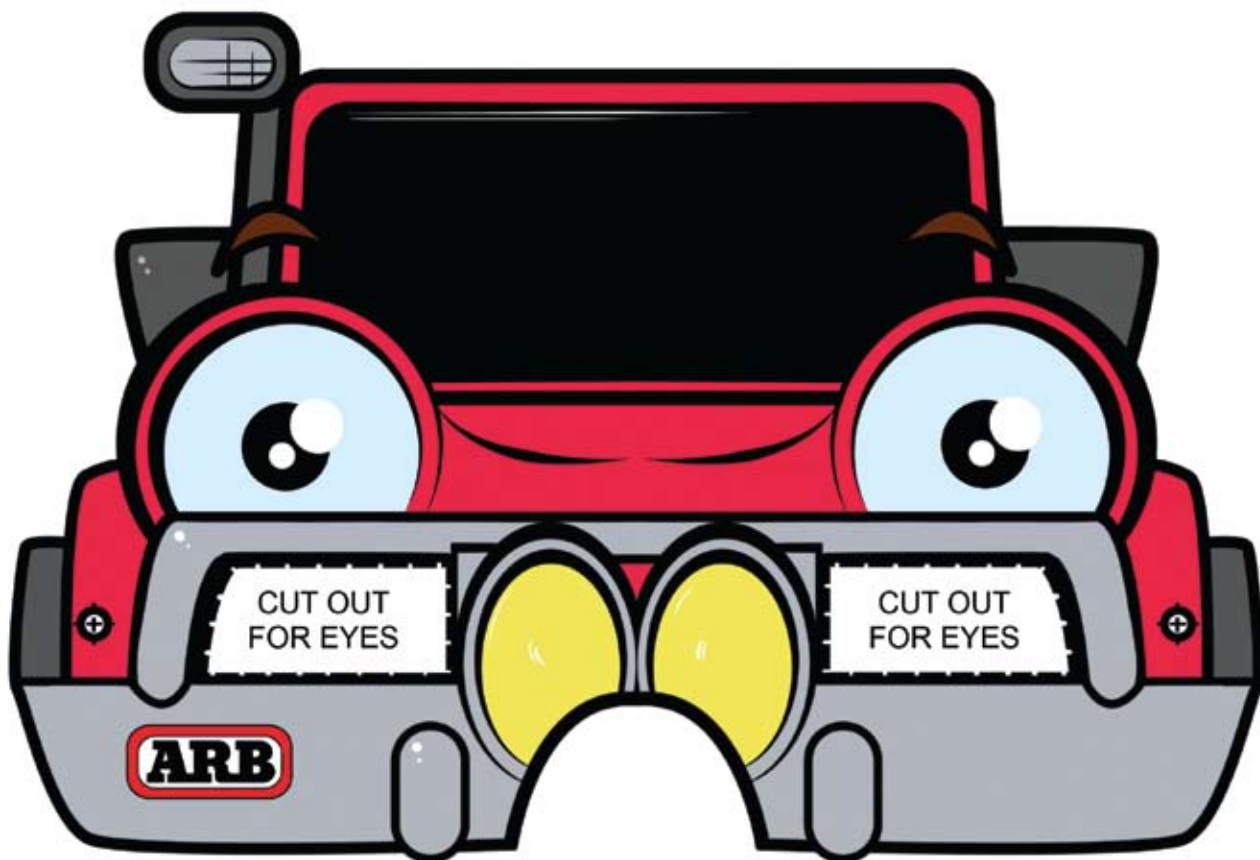
Fourby and Ariel are planning a big summer holiday but they're not sure where to go! Can you help out? Write in and share your favourite holiday destinations and you could win a Toys R Us voucher. You could also see Fourby and Ariel on holidays at your favourite destination in an upcoming edition of ARB 4x4 Action.

Email: fourby@arb.com.au
with 'Holiday' in the subject line.

Entries close 31st December 2011.

ACTIVITY MAKE YOUR OWN

Cut out your very own Fourby and Ariel masks! You might need an adult's help to cut them out and use some string to put them together. If you want to colour in your masks, hop onto the website (www.arb.com.au/interactive/kids) and download the black and white version. Have fun!



THE ADVENTURES OF FOURBY AND FRIENDS

THE SUN IS OUT AND FOURBY AND ARIEL ARE READY TO HIT THEIR FAVOURITE TRACK!



THEY'RE SO EXCITED THEY ZOOM PAST THE ENTRANCE AND MISS A VERY IMPORTANT SIGN.



THE TRACK IS MUDDY AND MUCH MORE BUMPY THAN THEY REMEMBER.



THEY SLIP AND SLIDE...



...AND WRECK THE TRACK!



BUT FOURBY HAS AN IDEA...

THEY GET ON THEIR RADIOS AND QUICKLY CALL THEIR FRIENDS...



...SOON THEY HAVE HEAPS OF HELP FIXING UP THE DAMAGE.



NOW THE TRACK IS FUN AND SAFE FOR EVERYONE!





Words & photography by Mike & Anita Pavey

BEAM ME UP!

LOOKING TO UPGRADE THOSE HALOGEN SPOTTIES? THE PAVEYS TAKE A CLOSER LOOK AT THE IPF 900XS HIDS.

I don't normally make a habit of driving at night in the Outback due to the risk of animal strike and fatigue, but sooner or later you find yourself in a situation when you do. Whether it be pushing on into a transport leg to get you to where you need to be, or an unplanned detour that takes longer than anticipated, sooner or later you'll discover the limitations of halogen 4x4 lighting.

In our big lap this year, we've been caught out a couple of times, the latest along the Karunjie Track around the Cockburn Ranges in the East Kimberley. Unlike tootling around the suburbs with street lighting on every corner, the only light out in these parts is cast down by the moon, often making it blacker than the inside of a

bull. With deep erosion mounds, unfenced plains and a lack of familiarity with the track, it had me wondering about the safety aspect of an HID lighting upgrade.

Current ADR requirements restrict HID headlights to vehicles that offer them as standard from the factory, with in-cab adjustment. This prevents other road users from being blinded by poorly fitted, upgraded hardware, even on low beam. Any modification of headlight assemblies in this regard would be deemed unroadworthy, with run on implications to void insurance cover.

