

ARB

4X4 ACTION



FEATURE ARTICLES ON

TRAVEL, 4WDING & ARB GEAR IN USE

FEATURES > THE NEW TWIN MOTOR COMPRESSOR RANGE
> OLD MAN EMU'S SUSPENSION DEVELOPMENT PROGRAM
> NEW PRODUCTS FOR THE FJ CRUISER AND VW AMAROK

LATEST NEWS > AN INSIDE LOOK AT THE ARB AUSTRALIAN
OUTBACK 4X4 EXTREME EVENT

WIN
AN ARB
FRIDGE
FREEZER

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ARB

SNAPSHOT

The past few months have been eventful in the 4WD industry to say the least, with the most significant development being the complete shelving of all plans to introduce GTR09 legislation in Australia. The Federal Government went as far as issuing a formal statement that acknowledged the vital role of bull bars, and that the government would not contemplate introducing any legislation that would reduce their effectiveness.

In the previous edition of ARB 4x4 Action, we detailed the possible implications of GTR09 and invited readers to complete an online user survey that was developed to gather some hard facts about motorists' experiences with animal strikes. With over 40,000 survey responses, we were able to gather data that had never before been available, which clearly illustrates the huge benefits bull bars offer for vehicles travelling in regional, rural and remote areas.

We can only speculate as to why the government shelved the legislation so quickly, but undoubtedly the information obtained via the survey was key in the decision making process. So we'd sincerely like to thank everyone that got involved in this issue.

You have probably noticed by now that we have given the ARB newsletter a makeover, courtesy of the new editor, Kelly Teitzel. Kelly's predecessor, Debbie Kaye, started ARB 4x4 Action shortly after she joined the ARB Marketing team back in 2003. Clearly, all that reading and writing about remote area travel got to Debbie eventually, inspiring her to pack her bags and take off overseas indefinitely. Last we heard she was somewhere in North Africa, with plans to head into eastern Europe.

Once you've finished with this newsletter, we encourage you to hop onto the ARB website and order your free copy of ARB's all new Australian catalogue. This catalogue follows months of hard work by a dedicated team of people at ARB, and features some stunning imagery from our photographer, Michael Ellem of Offroad Images.



Please spare a thought for the individuals who were responsible for getting the vehicles clean in the middle of nowhere, including Bernd Taubenreuther, the Marketing Manager of ARB's German distributor. Bernd was sent over here for some work experience, expecting a bunch of marketing related graphs and pie charts no doubt. Instead he got a bucket and sponge, and joined us on a major photoshoot in the Corner Country. It was certainly an educational experience for Bernd (especially with ARB's Mark 'Lowmount' Lowry along for the week), just not the one he was expecting.

Our final bit of excitement this Autumn was the staging of the inaugural ARB 4x4 Outback Extreme, a new off road competition held around the Broken Hill area. This was a week of fun and adventure for everyone involved, and you can get a taste for the event through our eight page pictorial.

To finish this newsletter on a more serious note, we have all been deeply moved by the scenes coming out of Japan following the earthquake. When catastrophic bushfires hit Victoria just over two years ago, ARB launched an appeal to raise funds for victims of Black Saturday and Japanese lighting manufacturer, IPF, was one of the first to respond. Recent events in Japan allowed us to reciprocate this act of friendship, with ARB making a substantial donation to an appeal that IPF was supporting.

Happy 4wheeling!

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

LIGHTEN UP

THE HANDY ARB ADVENTURE LIGHT RANGE HAS JUST EXPANDED.



ARB's 12 volt 4x4 adventure lights are designed to be tough, compact and lightweight so you can use them anywhere, anytime reliable lighting is required. With both a fluorescent tube and an LED model already available, ARB now has a hardy, new rechargeable LED variant.

Supplied with a 12V DC cigarette lighter adaptor charge lead and a 240V/300mA AC charger/adaptor, the new rechargeable LED adventure light incorporates a convenient cordless rechargeable battery with a running time of up to 4.5 hours.

Sixty individual LED lights each have a life expectancy of 50,000 hours to provide optimal, long term brightness that is perfect for roadside repairs, camping, hunting and in the workshop. A versatile hook mount has been integrated



into the top of the adventure light, making it perfect for around the campsite, while dual magnetic mounts allows it to be attached to steel surfaces such as the side of your vehicle to allow hands-free operation during night-time repairs.

Shock and water resistant, the rechargeable LED adventure light incorporates an in-line power switch

and soft rubberised handle, and comes in a high visibility, durable canvas storage bag. With a low amp draw and a 2 year warranty, the rechargeable adventure light is available in July from ARB stores in Australia and international stores soon after.

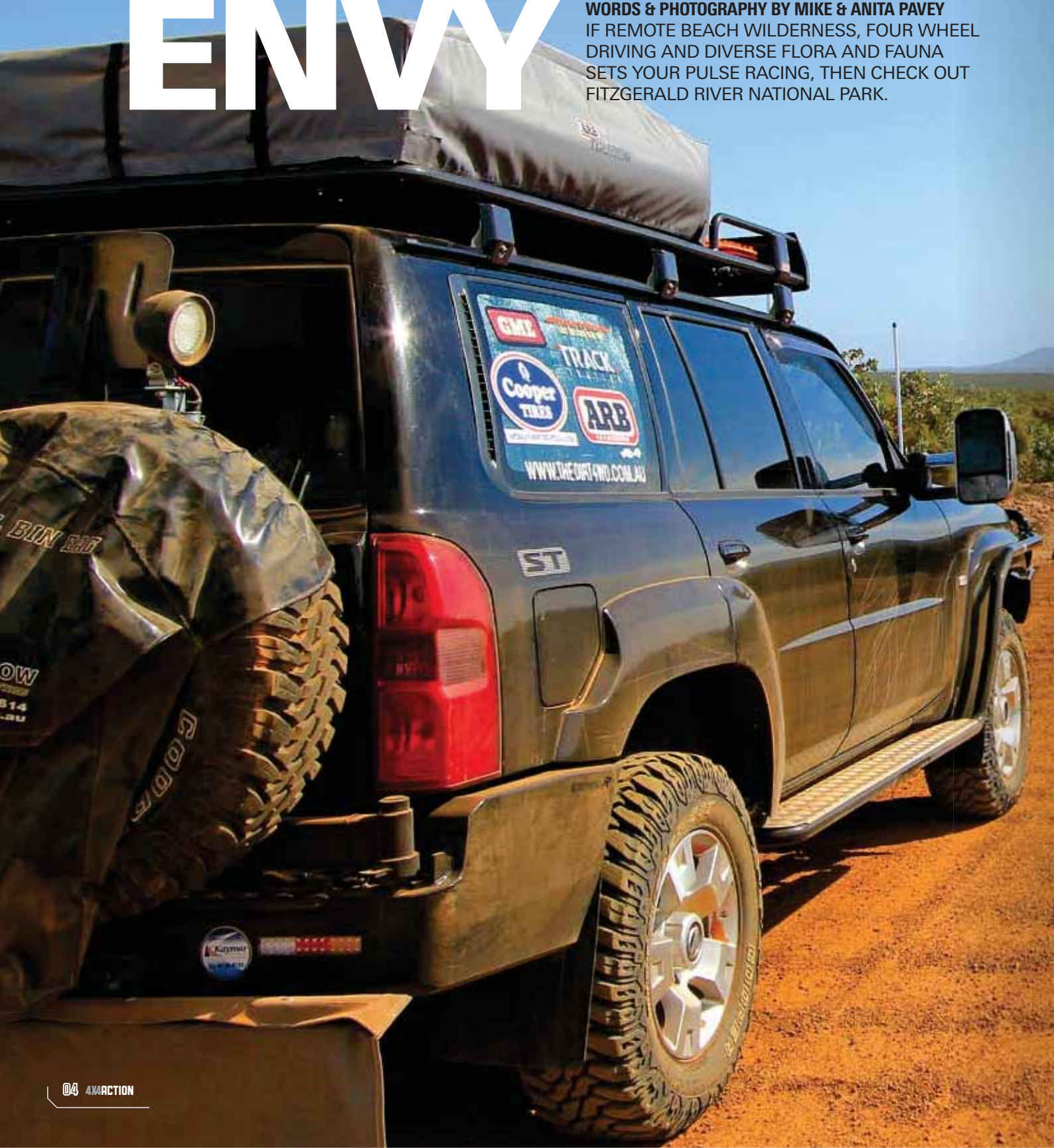
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TRAVEL

FITZGERALD RIVER NP, WA

GREEN ENVY

WORDS & PHOTOGRAPHY BY MIKE & ANITA PAVEY
IF REMOTE BEACH WILDERNESS, FOUR WHEEL
DRIVING AND DIVERSE FLORA AND FAUNA
SETS YOUR PULSE RACING, THEN CHECK OUT
FITZGERALD RIVER NATIONAL PARK.





Tight clearances and terrain that can deteriorate quickly makes slow, cautious driving a necessity.

**OVER 1800
PLANT SPECIES
HAVE BEEN
IDENTIFIED, 75 OF
WHICH CANNOT
BE FOUND
ELSEWHERE**



The Fitzgerald River National Park (329,000ha) is located on Western Australia's south coast, around 420km southeast of Perth. Beyond the spectacular scenery, the park is one of few Biosphere Reserves, the only one in WA, recognised internationally as a place where people and nature work together in a sustainable manner. According to the Department of Environment and Conservation, over 1800 plant species have been identified, 75 of which cannot be found elsewhere. More species of animals live in this park than any other reserve in south-western Australia. Worth seeing for yourself, you bet!

We chose to venture into the park from Jerramungup, via the South Coast Highway and Quiss Road, which parallels private property before diving headlong into the park. The Rangers Station is on the right-hand side coming off the highway, as is an information hut with photos, brochures and general park information. Quiss Road is well formed but not as well

maintained as the surfaces further east at Cape Arid National Park, and is littered with corrugations that deteriorate the further you move off the main thoroughfare. There are varying levels of fine surface gravel to plough through, that when combined with the corrugations, can have an interesting impact on forward progress. As such, speeds are limited to 60km/h, which is not such a bad thing.

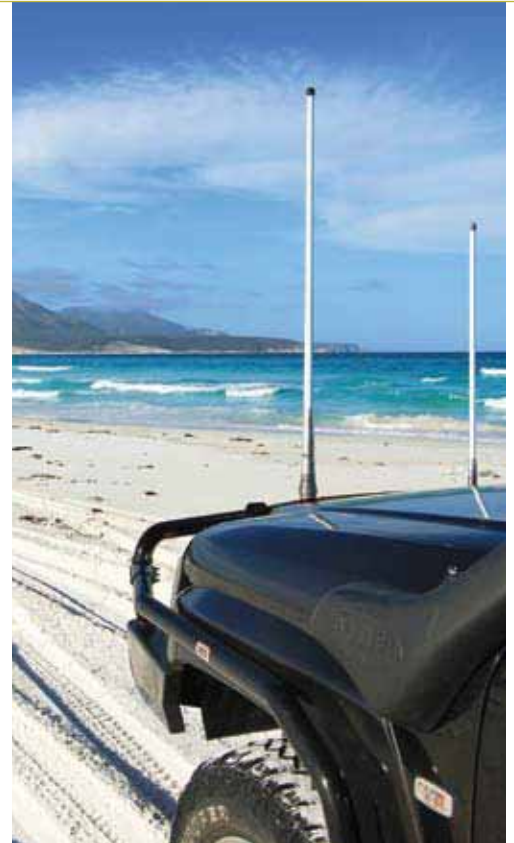
Caravans and motor homes are not permitted in the park due to the road conditions and the likelihood of a return journey on the back of a tray top – all in small pieces. Fortunately, we had the Topaz along for the trip, a rugged off-road camper, which traversed the corrugations effortlessly.

It was a surreal experience, weaving along the dusty tracks without another vehicle in sight, surrounded by vegetated plains extending to the distant mountains. Unfortunately this experience isn't possible all year 'round. Come any long weekend or holiday period and this area is

teeming with enthusiasts, all keen to escape the rat race and claim their piece of paradise. But outside these times, it's sheer bloody perfection!

Trundling 24km into the park takes you to the four wheel drive turn-off to the Twertup Mine Hut and Field Studies Centre. This area was damaged by fire in January 2008 and was closed to the public at the time of writing. The field studies centre is maintained by the volunteer group Friends of the Fitzgerald River National Park, who assist in the upkeep and conservation of the park.

A further 20km takes you to the turn off to Fitzgerald Inlet near Point Charles. This is 4WD only and best suited to tent-based accommodation or small camper trailers and those not too precious about their paintwork. In fact, it had me thinking that while the Ranger runs around in a HiLux, the clearances are a tad tight for the Patrol. It's a great place for a day trip, especially if you want to wet a line or run around on the dunes. The return journey takes between 2-3 hours.



Now, if you thought the main thoroughfare was corrugated, expect a rude awakening within the first few wheel rotations along the Fitzgerald Inlet track. On the plus side, the terrain is entertaining, carving across the bumpy coastal heathland tracks, over rock steps and through pretty woodlands before tracing the perimeter of the inlet. The campsite is shrouded in tea tree, providing shelter from the wind and sun in the warmer months. Facilities are impressive for such a remote location. Gas bbqs, picnic tables and a long drop toilet – it's good to see our park fees at work!

The track continues to the inlet through soft sand with a firm base. There are a few big roots over the track framing nasty holes which could make it a little tricky for low clearance vehicles, but otherwise the track condition is ok, subject to narrow clearances and soft sand. As you approach the inlet, the track is almost swallowed in a cocoon of tea tree. Our ARB rooftop tent copped a few touches on the way through as did the brush bars, pushing the leafy scrub aside as we gingerly drove through.

Like many of the inlets along the south coast of Western Australia, the inlet is closed to the sea.

Instead, a wide expanse of bare white sand stretches across where water once lapped. Our VMS navigational system warned of quicksand near the exit of the track so we didn't explore too far from the edge. A few big dunes could be seen in the distance beyond the

DISCOVER A GLIMPSE OF THE AREA'S HISTORY, INCLUDING REMNANTS OF THE RABBIT PROOF FENCE

inlet that looked good for some sand bodysurfing (byo piece of cardboard), but with the light fading fast in these parts we left that to explore on another occasion. The track weaves its way onto the beach, with fresh wheel tracks indicating an isolated fishing spot wasn't too far away.

Retracing our steps back onto Quiss Road, another 4km south takes you to the track junction towards Point Ann and the St Mary Inlet campsite, 15km from the main road. The campground at St Mary's is a short distance from the inlet, shrouded in tea tree, providing protection from the sea breeze. Like Fitzgerald Inlet, St Mary Inlet is closed to the sea and is none too appealing; the skeleton-like rocks lie partly submerged in the diminishing water supply. Without the cleansing flush of the inlet opening, the water soon

loses its vibrancy, increasing the salinity of the water and leaving its inhabitants to adapt or die.

The campsite features 13 sites with drop toilets, gas bbqs and a few picnic tables. Beach access is available from the camp with a boat

launching facility at Point Ann for use outside of the whale migration season. Point Ann has viewing platforms to spot southern right and humpback whales or just enjoy the panoramic views. Additional picnic facilities including gas bbqs, toilets and covered seating areas provide another option for day visitors. The Point Ann Heritage trail provides an opportunity to discover a glimpse of the area's history, including remnants of the Rabbit Proof Fence, with information boards en route. There are a number of other walks throughout the park ranging from 1-4hrs.

Further north, Hopetoun provides access to the eastern end of the park with campsites at Four Mile Beach, Hammersley Inlet and Quoin Head, the latter accessible by four wheel drive only.

A FEW BIG DUNES IN THE DISTANCE LOOKED GOOD FOR SOME BODYSURFING



In addition to bushfires, Dieback is another serious threat to the parks of Western Australia and the four wheel tracks that carve through them. Dieback is a plant disease prevalent in the parks along the south coast due to the climate that favours the spread of the disease, thriving in warm moist soil that can easily be spread in mud or soil that adheres to tyres or walkers footwear. For that reason, it is imperative to clean footwear and vehicle tyres before entering these parks to prevent the spread of the disease. The Point Ann Heritage Trail includes a Dieback footwear cleaning station to clean footwear before embarking on the trail. Areas affected by Dieback are often burnt as a cleansing exercise which closes any four wheel drive tracks in the vicinity. With track closures on the rise, do your bit by cleaning all footwear and tyres before entering the parks of the south coast or any areas affected by Dieback.

With a couple of days spent absorbing the natural beauty of the Fitzgerald River National Park, sadly it was time to move on, but the remote wilderness location, rugged cliffs and diverse flora and fauna experiences will long be remembered as one of the southern highlights of the west Australian coastline.

FAST FACTS

GETTING THERE

The Fitzgerald River National Park is located on the central south coast of Western Australia, between Bremer Bay and Hopetoun, 420km southeast of Perth.

CAMPING

Two wheel drive access: Four Mile Beach, Hamersley Inlet, St Mary Inlet

Four wheel drive access: Fitzgerald Inlet, Quoin Head

Long drop toilets and gas bbqs can be found at all sites. Some also have picnic tables.

Park entry is \$11 or \$80 annually for all WA parks and \$7 per adult, \$2 per child per night.

Bring your own drinking water and plan to be self sufficient.

No caravans or fires. Generators permitted.

FUEL/SUPPLIES

Bremer Bay, Ravensthorpe, Hopetoun and Jerramungup can supply fuel and other requirements.

ATTRACTIONS

Remote beach wilderness, four wheel driving, fishing, wildflowers (Sep – Nov), whale watching (Jun – Nov), beach driving, walks, wildlife appreciation, photography, scenic touring, surfing and swimming.

RESOURCES

Hema, Goldfields, Esperance & the Southern Coast of WA, 1:750,000

Department of Environment & Conservation: ph (08) 9842 4500 or visit www.dec.wa.gov.au

Rangers, East: ph (08) 9838 3060; West: ph (08) 9837 1022 – check for road and track closures.

Friends of the Fitzgerald River National Park: visit www.fitzgeraldfriends.org.au/

LETTERS TO ARB



CONGRATULATIONS TO **RICHARD**, 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.

Hi ARB,

I am after some advice. I live in the outback of WA in a community called Burringurrah, more commonly known as Mount Augustus. We have to travel quite some distance to Perth and other places when we go on holidays or buy food. With a family of 5 in a 2005 Pajero, it's no easy task.

Carrying a trailer is quite often a pain in the rear end, as the roads up here can be unpassable. In fact, our roads have been closed since 18th December 2009 and should be open this week!

But to cut to the chase, I have been talking to a few dealers about roof racks and I am hearing different stories and need to get some good advice. I have been told that I can put no more than 60kgs on the roof of the Pajero and

that sort of defeats the purpose.

I am struggling to get a straight answer and really need to sort out the space issue.

- **Richard**

Hi Richard,

Thanks very much for your question.

The Pajero is a fine vehicle all right, and we have had quite a few on our fleet over the years and they have all given perfect service.

With roof racks, it's very much our policy to be guided by the vehicle manufacturer's recommendations, as they have the knowledge of what their roof structures are capable of, and for us to gain that knowledge independently is commercially unviable.

I would certainly not recommend you exceed the Mitsubishi nominated roof load.

We do a lot of work in the development stages of the ARB roof racks themselves, and do all sorts of computer simulation testing, physical testing to Australian Standards, and field testing on vehicles that are subjected to extreme conditions, so we know our product as well as the motor companies' know theirs.

Thule make a range of roof bars and accessories for your vehicle that would allow you to put a few light but bulky items up there, but I would suggest that a full roof rack is not a good idea as much of the capacity will be taken by the rack itself, and it is for this reason we do not offer a full cage rack for your Pajero model. One of Thule's roof boxes would be worth looking at. These offer a lightweight but roomy means of carrying light but bulky items with an aerodynamic advantage as well.

The later model Pajeros are rated to 100kg as they have stronger roof bar mounts, and we do offer our steel and alloy cages for these as a result, but again we recommend that the 100kg limit be respected, especially on poor roads.

Another way of maximising the cargo space in wagons is with a Milford Cargo Barrier. This is a safety device as well as an excellent 'wall' that you can stack all sorts of cargo against. If you can do without the third row seats (assuming you have them), this will allow you to get maximum use of the available space.

