



APRIL 2009

# 4x4action >



**OLD MAN EMU**  
4X4 SUSPENSION BY ARB

# THE WORLD'S BEST 4X4 SHOCK ABSORBER HAS EVOLVED



# 4x4action >



**OLD MAN EMU**  
4X4 SUSPENSION BY ARB



## > PRODUCT RELEASES

200 Series rear bars, Sahara bumpers for Mitsubishi Pajero and more

## > GIVEAWAYS

Check out our giveaway pages for your chance to win cool ARB prizes

## > LATEST NEWS

News from the Rainforest Challenge, Neil Cocks' African trip and more

## > FEATURES

This issue is chock-full of interesting feature articles to keep readers occupied

## NITROCHARGER SPORT

09

Old Man Emu has been at the forefront of suspension development and innovation for decades. And now we're ready to lead the way with the most advanced and innovative 4x4 shock absorber Australia has ever seen – Nitrocharger Sport. For the comprehensive report on this brilliant new product, turn to page 18. >>

# 4x4 action

## HIGHLIGHTS

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Editor: Debbie Kaye

Contributors: Candice Baker, Shane Fewster, Stuart Fooks, Matt Frost, Syd Groves, Mark Lowry, Kelly Teitzel, Mark Allen, Pat Callinan, Neil Cocks, Chris Collard, Andrew Hiscock (Overlander Magazine), Richard McKenna, Shaun Robertson, Luis J.A. Wee, Dylan Wilson

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### ARB Snapshot

If you watch the news or read the papers, you'd be forgiven for thinking that the economy is, to put it in 4WD terminology, bogged up to the axles. I'm pleased to report that ARB, a proudly Australian owned public company, is defying the odds and is actually expanding its operations at the present time.

First up, we have four new ARB stores that have recently opened their doors. Two of these, ARB Maroochydore and ARB Geelong are new operations, while ARB Gawler is relocating to bigger premises in Elizabeth, and likewise, ARB Mackay is also shifting to larger premises. These new stores will provide four wheelers in these areas with far better access to ARB products and services, and the staff there look forward to helping customers with their off road requirements.

Similarly, we're not cutting back on product development either. In fact, this is the biggest newsletter we've ever produced, packed full of the latest gear. In this issue you'll find our revolutionary Nitrocharger Sport shock absorbers, Air Lockers for the LandCruiser 200 Series and bull bars for the Mitsubishi Pajero. And what do all of these products have in common? Well believe it or not, they're all made right here in Australia. In a time when an increasing number of companies are shifting their production overseas, ARB continues to manufacture the bulk of our core product lines here in Australia. If you're interested in seeing our manufacturing plant in operation, visit [www.youtube.com/ARB4WD](http://www.youtube.com/ARB4WD) where you'll find a short video clip titled 'ARB factory tour'.

On a sadder note, you'll see we've dedicated a section of this newsletter to the events of Black Saturday. A number of ARB staff were personally affected by this tragedy, including one of our company directors, Andy Brown, and warehouse operations manager, John Blakeney. Both Andy and John fought fires for several days on their properties in the Yarra Valley, successfully defending their homes. Mark 'Lowmount' Lowry, a long term ARB employee and regular contributor to this newsletter, lost his home and everything he owned in Kinglake, including four 4WDs (three of these were immobile 'project' vehicles). Lowmount's had a flood of support from fellow employees, suppliers and customers, and is well on his way to getting back on his feet. He's now the proud owner of a 100 Series LandCruiser that seems to be getting an ever increasing amount of gear fitted to it.

Finally, there's some great editorial in this newsletter, including an article titled Round Oz on a Shoestring from a couple of Neil Cocks' grandchildren, Dylan and Ashley. Neil is a regular contributor to ARB 4x4 Action and a long term ARB customer (he reckons he bought the second bull bar ARB ever made). It seems Neil's love of Outback travel has well and truly been passed down the generations, and he's packed Dylan, Ashley and a few of their mates into an old Troopy and sent them on their way. Whilst the gang are undoubtedly looking forward to the sense of freedom that the Outback offers, I don't think it'll be too long before Grandpa's tracked them down to check up on them.