Fortunately, spotlights aren't as tightly regulated, with a broad range of HID kits on offer. For our application, a pair of IPF Extreme



Sport XS 900 HID's was called into duty, stepping up onto the colour coded ARB bar, replacing the halogen combo that came before it.

If you've had your head in the sand for the last few years, high intensity discharge (HID) are the mainstays of performance lighting, offering greater light output, a whiter light and a longer service life than their halogen brethren. While halogens use electricity passed through a filament, HID's use an arc discharged between two electrodes within a quartz tube containing xenon gas. A typical 100W halogen spotlight generates a yellow glow, whereas an HID globe may only draw 35W and yield a whiter light, hence offering greater efficiency.

The IPF HID's use quality HID components sourced from world leading organisations such as Osram in Germany. The HID kits are comprised of powder coated steel bodies for durability, a heat-proof resin reflector and hardened

glass lenses for improved optical performance. Glass is more durable than polycarbonate (plastic) lenses which can be scratched after contact with ice, mud and dirt, affecting light performance. A remote-mounted ballast is provided to maintain a slimline design for improved appearance and to reduce the cost impact if the lights are stolen – at least you don't have to replace the high voltage ballasts.

In most applications, manufacturers recommend a pencil beam for distance and a spread beam for coverage. For our use, we opted for dual spread beams. The IPF HID's deliver strong performance, punching out a very bright spread of light without the scattering seen in cheaper HID's. As such, the spread beams achieve good distance coverage with the additional benefit of the extra spread. Like other HID's, they take a second or so to hit their straps but still provide plenty of light in the build-up.

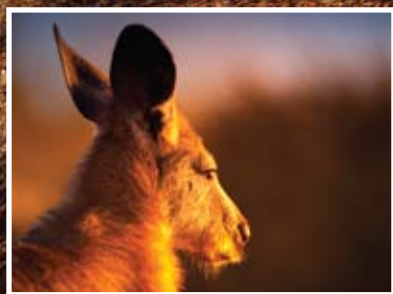
As the pics indicate, their performance is nothing short of brilliant. Not only do they kick out some serious light, but they are manufactured with high quality componentry to ensure they continue to deliver the goods for many years to come. Independent testing in various online and print media has confirmed their performance at the top end of the market.

Like all quality kit, performance and longevity comes at a cost. For class leading light output and the additional safety margin offered, put the IPF 900XS HID's at the top of your shopping list.

Thanks to Mark Lowry and Greg Milton at ARB for their assistance in compiling this review.

OPERATION OUTBACK ADVENTURE

ARB'S MATT FROST GRABS A HANDFUL OF HIS COLLEAGUES TO HOST A GROUP OF US MEDIA ON A WHIRLWIND 4WD TRIP THROUGH THE FLINDERS RANGES AND OUTBACK NSW.







When ARB USA's marketing manager, Lisa Wood, first floated the idea of a US media trip past me, I was pretty relaxed about the idea. I figured we'd grab two or three vehicles, a handful of ARB people, and maybe head up into the Simpson Desert for a couple of weeks. When she followed up the call with an email stating that the media group in question had an audience of 65 million consumers worldwide and I had a month to get things together, an increasing sense of urgency began to develop.

The media group in question comprised of representatives from Overland Journal, Expedition Portal and Expeditions West.

Overland Journal is a magazine we're very familiar with at ARB, as it is a publication many of the crew here thoroughly look forward to receiving and reading each issue. The Journal is a highly respected reference tool for vehicle-dependent expeditions and remote area travel from around the world. It has very high standards for photography, written material and advertising, and also has strict rules in place relating to product placement and reviews. They basically won't feature a new advertiser's product until they have had the chance to use and test it for at least 12 months.

Expedition Portal is a huge internet community of international vehicle-based adventurers and explorers residing in over 180 countries. It has experienced up to 1.4 million views across a single thread.

Expeditions West is a film producer of vehicle-based expedition and adventure content whose work is used by over 60 international broadcasters.

To top it all off, the group was to be headed up by Scott Brady, an internationally well known adventurer and vehicle expert who has been featured in some of the world's best known publications such as Popular Mechanics and Forbes Magazine. Scott is also a celebrity expert driver who works with several vehicle manufacturers.

With such a distinguished guest list, the trip was shaping up

to be a very important media opportunity for ARB. It was essential that everything was planned impeccably, and that we made the absolute most of our time with the group.

The importance of making the most of the time we had was compounded when I found out we only had a week with the group, so hence the Simpson was off the agenda. Given the trip was starting from ARB's head office and primary manufacturing facility in Melbourne, we had to pick a route that was achievable in the timeframe, allowing for filming and stills photography. The High Country was also out of the question, as much of the area was inaccessible due to seasonal track closures.





**THERE WOULD BE NO DROPPING INTO THE BOTTLE SHOP IN BROKEN HILL
TO PICK UP SOME WINE CASKS ON THE WAY... WE MIGHT ACTUALLY NEED
TO GRAB SOME DECENT STUFF ON THIS OCCASION**





Our attention started turning towards the Flinders Ranges, an area very well known to us given we have undertaken many photo shoots for ARB in the region.

The Flinders Ranges really does have an awful lot going for it. The area offers superb scenery, stunning camping options and of course brilliant 4WDing. From the southern states, the region also serves as the gateway to some of Australia's most iconic 4WD trips. The Oodnadatta, Birdsville and Strzelecki tracks are all accessed from the northern Flinders, branching out into the very heart of the Outback.



One of the biggest attractions of the Flinders Ranges to the off roader is that so much of the area is accessible to vehicles, thanks to many of the stations in the region embracing tourism and offering a range of options in relation to accommodation and activities. A great example of such a property is Willow Springs, located right on the edge of the Flinders Ranges National Park. This was definitely one to stick on the itinerary.