Other than those suggestions, as far as cargo capacity, you are still stuck with the trailer I'm afraid.

If you do decide to maximise the load on the vehicle with or without the trailer, I would strongly advise you to upgrade the suspension, and we know some people – our friends in Old Man Emu land – who can help you out.

- **Greg Milton, Manager – National Product & Services**

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.



Hi ARB,

I've got a question concerning the use of OME suspension – can I fit the shocks and struts without the OME springs, and then add the springs later?

My plan is to fit a custom made bull bar to my 98 Grand Vitara (because ARB does not make one), along with OME springs and shocks/struts to compensate for the additional weight. However, I will need to replace at least the rear shocks in the near future, and this will need to be done before I am in a position to install the bull bar.

I really don't want to fit standard shocks and then replace them with OME in six months time. The ARB catalogue indicates that the shocks can be used with the standard springs. I need to know if adding the springs at a later date would have any negative effects?

- Ernest

Hi Ernest,

Yes you can fit our Nitrocharger shocks to your Grand Vitara's original springs with confidence as the Old Man Emu valving is well suited to them as well as our upgraded coil springs, and you will notice a pronounced improvement in the ride quality and handling of your vehicle.

I would, however, suggest that you only change the rear shock absorber initially as you mentioned they need to be replaced soon.

Because your vehicle has a coil over front shock absorber design, which is where the coil spring is mounted onto the shock absorber body via a coil seat, there is approximately 1.5 to 2 hours work in removing and reassembling them that you would be charged for.

As you are going to fit our OME upgraded coils after you have fitted your bull bar, I recommend you have the front absorbers replaced when the



coils are installed as this will save you paying twice for the fitment costs.

Ernest, you can look forward to joining the large worldwide club of happy Old Man Emu Grand Vitara suspension owners, and I am sure you will enjoy many years of happy driving with OME under your vehicle.

- Syd Groves, Manager – Old Man Emu



Hi ARB,

I am intending to retire next year and have just bought my retirement vehicle – a LandCruiser 200 Series. I have begun setting this vehicle up for touring post-retirement and would love to put roller drawers in the back. I have seen roller drawers in other vehicles and like the idea, however my wife is not keen on having the fridge sit so high. Can I have roller drawers and a happy wife?

- Alan

Hi Alan,

Your situation is by no means an uncommon one. Regardless of whether you use your four wheel drive for work, touring or weekends away, roller drawers are far and away the most effective method to organise your cargo area. ARB's Outback Solutions Modular Roller Drawers offer a number of features to ensure using your drawers is a pleasant experience.

All Outback Solutions roller drawers are single hand opening and slam shut closing and feature an anti rollback

mechanism built into the drawer stops. This is particularly useful when your hands are full. Simply open the drawer to full extension and it will lock in that position.

Outback Solutions roller drawers are also available in a drawer with roller floor configuration. This means the top floor of the drawer is able to roll out in the same way as the drawers do. Typically this is used to gain better access to a fridge, but can be used for ease of loading or accessing other items like tool boxes. While this is a fantastic option for many four wheel

drive owners, the fridge is sitting on top of the drawers and is therefore higher and harder to access. As the name suggests, Outback Solutions has a solution.

ARB's Outback Solutions offer the roller floor module. This module has the roll out top floor to access your fridge, but sits 140mm lower than the drawer. So as not to waste any space the roller floor module has a full length storage tray capable of holding an assortment of items.

ARB's Outback Solutions modular roller drawers are modular by design, giving

you full control over your configuration. For example, you may choose a roller floor module on the passenger side to meet your wife's requirements and a drawer on the driver's side. You could even choose a stacker drawer to go on top of the drawer, giving you two drawers and a low fridge. Alternatively you could choose from a range of other configurations.

Good luck with your retirement next year and enjoy your time touring this beautiful country of ours.

- Andrew Bellamy, Product Manager – Outback Solutions Drawers

Dear ARB,

We are looking to do a long trip from Perth to Darwin and back and are going through the planning of the trip. Food storage is a big part of the adventure, and cold storage items need to be kept cold. Now we are looking at all the different ranges of portable fridge/freezers on the market and are trying to see which ones are best suited. The YouTube video that ARB put together on your Fridge Freezers is very informative and raised some valid points.

Now the only decision left for us is what size ARB Fridge Freezers, how to use them and where to stow them. There are two couples travelling on this trip, each have their own 4WD, camper and we're all buying our own fridge(s). We plan to do a fair bit of day tripping but probably in only one 4WD at a time.

Are ARB Fridge Freezers best used as a freezer with a day esky on long trips or as a fridge? Also, how well do the ARB Fridge Freezers travel inside a camper trailer as opposed to the back of a 4WD?

- Phill

Hi Phill,

Thanks for the info on your impending journey. Striving for the perfect set up is something we four wheelers do.

An ARB Fridge Freezer will perform equally as well in the camper or in the back of a vehicle, although for optimum performance, the fridge box on your camper trailer should have an adequate ventilation system. Many boxes are filtered to reduce dust ingress and can be insulated, therefore reducing the need for an insulated transit bag.

When you're set up at campsites, you could utilise the fridge box on the camper trailer, however having a fridge in the back of one of the vehicles during day tours will be a blessing when you want to keep cold drinks available during hot weather.

Fridge capacity, size and power consumption are important considerations, and given the length of travel you will be undertaking, I recommend the 60L ARB Fridge Freezer in each of the campers, while the 35L or 47L model would come in handy for those day trips.

The squat height and front opening lid of the 60L makes it easier to look and reach inside, and it provides plenty of internal capacity to keep sufficient food staples and drinks cold. You can even fit a 2L soft drink bottle and champagne bottle in the 60L fridge. The power consumption is very economical, using an average 0.89 amp/hr compared to 1.1 amp/hr for the larger 78L model when used solely as a fridge.



I would also recommend you cryovac any meat supplies, therefore eliminating the need to keep a freezer. A freezer will require more energy consumption to change the state of food into a solid frozen mass – often a challenge for your battery system if you're camping for several days without an additional power supply.

Also ensure your fridge wiring is 6mm automotive cable to minimise voltage drop and optimise the running time on your battery. If you have a dual battery set up, ask the retail store to adjust the ARB fridge battery protection setting to "Lo". Details on how to do this yourself are in the instruction manual too.

Hopefully this information has been helpful for your trip preparation.

- Robert Puts, Product Manager – Canopy & Fridge

WINTER DRIVING



WITH WINTER UPON US AGAIN, IT'S TIME TO BOLT ON THE MUD TYRES AND GET OUT THE SNOW CHAINS IN PREPARATION FOR A WET AND COLD OFF ROAD ESCAPE.

Being prepared for the worst the weather can throw at you not only means carrying the right gear and having your vehicle properly equipped, it also means ensuring that your equipment is well serviced and you've honed your driving techniques.

SNOW CHAINS

Driving in winter both on and off road requires you to change your driving style to suit the adverse conditions. If you are heading to the snow fields, the icy bitumen roads often dictate the fitment of snow chains just to keep your car on the blacktop. Traditionally, snow chains are fitted to the front wheels of a 4WD to aid with steering as well as traction. However, many modern 4WDs with IFS (independent front suspension) physically don't have enough clearance between the front tyre and shock/steering components to fit a set of chains, so always be sure to check your owners' manual for correct fitment instructions before you hire or buy a set of chains.

SNOW DRIVING

Snow chains have the ability to dig and bite into the road surface, but if you find some deep snow off road, they can often be more of a hindrance than a help. As the chains bite deeper, you can find your vehicle bellying out on the snow surface and going nowhere. It's times like this that treating snow driving like sand driving and lowering your tyre pressures accordingly will get you out of a situation before frost bite sets in. Like on sand, the larger tyre footprint offered by lower pressures places less pressure on the road surface, lifting the vehicle rather than digging in. But always remember when running on low pressures to adjust your driving accordingly with lower speeds and no sharp cornering, and also re-inflate to normal road pressure when back on the blacktop.

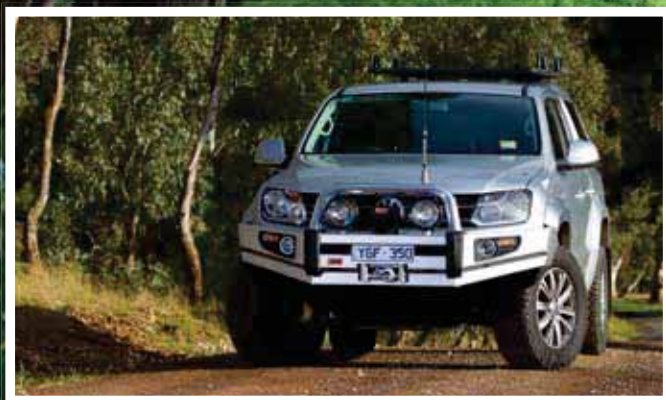
DRIVING IN MUD

Muddy tracks are where chains or low pressures can also be an advantage. After a downpour and

the rain starts to soak into clay surfaces, they quickly turn greasy and clog mud tyres. Lower tyre pressures again help with traction by allowing the tyre to flex and eject the mud from the treads, but the longer footprint also helps the tyre mould itself over slippery surfaces like rocks, giving even greater traction. Fitting chains to the front wheels of a 4WD not only aids traction but can help steering response when an otherwise clogged tyre fails to turn on a greasy surface. It's not uncommon to see logging trucks and national parks vehicles fitted with chains when traversing tracks in winter, and when used properly will do less damage to the track surface than a spinning mud tyre.

Snow chains are often one of the most underrated accessories for your 4WD but a necessity to carry in alpine areas during winter months. ARB carries a large range of Konig and Thule chains to suit most 4WD vehicles including IFS vehicles where traditional style chains may not fit. Call into an ARB store for more advice on selection and fitting.

OFF ROAD EQUIPPED



A LENGTHY ENGINEERING PROGRAM HAS LED TO AN EXTENSIVE RANGE OF ARB ACCESSORIES THAT ARE NOW AVAILABLE FOR THE VW AMAROK.

Hundreds of ARB engineering man hours, dozens of prototypes and a special order VW Amarok hidden away in ARB's Melbourne production site months before the vehicle's official Australian release... this is what it took to get top of the range 4x4 products ready in time for the Amarok's launch in March 2011.

The lengthy vehicle-specific engineering program has resulted in an impressive array of ARB products for the Amarok being available now, including deluxe bull bars, Old Man Emu suspension, canopies, a rear Air Locker and roof racks.

For Amarok owners who regularly spend time off road or in rural areas, a bull bar is an essential investment. The deluxe bull bar for the Amarok features ARB's renowned multi-

fold wing design for strength and optimised approach angles in uneven, difficult terrain. Engineered to give owners the option of having a winch installed, the bar is the perfect platform for electric winches

OME SUSPENSION PROVIDES NOTICEABLE IMPROVEMENTS IN LOAD CARRYING ABILITY, HANDLING AND CONTROL TO ENSURE OWNERS CAN MAKE FULL USE OF THE AMAROK'S SUBSTANTIAL STORAGE CAPABILITIES

up to 9500lb but is equally suitable for non-winch users – a colour coded blanking plate is included to give the bar a streamlined front while giving owners the ability to have a winch fitted in the future.

Designed to withstand the extremes associated with four wheel driving,

this bar also incorporates air bag compatibility and a split pan design that combines exceptional structural strength with superior airflow to the engine. Other practical elements include provision for twin CB

aerials and IPF driving lights, and also twin Hi-Lift jacking points and compatibility with original equipment tow points to ensure the bar is an invaluable asset on the track.

Providing owners with an alternative protection option, an ARB Sahara bumper incorporates many of the



ANGLESEA PROVING GROUND

Part of the development program for the Amarok included multiple visits to the Australian Automotive Research Centre in Anglesea, located along the famous Great Ocean Rd in Victoria. The 1000 hectare site boasts a broad range of testing terrain, including a 4.2km bitumen highway circuit, 10km gravel road, dust track, off road course, 4WD tracks, gradients, low friction surfaces and 3.2km brake test site. Both ARB and OME engineers took advantage of the facilities to ensure products for the Amarok are of the highest standards.

renowned features engineered for the deluxe bull bar, including a sophisticated SRS compatible mounting system, split pan design and winch provision. Owners can further customise the bumper to suit their own style with the option of fitting a polished chrome centre tube for increased aesthetics.

Along with front protection options, ARB's engineers launched a development program to produce a canopy specifically designed for the Amarok. Available in either a smooth or grained exterior, the canopy is available in a mid roof version that allows extra headroom and carrying capacity compared to other canopies on the market. The Amarok canopy comes with the choice of a sliding front or lift-up window, while owners can choose

to fit lift-up side windows to allow easier access to their gear.

Old Man Emu's engineers have also invested considerable time and effort developing integrated suspension systems that provide noticeable improvements in load carrying ability, handling and control to ensure owners can make full use of the Amarok's substantial storage capabilities. OME engineers have produced uniquely configured and designed Nitrocharger Sport shock absorbers and struts which, when combined with OME springs, provide the improvements in ride, comfort and control customers have come to expect from OME.

And for facing the toughest terrain with confidence, a rear Air Locker offers vastly improved traction, while a range of ARB

roof racks and a Sport Lid are also available.

A number of other accessories are also currently under development for this vehicle, including ARB side rails and steps, and a rear step tow bar. For more information on these accessories and further additions to the Amarok range, please visit your nearest ARB stockist.

Deluxe bull bar // Part no: 3470010

Sahara bar // Part no: 3970010, contact ARB for buffers & centre tube part numbers

Canopies // Contact ARB for part numbers

Sport Lid // Part no: 9650

Roof racks // Contact ARB for part numbers

STOCKTON SANDCASTLES

Words & photography by Mark Allen

BRING YOUR SHOVEL... THERE'S PLENTY OF SAND TO DIG AT STOCKTON BEACH.

Want to spend a week getting sand out of your 4WD, hair, undies and pretty much every nook and cranny you can think of? Then you need to play in the massive dunes of Stockton Beach NSW.

There's some 32km of adrenalin-generating, wheel-spinning, sand-flicking fun in dunes standing more than 20 to 30 full-sized wagons high.

Perhaps they don't look all that substantial while you're driving on the coastal sections and peering west into the huge dunes, but when you're amongst the shifting sands, they seem positively gigantic. This is especially true at the peak of every dune, where you experience a last second lack-of-vision (other than skywards) as you go over. You just never know how soft, steep or far down each dune will be – unless you've done the right thing and exited your vehicle first for an eyeball over the edge.

Don't be tempted to play the hero and hit the tops of dunes at speed – you will come unstuck sooner rather than later with potentially horrifying results.

But you needn't be too worried, as driving Stockton Beach is generally a safe affair providing you take adequate precautions for yourself and all other beach users. Of course, you should carry all relevant recovery gear, fit a sand flag and preferably travel with at least one other vehicle.

WWII HISTORY

There are many theories, folk law and yarns about what really went on along the 32 kilometres of this beach during the war years. While some of the tank traps (pyramid-shaped concrete pillars used to prevent the encroachment of army tanks) are still visible at times amongst the dunes, many have been repositioned at the northern end at the café to border off walkers, parked cars and the myriad

of tourer operators. These tank traps lined Stockton Beach and into neighbouring farmlands and were intertwined with barbed and razor wire to ensure the Japanese didn't invade our shores – Williamtown RAAF Base is just a stone's throw inland, so due caution was exhibited!

There are also remnants of the barbed wire fencing back near the forest, within the dunes and on several rows of star pickets that were claimed to run the length of the beach – more war time furniture that becomes exposed at various times.

WRECKED

The Pasha Bulker kept all eyes glued to the TV in 2007 when she ran aground just south of Stockton Beach. After three attempts, it was successfully refloated and removed. The next most well known ship to hit our shores (literally) is the MV Sygna, a Norwegian bulk carrier which docked its 53 tonnes into the





shallows during a wild storm back in 1974. Its decaying wreck plays host to many photographs at the southern end of Stockton Beach.

There have been countless other ships run aground in the area, of which one can at times be seen during low tide. There is also said to be the remains of a wrecked aircraft in the dunes, but unfortunately sand drifts have covered it over in recent years.

TIN CITY

Tin City, as it is affectionately known, was originally conceived due to the high number of shipwrecks in the late 1800s. The sheds were host to supplies, provisions and shelter for the seamen of the time.

Additional shacks were built during the Great Depression for those unfortunates unable to be housed in town. The shacks were then removed during World War II to make way for an army camp and then rebuilt for fishermen at a later date.

The current Tin City is unique and well worth visiting. Movie goers may recognise scenes from Mad Max in which a 'pub' was constructed for the movie. Currently, the shacks are on a 99 year squatter's lease and cannot be rebuilt if destroyed, nor can additional structures be built.

ABORIGINAL EVIDENCE

While travelling amongst the dunes, you'll notice piles of long-ago emptied shells and the bones of birds, lizards and small animals. These middens are leftovers from the Worimi Aboriginal tribe's meals. Stockton Beach was recently handed back to the Worimi people and is co-managed with the NPWS.

It is prohibited to drive over or disturb these middens or any other remains that may become uncovered in the sand, so please do keep off them.

FISHING AND CAMPING

Selecting one of the many 'gutters' along the beachfront is paradise for a fisho, as is seeking out fresh bait (pippies and sand worms), casting, retrieving all manner of fish, and cooking and eating on the spot. There is mile after mile of fishing spots to choose from, which generally makes a secluded spot easy to procure.

If you're camping on the beach, you can do so within 100m of the high water mark but you'll need to supply your own firewood. Caution must be exercised, as the wind can pick up during the night and there's not much shelter – even on the lee side

of a dune you'll often end up with sand in your food (and most other places of your body).

But that's all part of the fun of visiting one of Australia's largest sand dune systems.

GETTING THERE

Heading north from Sydney, you'll exit the Pacific Hwy at Tamago Rd. After this, you'll reach the Lavis Lane entry point, which then takes you onto the southern end of Stockton Beach via Mac's Track.

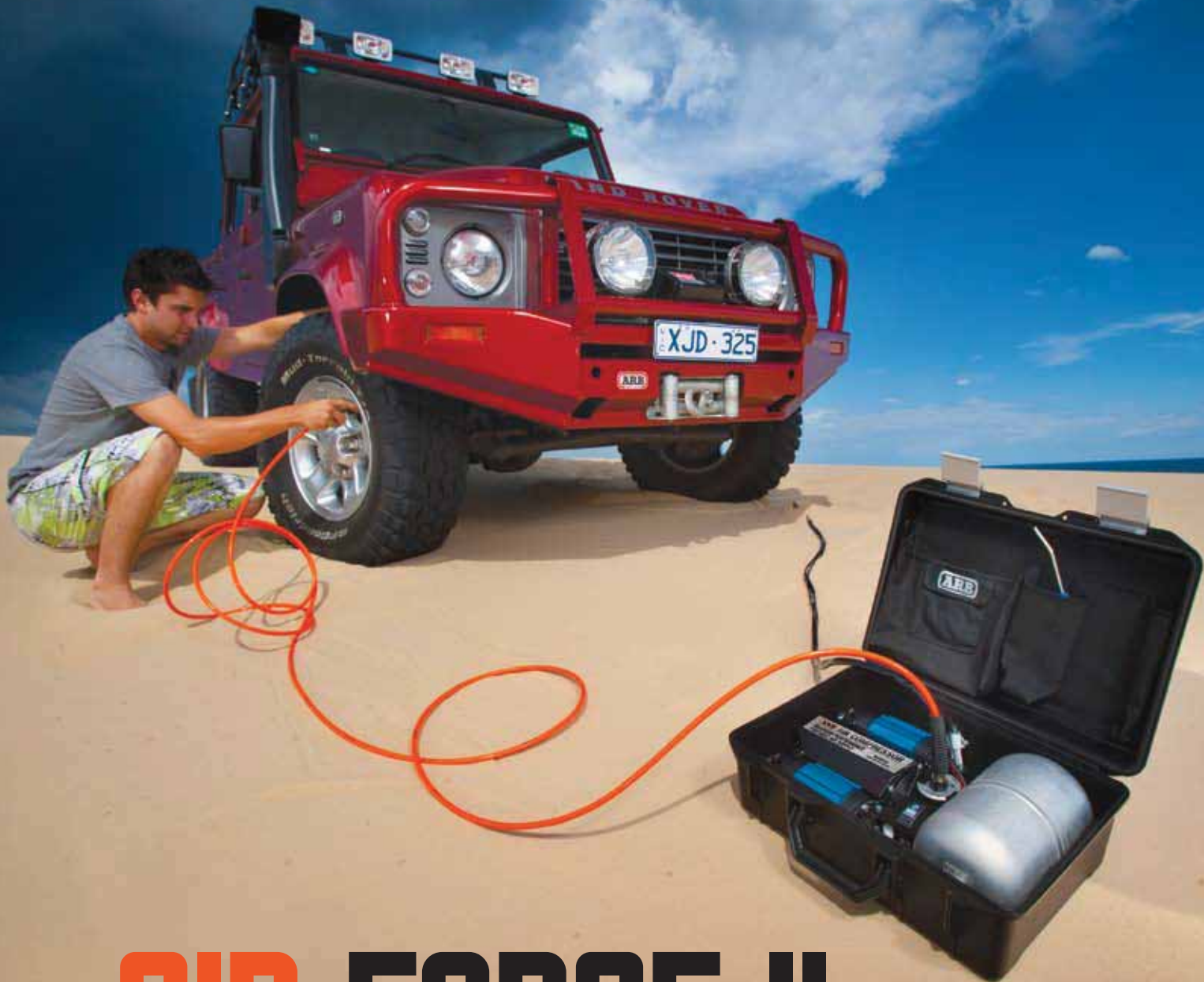
Further north, near Anna Bay (just south of Nelson Bay) at Birubi Point, is the northern beach entrance, off Gan Gan Rd, then into James Paterson St.