Happy 4wheeling

- Matt Frost, Marketing Manager, ARB 4x4 Accessories



## New Accessories for Mitsubishi Pajero

To add to the already extensive range of accessories available for the Mitsubishi NS Pajero, a number of new products can now be found at ARB stores.

ARB has recently released a Sahara bumper as a stylish and innovative protection option for vehicle owners. Featuring ARB's renowned five fold upswept and tapered wing design, the new Sahara bumper is exceptionally strong and will provide your vehicle with a massive amount of frontal protection. The strength of the bumper is further increased with a split pan, which has the added benefit of facilitating airflow into the engine.

The Sahara bumper's vehicle specific design ensures that air bag functionality is not adversely affected following fitment, and that it will withstand the stresses placed on the bumper during vehicle recovery. A range of Warn winch models can be selected depending on your individual requirements, and the bumper also incorporates provision for a range of IPF driving lights, and the ability to fit optional fog lights.

This particular Sahara bumper offers Pajero owners the option of configuring the bumper either with or without the 76mm polished centre tube. For those thinking of heading off road, tough 2mm steel stone guards under the centre pan and wings

will assist in protecting the undercarriage from rocks and road debris, while the original tow points are retained for use in recovery situations. Featuring quality urethane buffers and provision for CB aerials, this bumper is finished in a durable millennium grey powder coat with the option to colour code, and will provide your vehicle with stylish and durable frontal protection.

Another accessory that is now available for the Pajero is a selection of roof racks which will assist vehicle owners with all their load carrying requirements. Measuring 2200mm x 1250mm or 2200mm x 1120mm, both steel and aluminium racks can be accommodated, the steel featuring evenly spaced cross bars and the alloy incorporating a mesh floor. Engineered to replace the original equipment roof rails and position the rack cage as low down as possible, this product is the perfect way to get bulky items out of the vehicle and increase valuable storage space.

Along with the products mentioned above, ARB also has a vast array of other accessories designed for the Pajero to increase its versatility including deluxe bull bars, rear step tow bars, ARB Air Lockers and Old Man Emu suspension systems.

Sahara bumper > Part no: 3934100  
Roof Rack > Part no: 3734010





> ARB Rear Bar



> ARB Rear Bar with Wheel Carriers

## Toyota LandCruiser 200 Series Rear Bars

Continuing the large succession of 4x4 accessories that ARB has already released for the 200 Series LandCruiser, we are ready to launch another new product into our selection of protection equipment. Not one, but two different styles of rear bar are now available to cater for the diverse needs of Toyota drivers.

While we generally only develop one style of rear bar for each vehicle, a number of factors necessitated the production of two for the 200 Series, affording vehicle owners with more choice. Depending on individual requirements, a standard rear protection bar can be purchased, or for extra functionality, a rear bar incorporating a wheel carrier and jerry can holder is also available.

The design of both these rear bars involved extensive development programs. You would have read in previous newsletters about the work that went into producing the bull bar for the 200 Series, and the rear bars maintain the same standard. Some of the original rear bumper's design features, plus the fact that the bars had to be made available to a number of markets

with different requirements, meant producing a design that was versatile enough to suit. The result is robust, vehicle specific rear bars that incorporate various functional and design features to ensure they will complement the modern shape of the 200 Series, and provide unparalleled rear protection.

Manufactured to be exceptionally strong, the rear bars for the 200 Series utilise steel construction, with 32mm tube bracing in the wings for extra strength, 4-8mm steel mounting system construction and 3mm steel pan and wings. The bars have also been designed to incorporate optimum departure angles, an important feature when venturing off road. And while both these bars have been based on the same general principles, they still required completely separate design processes to cater for each one's specific functionality.

For people who do not require the spare wheel to be relocated from underneath the vehicle, or for those vehicles with an original equipment second wheel carrier, ARB's standard rear protection bar is the ideal answer to providing protection for the 200 Series. Featuring dual Hi-Lift jacking points (with cover panels supplied for when not in use), integrated reflectors and

a mounting kit for the fitment of ARB or aftermarket mudflaps, this bar is a stylish and practical accessory for your vehicle. It also caters for all towing purposes with the ability to suit both gooseneck/ball and pintle type hitches. Finished in a durable black powder coat, optional colour coding is available to further tailor it to individual vehicles.