Willow Springs, like many of the properties in the region, is a working sheep station. Owned by Brendan and Carmel Reynolds, this 70,000 acre property opened up to tourists in the mid eighties when it started offering weary travellers accommodation in the shearers' quarters. However, it wasn't until 1995 that the property really started to grab the attention of four wheelers, when Brendan and Carmel opened Skytrek.

Skytrek is a series of mining and hunting trails and station tracks that form a circular drive on Willow Springs and a neighbouring property totalling approximately 60km. The highlight, though, is the specially constructed 26km of track that climbs the ridge tops up to the summit of Mt Caernarvon. At approximately 920m above sea level, this is the highest point you can get to in the Flinders Ranges in a vehicle, and as you would expect, the views are breathtaking.

It's best to allow a full day to undertake the drive, which will really give you the opportunity to



experience the diverse landscape, flora and fauna in the area. Leaving the homestead, the track winds through a series of gorges, then crosses open plains before climbing up into the ridge tops.

Most of the track is fairly easy going, though the climb over the ridge tops necessitates low range gearing and reasonable ground clearance. The terrain can also be quite harsh on tyres, so it's worth carrying some decent tyre repair equipment and a good quality air compressor. My first visit to Skytrek was in a Land Rover Discovery 3 running road tyres on the factory 18 inch rims. Even with the tyres aired down a little to prevent damage, they still took a hiding. This trip was undertaken in my later model Discovery running General Grabber AT2s, and I didn't experience any tyre issues whatsoever.

Another place I was keen to visit on this trip was the Prairie Hotel in Parachilna. This iconic Outback pub is just a short drive from the Brachina Gorge turn off up the main road to Leigh Creek.





AT MOUNT GIPPS, OUR USA VISITORS KNEW THEY WERE IN FOR SOMETHING SPECIAL WHEN WE WERE PROUDLY GREETED AT THE FRONT GATE BY THE PROPERTY'S OWNER



Positioned beside the railway line which runs from Port Augusta to Leigh Creek, the town of Parachilna was first surveyed in 1863. Today, all that remains is the Prairie Hotel, railway station, airstrip and a few outbuildings.

The Prairie Hotel is run by Jane Fargher, who offers Outback hospitality at its absolute best. The hotel exudes rustic charm and character, and this is particularly evident in the bar. A carefully chosen selection of great wines and beers is on offer, including the Prairie's very own Fargher lager.

The most memorable aspect of any visit to the Prairie Hotel however, is the superb food. The restaurant offers a range of dishes with a distinctively Outback flavour, many using local ingredients. On this visit, I think we all went for the signature dish, the 'Feral Mixed Grill,' which features an assortment of camel sausage, goat chop, kangaroo fillet and wallaby shaslick. Diners seeking a more conventional pub meal are also well catered for, with the restaurant offering fabulous steaks and seafood, most of which are sourced from South Australia.

The Fargher family name is synonymous with the Flinders Ranges, with Jane's husband Ross running nearby Nilpena Station, and Ross' brother Ian, and wife Di, on nearby Angorichina Station. On the other side of the ranges, Warren and Barb Fargher own Wirrealpa.

Our team had a hugely successful few days in the Flinders, with numerous outstanding filming opportunities taken advantage of, thanks to our location scout Michael Ellem. Michael knows this area like the back of his hand due to the countless trips he has done with ARB, vehicle manufacturers and 4x4 magazines over the years.

We had originally planned to head up to Cameron Corner and possibly

Innamincka, but Scott was keen to do some more low range filming, so instead, we headed across to Broken Hill. It's no coincidence that this region has been the staging area for so many off road events over the years. The Barrier Ranges, just north of Broken Hill, provide some outstanding opportunities for four wheeling, and the hostile environment just adds to the adventure. The change in itinerary provided the chance to visit one of my favourite stations in the area, Mount Gipps.

One of the first properties settled west of the Darling in the 1860s, Mount Gipps has a very rich and colourful history. Charles Rasp, one of the founders of the Broken Hill Proprietary Company (BHP), was originally a boundary rider on Mount Gipps, stumbling across some rock specimens which turned out to contain deposits of lead, zinc and silver. Rasp wasted no time in pegging out his claim, forming a syndicate with several others in the area. The following year, they hit a massive 7.5km long ore body, which became known as the Line of Lode.

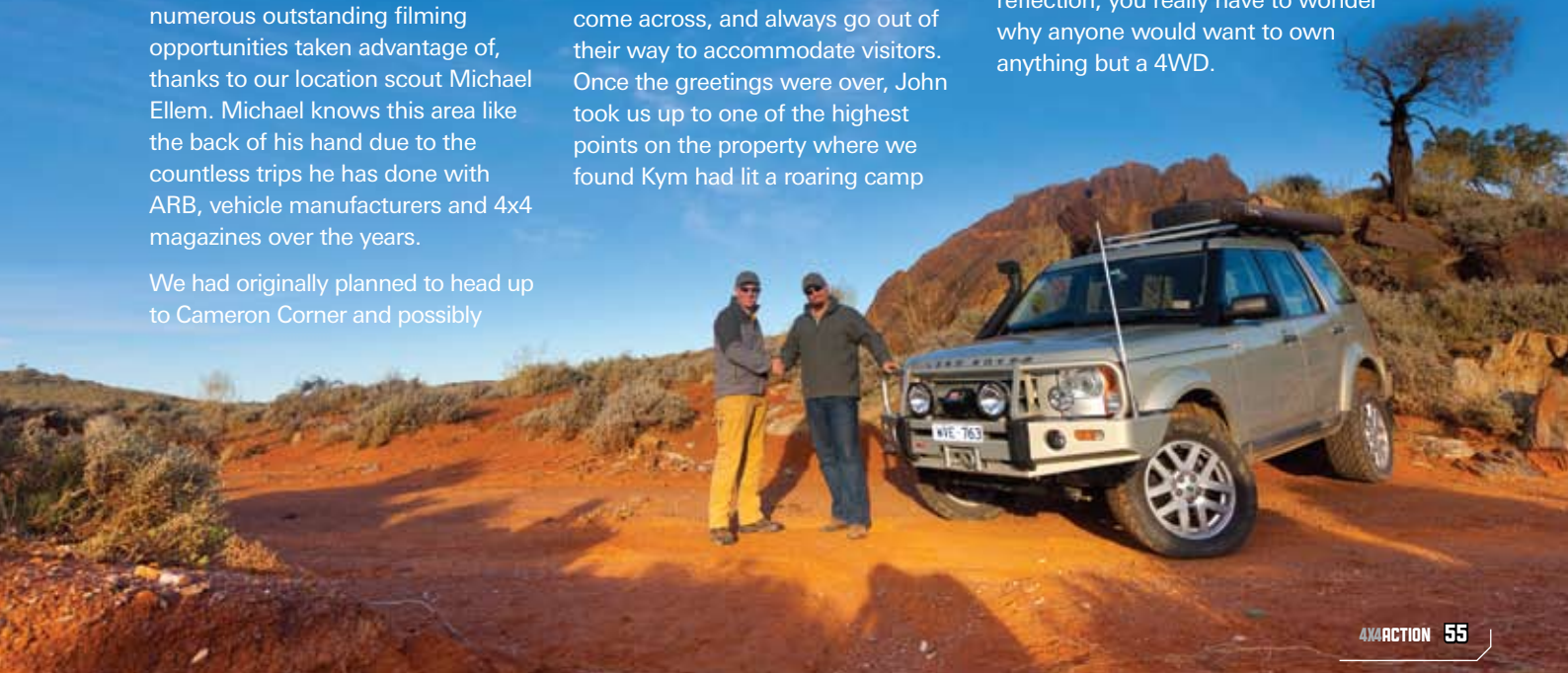
Mount Gipps was the perfect location to wind up our Outback trip, and our US visitors knew they were in for a special experience when we were proudly greeted at the front gate by the property's owner, John Cramp. If ever you break down in the Outback and need help from a station owner, pray that it happens near Mount Gipps. John and his wife Kym are just the nicest folks you're likely to come across, and always go out of their way to accommodate visitors. Once the greetings were over, John took us up to one of the highest points on the property where we found Kym had lit a roaring camp