PERMITS

A beach vehicle permit (for standard registered 4WDs) and a recreational vehicle area permit (for conditionally registered vehicles such as quad bikes, trikes, ATVs and the like) are available at local shops and servos. Both permits can be purchased for three days at \$10, or 12 months for \$30. Pensioners can get the 12 month beach permit for \$15.

Speed limits of 40km/h apply and 20km/h within 100m of pedestrians and other vehicles. Pedestrians have right of way at all times.





AIR FORCE II

ARB'S NEW TWIN MOTOR AIR COMPRESSORS

WHEN IT COMES TO RELYING ON ARB'S NEW TWIN MOTOR COMPRESSORS, YOU CAN BE CERTAIN THEY'RE BUILT TOUGH AND READY FOR ANY SITUATION. WHY'S THAT? BECAUSE THEY STARTED OUT AS A MILITARY APPLICATION FOR THE US ARMY.

Back in 2009, the engineers in ARB's Air Locker division created a number of twin motor air compressor prototypes for the US military. These on-board prototypes, the result of extensive research and a bit of engineering ingenuity, ended up fitted to armoured humvees and put through their paces on extremely tough obstacle courses and in a range of testing scenarios. Now they're playing a part in US field operations offshore in locations we're naturally not privy to.

Following the US military project, the engineering team began exploring the possibility of a similar range of air compressors for 4WDers that delivered greater versatility and higher air flow than existing compressors on the market.

Daniel Bongard, head engineer in ARB's Air Locker division, explains. "The rapid air flow and compact size of the military spec compressors were something we knew would appeal to four wheelers and tradies, particularly in regard to using air tools and Air Lockers. We saw potential for a portable version as well, and so we entered a new development program to achieve all of this."

After a further 18 months of research and design, the team has produced ARB's new twin motor air compressor range. With a 12V portable and on-board model as well as a 24V on-board model all available, these units deliver the



highest air flow of any compressor of their size on the market.

These new compressors are not only relatively compact and inflate tyres at rapid speed, but are also compatible with air tools, leisure gear and, for the on-board models, Air Locker activation (additional accessories required).

Designing the twin motor compressors presented unique challenges, including ensuring the integrated cooling system did not adversely affect the thermal overload cut-out.

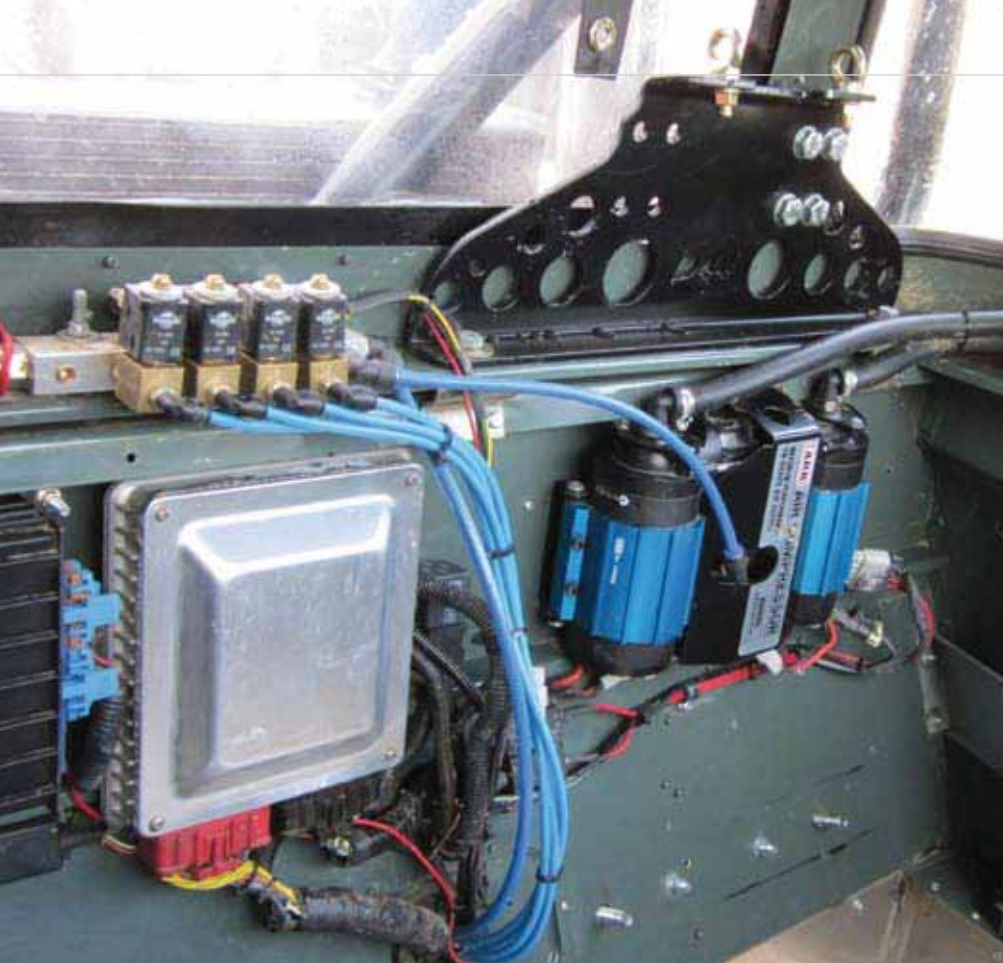
"All of these new compressors feature a thermal overload cut-out to protect the motor from thermal damage," Bongard explains. "The challenge was to integrate the cooling system in a location that cooled the components without also cooling the thermal overload

sensor and essentially tricking it into thinking the compressor was running at lower temperatures. With a bit of trial and error, we've managed to ensure we've got optimal cooling and full functionality of the overload sensor – while also keeping the units compact."

In a recent air compressor comparison by 4x4 Australia magazine, in which the portable version was pitted against 13 other models currently on the market, the new twin motor compressor was found to have the fastest air output by a significant margin. Averaging just 18.5 seconds to inflate a BFG KM2 mud terrain tyre from 20-35 PSI, the twin motor compressor's nearest competitor clocked in almost twice that time at 31.42 seconds, while the vast majority of compressors averaged over 52.2 seconds to inflate the tyre.

**THE PROTOTYPES
ARE NOW PLAYING A
PART IN US MILITARY
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LOCATIONS WE'RE
NATURALLY NOT
PRIVY TO**





The compressors are already proving to be a hit on the 4x4 motorsport scene as well, with the 12V on-board version making its way onto the Croatia Trophy event circuit, where it came in very handy for the winning team of Aussie Wayne Smith and Briton James Marsden.

The Croatia Trophy event is an 8 day off road event that demands superior driving skills to get through tough, muddy terrain and difficult winching scenarios. The fastest team each day is the winner, with competitors having to rely on navigation, vehicle reliability and a heap of teamwork to get through. With a record number of local and international competitors – 63 from around Europe, plus one Australian – taking part, Smith and Marsden took out the event with flying colours.

We got hold of Croatia Trophy champion Wayne Smith to get his thoughts on the event and the air compressor's performance.

"With nothing other than a navigational road book and with no time limit for stages up to 80km long, we raced through tight, twisting (and sometimes barely visible) forest tracks, winched down

vertical faces into narrow gullies and immense mud holes, crossed water meadows onto hill climbs and through rivers," Smith says.

"Our pneumatic requirements were met using ARB's CKMTA12 twin motor, dual cylinder air compressor.

"THE ARB TWIN MOTOR COMPRESSOR PERFORMED BRILLIANTLY! THE TYRE INFLATION WAS SO FAST THAT ADJUSTMENT TO TYRE PRESSURE EACH MORNING WAS MEASURED IN SECONDS RATHER THAN THE USUAL MINUTES." WAYNE SMITH

"We mounted the compressor in our Land Rover TD5 Defender behind the passenger seat with extended intake breathers cable tied to the roof to make sure it was above the potential water line.

"Installation was easy, with plug-in connectivity to Air Locker control solenoids from the wiring loom to the compressor. It was then connected to an air tank reservoir and ran the Air Lockers, giggiepin winch freespool as well as the tyre inflation – all off the one central manifold."

Smith goes on to share his insights on the compressor's functionality. "The ARB twin motor compressor

performed brilliantly! The tyre inflation was so fast that adjustment to tyre pressure each morning was measured in seconds rather than the usual minutes.

"I would recommend this compressor for all 4WD trips,"

Smith says. "The time saving and convenience of being able to quickly inflate tyres, whilst still running your Air Lockers, combined with reliability, makes it the perfect tool."

ARB's twin motor air compressors are available now at ARB stores and stockists worldwide.

12V portable compressor

// Part no: CKMTP12

12V on-board compressor

// Part no: CKMTA12

24V on-board compressor

// Part no: CKMTA24



AT A GLANCE

12V AND 24V TWIN MOTOR ON-BOARD COMPRESSORS



FEATURES

- Designed for inflating tyres and Air Locker activation when used in conjunction with optional Air Locker solenoid manifold kit
- Suitable for many air tools when used in conjunction with optional air tank kit
- High flow, twin motor, dual cylinder, DC compressor
- 100% duty cycle
- Sealed for moisture and dust resistance
- Hard anodised cylinder bores and Teflon impregnated carbon fibre piston seals for reduced friction and maximum trouble free life
- Heavy duty in-line maxi fuse for each motor provides professional circuit protection
- Anodised mounting bracket dissipates motor heat
- Relocatable splash resistant air filters with washable high flow sintered bronze filter cartridge
- Integrated pressure switch, relays and IP55 (waterproof/dustproof) brushless fan cools electronics, motors and cylinder heads
- Motors are internally thermal protected against extreme temperature damage
- Over-pressure safety valve equipped
- Constructed entirely of lightweight, high strength engineering grade materials
- Quality components for quiet operation and extra long life
- Complete wiring loom with Air Locker solenoid plug-in connectors
- Mounting hardware and comprehensive installation guide
- Options available separately:
 - tyre inflation kit
 - air tank kit
 - Air Locker solenoid manifold kit

SPECIFICATIONS

Current Draw 12VDC

At 0 KPa/PSI: 28A
At 200 KPa/29 PSI: 51A

Current Draw 24VDC

At 0 KPa/PSI: 14A
At 200 KPa/29 PSI: 25A

Flow Rate (under load)

At 200 KPa: 132L/m
At 29 PSI: 4.62CFM

12V TWIN MOTOR PORTABLE COMPRESSOR



FEATURES

- High flow, twin motor, dual cylinder, portable 12V DC compressor with 4L air tank
- 6m (20ft) durable high temp air hose, inflation accessory kit and air blow gun
- Designed for inflating tyres and other equipment
- Suitable for many air tools
- 100% duty cycle
- Sealed for moisture and dust resistance
- Hard anodised cylinder bores and Teflon impregnated carbon fibre piston seals for reduced friction and maximum trouble free life
- Heavy duty in-line maxi fuse for each motor provides professional circuit protection
- Anodised mounting bracket dissipates motor heat
- Integrated pressure switch, relays and IP55 (waterproof/dustproof) brushless fan cools electronics, motors and cylinder heads
- Motors are internally thermal protected against extreme temperature damage
- Over-pressure safety valve equipped
- Constructed entirely of lightweight, high strength engineering grade materials
- Quality components for quiet operation and extra long life
- Conveniently mounted in a durable, high impact polymer carry case
- Integrated accessory storage pockets within carry case

SPECIFICATIONS

Current Draw 12V DC

At 0 KPa/PSI: 28A
At 200 KPa/29 PSI: 51A

Flow Rate (under load)

At 200 KPa: 132L/m
At 29 PSI: 4.62CFM



Socks In A Can M-L

// Part no: 217373 // Price: \$19.95

Socks In A Can L-XL

// Part no: 217374 // Price: \$19.95

You might recognise Soxy the sheep from the Summer edition of ARB 4x4 Action, in which he made a cameo appearance by chilling out beside a campfire in Fourby's Cartoon. Clearly a fellow with a taste for the finer things in life, Soxy is back, and he's given his thumbs up to ARB's latest apparel item – Socks In A Can.

Otherwise known as ARB's Outback Survival Kit, the socks are made from 65% Australian Merino wool, 32% nylon and 3% lycra to make your feet warm, toasty and happy... so, so happy they will love you!

Featuring a stylish black and grey design, the socks have been designed for maximum breathability in all conditions and deliver comfort no matter how harsh you are to your feet. The socks come ready to wear in a fun, mock drink can with Soxy featured on the front.

These socks are so fabulous that folk around ARB can't stop raving about them. "It's like having my feet surrounded by woolly sheep!" says Peter Lea-Smith, ARB's Victorian State Manager. Brett Sposito from the ARB Kilsyth showroom says, "I just wanna keep walking!"

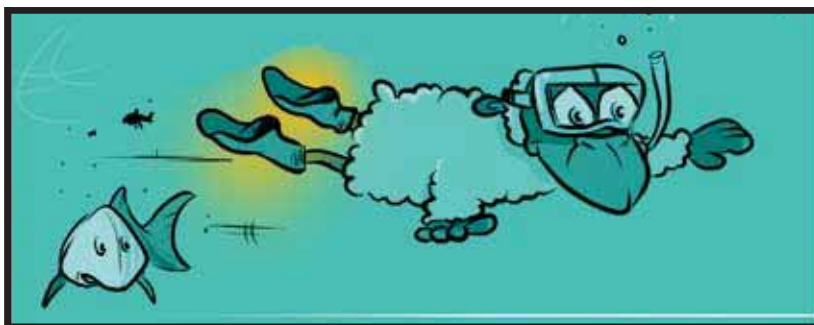
ARB Marketing Manager, Matt Frost, tells his mates, "These things are addictive... I can't stop wearing them. I forgot to put them on one day and had withdrawal symptoms by 10am."

So next time you're stuck on the track or ready to relax by a campfire, pop open a can and give your feet the treat they deserve.



Send in a photo of yourself wearing a pair of Soxy's Socks In A Can and you could win a 47L ARB Fridge Freezer!

It doesn't matter where you are – on your local 4x4 track, at a picnic or giving your much-loved fourby a wash. Get creative and send us your photos of your happy, ARB sock-wearing feet.



WIN AN ARB FRIDGE FREEZER

Entries will be judged by ARB marketing on their cleverness, humour and originality, so put on your thinking socks, have a bit of fun and you could be the winner of a brand new 47L ARB Fridge Freezer.

We'll print a selection of our favourite photos in an upcoming edition of 4x4 Action, and winner(s) will be contacted directly. Entries close 20th 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.

OLD MAN EMU'S DEVELOPMENT PROGRAM

4X4 SUSPENSION IS COMPLEX TO SAY THE LEAST. OLD MAN EMU'S RIDE CONTROL ENGINEERS SHARE THE DIRT ON SUSPENSION DEVELOPMENT.

NITROCHARGER
SPORT



ORIGINAL SUSPENSION

It's no secret that the two major components of a 4WD suspension system are the shock absorbers and springs. But what is not commonly known is that the manufacturers of these vital components develop them independently of one another. The bringing together of a vehicle's springs and shock absorbers into a well tuned and functional unit is the role of ride engineers.

Coming from the automotive engineering field, these ride engineers are employed by vehicle manufacturers because of their considerable hands-on design and tuning experience. Very high tech equipment helps them develop all facets of a vehicle's suspension design to ensure it meets critical engineering requirements, safety, Noise Vibration Harshness and durability criteria.

However, when it comes to the actual tuning of the shock absorbers and springs, reliance is placed solely on the ride engineers' assessments. What is called 'seat of bum' tuning is the industry's best method of assessing how well a vehicle rides and handles.

This 'seat of bum' process on a new vehicle is very time consuming, requiring many thousands of hours driving over a myriad of road conditions and under the various loads owners will carry.

Hundreds of shock absorber valve and many spring rate changes can



'SEAT OF BUM' TUNING IS THE INDUSTRY'S BEST METHOD OF ASSESSING HOW WELL A VEHICLE RIDES AND HANDLES

be done during this process before the right combination is established.

But even after all this effort, the original suspension on any new 4WD will be a compromise. This is because individual vehicle setups vary considerably, and one set of springs and shocks is unable to provide a consistent, high level of ride comfort and handling when faced with differing terrain and load weights. These loads can range from next to nothing to over a tonne after accessories, camping equipment, fuel, food, passengers and so on are all added in.

It is for this reason 4x4 owners look to the aftermarket 4x4 suspension companies to supply the right suspension system to suit their needs.



AFTERMARKET SUSPENSION

You can be excused if you thought all aftermarket 4x4 suspension companies follow the same in-depth development process the vehicle manufacturers do, but sadly this is not so. The vast majority of 4x4 aftermarket suspension companies simply purchase their shock absorbers from an overseas manufacturer and package them up with springs they purchase elsewhere. Very little, if any, tuning work is undertaken to match these two vitally important components.

The advantages in doing this is all one way. The company doesn't need to outlay a large investment in development and test equipment or employ a ride engineer. Meanwhile, customers get to pay good money for a suspension system that will never allow them to enjoy the best ride and handling characteristic their 4WD could be giving them.

THE OLD MAN EMU ADVANTAGE

Old Man Emu is different. We develop all of our suspension systems at our Melbourne facility, employing three fulltime ride engineers and using the same sophisticated design and

testing equipment the vehicle manufacturers use – including Finite Element Analysis programs, spring and shock dynometers, Motec data acquisition and Solidworks design and analysis programs.

It's OME's unrelenting, no compromise approach to development and testing that guarantees 4WDers will receive the maximum benefit in ride quality, handling and safe load carrying ability from their suspension.

THE VEHICLE

The latter part of 2010 and early part of this year saw the OME development team work on some exciting projects for local and global markets. Among the most extensive programs has been the full development of suspension for the VW Amarok, which presented interesting engineering challenges unique to this vehicle.

The Amarok was imported from Chile prior to the release of the vehicle in Australia. OME had previously employed a similar strategy during the development of suspension for the current model Triton, Ranger and JK Wrangler, where models were imported to Australia soon after they were available in Thailand and the US. This ensured OME had sufficient

time to develop new aftermarket products for the Australian launch of these vehicles.

THE CHALLENGES

The development of aftermarket suspension for the Amarok, like many vehicles, presented a number of complications and challenges for OME's ride engineers.