For users that require more functionality, the rear bar incorporating wheel and jerry can holder is a better solution. Fitting some auxiliary fuel tanks means the spare tyre needs to be relocated, which will in turn take up valuable storage space. In its original position, the spare tyre can also sustain damage simply by coming into contact with rocks and road debris. The ARB rear bar solves these problems, and can be optioned with two tyre carriers, a combination of tyre and jerry can holder, or no carriers at all.

The carriers on this bar are simple to operate with only slight pressure required to open them. The gas struts assist with this and also work to hold the carriers in the open position, with a locking pin only required if the vehicle is on an extreme side angle. A simple 'slam shut' is all that's needed to close the carriers, making this rear bar a very practical and easy to use product for vehicle owners. Like the standard rear bar, this model has the ability to cater for differing towing requirements, and integrates durable towing points and Hi-Lift jacking points for use in recovery situations. Colour coding options are also available.

So whatever level of protection or functionality you require for your 200 Series, suitable solutions can be found at ARB stores.



Rear Bar > Part no: 5615020  
Rear Bar (incorporating wheel carriers) >  
Part no: 5615010



# On the Tracks of Manson In California's Famous Valley of Death

Images and text by Chris Collard

Following a hectic few days at the SEMA show in Las Vegas, ARB USA's Lisa Wood grabbed a few journalists and headed out on a 4WD trip into Death Valley. Here, Chris Collard recounts their adventure following the tracks of Charles Manson and his gang.

It was a warm December afternoon, 1969, a day like any other in the temperate desert southwest. The setting sun cast ochre hues across Goler Wash and waning cottonwood leaves rustled in the breeze. Crescent silhouettes of a half-dozen turkey vultures circled above while a kit fox stealthily skirted the canyon wall and long-tailed pocket mice took cover under scattered clumps of Napkin Ringed Buckwheat. The seasons were transitioning in normal fashion but a macabre darkness loomed in the canyon. A few miles away, national park rangers and CHP officers, who were investigating a vandalised piece of heavy equipment, were preparing to raid a small encampment in a tributary of Goler, a semi-abandoned site known as Barker Ranch. One hundred miles to the south, Los Angeles police were focusing on a bizarre string of gruesome murders of prominent Hollywood celebrities. Little did each know that the man CHP officers would find hiding under the kitchen cabinet at Barker Ranch would become a poster child for out-of-control psychopathic killers. The ensuing

arrest would be the impetus for best-selling books, hit movies and documentaries, and would shake the public's psyche almost forty years later. Mom, meet Charles Manson.

## The Journey

As we approached the fortieth anniversary of Manson's LA rampage, a headline of possible parole for his main axe woman, Susan Atkins, prompted us to take a closer look at this bizarre string of murders and further investigate Goler Wash and Barker Ranch. Following the SEMA show, we headed west from the glitter of Sin City (Las Vegas) to the arid and foreboding reaches of Death Valley. The plan, to follow the tracks of Charles Manson and his gang of long-haired-hippy-freaky-kinda-LSD-hallucinating cronies, explore their haunts of four decades past, and ultimately take in the view from Charles Manson's lookout chair from atop a rocky knoll above Barker Ranch. In the process we'd get the bonus of traversing isolated desert two-tracks through Warm Springs, Mengel Pass and Panamint Valley.

## Wagon Trains and Desert Illusions

Ours was a similar winter morning, warm with a light westerly breeze. Pulling out from Baker, California, we headed north towards Saratoga Springs and the entrance to Death Valley National Park. Airing down the tyres near Harry Wade Road, the russet foothills of the Amargosa Mountains rose to the east, standing in desolate contrast to the cerulean easterly sky. To access Goler Wash, which lay on the western slope of the Panamint Range, we would climb a tributary of Warm Springs Canyon. The park map stated, 'Road conditions require experienced 4WDers.' Considering we were in the company of some really seasoned off road guys - Dean Mellor (4x4 Australia magazine), Patrick Cruywagen (South Africa 4x4 magazine), Fred Williams (Peterson's 4Wheel), and Lisa Wood from ARB - we figured the worst that could happen is that we run into a Manson wannabe with a flat tyre.