fire and set up a picnic table with a bowl of freshly caught and cooked yabbies. Together we shared a few laughs and yarns as we watched the sun go down, though we did have to keep telling Ben to stop referring to the yabbies as crawfish.

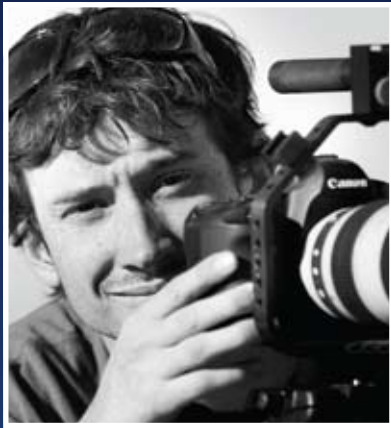
The hospitality didn't end there, though. Kym had prepared an absolute feast for us back at the homestead, where we thought it was time to start getting stuck into those bottles of red I had been carting around for the previous week. Entertainment for the night was provided by Christie, a German backpacker who had just spent the best part of 12 months down under, much of her time at Mount Gipps. The highlight of the evening was Christie's tales of Jillaroo school, though there were a few worried looks in the room when she told us that her training had included tuition on how to castrate a lamb with her teeth.

Over the past week we had covered thousands of kilometres with an action packed itinerary that had necessitated pre-dawn starts every day and late finishes. Mike, Lisa and I had been hosting some of the most respected and professional people in their fields, whose work would be seen by millions all over the world. We started out as strangers, but we finished up as a bunch of mates who had just experienced an awesome Outback trip, doing the kind of stuff 4WD enthusiasts get to do all the time.

This is the kind of trip that, on reflection, you really have to wonder why anyone would want to own anything but a 4WD.



THE CREW



AUSTIN ANDREWS

Austin loves a good movie and has made a career out of producing high-definition video in the remote environments of the world. He works as the Director of Photography for Overland Journal and Expedition Portal, producing online, television and commercial media. Austin's personal vehicle is a 2003 Nissan Xterra with an ARB Air Locker installed and plans for a bull bar. Austin lives in Prescott, Arizona with Eiger, his six-month-old Husky pup that has become the office mascot.



CHARLES NORDSTROM

Charles is an adventurer at heart, having travelled the world by plane, backpack, train and 4WD. Having visited nearly 50 countries at only 26 years young, he has learned more than a few lessons about packing light, blending in with the locals and stopping to soak in the experience. Charlie and Scott Brady travelled across 25 countries from Spain to Mongolia in 2010 with an Old Man Emu equipped Suzuki Jimny. Charlie lives in Prescott, Arizona and operates The Overlander apparel company.



SCOTT BRADY

Scott is the Publisher and Chairman of Overland Journal and expeditionportal.com, and has spent the past few decades exploring the world. He can be found overland on his KTM 950 or with the various ARB equipped 4WDs that he has modified through the years. Scott has travelled on six continents, from the jungles of Guatemala to the Wakhan Corridor of Afghanistan and Tajikistan to being the only American driver to win the rugged Outback Challenge (Africa). Scott lives in Prescott, Arizona with his high-school sweetheart and wife of 18 years, Stephanie and their 63kg Malamute, Yukon.





LISA WOOD

Lisa has been running ARB's marketing in North and South America since 2004. Her talents are wide and varied, and she has 'wheeled' some of the toughest trails in North America. Arguably her greatest skill, however, is coming up with all of these great marketing ideas, and then getting Matt Frost to do all of the work.

ROB BOEGHEIM

Special fly in guest, Rob is the Managing Director of Hema maps, and despite a very hectic schedule, managed to join us for a few days. Rob lent Scott his new 200 Series for the duration of Scott's visit, and we have to say it takes a very special person to give up their new fourby and have to turn up on a trip in a hire car.



BEN EDMONSON

Ben is an international adventurer and product photographer, specialising in overland and adventure travel product features and editorial. Ben has travelled to South America, Mexico, Asia and Europe for his clients that include Mountain Khaki, Patagonia and others. Ben has a love for the outdoors and enjoys fly fishing, wing shooting and trekking. Ben often travels with his wife Beverly and their Border Collie, Jackson, touring the United States by ARB equipped LandCruiser FZJ80.