The immediate task was the front strut design. Stuart Fooks, senior ride engineer, explains: "The lower mount of the front coil over is a clevis design uncommon to most dampers in our range. The factory damper has the pressed steel clevis welded to its body, and this meant design and testing of a new lower mount."

Although not a routine part of a new suspension system development program, it was well within the capabilities of the OME team. New clevis designs were modelled using Solidworks, evaluated using Finite Element Analysis tools and optimised for strength, manufacturability and cost of both part price and tooling. The result is a strut unique to any OME has produced before.

A study was then carried out on the next potential long lead time component – the spring seat. Fortunately, the geometry of the factory VW coil was similar to an existing seat in the OME range. The

seat originally developed for the Toyota Tundra and now also used on the 200 Series LandCruiser got the job and was found to be more than capable of handling the stresses to be applied by the Amarok.

The work on these components was on top of OME's shock absorber valving and the development of shock absorber and spring combinations to best suit the Amarok's diverse users.

TESTING

The only impediment in obtaining an Amarok import was the inability to drive it on Australian roads. And so to carry out ride work, the development workshop was packed up and relocated to the Australian Automotive Research Centre proving ground in Anglesea, Victoria.

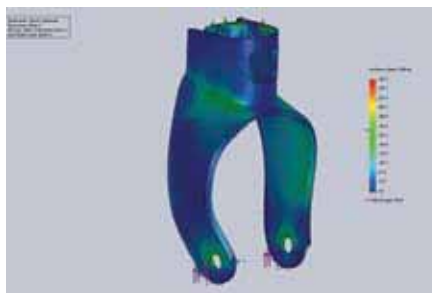
"From our shock lab we took everything but the kitchen sink... or, in this case, the dyno," says Fooks. "Valving components, pistons, discs, oil, nitrogen, special valving tools and torque wrenches... we needed it all. From the workshop we took all the hand tools, air tools, digital race scales, spring compressor and jacks required to do the ins and outs of ride control development."

On top of that, bull bars, winches and general load items were brought in order to adequately test suspension performance in various vehicle setups.

The proving ground provided all of the necessary road conditions for tuning medium and heavy loaded vehicles. OME's 'seat of bum' testing included trials on slow off road tracks and high speed second class dirt, concrete corrugations, as well as Belgian blocks, highway quality high speed loops, and chassis twist articulation. Multiple load scenarios were tested, with the bars on and off, weight in and out, and springs and dampers in and out.

After months of development and trials, the OME ride engineers developed heavy and medium dampers for both ends, three front coils for all load combinations, and two rear springs with extra leaves to cater for empty to GVM loading.

The range of OME suspension systems for the Amarok was born.



Finite Element Analysis programs assess potential stress areas of the clevis design.





HEY SPORT!

Words & photography by Mike & Anita Pavey. Additional photography by Atoc Auto

IS YOUR TOURING LOAD WEIGHING YOU DOWN? MIKE PAVEY GIVES US THE LOWDOWN ON HIS OME NITROCHARGER SPORT UPGRADE.

After stacking on the kilos from our recent touring rig build-up, it was time to reassess suspension requirements. Our existing Old Man Emu Nitrochargers had served us well, with over 120,000km of hard work without issue, but the Nitrocharger Sport range had grabbed our attention, with claimed improvements in valving and terrain adaptability.

The Nitrocharger Sport range has been around for almost two years now, after a three year development program. The

design of the shock absorbers was profiled in the Autumn 2009 edition of ARB 4x4 Action, so check that out online for a detailed analysis of the Sport range.

The objectives for the upgrade were to replace the coils and shocks to better suit our revised touring load while maintaining articulation, ride, handling and a flat towing profile (no sag). A number of additional accessories had been added since our last upgrade, including an ARB bull bar, side rails and steps, a Warn 12,000lb winch, an ARB Simpson



Ill rooftop tent and touring roof rack, Outback storage system, Foxwing awning, Kaymar rear bar with dual wheel carriers, a Long Ranger tank and a rugged off road van, all putting additional download on the suspension.

The boys at ARB Brighton assessed our touring load, selecting a pair of heavy duty 400kg constant load coils for the rear and matching heavy duty coils for the front. Similarly, heavy duty Nitrocharger Sport shock absorbers engineered for the Patrol were fitted on all corners. A steering damper, castor correction kit and wheel alignment completed the fit-out. As the Outback storage

system and Kaymar rear bar were scheduled to be fitted at a later date, I expected the initial ride would be over-sprung, resulting in a harsh ride around town. Interestingly, the suspension was firm but compliant and well controlled, an initial testament to the new valving. But the real test would come once all our touring accessories had been fitted, the Topaz hitched up and the Patrol packed for the open road.

In touring mode, with the Patrol and Topaz loaded, the vehicle sits level with no hint of sagging. Rim to guard measurements indicate 798mm for the front and 842mm to the rear, a variation of only

a couple of mm on our original OME kit. And to our delight, that dreaded Patrol 80km/h steering wheel wobble has been rectified.

While others have experimented with load carrying air bags, we have found a well sorted, coil sprung system such as OME's to be just as effective, without the added complexity and vulnerability of the air bags and the additional stress on the chassis mounts.

Two months into a twelve month around Australia trip and the suspension has performed faultlessly laden or unladen, riding well on patchy bitumen, corrugations and unexpected large bumps. Beyond the first few blacktop transport legs, the Balladonia Track down to Cape Arid in WA was the first significant off road test, with feral coastal tracks, fire trails, grey clay, rugged limestone-embedded surfaces, bog holes and undulating soft sand all despatched with ease. With all the rain in the southern states, some of the roads have only just reopened in a very poor state, looking more like a gymkhana circuit than a serviceable track.

For the transformation in ride, control and the ability to safely lug a touring load, the OME suspension upgrade would run close to being the best accessory money can buy.

NORTH BY NORTHWEST

PART 3

Words & photography by Rob Puts

CONTINUING AN AMAZING INLAND TRIP FROM MELBOURNE TO LOCATIONS INCLUDING COOBER PEDY, DARWIN AND KATHERINE GORGE, ROB PUTS AND HIS FAMILY SET OFF TO CHECK OUT WHAT THE GIBB RIVER RD AND THE BUNGLES HAVE TO OFFER.

Leaving the Northern Territory for WA, we reached the mandatory stop at the quarantine station. We'd planned ahead and already consumed most of the fruit and vegetables, however we had a couple of lemons and some nuts which headed straight for the rubbish bin. The quarantine inspectors were very thorough and after a quick chat they happily showed us the catch of the day – a cane toad... yep, all the way over in WA.

Taking advantage of the change in time zones, we arrived just after dusk into Kununurra, our rest stop for a few days. Working as a team, we had the Tvan set up in under ten minutes and dinner was underway with a relaxing drink in hand. We sat back and relaxed under the Kimberley stars to the tune of tree frogs located beside the Tvan.

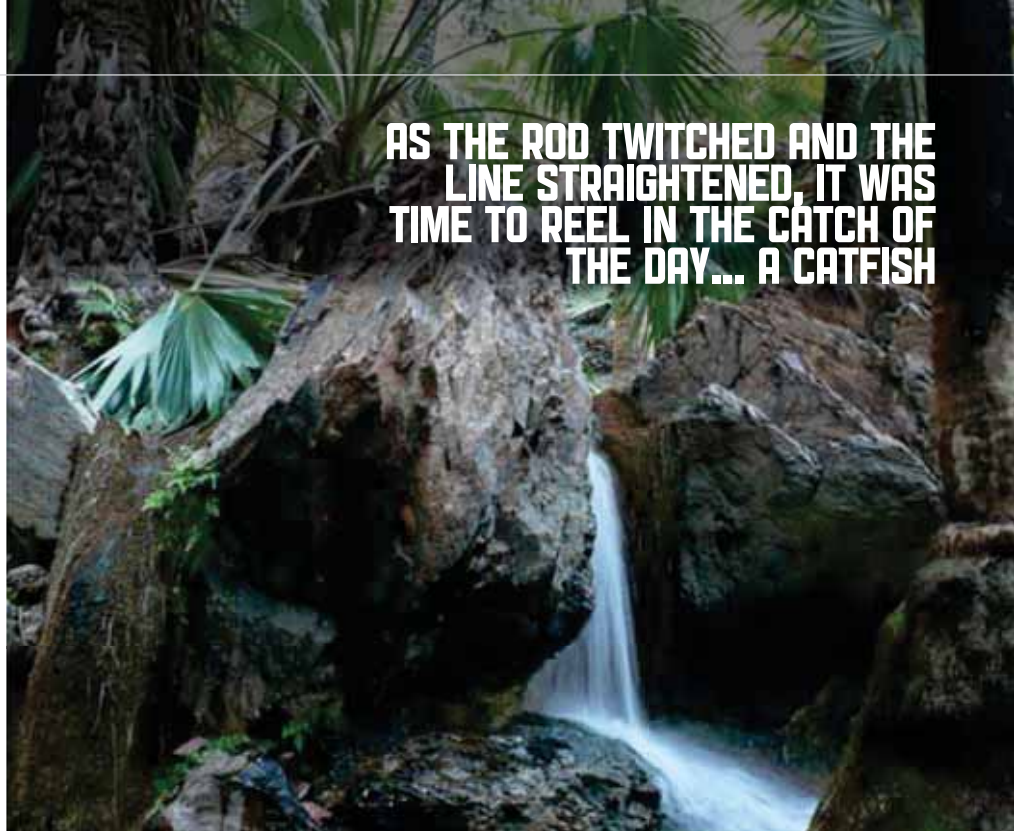
With so many tourist attractions around Kununurra we decided on a day trip taking in a visit to the sandalwood factory, then across the fast flowing Ivanhoe crossing onto Old Parry Creek Rd to the telegraph station and then onto Five Rivers lookout at Wyndham for lunch.

Sticking to the tracks (King River Rd), we visited the Boab prison tree and checked out local Aborigine art before heading back to camp. But just as we were within eyesight of the blacktop, the Patrol suddenly loosened up in the rear – sharp rocks had resulted in us getting a flat tyre. We weren't too concerned as we were carrying three spares, but we decided to repair the wheel in preparation for whatever lay ahead for the journey down the Gibb River Road.

Unbeknownst to us, it was a long weekend in Kununurra, and finding an open tyre outlet was proving

tricky as many locals had gone fishing for the weekend. As we watched the drawn AFL grand final over a couple of quiet ales with nearby campers, we heard of similar tyre misfortunes. Determined to keep on schedule, we dialled the afterhours phone numbers. The customer service ethos came through by Ray Berry from the local Beaurepairs shop, as he was happy to open up to get us on our way again, and when I brought a fellow camper along (and three blown tyres) the rewards were well worth him opening on a public holiday. That night we relaxed and enjoyed fine local entertainment at the nearby rodeo.

Following a short trip to the start of the Gibb River Track, we ventured into the world-renowned El Questro Station. In this quieter time of year for travel, we had the pick of campsites within the



Black Cockatoo campground. A great little pool in the nearby creek provided a nice spot for us all to cool down. After a short 4WD trip to Saddleback Ridge lookout, we shared beer and biscuits over a sensational sunset. When heading into this area, be sure to time your visit carefully for a trip into Zebedee Springs for a serene and relaxing thermal spa. These springs are closed during certain times for ELO homestead customers only.

We ventured into Emma Gorge for a reasonably challenging walk, especially as it was in the hot afternoon sun. The rewards were absolutely magnificent as we took a refreshing swim in the gorge with water cascading down the walls.

I joined the ELO ranger on a journey to the Pentecost River in search of my first catch of local barra. As the rod twitched and line straightened, it was time to reel in... a catfish.

ELO has a policy of a free feed of barramundi if you don't catch your own – so as a family we went to the open bistro that night and enjoyed a fine meal of local produce.

Heading off down the Gibb River Road, the corrugations were relatively easy until we passed Home Valley Station, after which the road became heavily corrugated and in need of a grader. With both vehicles running OME Nitrocharger Sport shocks, the undercarriage was soaking up as much of the bumps as it could, whilst the constant vibration in the cab had the teeth rattling and those old silver fillings looking for a new home. A well-earned rest for scones with jam and cream at Ellenbrae was on the cards and the hospitality did not disappoint.

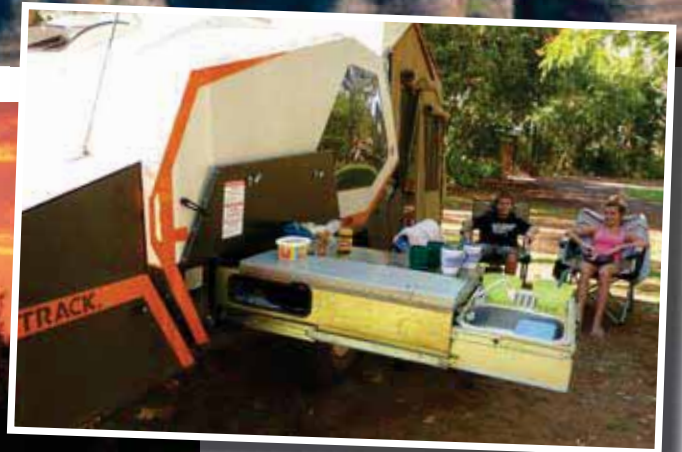
With the track full of corrugations and void of people, we rolled into Mt Barnett (Manning Gorge) for a refreshing swim and a great night's

sleep. This is an excellent place for an extended stay, with the water a great spot for the kids to swim safely.

We ventured further south off the track into Bell Gorge which, despite the rocky and relatively steep track leading to the gorge, was a spectacular sight and great photo opportunity. As if we weren't gorged out by now, we continued into Windjana Gorge to see the much anticipated freshwater crocs. There were only a few crocs visible in the afternoon heat, yet the short walk to the gorge and the fossils embedded into the cliff face was rewarding. The track from here to the Northern Hwy had the worst corrugations we have experienced, and we were happy to arrive at Fitzroy Crossing Caravan Park just as the sun was setting.

After a couple of days soaking up the sun and exploring Geikie Gorge, we made our way into the Bungles

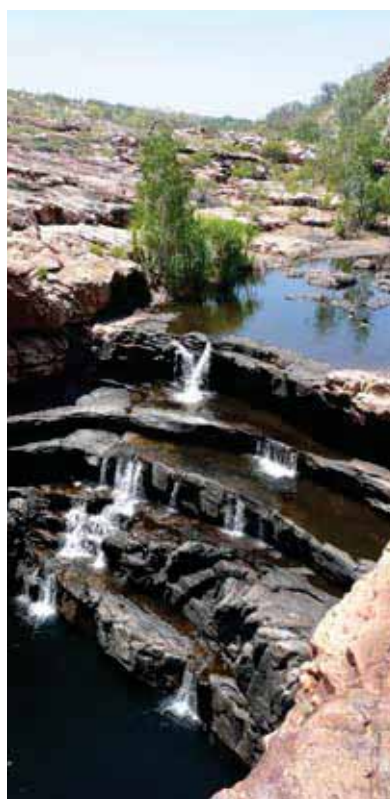
A HELICOPTER FLIGHT OVER THE BUNGLES WAS VOTED #1 ACTIVITY FOR THE TRIP



with the Tvan camper trailer in tow (no caravans or dual axle trailers are allowed). We aired down our tyres in preparation for a relatively slow drive down a track which is quite narrow in places.

After calling into the ranger's office, we set up camp at the southern end of the range for a few days of exploring the surrounding formations. We treated the kids to a flight over the Bungles in a helicopter. From the air you get to experience the magnitude of this heritage listed national park and the variety of rock formations and escarpments. We reinforced our affection for the area by exploring the many designated walking trails in the park. The Bungles are truly remarkable.

The final frontier before reaching the blacktop into Alice Springs is the Tanami Track as it traverses the Tanami Desert. We stopped at Halls Creek to top up our supplies and check on the track conditions, where we read a surprise bulletin. The Rabbit Flat Roadhouse was closing on the 1st of October, a couple of months earlier than planned. The Tanami is a long stretch of track with few fuel stops, and at this point we were extremely happy with the decision to fit a Long





Ranger fuel tank to the Patrol prior to the trip. Having the long range fuel tank fitted is great insurance, as there are no guarantees of fuel being available in remote areas.

Traversing the Tanami was relatively easy as the track conditions were dry and moderately corrugated (a walk in the park for the OME Nitrocharger Sport shocks). We were expecting to see red dirt everywhere, but the recent rains had turned the desert into a green oasis. The Wolfe Creek meteor crater (the second largest in the world) is a sight to behold and well worth the small detour from the main track. As we later drove through the community at Billiluna, we found ourselves at the northern end of the Canning Stock Route heading south to Stretch Lagoon. There was a local contingent performing a heli-muster, and after a quick chat we set up our bush camp down the track next to the lake and took in a breathtaking sunset.

A new self serve fuelling depot was commissioned only weeks before in Billiluna, so we topped up our tanks which should get us to Alice (Note: fuel cards of a specific value are available at the general store – check opening hours).

The rest stop at Renahan's Bore did not look too inviting, so we kept going until we found a clearing on the side of the track for the night west of Yuendumu. The sky was now getting darker and after a short time the rain came down in buckets. The track and surrounding area was awash, and we were woken during the night by the sound of a road train powering through the mud and slush.

Packing up camp the next morning, our boots would submerge themselves in the red mud with every step we took. As the Tanami Track is frequently graded to assist the road trains and local mining companies, the track itself is wide and lower than the surrounding area. With the dumping of rain, the Tanami became a new river. With 4WD engaged we pushed our way through the mud, keeping near the middle of the track and away from the soft edges. Although the distance to Tilmouth Well was not too great, we battled the boggy conditions for hours on end until we finally made it for a rest stop and the start of bitumen roads. Several people in the area had the same idea, and the vehicles in the car park were all painted clay orange. Even the locals were talking about the tales of travellers battling the conditions.

From here we travelled on to Alice Springs for a well earned shower and to treat the Nissan to a wash before heading for home via the pizza shop in Coober Pedy. With water flowing down the Todd River once again, we had to give Rainbow Valley a miss. However it provides us with another reason to come back and visit this magnificent area again.

Our North by Northwest adventure encompassed just over 11,000km and a month on the road. Special thanks to our travelling partners Margit and Heinz and my family Karren, Tegan and Brad for sharing this journey.



ARCTIC TRUCKS



FEELING THE CHILL THIS WINTER? THEN SPARE A THOUGHT FOR THE GUYS AT ARCTIC TRUCKS AND WHAT THEY DO FOR A LIVING.

The team at Icelandic 4x4 company Arctic Trucks know how to do it tough. Minus 50°C temperatures, extreme wind chills and formidable terrain such as glaciers, crevasses and bone-rattling ice packs are situations they specifically kit out their vehicles for. And during Australia's 2010-2011 summer, they successfully reached Antarctica's South Pole – three times.

For over twenty years, Arctic Trucks has been modifying SUVs and 4WD utes with the purpose

of travelling where no cars have ever been before. All modifications are meticulously designed and produced with a no compromise approach, while the vehicles also maintain all the conveniences and driving properties that can be expected in modern cars. ARB Air Lockers are among the formidable equipment the team at Arctic Trucks count on to get them across terrain others simply don't dare to cross.

November 2010 through to January 2011 saw Arctic Trucks head to the South Pole on three separate

expeditions, each for quite different reasons. The first expedition, involving members of the Indian National Centre for Antarctic and Ocean Research, was a 4600km round trip from Novo – below South Africa on Antarctica's coastline – to the South Pole for the purpose of scientific research and to identify a suitable location for a fuel drop for later in the season. The second expedition, for the Kazakhstan National Geographic Society, helped set up both the cars and people for a more extensive operation next



EXTREME WORLD RACES

Founded in 2003, Extreme World Races have been pioneers of ultra endurance, multi-disciplinary and extreme adventure sports in the most hostile environments on the planet. The Polar Challenge is the ultimate extreme endurance race, set in the stunning landscape of one of the coldest, driest and highest deserts on the planet.

Journeying up to 3550m altitude in temperatures down to -56 where even your antifreeze freezes over, the team travelled 5400km in one month, averaging 30km/h with a top speed of 60km/h on the vast icy Antarctic plateau. During this time, all participants slept in canvas tents, ate freeze dried food and melted every drop of water from surface snow.