Though only an hour or so from the pavement, we thought we were suffering from a heatstroke induced delusionary mirage. In the distant sheen off the desert floor, we could have sworn we were seeing... covered wagons? Can't be, that was 150 years ago, right? Low-and-behold, as we neared this aberration of the desert, our eyes beholdith the truth, a dozen covered wagons replete with wooden spoked wheels, dusty canvas tops, sloshing wooden water buckets and a handful of salty pioneers, creeping slowly north along the dusty two-track. Pulling up alongside this spectacle of yesteryear, we stopped to chat with one of the sun-baked adventurers. The bearded old guy behind the reins gave me a nod and with a wink of the eye said, "We're headn' to Salt Lake City Pardn'er... Phoenix to Salt Lake... by horse and wagon... should take about six months." Enjoying the trusty 4x4s under our rears, we slipped back into gear and moved on.

If you've never visited Death Valley National Park, in a four wheel drive that is, put it on your bucket list of places to go before you... kick the bucket. It wanes only to Alaska's big six in size, and what Alaska's parks kick out in the way of sub-freezing climes in the dead of winter, Death Valley, with a mere two inches annual precipitation and a record high of 56°C, steps up as one of the hottest and driest spots on the planet. Then there is the desert oasis of Badwater (pun intended), which at -282ft below sea level, is the lowest spot in the western hemisphere. But don't get scared just yet, despite these extremities of environs, Death Valley is one cool place. At almost 3000 square miles in size, it sports several hundred miles of OHV routes. In fact, there are more dirt tracks than paved ones, over seven hundred miles of them. I digress.

## The Geologist Cabin, Gravestones and a Desert Oasis

Back in the day, the 1880s, the single-track to Warm Springs, which was part of the Panamint Shoshone Indian Reservation, led to a small ranch built by an old Indian named Panamint Tom. In an area seemingly void of surface water, the aquifer has pushed its way through strata in the form of an artisan spring known as Warm Springs. Back in the day, Warm Springs provided year-round water for 150 fruit trees, livestock and the local mines. When a flash flood destroyed the ranch in 1897, the area remained relatively sedate until the 1930s when talc was discovered in a nearby canyon. The post WWII demand for talc sent the mines back into operation until finally shutting down in 1989. After exploring the artifacts of bygone years, we continued west towards Butte Valley and a famous stone abode know as the Geologist Cabin.



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Uplifted, folded, warped and subjugated, Death Valley holds the geological history of the world, and almost every period of the planet can be sniffed out. Butte Canyon and the sculpted arroyos surrounding the old Geologist Cabin are a potpourri of this geological record. Standing testament to a hundred million years of torturous tectonic folding and rifting, a precipice to the north displays fossilised Precambrian riverbeds, sandwiched between those of Paleozoic and Jurassic era. Standing on the long-silent footsteps of the cabin's owner, in our mind's eye, we were humbled by the thought of our brief existence on earth and the evolutionary history that lay before us.

Tracing a serpentine track from the Geologist Cabin, we climbed a boulder-strewn route to Mengal Pass. The old prospector, Carl Mengel, became an institution in the valley, roaming the region for decades in search of riches. After losing one leg in a mining accident, he continued to prospect into his seventies before ultimately passing in 1944. His ashes and prosthetic leg are buried under a stone monument on the summit.

#### Holes in the Desert and Barker Ranch

While it is said that Manson accessed his Barker Ranch hideaway from the shorter westerly route though Panamint Valley, we were coming from the eastern escarpment of the Panamint Range. Descending from the summit through Goler Wash on a fairly well travelled route, we kept a keen eye out for the entrance to Barker Ranch. Through a small side canyon, a non-descript two-track veered off to the south. More than a hundred miles from the long arm of the LAPD, hidden from view and veiled in overgrown brush, this would have been a perfect hideaway for Manson's clan. A few hundred yards up the wash, the canyon walls parted to reveal several structures and the ranch style gate of Barker Ranch. Tucked up against a rock outcropping, the main ranch house, several outbuildings and a crudely built swimming pool lay abandoned and dusty, but still fairly well preserved.