MATT FROST

Despite complaining constantly about how much he misses his dogs whenever he's away, Matt tends to get invited along on a few Outback trips, primarily because he makes the perfect target for Land Rover jokes.

MICHAEL ELLEM

If you've read ARB 4x4 Action or looked at an ARB catalogue in the past seven years, Mike needs little introduction. ARB's sole photographic supplier since 2004, he is widely regarded as the best in his field, and lets nothing come between him and a great shot. Madly passionate about what he does, just add good lighting and coffee, and you have the perfect storm.



THE VEHICLES

As you would expect, ARB has a very large fleet of 4WD vehicles, and Scott Brady was asked to select whatever he wanted. Bearing in mind we were a fairly small group and wanted to cover ground quickly, we took just three vehicles as follows.



TOYOTA LANDCRUISER 200 SERIES

Perhaps more so than any other vehicle, the LandCruiser epitomises Outback travel, and many people consider this latest variant to be the ultimate Outback tourer. HEMA had just completed the fit out of their latest mapping vehicle, which was made available for this and several other film shoots whilst the US team was here. It's always great to have someone else's vehicle along in case you need to try out any potential panel-damaging tracks first.



LAND ROVER DISCOVERY 3

The most awarded 4WD in history, the Discovery 3 is a true global vehicle, sold in numerous markets around the world. Testament to the fact there are Land Rover nuts everywhere, we just had to have one along. Due to an incredibly sophisticated air suspension system, it's also one of the few vehicles around that can successfully transport large quantities of glass bottles off road, without worrying about breakages.



TOYOTA HILUX

Whilst not sold in North America, our US friends are very familiar with the unbreakable reputation that the HiLux enjoys. Scott was very keen to get behind the wheel of a well equipped vehicle, and from a practical point of view, we needed the payload space and load carrying ability of a HiLux to transport all the junk that Michael always brings away with him.



OFFICIAL EXPEDITION OUTFITTER - MOUNTAIN KHAKIS

Okay, that title is a bit of an exaggeration, but we did get to try out some of this awesome clothing on our adventure. Ben Edmonson is the official photographer for Mountain Khakis, and he brought a few pairs of their pants with him to hand out amongst the group.

Mountain Khakis is a relatively new outdoor clothing company based in Jackson Hole, Wyoming. The company has a growing range of gear but are best known for their range of pants. We got to try out their Alpine Utility pants, and were blown away with the level of comfort, construction and durability these pants offer. Made from a strong cotton canvas fabric with reinforced panels on high wear areas, most of us wore these things practically every day, and they just kept getting better and better. The tight weave did a great job of keeping out the icy pre-dawn chill and repelling burrs, but the airy fit meant they were still very comfortable when the day warmed up.

With the current strength of the Aussie dollar making these pants ridiculously inexpensive, they're well worth checking out www.mountainkhakis.com.

WANT TO SEE MORE?

A stack of videos, images and stories will be appearing across Overland Journal, Expedition Portal and Expeditions West media over the coming months.

For further information see:
www.overlandjournal.com
www.expeditionportal.com
www.expeditionswest.com

Or keep an eye on the ARB website, where we'll be posting a compilation of our favourite clips.

COASTING ALONG



IN HIS 4TH YEAR AS PRESENTER FOR QUEENSLAND'S CREEK TO COAST, ARB'S QLD STATE MANAGER, ROGER VICKERY, SHARES WHAT MAKES THIS TV PROGRAM AMONG THE BEST IN AUSTRALIA.

It's 9:30pm on a brisk July night, and on the top of Mt Mee in south-east Queensland, the mild breeze has given way to heady gusts of 50 knots and the temperature has hit a chilly 6°C...

Sure, it's not on par to being lost in a blizzard or getting locked in an ice box, but for ARB's QLD state manager, Roger Vickery, he might as well be in Siberia. "It was awful!" he laughs.

But it's all part of being a presenter on Creek to Coast, Queensland's premier TV program dedicated to all things outdoors.

For those of us not living in the sunny state or Northern Territory, Creek to Coast has been encouraging Australians to get out and travel since 1999. From hitting the off road trails and fishing hotspots to trying out every form of watersport on offer, Creek to Coast travels around Australia and overseas to get the message across that outdoor adventures are fun and accessible to all.

It's this message that got Roger on-board four years ago when the TV program first approached ARB for their input. "I really want people to understand that getting to incredible places is easier than you think," Roger says. "Whether

you're kayaking a Kimberley gorge or bushwalking the Blue Mountains, reaching these locations is often just a matter of hopping in a 4WD and driving. And this is a key point that Creek to Coast works to get across."

Which is how he ended up on top of Mt Mee in the middle of winter. Along with Creek to Coast producer Kieran Pelly and cameraman Aaron Bottero, Roger set about showing just why correct lighting and bull bars are critical in preventing animal strikes and to mitigate what happens when an animal strike occurs. "Particularly at dawn and dusk, lights are your first line of defence," Roger says. "And bull bars are your last."

The decision to film a segment about bull bars was spurred by the recent Bull Bar User Survey Report released by the Australian 4WD Industry Council regarding bull bars and animal strikes in Australia. The impetus behind the survey had been in response to the proposed GTR09 legislation which ultimately planned to have bull bars banned in Australia. While the legislation has since been scrapped, the data collected in the survey is proving to be a big talking point in the 4WD industry. Of the 33,620 people who completed the survey, a huge 73% had experienced at least one animal



strike in the past five years. And of the respondents who had a bull bar fitted to their vehicle, 98% did so for protection against animal strikes, and 84% had the bar fitted so that they had a stable mounting platform for auxiliary lights (for the full report, visit www.4wdcouncil.com.au).

Having read the survey himself, Creek to Coast producer Kieran Pelly was keen to highlight the importance of vehicle frontal protection and lighting, particularly at sunrise and sunset.

"We originally planned to do a 'how-to' story about vehicle recovery at night," Kieran says. "But after talking to Roger and doing a bit of research, we decided to go for the prevention rather than cure angle. That is, how to avoid getting into trouble in the first place.