We caught up with Gísli Jónsson from Arctic Trucks after he finished up being a support leader for the organisers of the Polar Challenge. A member of the Arctic Trucks team for nearly 4 years with a background in vehicle modifications and design, Gísli Jónsson uses ARB products in every serious modification he undertakes and states: "We have never had a catastrophic failure to any of the Air Lockers we have fitted and that is saying a lot. I think that is the best testimony of how good your product is."

What was the most memorable part of the expedition?

The endless space of nothing! The only thing disturbing the peace was patches of sastrugi up to 200km long which sent the vehicle flying through the air, bashing everything and everyone on board for days on end!

And the most challenging part?

I think the fact you have no choice but to go on no matter what happens! There is no one there to help if things go wrong... you are the help. If parts break, one must find a solution to fix it and if you hurt yourself, it will be days or weeks before you can get to a hospital.

What did you enjoy the most?

For me this trip was special. We now have so much experience with this type of expedition and everything ran extremely smooth considering the environment we were in. Personally I enjoy meeting all the incredible people that this continent seems to draw to it, the emptiness and in contrast the breathtaking mountain range we travel through on our way from Novo to the high plateau.

Would you do it again?

I would do it again because I think I'm addicted to the challenge, the thrill, the people, the hardship, the uncertainty and the satisfaction when you achieve something people thought was never possible.

summer. And finally, the team at Arctic Trucks assisted with a ski race to the South Pole as part of the Extreme World Races.

Amongst all of the trials and tribulations of the summer, Arctic Trucks managed to drive from Novo to the South Pole with the Kazakhstan team in a record breaking time of four and a half days. This amounted to 511km a day... an easy feat on the blacktop but amongst ice mountains, crevasses and changing terrain, it is a truly impressive feat.

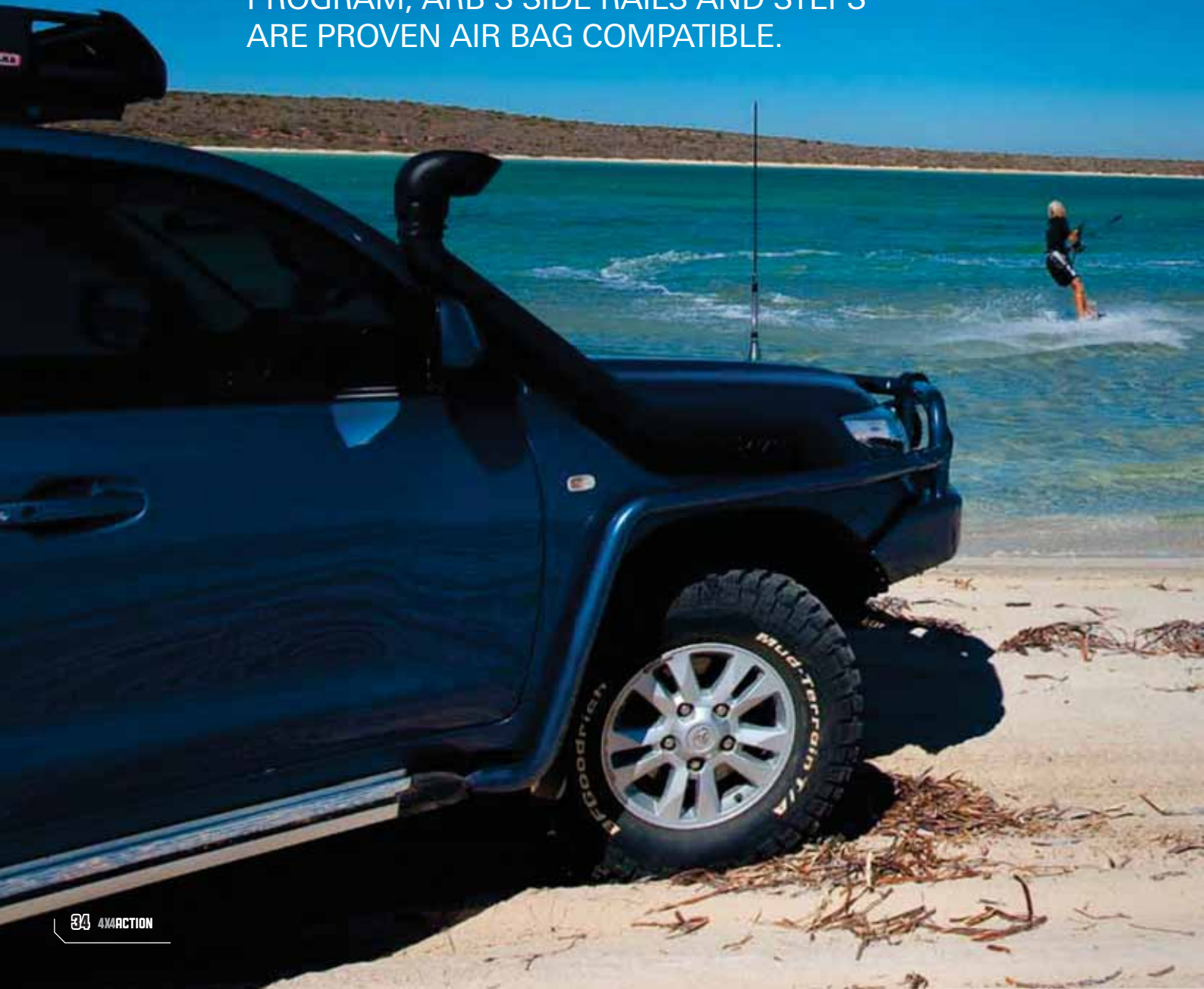
Later in the season saw the final expedition get caught by whiteouts, clouds and 1.5m sastrugi – the icy equivalent of sand dunes – that made driving difficult and time consuming. It is a testament to the team at Arctic Trucks and their uncompromising approach to 4x4 and 6x6 modifications that the vehicles performed exceptionally well and without major problems.

ARB would like to congratulate Arctic Trucks on a phenomenal summer in the snow.

INSIGHT ARB ENGINEERING

THE SIDE STORY

AFTER A COMPREHENSIVE TESTING PROGRAM, ARB'S SIDE RAILS AND STEPS ARE PROVEN AIR BAG COMPATIBLE.





Safety standards in motor vehicles have evolved significantly in recent years, with side air bags being one of the latest features that are increasingly appearing in off road vehicles.

Whilst side air bags have major safety benefits, they have created a whole new set of challenges for accessory manufacturers like ARB, given the potential for aftermarket equipment to interrupt the air bag triggering.

ARB has been manufacturing side protection equipment for an extensive range of vehicles for almost thirty years, which is designed to provide protection to a vehicle's sills and front panels from rocks and road debris. Up until recently however, we have not been fitting this equipment to 4WDs equipped with side air bags, given the risk of premature air bag deployment.

Following an exhaustive research and evaluation program, ARB is now delighted to announce that all ARB side rails and steps are fully compatible with side air bags.

Occupant safety for the sides of motor vehicles is covered under Australian Design Rule (ADR)72, which sets out strict guidelines in relation to the crash performance of the side of vehicles. New cars are subjected to testing which involves a stationary vehicle being subjected to an impact using a trolley system which is propelled into the side of the vehicle. Side air bags are triggered when a certain G force is generated, deploying in milliseconds. ARB's primary concerns were that given the enormous strength of our side rails, they may stiffen the vehicle, which could potentially lead to a premature firing of the air bags in a low speed collision.

ARB's initial testing on the issue involved using a computer software program called Finite Element

Analysis. Our engineers found that whilst fitment of the side rail did alter the point of initial side impact, the addition of side rails to a vehicle had limited impact on the overall stiffness.

The next step of the development process was to acquire the very specialised honeycomb material that formed part of the crash test trolley itself. Our engineers then pressed a side rail into this material, to examine the effect. This testing reinforced the conclusions drawn from the computer analysis.

Whilst our engineers were very confident in the results they were obtaining, their absolute thoroughness and pursuit for perfection drove them to perform

WHILST OUR ENGINEERS WERE VERY CONFIDENT IN THE RESULTS THEY WERE OBTAINING, THEIR ABSOLUTE THOROUGHNESS AND PURSUIT FOR PERFECTION DROVE THEM TO PERFORM FULL SCALE CRASH TESTING.

full scale crash testing. This led to the purchase of a current model Nissan Navara and the commissioning of an independent facility to perform the testing.

One side of the Navara was fitted with an ARB side rail, and the other side was left standard with the original factory side step. The vehicle was fitted with an accelerometer positioned right next to the air bag module itself. A crash test trolley was then propelled into each side of the vehicle.

A significant difference in vehicle damage was observed, with the original equipment step falling off, and the trolley inflicting substantial damage to the side of the vehicle. The other side of the vehicle was a different story though. In this case, the ARB side rail absorbed most of the impact with very little vehicle damage incurred.

Despite the major difference in vehicle damage however, the graphs that were generated from the accelerometer revealed very little difference in the overall crush performance.

A draft standard, ME-083, sets out impact performance criteria which is measured in distance versus time, and the measurements taken from side to side were very similar, with both sets of figures being within the guidelines set out in the standard.

The conclusion drawn from this final test determined that whilst ARB side rails did offer a huge amount of protection to the side of the vehicle, they did not in any way affect the deployment of the side air bags.

The findings of this testing program have been modelled against other 4WDs equipped with side air bags, and the conclusions are exactly the same. The ARB side rails are indeed fully compatible with all side air bag equipped vehicles.

It is interesting to note that the approach taken by our competitors has largely been to ignore the issue and continue to fit their product irrespective of the consequences. Others have introduced a collapsible mount into their product, significantly weakening it. Only ARB has adopted this exhaustive, no compromise approach to the issue.

The end result is that ARB's customers can continue to protect their vehicle with the ultimate in side protection equipment, and maintain confidence that these accessories are not interfering in any way with the vehicle's safety systems.



CRUISIN' WITH ARB GEAR

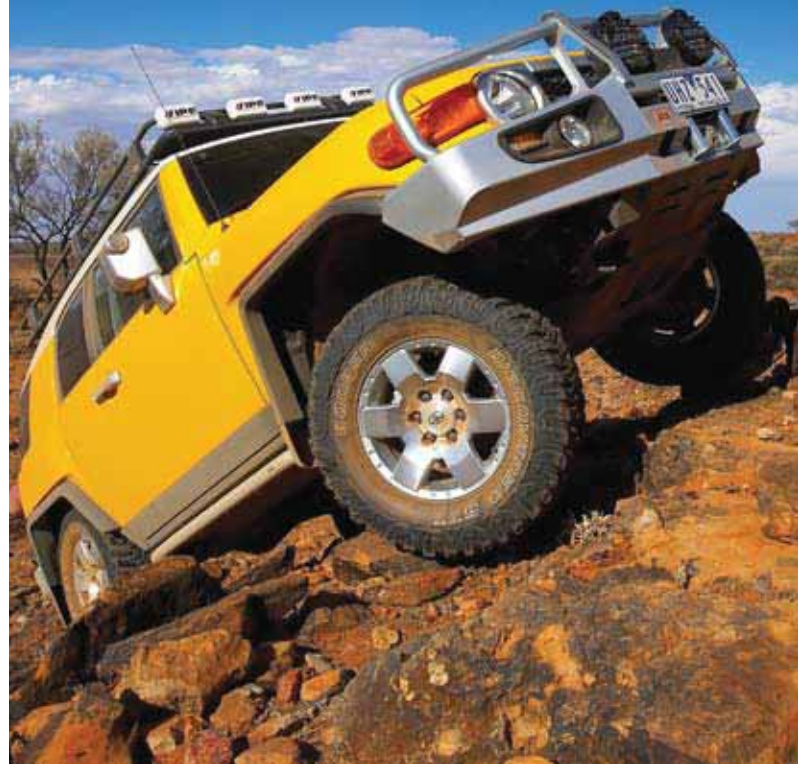
PRODUCTS THAT HAVE PROVEN THEMSELVES IN THE TOUGH US TERRAIN ARE READY TO TAKE ON THE OUTBACK TOO.

ARB and the FJ Cruiser have been synonymous with adventure in the US for a number of years, with the US variant of the vehicle taking on the Moab Desert and the Rubicon with ARB gear proving a vital investment in such famous 4x4 terrain.

Now that the Toyota FJ Cruiser has hit Aussie shores, we're pleased to announce that the products that have proven themselves in the tough US terrain are ready to take on the Outback too. Engineered and tested in Australia, these products include ARB deluxe bull bars, roof racks, Safari snorkel, Old Man Emu suspension and Air Locker locking differentials.

Engineered to ARB's uncompromising standards, the deluxe bull bar is the excellent accessory for the FJ Cruiser. With tapered and upswept wings to provide ultimate functionality and approach angles, along with a split pan design for increased strength and maximum airflow to the vehicle's engine, the deluxe bull bar has been engineered to withstand the extremes associated with four wheel driving.

ARB developed a mounting system specific to the FJ Cruiser which spreads impact and winch loads evenly over the vehicle's chassis. This design also takes into account the vehicle's air bag system, ensuring that it's not affected



when the bull bar is fitted. Suitable for winches up to 9500lb, the bar contains provision for IPF lights and CB aerials, while dual Hi-Lift jacking points come standard to ensure drivers are fully prepared in any recovery situation. Finished in a hard-wearing powder coat, the bar can be further customised with the option of colour coding.

When off road, enthusiasts will subject their vehicle to a range of contaminants including water, severe dust and grime. A Safari snorkel is a reliable and sound investment for the FJ Cruiser to ensure the longevity and performance of its engine. By relocating the engine's air intake from the relatively low and vulnerable position under the bonnet to a much higher and safer location, the Safari snorkel ensures the vehicle's engine has access to a constant source of cool, dry air.

Old Man Emu suspension will greatly improve the ride quality of the FJ Cruiser. ARB produces a range of integrated 4x4 suspension systems that deliver exceptional improvements in load carrying,

ride control and comfort. Old Man Emu's suspension systems for the FJ Cruiser also delivers up to 50mm increases in ride height, thereby minimising possible under-body damage while maximising the vehicle's wheel articulation.

Off road conditions can be unpredictable, especially if coupled with changing weather, and when the unexpected occurs, losing traction can be a big problem. ARB's award winning Air Locker system can mean the difference in the harshest terrain. Activated by the touch of a button, ARB Air Lockers make it possible for the FJ Cruiser to traverse steep, unpredictable terrain in a controlled manner, reducing the likelihood of vehicle damage and environmental impact.

ARB has also released both steel and alloy roof racks for the FJ Cruiser. Ideal for carrying bulky items or simply freeing up space in the cabin, all ARB roof racks are superbly mounted to ensure proper load distribution and feature an inbuilt air deflector plate to help decrease wind noise, most evident when driving at highway speeds.

Other products for the FJ Cruiser include ARB rock sliders and IPF lights, while ARB's engineers are in the process of designing a rear bar to provide even greater protection for your FJ Cruiser. For more information on all these products and ARB's extensive range of 4x4 accessories, contact your nearest ARB store.

Deluxe bull bar

// Part no: 3420210, 3520010 or 3520020

Rocker rails

// Part no: 4420100 plus optional skid plates 4420110

Air Lockers

// Front: RD111 or RD121
// Rear: RD132

Safari snorkel

// Part no: SS410HF or SS415HF

Steel & Alloy roof racks // Contact ARB for part numbers and pricing

Old Man Emu suspension

// Contact ARB for part numbers and pricing



HEY, KIDS, FOURBY HERE

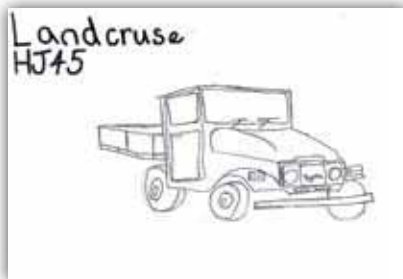
You've all been super busy recently – thanks for all the great drawings and pictures you've sent me! Keep sending them in and you too could win some awesome prizes from ARB. Check out my 'spot the difference' activity over the next page too – can you find all of the differences?



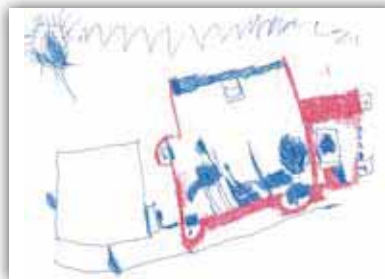
★ My name is **Tyronne**. Here is a picture of our 4WD. It's a Toyota Prado. We have an ARB bull bar. This is the picture I drew and this is the picture I coloured in and put the sticker on. I am 6 years old and like camping.



★ Hi Fourby, My name is **Mason** and I am 7 years old. Here I have drawn my favourite 4x4.



★ Hi, my name is **Lilie**. This is a picture of my Dad's new old 1979 LandCruiser HJ45 ute. We like going 4WDing in Dad's 100 Series LandCruiser at Fraser Island. We have a camper trailer that we like to take to Lake Cootharba.



★ 5 year old **Curtis** sent in these great photos and drawing.



★ This is our 4x4 Prado that we go to my grandparents' farm and sometimes we go camping. From **Nicholas**



★ 6 year old **Grace** sent in this cute drawing.

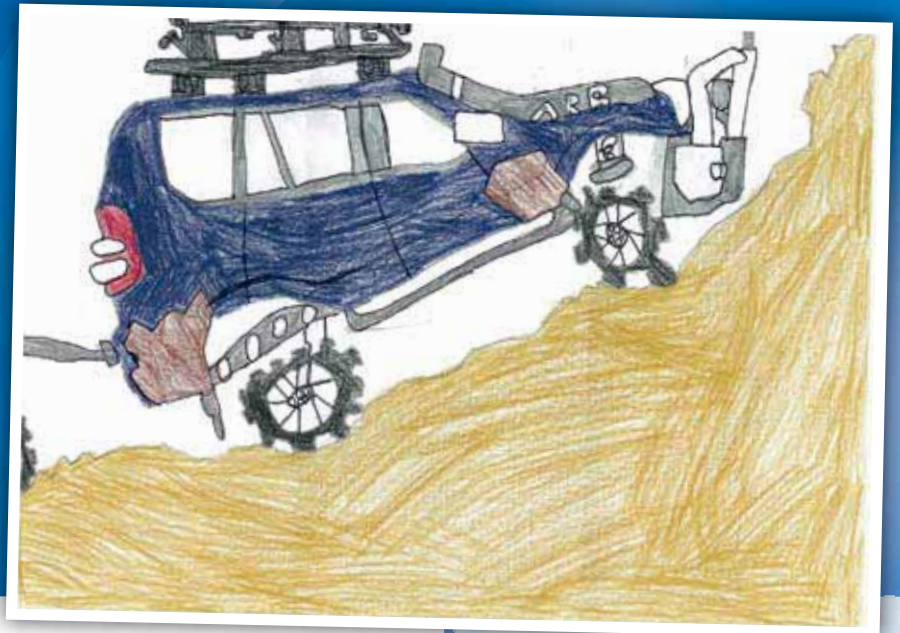


★ Hi, my name is **Jye**. I am 8 years of age. I like going camping in my Dad's 4x4. I like sitting in the front.

WINNER!

We really loved the picture 8 year old Jack drew of his family's 4WD. Congratulations on winning the Toys R Us gift voucher, Jack, and we hope you buy some cool new toys with it!

I drew a picture of my family 4WDing in the Coffs Harbour hinterlands. We loved the challenges and the view was awesome.



* 9 year old Dylan sent in this great monster truck drawing and photo of him fishing with his dad at Salt Creek.



* My name is Kyle. I am 7. I love going 4WDing with my dad in our Triton.

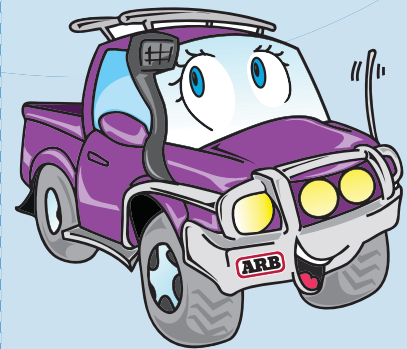


* Hi, my name is Ben. I am 10 years old. I live in Victoria. I like drawing cars and that's all from me...