As we wandered through the grounds poking around, we couldn't help but reflect back on the macabre accounts of the Tate and La Bianca murders, of the merciless killing of an unborn child, or that of Gary Hinman. And what happened to the number of Manson associates that just disappeared without a trace, who vanished in the desert, and those who succumbed to the psychological control of Manson? Murder, deceit, and treachery...? Under our watchful eye, every non-descript pile of dirt was suspect as we shuffled through the sagebrush and kicked over long-silent stones.

Behind the main house we followed a narrow single track up the escarpment to the east, and there it was: Manson's famous lookout chair. Bullet ridden and rusting, its metal legs firmly incarcerated in a shallow bed of concrete and stone. Sliding into the cold metal chair provided us a crosshair line-of-sight view of both accesses to the canyon. Flashback forty years, to 1968, and Manson or one of his clan was probably sitting in this very chair, but with a completely different agenda than ours. As we discussed the prospect of camping at the ranch, a couple of vultures swept in on an unusually chilly breeze. We decided it would be better to camp at Panamint Springs. We left Barker Ranch to the spirits of those who remain, a forgotten name on a missing persons report, those whose fate is only known by the surrounding hills of Barker Ranch.

Making our way north to the boomtown of Ballarat (population 10... including dogs), we stopped to check out Manson's old truck, the jailhouse, and the combination post office/general store/saloon. The sun was setting on the western horizon as we passed the signpost for the now-closed OHV trail to Surprise Canyon and Panamint City. But our stomachs were growling for Fred Williams' famous chuck wagon Corona Burgers, so we would have to hike Surprise the next day.

As for following the tracks of Manson to Barker Ranch and locating his infamous lookout chair, we were successful. But as we turned our tyres north to Panamint Springs, we knew we had only scratched

the surface of possibilities for exploring Death Valley. While tossing back a few coldies and swapping yarns around the fire, we vowed to soon return and continue our exploration of California's famous Valley of Death.

**1** What looked like a sunstroke-induced mirage of the Wild West turned out to be the real McCoy – a wagon train? While on the route north from Baker, CA, we ran into a group of modern day pioneers who were retracing the wagon route from... get this, Phoenix to Salt Lake City. Wahooooa there pard'ner.

**2** Known as Tumpisa by the native Shoshone, Death Valley is a land of extremes. It hosts the lowest elevation in the western hemisphere (-282 feet in Badwater Basin), the highest line-of-sight rise in elevation (Telescope Peak to the valley floor is 11,049ft), and is one of the hottest places on Earth (recorded 56.6°C degrees in 1913, second only to Libya's 57.7°C).

**3** Even in a region that receives less than two inches of annual precipitation, the natural aquifer finds its way to the surface. Providing life in this arid clime, local fauna and flora cling to its cusp. The verdant creek crossing near Warm Springs was a welcoming contrast to its sun-baked surroundings.

**4** Descending from Goler Wash into Panamint Valley, the two-track heads north across the valley floor.

**5** Another anomaly of Death Valley is snow in the desert, or so the mirage appeared. Bleach-white and giving the appearance of snow, talc was a boom-and-bust industry. Talc mining, as well as precious metal ventures, operated from the 1800s to the 1980s. We stopped to explore one of the mines northwest of Saratoga Springs.

**6** Sculpted by a thousand millennia of tectonic mayhem, outcroppings near the Geologist Cabin in Butte Canyon share millions of years of geologic history.

**7** No diving... though abandoned for several decades, the ranch at Warm Springs, which included

a dozen rooms, large ranch-style chow hall and a now-empty swimming pool, stands testament to a once thriving local economy.

**8** Like an intersection in the sky, Ballarat is a crossroads in an empty desert. If you are travelling east, west, north or south, you must pass through it, and old road signs like this one will show you the way.

**9** The history and lore of the American Wild West is deeply seeded in the Panamint Valley ghost town of Ballarat. There are no stoplights, paved roads or power lines, and the post master (mail man) doubles as the mayor, judge, tour guide and bartender, but it's a must-stop on a visit to Panamint Valley.

**10** Prospectors from the days of lore were tough cookies. Carl Mengel reportedly lost a leg in a mining accident but continued to prospect until his demise in 1944. His ashes and prosthetic leg are buried on the summit of Mengel Pass.