"The two key factors we found in accident prevention were good spotlights, which increase the amount of time drivers have to react to obstacles on the road, and bull bars, which are the last line of defence if there's not enough time to prevent a collision," Kieran says. "The bull bar survey came in very handy because it confirmed a few facts that most people had anecdotally suggested for years. Things like almost 70% of vehicle-animal strikes are caused by kangaroos. When it

comes to location, 65% of incidents occur more than 100km away from comprehensive medical and mechanical repairs. And as for time of day, a staggering 85% of these accidents happen at either dawn, dusk or night."

Roger's additional insights regarding bull bars and auxiliary lighting proved very handy, as has his general 4WDing knowledge over the past four years. His ability to fill the knowledge gap in the Creek to Coast team was a key reason behind him being approached in the first place.

"It's a bit embarrassing to admit, but our team's always had a wealth of knowledge in the world of fishing, boating and camping, but when it came to 4WDs, we've never really had anyone who'd confidently call themselves an expert," Kieran explains. "We'd crossed paths with Roger a bit over the years while out filming 4WD stories, and had a few beers at events like Mud, Bulls and Music, so we approached him in late 2006 to see if he, and ARB, would like to come on-board.

"To his credit, Roger's put a massive amount of effort and personal time into his delivery skills, taking that brain full of information and distilling it down to an entertaining, informative style geared specifically

to our fishing, camping, and four wheel driving audience.

"And I think it's worth pointing out that we've learnt a lot from Rog, too. We recently created an animated 3D graphic of how a diff works, and through that process our whole crew now has a much better understanding of a few technical elements of our cars."

After having just notched up its 500th episode, even bigger things are in store for Creek to Coast, with October 2011 seeing the popular lifestyle show going national on 7TWO.

Creek to Coast host, Scott Hillier, says, "Creek to Coast has always been a 'no borders' show, which means we can bring great Queensland-based, interstate and international stories to our viewers. Now that the show is going national, I reckon we'll woo a whole new audience of die-hard outdoor fanatics."

An upcoming special episode of the popular show features highlights of a week-long tour north of Cooktown, with Roger giving advice on all things 4WD. So be sure to keep up with all the Creek to Coast news on Saturday at 5pm for Queenslanders on 7 and 12pm nationally on 7TWO.

BREATHE EASY

AUSTRALIAN MANUFACTURER SAFARI SNORKEL HAS JUST MADE WATER CROSSINGS AND DRY DUSTY ROADS MECHANICALLY SAFER FOR A RANGE OF VEHICLES.

4WDers out on the track would be hard pressed to find anyone who hasn't heard of the Safari snorkel brand. Manufacturers of premium quality snorkels since the early 1980s, Safari is a multi-award winning company focussed on protecting 4WD engines from contaminants such as dust, snow, water crossings and torrential downpours simply by relocating the vehicle's air intake point to a higher and safer location than under the bonnet.

Safari snorkels are manufactured from premium quality polyethylene and are UV stable to handle the

worst conditions found in the Australian Outback. The hardware is also first rate, utilising 100% stainless steel for fasteners, clamps and brackets.

Capping off a busy number of months for the team, Safari has just released a range of new and redesigned snorkels for a huge number of vehicles, including the NS/NT Pajero, late model 70 Series, Discovery 4, current model Challenger, and GU Patrol.

A number of these new and redesigned snorkels feature Safari's unique Charge Air Ram, which



incorporates a highly effective, inbuilt separator system that removes rainwater from the incoming airstream to ensure safe engine operation even in the most torrential storms.

These snorkels and many more are available from ARB stores and stockists.

// Contact ARB for part numbers and pricing

NEW BUSHRANGER AIR COMPRESSOR



With a maximum inflation rate of 52 litres a minute, the new RV air compressor from Bushranger

is designed to inflate a range of equipment and tyres up to 31".

The RV air compressor features an aluminium alloy cylinder

and stainless steel valves, and also incorporates permanently lubricated bearings to ensure owners do not need to do any servicing themselves.

Featuring a gearless direct drive motor and oil free, dry sump design, the compressor has a maximum pressure of 60PSI and incorporates a built in pressure gauge. Coming with a 4.5m power cord with battery clamps and inline fuse, the compressor also has an LED work light, making it particularly handy for night time inflation of tyres on the track.

The compressor includes a heavy duty copper plated tyre chuck and three piece inflation needle kit to suit most inflatable gear. Coming with a five year warranty, the RV air compressor is available from ARB stores and selected stockists now.

// Contact ARB for part numbers and pricing

OUTBACK EXTREME EVENT DVD

GET AN UP CLOSE AND PERSONAL VIEW OF ALL THE EVENTS AND ANTICS FROM THE VERY FIRST ARB AUSTRALIAN OUTBACK 4X4 EXTREME EVENT.

Following the successful debut of the ARB Australian Outback 4x4 Extreme event earlier this year, 4wdTV and throughthegears.net have joined forces to release a DVD that shows off all the best thrills and spills from the seven day spectacle.

The properties around Broken Hill offered some outstanding 4WDing opportunities with stages being held at places such as Stephens Creek, Broken Hill race track, Mt Gipps Station, Avondale and Rochdale.

Recent rains meant that the mud stages were exceptionally tough,

with many winching scenarios and plenty of varying terrain, including rocks and sand. Several competitors were forced out with mechanical issues, while the remaining contenders put on an awesome show well worth taking the time to check out on the DVD.

Filmed in high definition with five cameras capturing all the action, the DVD also lets you enjoy an up-close view from the multiple in-car cameras. This is one DVD you don't want to miss out on and is available from ARB stores across the country.

// Part no: 217279



Want to check out what went on at the ARB Australian Outback 4x4 Extreme event? We're giving away 100 DVDs of the event to our readers.

Simply email your name and address to marketing@arb.com.au with 'WIN DVD' in the subject line, and the first 100 will be sent their own copy of the DVD. Competition closes Saturday, 31st December 2011.