* I'm 8... going for a drive with my mum.
From Mathew

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:

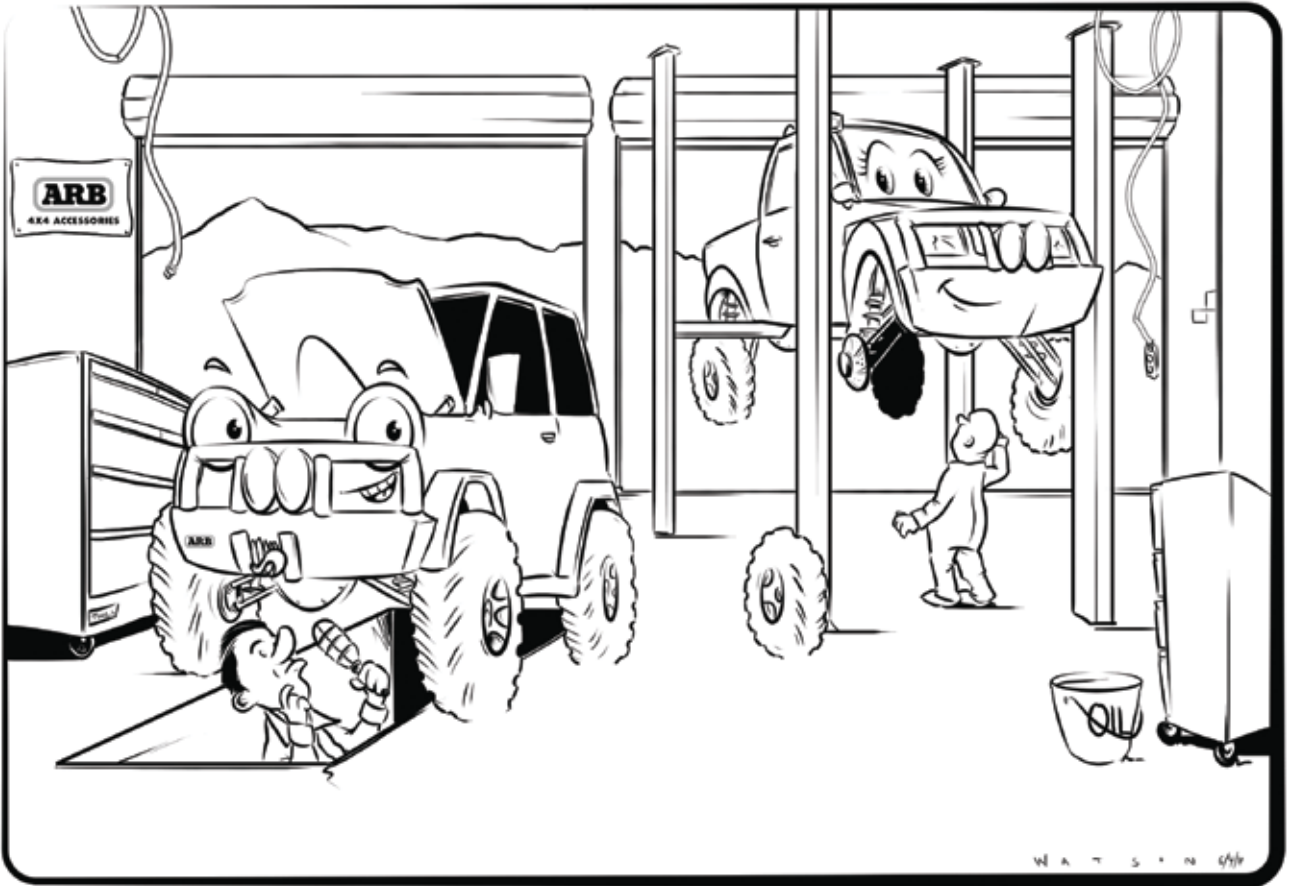
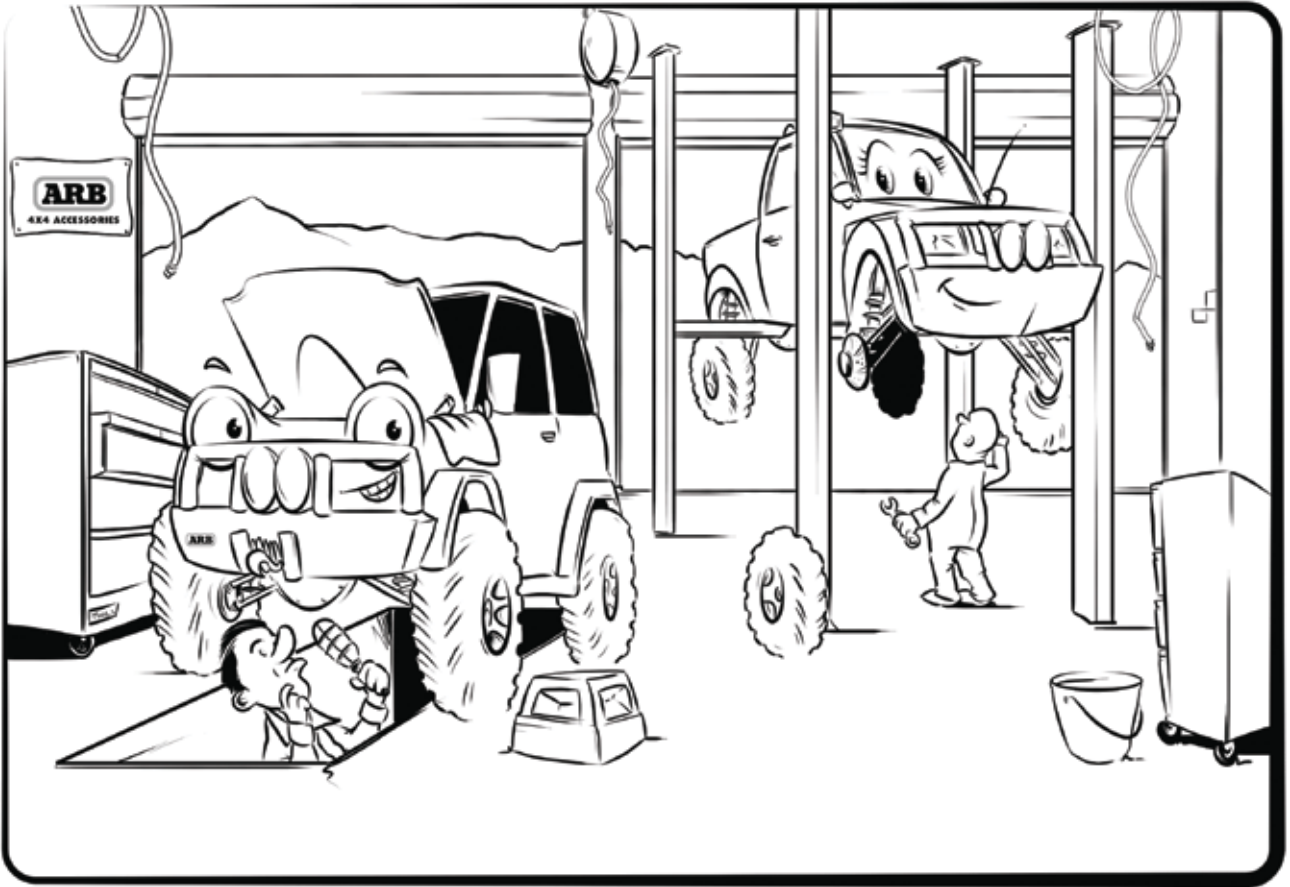
Post: ARB 4x4 Accessories
Marketing Department
PO Box 105, Kilsyth
VIC 3137

Email: fourby@arb.com.au

GAME

SPOT THE DIFFERENCE

Fourby and Ariel are having a relaxing tune-up before their next 4x4 adventure. Can you spot all of the differences between the two pictures? There are 10 to find!





FOURBY AND ARIEL TEES

ARB's hugely popular mascots, Fourby and Ariel, have just released two brand new t-shirts to add to their expanding range of quality merchandise.

Made from 100% cotton and fully machine washable, these t-shirts are available in sizes 3 to 12.

For Fourby fans, the new tee is available in bright green with a contrasting grey trim and features a large, detailed print of Fourby on the front. The Ariel t-shirt features

the loveable lass in great detail and comes in a vibrant pink with cream trim. Both tees feature a small ARB logo on the sleeve.

Available from ARB stores now, these new tees join a growing range of ARB Kids' merchandise, including a hat, drink bottle, pencil case and key ring.

Fourby T-shirt

// Part no: 217375-81

Ariel T-shirt

// Part no: 217382-88



TRI STATE SAFARIS CONTINUES WINNING STREAK

You might recall in the Autumn 2011 edition of 4x4 Action that Broken Hill based operator Tri State Safaris experienced great success at the 2010 NSW Tourism Awards.

Now they're celebrating their success at the 2010 Australian Tourism Awards, in which they were declared winners in the Tour and Transport category ahead of fellow competitors, including whale watching cruisers, balloon flights and other transport operators.

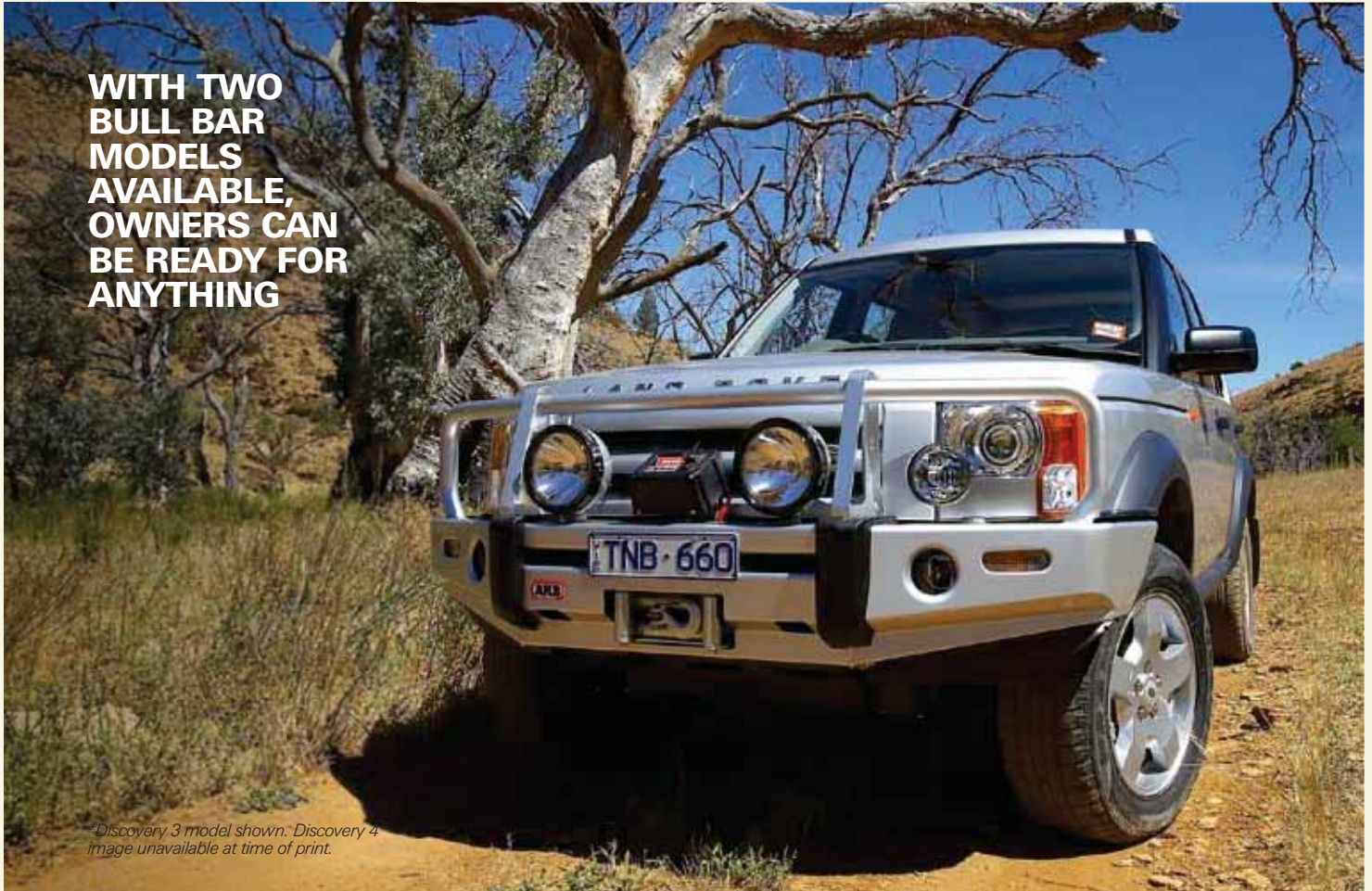
Mutawintji Eco Tours, also operated by Tri State Safaris, took out the Indigenous Tourism category at the prestigious awards ceremony. Tri State Safaris have won an Australian award on two previous occasions, in 2006 and 2007. The local tour operator has also had success with wins in three categories in both the NSW and Inland NSW Tourism Awards in 2010, making them the most highly awarded tour operator in the country.



Co-owner Mick McCulkin says regarding the Australian Tourism Awards: "The win highlights Tri State Safari's role as a significant national tourist operation. The entrants came from a diverse range of product so we are especially pleased that a 4WD operation led the field. It's all good recognition for the 4WD industry."



WITH TWO BULL BAR MODELS AVAILABLE, OWNERS CAN BE READY FOR ANYTHING



**Discovery 3 model shown. Discovery 4 image unavailable at time of print.*

IN FRONT

ARB'S DELUXE BULL BARS FOR THE LAND ROVER DISCOVERY 4 ARE AVAILABLE NOW.

To cap off a very busy couple of months, the engineers here at ARB have also worked hard to release two deluxe bull bars for the recently launched Land Rover Discovery 4.

These deluxe bull bars provide exceptional frontal protection and are an essential investment for owners who regularly head off road. Discovery 4 owners can choose

between the non-winch deluxe bar and the winch variant specifically engineered to suit electric winches up to 9500lb.

Engineered for six cylinder diesel engine vehicles, both bars are fully compatible with the vehicle's air bag system and also incorporate splash guards and pans to provide protection to vulnerable under body components. Along with strength-related aspects, these bars feature Hi-Lift jacking points integrated into the centre pan, while original tow points remain. The bars each incorporate provision for UHF aerials on the wings as well as IPF light provision and original fog lights.

While not able to accommodate the factory front camera found on many HSE models, the design of these bars allow front parking sensors to be fitted and is also compatible with factory headlight washers.

Both bars are finished in a durable black powder coat, which provides the perfect base for colour coding for that individual touch.

Deluxe bull bar
// Part no: 3232200

Deluxe winch bull bar
// Part no: 3432200



ARB AUSTRALIAN OUTBACK 4X4 EXTREME

ARB has had a long association with off road motorsport, so when we heard about an all new event planned for Outback NSW, we were very keen to get involved.

The ARB Australian Outback 4x4 Extreme, as it became known, was created by a team of representatives from the Broken Hill divisions of Rotary and Legacy. The concept was to create a fun-filled week of off road activities that would showcase the town and outlying area, and at the same time raise funds for Rotary and Legacy. The event was supported by the Broken Hill City Council, tourist association, local media and many businesses in the town.

This region has certainly seen the staging of some spectacular events over the years, with organisers and competitors drawn to the outstanding variety of terrain in the area.

Set in the Barrier Ranges, the properties around Broken Hill offer some outstanding 4WDing opportunities with steep, rocky hillsides and plenty of soft creek beds. Head a little further out, and you'll find sand dunes and an abundance of mud. All of this combined presents the perfect environment to test out the capabilities of drivers and vehicles, and the remoteness makes navigation an added challenge.

The ARB Australian Outback 4x4 Extreme started with a show and shine in town that allowed everyone to see up close the competitors' vehicles. They didn't shine for long though, with a very challenging prologue staged the following day at a purpose-built course. This in itself proved too much for some, with several vehicles being forced to pull out with mechanical troubles. Those that remained faced five days of action at several properties in the area, involving a variety of terrain.

We won't attempt to put into words the adrenaline-filled adventure that followed, but this pictorial should give you a taste of the fun. The entire event was filmed by the team from 4WDTV, and we can expect to see extensive footage in future episodes of the show. A DVD of the event will also be available through ARB stores, details of which will be announced in a future edition of this newsletter.

The week wrapped up with a dinner and presentation night in town that was attended by competitors, spectators and many local residents. Everyone enjoyed a great meal and live music, while the place getters shared in a massive \$37,500 prize pool.

The organisers are already planning next year's event, which they say will be bigger and better, so stay tuned for more information.

ARB AIR LOCKERS

Competitors will often modify their 4x4s to the point they barely resemble the original platform in order to build the ultimate off road racer. There is no disagreement regarding the preferred traction aid, though. The vast majority of competitors have always used ARB Air Lockers in their vehicles. Of course, the best of the best wouldn't consider using anything else. This is clearly demonstrated with the first, second and third place getters at the ARB Australian Outback 4x4 Extreme all running Air Lockers.

1st Place:

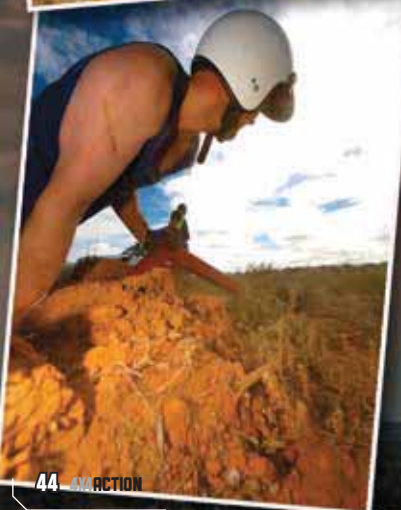
Peter Mihailoff and Clint Sharpe

2nd Place:

Adrian and Lisa Parker

3rd Place:

Andrew Mumford and Alister Grove

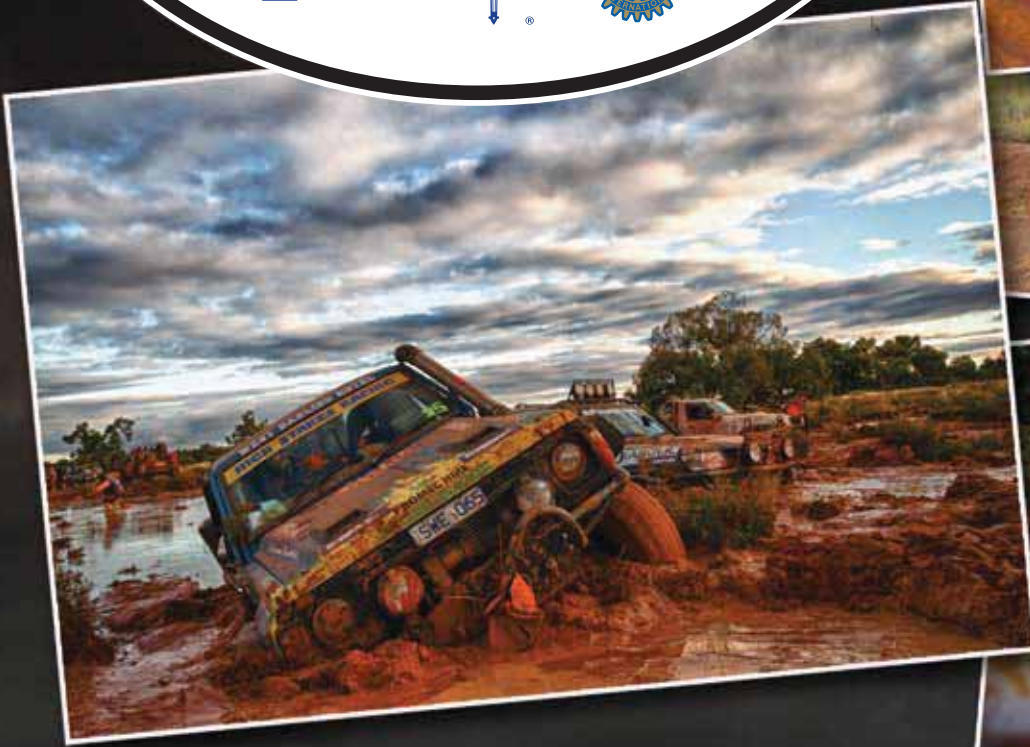


ARB

AUSTRALIAN OUTBACK

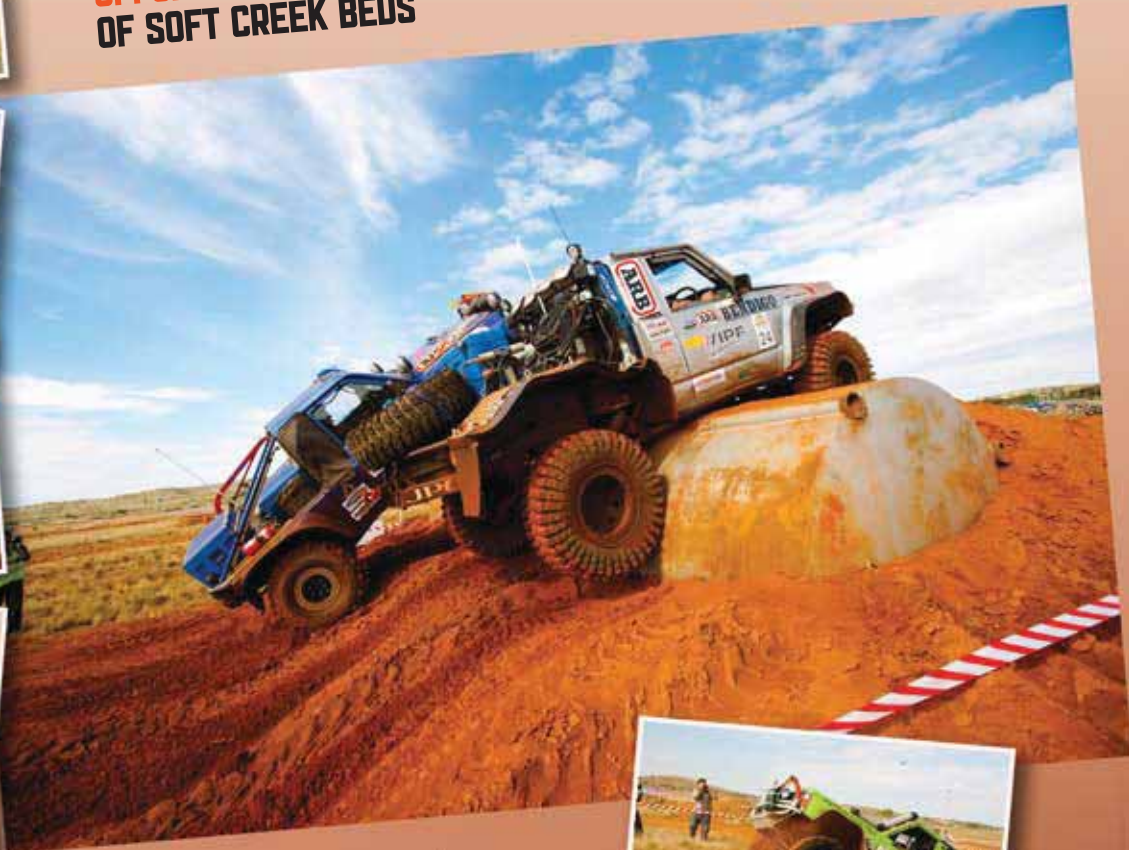
**4X4
EXTREME**

LEGACY 





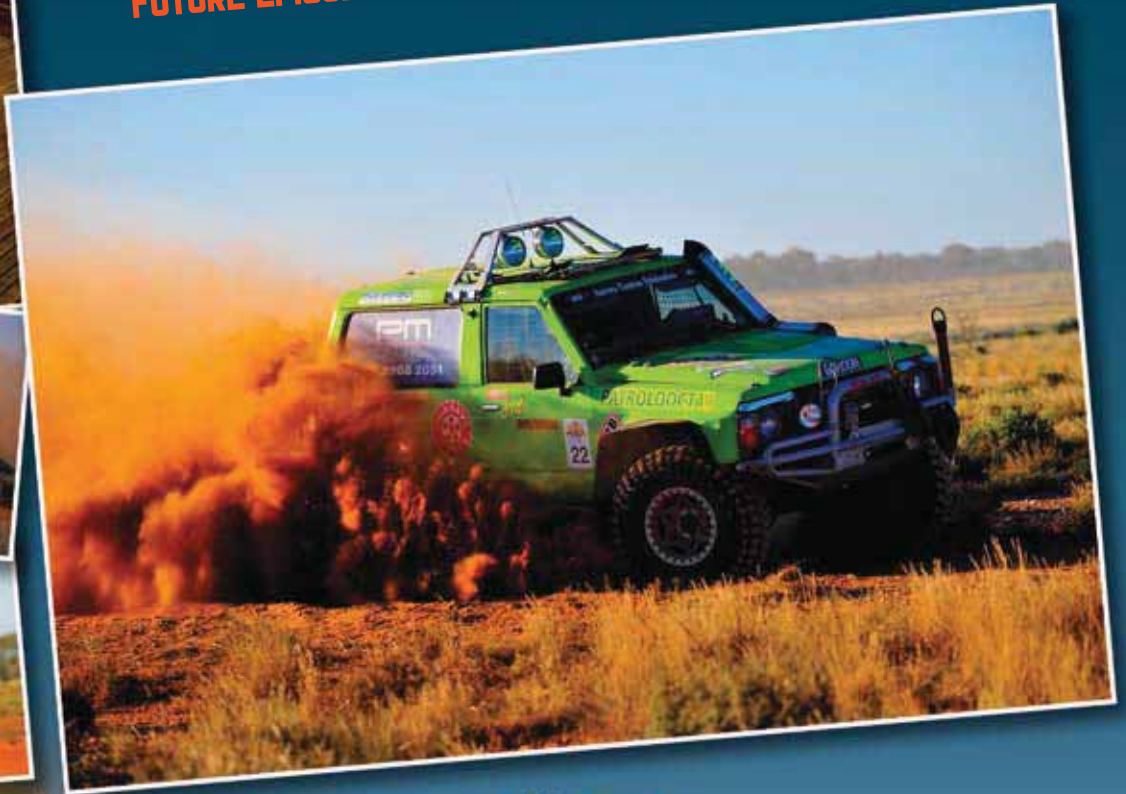
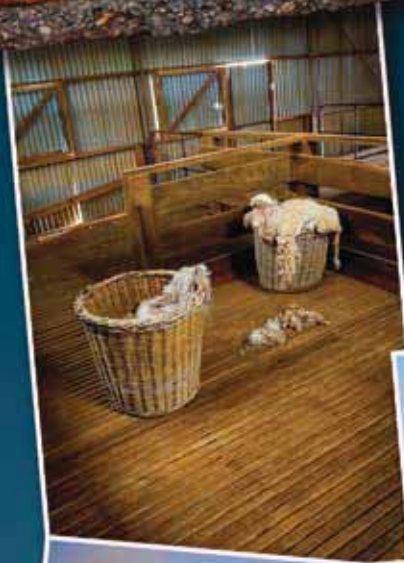
SET IN THE BARRIER RANGES, THE PROPERTIES AROUND
BROKEN HILL OFFER SOME **OUTSTANDING 4WDING**
OPPORTUNITIES WITH STEEP, ROCKY HILLSIDES AND PLENTY
OF SOFT CREEK BEDS







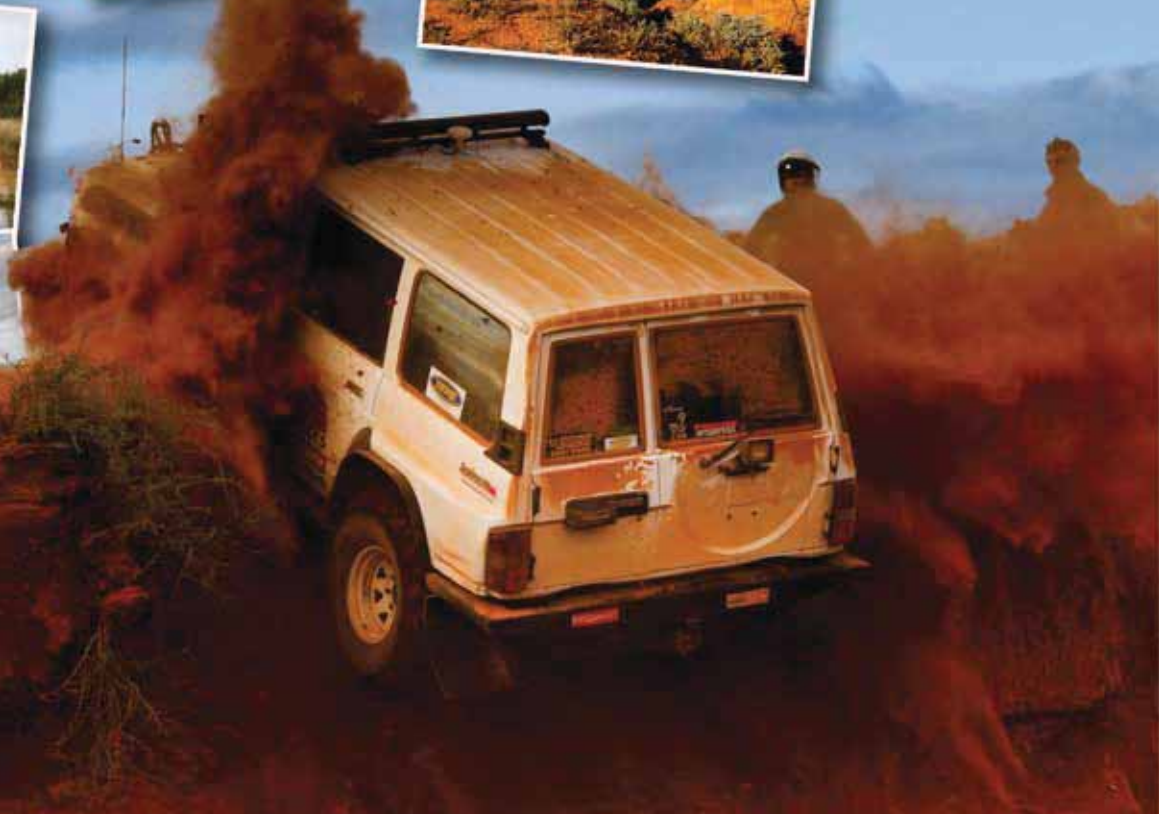
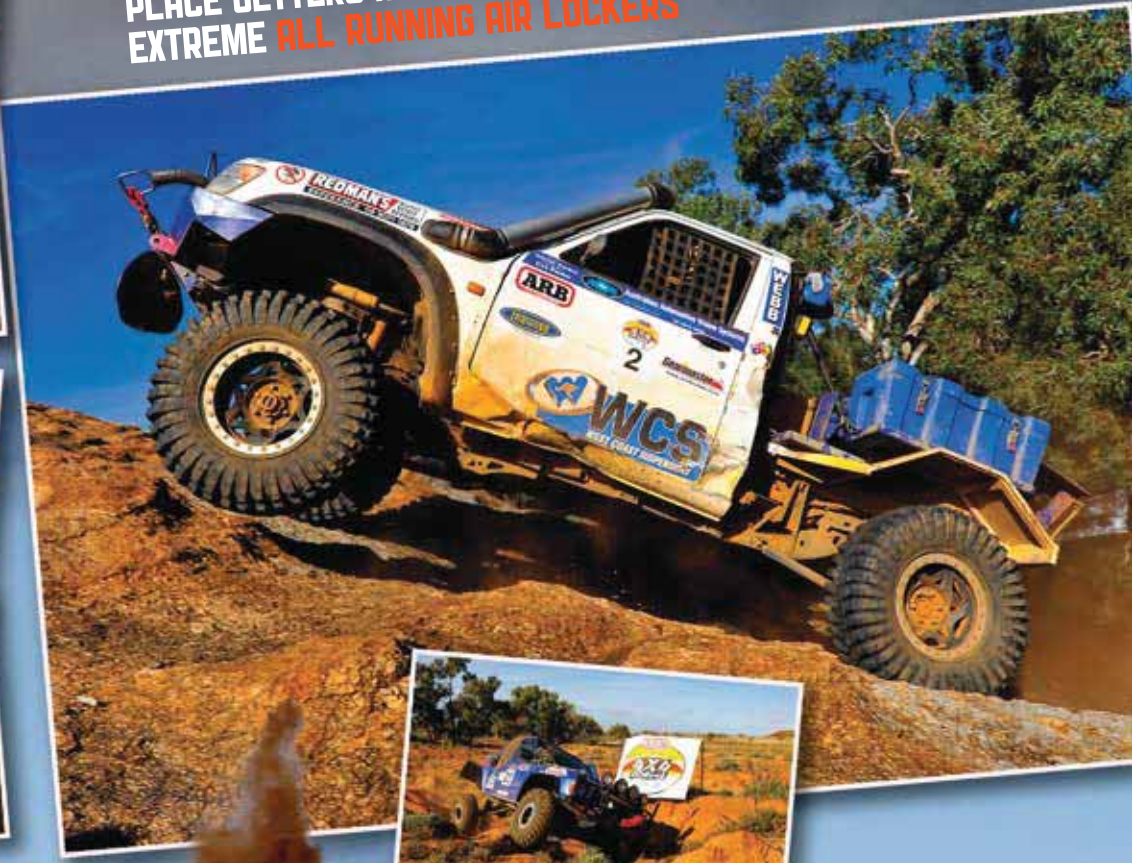
WE WON'T ATTEMPT TO PUT INTO WORDS THE ADRENALINE-FILLED ADVENTURE THAT FOLLOWED... THE ENTIRE EVENT WAS FILMED BY THE TEAM FROM 4WDTV, AND WE CAN EXPECT TO SEE EXTENSIVE FOOTAGE IN FUTURE EPISODES OF THE SHOW







THE BEST OF THE BEST WOULDN'T CONSIDER USING ANYTHING OTHER THAN AIR LOCKERS. THIS IS CLEARLY DEMONSTRATED WITH THE FIRST, SECOND AND THIRD PLACE GETTERS AT THE ARB AUSTRALIAN OUTBACK 4X4 EXTREME ALL RUNNING AIR LOCKERS





AVALANCHE VEST

ARB's great range of apparel has had a recent addition with the release of the new Avalanche Vest. The ideal garment for the cooler months, this vest incorporates a breathable feather fill for optimum warmth. Featuring an attractive two-tone grey colour pallet with contrast lining, the vest utilises a nylon matt and ripstop outer, making it more resistant to tears and rips than your average garment.

Designed with the outdoors in mind, the vest features press stud buttons to make it easy to wear and take off, and two handy front pockets for various small items. The Avalanche Vest is finished off with a neat ARB embroidered logo on the chest, and comes complete with a stuff sack for space saving storage on your next camping trip.

Available in sizes XS-3XL, the Avalanche Vest can be found at ARB stores around the country now.

// Part no: 217364-70



TO CAP IT OFF

Just when you thought you had every possible accessory available for your 4WD, along comes a subtle, classy addition to ARB's promotional range.

Available in black, red or silver, ARB's new valve cap range comes in packs of five. Made from aluminium, each cap features a small ARB logo on the top within a protective plastic coat. The perfect finishing touch to your ARB-customised fourby, the valve caps can be found in your local

ARB store now along with a range of other promotional merchandise.

Black // Part no: 217361

Red // Part no: 217362

Silver // Part no: 217363



Since 1977, Bushranger has followed the philosophy that with the right advice, training and attitude – and some suitable off road accessories – anyone with an SUV or light-duty 4WD can head off road with confidence. And recent months have seen Bushranger release a range of products to make off road adventures even more accessible.

TRI-FOLD SHOVEL

Having the right tools for an unexpected situation can mean the difference between continuing on in a few minutes or delaying a trip for hours. Measuring only 25cm long when folded, the shovel features a 2mm heat-treated steel blade and moulded nylon handle with reinforced extensions. Weighing only 1.2kg, the shovel has three blade positions and comes with a convenient carry bag with Velcro tab.



BUSH SAW

Lightweight and compact, Bushranger's new folding Bush Saw measures only 23cm when closed, and features a 18cm blade. Ideal for collecting firewood and for clearing branches blocking off road trails, the Bush Saw incorporates an ABS moulded handle designed to provide extra finger protection. The 65Mn steel blade features heat-treated teeth that have been sharpened on three sides for excellent sawing performance.

NIGHT HAWK HID DUAL LIGHT KIT

Built to handle rugged conditions, the Night Hawk range has recently expanded to include the HID Dual Light Kit.

The kit contains a 205mm spread beam and 205mm pencil beam Night Hawk light, plus wiring loom, conversion kit and two clear covers, and delivers over twice the luminosity of most 100W halogen lamps. With a maximum power draw of 10 amps, both lights have a life expectancy of up to 3000 hours.

A raft of safety features have been incorporated into the design, including short circuit protection, no-load protection, hi-tech core plate control and reverse polarity



protection. With waterproof and shock resistant ballast, the lights are designed to be reliable in the harshest terrain. The kit comes with a one year warranty and is available from ARB stores and selected stockists now.

NOW FILMING HIS FOURTH SERIES, PAT CALLINAN LETS US IN ON A FEW OF HIS FAVOURITE DISCOVERIES WHILE IN THE VICTORIAN HIGH COUNTRY.

PURE GOLD

Words by Pat Callinan. Photography by Offroad Images.



I guess if I were more media savvy, these words about the next season of the show would never see the light of day. Well, at least not until the show aired. But I'll be buggered if I'll keep the readers of this fine publication in the dark about some of the new things I discovered in the Victorian High Country.

So here's the thing. Like many of you, I've been to the Victorian High Country on a bunch of occasions. I've marvelled at its magnificence, and occasionally got brown-undies thanks to its gravity-defying tracks. But like most adventures, you always come back with something special, something unexpected.

This latest adventure started in the Buckland Valley, a stone's throw (if you've got a damn good arm) from the resort town of Mt Hotham. After making our way to the Gunns and West Ovens tracks, we slipped down to the valley floor on the Clear Creek track. It was here that we met up with Andrew Swift, the pre-eminent history guru of the area. Andrew told us about the thriving gold community that carved its living out of these chilly hills back in the 1850s. It was a tough mob that inhabited this region, and persecution inevitably followed. Amongst its not so glittery history, the hills saw a ghastly uprising led by Irish miners against the Chinese, resulting in the killing of hundreds of Chinese.

Yet this was not the only problem to hit the gold field. As a result of poor hygiene, typhoid broke out, killing thousands of miners and their families, and prompting the Buckland to be named 'The Valley in the Shadow of Death'.

UNDERGROUND WONDER

One mine that has seen very little penetration over the past 100 years is the Red Jacket Mine. It sits perched halfway up an incredibly steep hill, and is able to be accessed only by scaling over a 300-metre long near-vertical pile of loose mine tailings. I trudged up the hill with historian Andrew, who is as surefooted as his nickname – Rat – suggests.

While he seemingly glided up the rocky tailings, I was like an asthmatic old diesel, chugging away steadily, but certainly not rapidly. After the one-hour trek, we finally arrived at the entrance to the mine. I now learned why no-one had accessed this place in the past eight decades – it was flooded.

With ice-cold water one metre in depth in front of you, there is no way a self-respecting human would enter this mine. But never trust a bloke called Rat; Andrew had an idea. Awaiting us was a couple of small inflatable boats – the type you get for Christmas off gran and only use once. We would float hundreds of metres into the side of the

mountain, through a mine that once dragged out ounces of shiny gold from the quartz seams. Heck, I'm up for anything!

With Pelican torches fully charged, we slipped the boats into the dark and pushed our way along the walls. It was just wide enough for the boats, so paddles weren't required. The water was crystal clear and icy cold and afforded excellent vision to the bottom. As we floated by, we could see the holes drilled in the walls for the explosives, with black powder still marking the rock.