FLYING HIGH

THE ROYAL FLYING DOCTOR SERVICE RECEIVES A SIZEABLE DONATION FOLLOWING THE 4WD INDUSTRY COUNCIL'S BULL BAR USER SURVEY.

As you're likely already aware, earlier this year saw the Australian 4WD Industry Council launch a national bull bar user survey in response to the Federal Government's proposed legislation regarding frontal protection systems on vehicles in Australia. The proposal to bring Australian bull bars into line with European standards created strong public opposition, and resulted in 42,600 respondents to the Bull Bar User Survey.

When launching the survey, which focussed on the public's experiences

regarding bull bar and nudge bar use in Australia, the Council committed to donating \$1 to the Royal Flying Doctor Service for every completed survey up to a maximum of \$22,000. ARB is pleased to be among the five companies that contributed to the Council's donation.

AAAA Executive Director Stuart Charity explains that the RFDS was an obvious beneficiary for the \$22,000 donation. "The Royal Flying Doctor Service saves lives and improves the health of people in regional and remote areas," Charity says. "These same people

are the main users of bull bars and nudge bars to protect their vehicles from frontal impacts, particularly animal strikes. We are delighted to deliver this donation to the Royal Flying Doctor Service at the maximum amount."

Greg Rochford, RFDS National CEO, was grateful for the donation. "Thank you to everyone who donated and to the AAAA for choosing us to be the recipient. Community support helps keep the Flying Doctor flying."

The full Bull Bar User Survey Report is available at www.4wdcouncil.com.au.



BRAGGING RIGHTS - YOUR 4X4

READER VEHICLE OWNER:

Siegy Mizzi, VIC

VEHICLE MAKE: Toyota

VEHICLE MODEL: 100 Series
LandCruiser

VEHICLE YEAR: 1999

ENGINE: 4.5L petrol/gas

ACCESSORIES FITTED: ARB deluxe winch bull bar, 9500lb winch, 2" suspension lift, front & rear ARB Air Lockers, ARB on-board air compressor, ARB 2.5m awning, Foxwing awning, Maxtrax, ARB trade roof rack, Safari snorkel, Kaymar wheel carrier, shovel and axe holder, Codan NGT HF radio with auto tune antenna, Icom 400Pro UHF CB and GME antenna, 33" BFG Tyres.

FAVOURITE ARB ACCESSORY:

My colour coded ARB deluxe winch bull bar. It looks great and I know our family is safer when it comes to any potential animal strike we may encounter on our many trips around Oz.

FAVOURITE 4WD SPOT:

The Victorian High Country in Gippsland because of the views, the history and the serenity. The mountains are steep and the rivers can be deep but our truck keeps taking us there and getting us home again so we can plan our next trip back.

WHY I LOVE 4WDING:

For my husband and I, it's about being able to take our kids and show them the history of our great land and to see things that a lot of other people will never get to see.

MEMORABLE 4WDING

MOMENT: Sitting at Poepel Corner in the Simpson listening to our youngest daughter during a HF telephone call she made to her primary school classmate back at school in Melbourne and explaining that there was a group of camels only 200m away from her and that tomorrow we would be "Climbing 'Big Red' in Mum's truck, it's the biggest sand dune in Australia." It makes you wonder why you would own a 2WD vehicle.

ADVICE FOR 4WDDERS:

Being a female 4WDer, I would recommend that more women get behind the wheel and do a 4WD course, put the blokes in the passenger seat and have some fun. And if you are new to the hobby, seek the experts at ARB and get the right advice and maybe join a 4WD Club.

WINNER!


OFF ROAD WITH ARB

VEHICLE OWNER: John Blakeney, ARB head office warehouse manager

VEHICLE MAKE: Actually I have 5 Toyotas – a HJ45, HJ47, FJ45, and the newest is a 2011 79 Series trayback. My daily ride is a LandCruiser 200 Series diesel.

ENGINE: 4.5 turbo diesel

ACCESSORIES FITTED:

Hamburger with the lot – ARB bull bar, 12,000lb Bushranger winch, ARB side rails and steps, front and rear Air Lockers, 50W HID driving lights, 80 channel UHF radio, roof rack, top shelf, Outback Solutions drawer system, 120lt water tank, Old Man Emu suspension, ARB twin motor air compressor, Safari snorkel, dual batteries, swing out stove and sink unit, drop down fridge slide.

FAVOURITE ARB ACCESSORY:

My twin motor air compressor.

FAVOURITE 4WD SPOT: I have two; one is the Ingeegoodbee River area, north of Benambra on the NSW border, and the other

would have to be the Hay River in the Simpson Desert.

WHY I LOVE 4WDING: I love the Australian bush, all of it, from the babbling brooks in the High Country here in Victoria to the stunning dawn and dusk colours in the Kimberley. There are a lot of relics from a bygone era out there if you take the time to look for them – we even found an old safe that was used for the safekeeping of silver in a very old mine.

MEMORABLE 4WDING

MOMENT: Years ago, I had a 75 Series trayback LandCruiser and I was on a really steep rutted hill. Just at the worst part of the climb, the vehicle slipped sideways into the ruts

and we started sliding backwards until the tow bar hit a tree root with enough force to stand the vehicle up like a rocket taking off. There it stood teetering and I remember the windscreen washers gravity-feeding water onto the windscreen, such was the angle. I had to leap out, leaving my hysterical wife inside screaming like a banshee whilst clinging wildly onto the terror rail. I managed to get the trusty winch hooked up to a tree and all was well from there. Don't want to do that again – it scared me a bit!

ADVICE FOR 4WDDERS: Don't go roaring out of river crossings, as you take a lot of water with you and it erodes the banks.



Readers, send us in your own vehicle profiles and you could be featured in an upcoming newsletter and win an ARB Adventure Light. Email: marketing@arb.com.au

MICHAEL DAVIS



THIS ISSUE, WE MEET MICHAEL DAVIS, AN EXPERIENCED FOUR WHEELER AND ARB'S SOUTH AUSTRALIAN STATE MANAGER.

SO WHAT'S THE STORY WITH YOU AND ARB?