After 20 minutes of floating and pushing, we arrived on the damp earth at the end of the passage. We scaled over cave-ins and clambered over rock falls before arriving at one of the most humbling sights I've seen. There on the dirt floor were hob-nailed bootprints from the mining era, as fresh as if they were made yesterday. Amazing! We trekked further into the dark, careful not to disturb the timeless prints.

At the end of the mine was a newspaper slumped over a pile of rocks. The date? August 27, 1937. So not only could we date the footprints, we now knew when the last miners pulled the gold from this hole. This was a privilege indeed, and my thanks goes to a bloke they call 'Rat' for showing me his domain.

MORE THAN ONE HIGHLIGHT

Yet Red Jacket Mine wasn't a lone highlight on this journey. Our sharp-shooting photographer, Michael Ellem, and his ability to get the goss from the locals never ceases to amaze me. Long after I had retired to the swag (after devouring the best T-bone in history), Michael chewed the locals' ears on the single best hut in the region. We didn't want to film and photograph just any old hut – we wanted a real cracker.

On Michael's advice, the next day we decided to take a two-hour diversion out to Eaglevale. On this private property there was apparently a pretty decent hut, which a mob from Melbourne had restored. 'Pretty decent' turned out to be the understatement of the century!

From the snaking driveway we stopped and stared at a bark-lined hut that looked like it was straight out of 1850. Grapevines plump with fruit hung from the veranda, and a post and rail fence kept cattle from the house paddock.

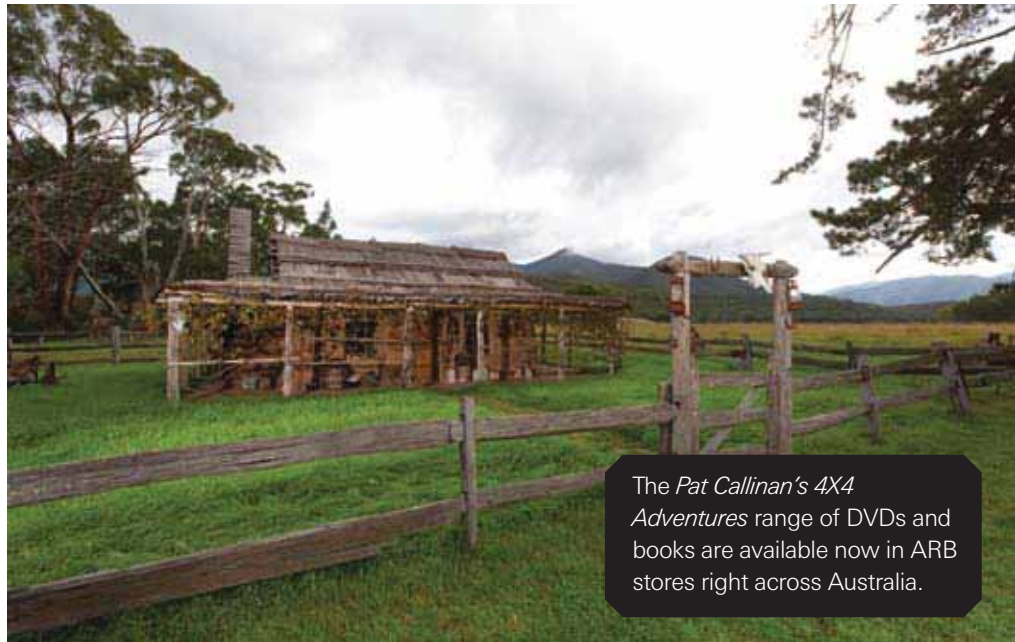
But it was on entering old Harry Smith's hut that our collective jaws dropped. It was like Harry was still living there – gun over the door, Hereford rug on the floor and the writing desk and chair perched ready for action. Walking through the hut we found hundreds of trinkets of yesteryear, lovingly restored and beautifully presented. But the best surprise was old Harry, or at least a wax impression of the bloke, lying peacefully in bed under his kangaroo skin rug.

I could tell you more about this hut, but I don't want to spoil your surprise. And I put the stunning presentation of this hut down to the fact that it lies on private property. You need to stop off at the Eaglevale homestead to get permission to visit the hut, a process that has no-doubt helped the place retain its unique quality.

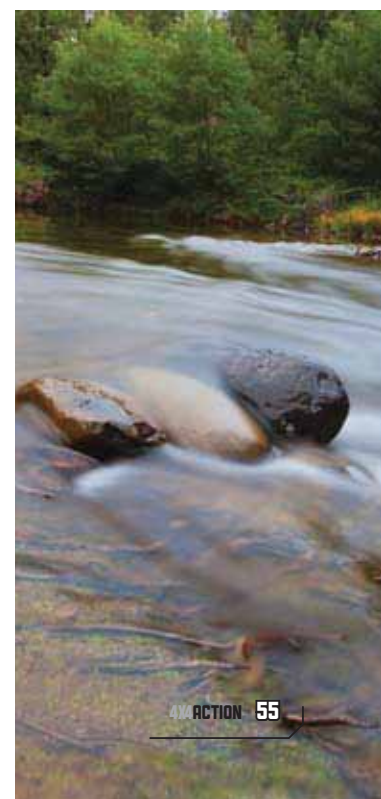
Ah, and one final plug for one of Australia's best campsites. It's off King Spur – snow gums, soft grass and views across to Hotham – say no more...

Keep the shiny side up!

Cheers,
Pat Callinan



The Pat Callinan's 4X4 Adventures range of DVDs and books are available now in ARB stores right across Australia.



AUSSIES IN AFRICA

THE FINALE

NEIL COCKS SHARES WITH US THE LAST FEW DAYS OF HIS EPIC AFRICAN SOJOURN.

With a population of 11 million, Tunisia is a small country about half the size of Victoria. It is Africa at its most Mediterranean, and I swear most of the fertile land is covered in dates or olives. Tunisia's French colonial past means that the main languages spoken are Arabic and French.

We decided to head down to the Tunisian Desert to have a look at, among other things, some of the sites used for the Star Wars movies. The first one we looked at, Ksar Ouled Soltane, has weird architecture that rises to four stories high, with the top accessible only by impossible fairytale staircases (I managed to climb the highest one and it was a bit hairy). Some of these locations were also used in the Monty Python movie *The Life of Brian*, and the Tunisian desert scapes also played a part in the film *The English Patient*.

The country we were travelling through on the way to the Oasis of Douz is populated mainly by Berber and Bedouin people. Douz is quite a big town and is situated on the

Grand Erg Oriental. This Erg is your classic desert – a sea of sand that is still and silent, with huge golden drifts that cast strange shadows with the setting sun. There are some 400,000 date palms around this oasis, which produce a lot of dates for export.

WE COULD SEE THE NORTHERN-MOST POINT OF THE AFRICAN CONTINENT... ALL WE HAD TO DO WAS FIND A WAY TO REACH IT

Helen and Viv had a lovely time in the central market in Douz.

We went as far west as the town of Tozeur, not far from the Algerian border, before turning east and right back across Tunisia to the small town of Al Jem, which is dominated by a huge Roman colosseum that was built around 2000 years ago by olive oil traders with money to burn. This colosseum is in much better condition and has acoustics superior to the one in Rome. As is typical with most unique places, a whole industry has evolved around the colosseum, so you have to run the gauntlet of people trying to flog clothing and souvenirs.

We drove out to the coast where there are lots of towns catering for the European tourists, with many hotels, some of them massive. Alas, campers are not looked after, and the hotels, being pretty grand, were not for us. But while travelling between two of these towns, I

noticed a 4WD moving along the edge of the salt lake. We found a track that eventually led us around the lake to a campsite right on the beach. Viv, with help from Helen, cooked a beautiful dinner of lemon chicken and rice – yum!

We went to bed at about 10pm and were out like a light, only to be woken up by the beep of a car horn. It was the police – a patrolling constable and sergeant had seen our camp and investigated. We told them we would be moving on in the morning and they took our rego numbers and passport details. Driving an old, crappy Pajero station wagon, they got bogged while leaving, so we had to pull them out.

SAFARI IS THE SWAHILI WORD FOR ADVENTURE, AND WE SURE HAD PLENTY OF THAT



About 1am the police car returned, this time with the sergeant and his superior. It seemed they had found a place they regarded as a better campsite and wondered if we would like to go there. I explained that it would be a bit difficult in the dark and after a little discussion in French they left us alone. After almost getting bogged again, they were off and we could finally get back to sleep.

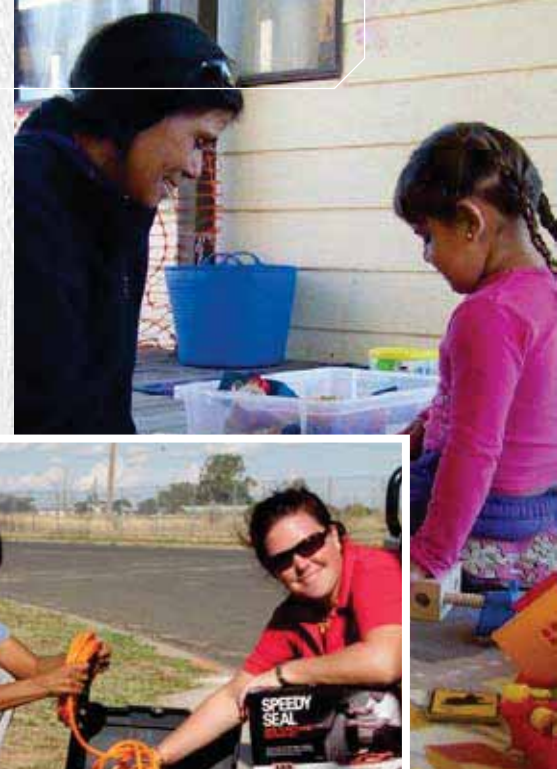
We awoke to a lovely morning and happily no sign of the police. We decided to bypass Tunis with a 20km shortcut that turned into a

60km drive through the olive groves, then we made our way to the beautiful ex-colonial French town of Bizerte. Somehow, we found our way through the maze of narrow streets to a road that took us to the top of Cape Blanc where there was a fantastic view. From this vantage point we could see the northernmost point of the African continent, and all we had to do was find a way to reach it. It was not easy. We tried this track and that track until we finally found one that led to the old lighthouse – and there it was, the most northern point and the end of our African sojourn.

It had taken us eight months and 35,000km to reach here, through a continent that has been described by many as beautiful, ugly, exotic, dangerous, frustrating, annoying, exhilarating and so much more. One thing Africa can never be described as, though, is dull.

And with much sadness but many magical memories, we saw the end of our great African safari. Safari is the Swahili word for adventure, and we sure had plenty of that.





ROAD TO RECOVERY

ARB IS PLEASED TO DONATE A RANGE OF RECOVERY AND TYRE REPAIR EQUIPMENT TO THE BREWARRINA MOBILE CHILDREN'S SERVICE.

Staff at the MacKillop Rural Community Services have long relied on their 4WDs to reach remote locations across NSW in order to run support services and programs within rural communities.

Travelling long distances daily, staff often face difficult and unpredictable terrain, and so undertaking 4WD driver training has become a priority.

Driving from Brewarrina to the isolated communities of Goodooga, Weilmoringle and Carinda, the Brewarrina Mobile Children's Service – one of the many programs within the MacKillop Services – provides early childhood education to children aged up to five years old living in remote areas. They also visit a number of outlying stations to work with families whose children are not able to easily access early childhood education.

Staff from the Brewarrina Mobile Children's Service recently participated in a 4WD training

course at Bourke, NSW. Trained by Michael McCulkin of the Broken Hill-based Australian 4WD Academy, staff learnt how to drive their 4WDs in a variety of terrain, including muddy, slippery conditions resulting from significant rain in the area. The MacKillop Rural Community Services began in a very small way at Balranald NSW in 1993, with the Sisters of St Joseph providing counselling and support to farming families severely affected by drought. In 2000, the sisters developed the MacKillop Rural Community Services, and began establishing a variety of programs in isolated communities in western NSW. MacKillop Rural Community Services are focussed on ensuring disadvantaged people in rural areas have access to the knowledge and skills to live dignified, secure and empowered lives in resilient communities.

Travelling in remote areas of NSW across long and unforgiving roads

on a daily basis is no mean feat, especially with minimal recovery equipment, and so ARB is pleased to support the MacKillop Rural Community Services and their work in assisting the community in rural areas of western NSW.

In order to make their countless trips easier, ARB has supplied the MacKillop Rural Community Services with an ARB Premium Recovery Kit – incorporating a snatch strap, winch extension strap, tree trunk protector, snatch block, recovery damper, bow shackles and gloves – as well as an ARB portable air compressor, ARB Speedy Seal tyre repair kit, and a 12V EzyWrench for loosening (or tightening) stubborn wheel nuts.

These accessories are sure to help the staff through many sticky situations and keep MacKillop Rural Community Services on the road to assisting the western NSW community.

NEW ARB BUCKET HATS

ARB's popular bucket hats have had a recent revamp, and are now available in a new style and two colours. Providing excellent sun protection throughout the year, the ARB Bucket Hat now comes in blue or green and features a prominent ARB logo on the front. A cream wraparound with eyelets adds a unique look to this Outback and fishing staple. Be sure to get your hands on them at your local ARB store.

Blue // Part no: 217342

Green // Part no: 217343



WHAT'S THE DIFF



Four wheel drivers with ARB Air Lockers and ARB Differential Covers will recognise the distinct look and shape of the new diff cover key ring. Made from cast aluminium and finished in a smooth powder coat, it's the perfect

addition to your set of keys and looks just like the real thing. A must for all fans of the competition-winning ARB Air Locker.

// Part no: 217321

ARB TRAVEL MUG

Whether you're enjoying a cold drink on the beach or a hot chocolate around the campfire, ARB's Travel Mug is the perfect accessory on your next off road journey. With a double wall stainless steel construction for improved hot/cold retention, this mug holds 450ml and features a twin seal lid with a quick seal closure for reduced spillage. Its

slim body makes it ideal for vehicle cup holders, and also features a contoured easy-grip handle and rubberised sides for improved grip.

The perfect addition to your next off road trip, the ARB Travel Mug is available now from ARB stores.

// Part no: 217359



BRAGGING RIGHTS - YOUR 4X4

READER VEHICLE OWNER: Bram Kefford, VIC

VEHICLE MAKE: Lexus

VEHICLE MODEL: LX470

VEHICLE YEAR: 2008

ENGINE: 4.7L V8 petrol

ACCESSORIES FITTED:

ScanGauge II Engine Diagnostic System, Platinum AHC 40mm lift package, front IFS differential drop kit, Pedders air bags to rear coils, Polyair gauges, low pressure air bag sensors, Pacemaker Headers with 3" Mandrel single exhaust, Chip Torque XEDE ECU Processor, ARB Sahara bar, Warn 9.5XP winch, IPF XS900 driving lights, RedArc dual battery system, National Luna dual battery monitor, GME TX3340

UHF CB radio, ARB on-board air compressor, Black Widow rear storage system, Pro Comp all terrain Xtreme tyres, Billet Race Craft front and rear diff breathers, Polaris rear camera, Projecta IM1000 12V/240V inverter, Platinum fridge slide, ARB roof rack, Foxwing awning, Kaymar Hi-Lift jack and shovel mount.

FAVOURITE ARB ACCESSORY:

ARB Sahara bar with Warn 9.5XP electric winch.

FAVOURITE 4WD SPOT:

Victorian High Country.

WHY I LOVE 4WDING:

The ability to escape the rat race of city life and enjoying the serenity of the wilderness.

MEMORABLE 4WDING

MOMENT: Getting bogged up to my knees in mud and self recovering.

ADVICE FOR 4WDERS:

Don't skimp with money on 4x4 accessories – purchase proven name brands!



OFF ROAD WITH ARB

VEHICLE OWNER: Michell Bairstow, ARB Osborne Park, WA, manager

VEHICLE MAKE: Nissan

VEHICLE MODEL: Patrol GU and GO

VEHICLE YEAR: 2004 and 1994

ENGINE: 3L TD and 4.2L EFI petrol

ACCESSORIES FITTED:

The GU has every ARB product possible – LTR shock absorbers with OME coils, TX4400 UHF, Outback roller drawers, cargo barrier and roof console, two Long Ranger fuel tanks, electric brake controller, Warn 9000lb winch, ARB dual rear wheel carrier, Air Lockers, ARB on-board air compressor, IPF 900XS lights, ARB side rails and steps. The GO has 4" lift, dual batteries, winch bull bar, adjustable panhard and custom rear control arms, GME UHF, rear work light, custom rock sliders, petrol/gas with custom auxiliary fuel tank.

FAVOURITE ARB ACCESSORY:

ARB bull bar. When driving up to and in the Kimberley, it's as much the cattle as the kangaroos you need to watch out for. Knowing I have that extra protection and safety factor means I am a lot happier travelling those roads.

FAVOURITE 4WD SPOT:

WA offers so many beautiful spots, including Warren River, Balingup, Collie down south and Cape Leveque, Turquoise Bay and Yardie Creek up north. How can I choose?

WHY I LOVE 4WDING: Because of the freedom, fun and adventure it

offers anyone who wants to get off the blacktop.

MEMORABLE 4WDING

MOMENT: I guess competing in the Night Owl Mud gymkhana (being only 1 of 2 ladies) soon after starting out in 4WDing. But there's something special with each and every adventure. That's why I keep 4WDing.

ADVICE FOR 4WDERS: Always learn what you and your vehicle are capable of in safe, semi-controlled situations like 4WD club trips and 4WD training courses.



DANIEL BONGARD



THIS ISSUE, WE MEET ARB ENGINEER DANIEL BONGARD, WHO HEADS OUR AIR LOCKER DIVISION IN MELBOURNE.

SO YOU'RE THE SENIOR DESIGNER AND ENGINEERING SUPERVISOR FOR ARB'S MECHANICAL PRODUCTS. WHAT DOES THIS ENTAIL?

Basically, I oversee the development of all mechanical products from ARB, including Air Lockers, air compressors and even snatch blocks. I have a team of four in the Air Locker division that I am directly responsible for, but I'm also 2IC for the rest of ARB's engineering department.

AND HOW BIG IS ARB'S ENGINEERING DEPARTMENT?

Bigger than most people assume. We have twenty three staff in design engineering, and another twelve in our production engineering department. We're all based at the Kilsyth head office.

YOU'VE BEEN AT ARB FOR 12 YEARS. YOU MUST ENJOY IT HERE.

I come in every day for the same reason I joined ARB in the first place – because there's a drive here to

produce a better product rather than one dictated by finding the cheapest components. When I migrated to Australia from Canada, I noticed the quality of ARB's products and decided I wanted to be part of that. A previous job had been based on justifying the smallest cost rather than attaining a quality product, but I could see that ARB didn't follow that mindset. Plus I get to destroy things as part of my job.

REALLY? DESTROYED ANYTHING RECENTLY?

Not in the past few weeks. But me and the Air Locker team have destroyed 100s of diffs on the test rig over the years. It's critical that our diffs exceed the strength of axels and other driveline components so that our customers can always trust the Air Locker brand. So destructive testing is crucial. We've probably destroyed more ARB gear than the rest of the corporation put together.

WHAT ARE YOUR CURRENT PROJECTS?

We've been busy with the twin motor compressors, and have

worked on a couple of new Air Locker applications. We're also changing a number of old model Air Lockers to newer designs which are even stronger and more reliable.

WHAT DID YOU DO BEFORE YOU WERE INVOLVED WITH ARB?

I spent several years in a design team and as part of the pit crew for touring car racing in Canada for Multimatic Motorsports.

HOW'D YOU GET A PASSION FOR 4WDING?

I didn't have it until I joined ARB. I was more interested in track cars. Then I got my hands on a LandCruiser 60 Series, which was an awesome vehicle to head off road in, and joined my ARB mates on the trail. I have a H3 Hummer now.

ANY FAVOURITE OFF ROAD LOCATIONS?

Definitely Fraser Island because of the scenery, lack of people and the ability to drive 100km/hr on a beach. What could be more fun?



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4X4 ACCESSORIES