I've been with ARB for 11 years. I was a qualified auto electrician working with my Dad in the heavy haulage industry – working on buses, tractors, trucks, and the occasional car – but I started out as a retail salesperson at ARB's SA state office. In time, I added on stock control and workshop liaison to my workload. In late 2005 I became the branch manager of ARB Morphett Vale, and less than a year later became the temporary state manager after Rick Long moved to WA to head the team over there. I've been the SA state manager ever since and head a stockist network of ten stores that are spread out from Broken Hill to Mt Gambier to Port Lincoln.

HOW'D YOU GET INTO 4WDING?

My brother had bought a Pajero, and so in 1990 we did a trip with Ron Moon for 4x4 Australia magazine. We headed down to Robe and had an amazing time. After that, I bought myself a Pajero and really got into travelling off

road. I bought a new Pajero in 1996 and clocked in 230,000km of travel by the time I was through with it, hitting places like the Kimberley and Flinders Ranges.

YOU'VE DONE 4WD TRAINING AS WELL.

Yeah, I was a qualified 4WDing training instructor and tour guide for the SA government. I'd do tours into the Flinders Ranges, Mallee Country and a few other places.

WHEN DID YOU LAST HEAD OFF ROAD?

Last weekend! I headed out with some of the boys from my 4WD club and hit the sand dunes on a property about 1.5hrs outside of Adelaide. Nothing too strenuous... it was all about clearing the mind, sleeping in the swag, a bit of driving and having a drink with mates around the campfire.

SO YOU'VE SEEN A LOT OF OFF ROAD AUSTRALIA. ANY FAVOURITE DESTINATIONS?

A few – the Flinders Ranges, Victorian Alps, the Kimberley...

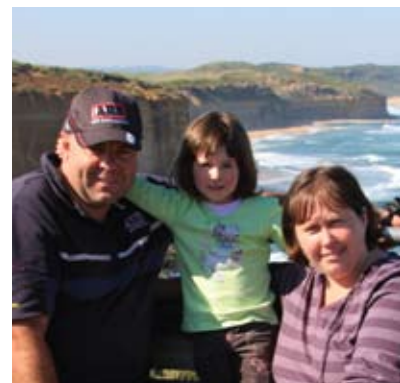
and you better add in the Simpson Desert, too.

THE FAMILY COMES ALONG TOO?

Naturally. There's my partner, Fiona, and our grommet, Jessica, who's four and a half. She was six months old the first time she went camping with us. She loves it, luckily, cause I've gotta say, if she didn't she'd be needing new parents.

ANY ADVICE FOR 4WDERS?

Don't buy the cheap stuff. Spend your good money on good gear, get plenty of advice and always be well prepared.



ON A ROLL

WE TALK TO OUTBACK SOLUTIONS PRODUCT MANAGER, ANDREW BELLAMY, ON THE DESIGN PROCESS BEHIND THE NEW ROLLER DRAWER SYSTEMS FOR THE TOYOTA PRADO 150 7-SEAT GXL, VX AND KAKADU MODELS.



What's the story behind the drawers being specifically tailored to the Prado?

Whether it's the 5-seater variant, the 5-seater with 7-seat option pack, or the 7-seat variant, the Prado 150 has a complicated interior that presented us with some unique challenges. For the 7-seat Prado, removal of the third row of seats reveals exposed metal – there's no carpet underneath the seats, and the side wall coverings end at the fold-down level of the seat. Because of this, we had to design unique Prado-specific side floors and installation kits to cover the exposed metal.

How did you go about designing the drawer system?

We have a set development process for all of our modular drawers. First, we figure out the best modular drawer size so that we can maximise the storage capacity and minimise redundant space within the vehicle. For the Prado, it meant drawers and drawers with roller floors measuring W505mm x H280mm x D945mm, plus the option of stacking drawers on top of these measuring W505mm x H280mm x D745mm. Roller floors are also available measuring W505mm x H140mm x D945mm.

After that, we found the optimum anchoring locations, whether it be existing seat anchoring points or drilling, which requires mountings that must meet ADR specifications. For the Prado, we actually did both – two bolt directly onto the existing seat anchoring points, while another two are anchored through

the floor in specially determined locations. There are plenty of cross-checks to make certain that these are lined up in safe locations, and then a waterproof plate is fitted underneath so that no water or debris splashes up into the vehicle through drilled holes.

And what about the side floors?

The side floor kit for the roller floor is the first of its kind. We designed a new sub frame, new adjusting supports and a complete drawer system around it. Because the factory jack for the Prado is located on the side wall, we had to ensure that access to this area was uninhibited while also providing cover over the unattractive metal floor. Access to the jack was vital to the design, as the jack would have otherwise been placed within the drawers themselves, and that obviously defeats the purpose of having drawers in the first place. We also designed the side floor kit so that it has a small, hard to access 'secret' location to hide valuables. It's pretty handy.

When designing the side floors for the drawers and roller drawer modules, we ensured the side floors are tall enough to allow for removable top panels. This is so you've got some side storage for essentials like radiator hoses and emergency tools – stuff you hope you'll never need but will be glad to have on hand. The top panels also give you access to the factory jack. We've designed simple flush fitting locks so that the top panels don't bounce out when you're travelling in rough terrain, too.

How many off tool samples did you need for the Prado?

Just a couple. We send line drawings and occasionally CADs of components such as brackets (and so on) to the factory, who then manufactures off tool samples of complete drawer systems. These samples use all of the materials of the final product – the same commercial carpet, same steel, same gauge, components and so on, so they are as close a match to the final product as possible. Naturally, doing this is more costly than having, say, a wooden replica, but it ensures the Outback Solutions range has the best fit and look on the market.

What drawer system would you recommend for the Prado 150?

We recommend you install two modules side by side, whether it be drawers or roller floor modules or a combination of both. This is so that none of the unsightly floor of the Prado is visible.

Anything else coming in the near future?

We've just released modular systems for the VW Amarok and the 5-seater and 5-seater with 7-seat option variants of the Prado 150. We're currently also working on Jeep JK Wrangler drawer systems for both the 2-door and 4-door models. These will be out in October, so keep an eye on ARB's website for the official releases.

// Contact ARB for part numbers and pricing



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