**11** From South Africa to Canada and Australia, our international crew of hooligans had an insatiable appetite for fun.

**12** This old truck is reported to have been owned by Charles Manson, who apparently left it in Ballarat one day when it broke down. With less than two inches of rain per year, this relic of Manson's legacy could sit for several centuries before rusting out in the elements.

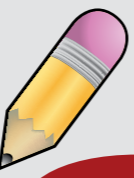
**13** This is the view looking west from the lookout chair above Barker Ranch. It is rumoured that some of Manson's associates, who vanished without a trace, are buried somewhere in surrounding hills and arroyos. Upon inspection, we resolved that only if the hills could speak would we know the true fate of these lost souls.

**14** Shadows like this on the walls of Charles Manson's hideout sent chills down our spines.

**15** Running from the law and his imaginary enemies, Manson and his followers probably spent many hours sitting in this chair with a shotgun watching the narrow access path to their hideout at Barker Ranch.



# ASK ARB



**WINNER!**

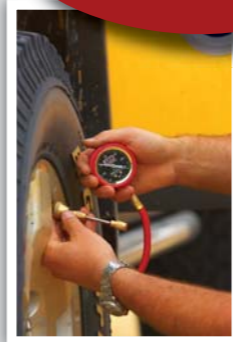
Hi,

In the article 'To Locker or Not to Locker', Ian Bellert makes the following statement: "The factory limited slip differentials tend to do exactly what you don't want them to – throw power across to the wheel that is spinning and has no grip."

This is fundamentally wrong. An open differential will throw power to the spinning wheel. A limited slip differential (by definition) limits the slip of the spinning wheel and moves power to the wheel that has traction. A locked one will move 50% of the power to the wheel with traction, but a limited slip differential is a lot better than an open differential.

There were plenty of things that Ian could have done before it got to tears in the car. 20 PSI is way too high for trying to climb slippery mud. If Ian had dropped the pressure to between 5 and 7 PSI, he could have carefully driven straight up the hill with full traction and no tears. You can't easily run 5 PSI in sand, because you need speed, but you can do it in mud, where you can crawl up a hill. Letting tyres right down is something that people need to know is an easy option in these kinds of situations.

Kind regards, Stu



Hello Stu, and many thanks for questioning Ian's opinions on limited slip differentials. First up, I should tell you a little more about Ian's background. Blerto, as he is better known to his mates, has been in the media for many years working on a variety of publications. He is best known to ARB through his time with 4x4 Australia magazine & Australian Geographic.

I asked Blerto to write the article for us when I found out he had fitted a locker to his Navara. I knew that none of his previous vehicles were equipped with lockers, so I was really interested to see what made him fit one to his latest fourby.

In theory, what you say about LSDs is quite correct. However, in practice, Ian is absolutely spot on in his observations. When I used to work in sales, we would regularly demonstrate the ineffectiveness of LSDs to customers in the car park. We used to jack up one rear wheel an inch off the ground and then try to drive off the jack. Customers used to be gobsmacked when their LSD equipped 4x4 sat there motionless on the jack, with one wheel spinning.

But you don't need to take our word for it. The team at Australian 4WD Action filmed a video a while back on traction aids. They took three Toyota LandCruiser Prados, one equipped with an LSD, another with traction control, and the third with Air Lockers. This video clearly illustrates how ineffective LSDs are in mildly challenging off road terrain. You can check out the video at [www.youtube.com/ARB4WD](http://www.youtube.com/ARB4WD). It's called Air Locker vs LSD vs traction control and is split into two parts.

With regard to your comments on tyre pressures, whilst what you say may be acceptable practice for a competition truck equipped with bead locks, I believe these pressures would be inappropriate for a typical family touring wagon running all terrain type tyres. However, given I am not an expert on tyres, I sought the opinion of someone who is. This is the reply from Steve Vickers, the National Sales Manager for Exclusive Tyres, the Australian distributor for Cooper Tyres & Mickey Thompson.

5 PSI is too low for a family touring wagon running all terrain type tyres without bead locks! On sand I would always start at about 22 PSI, come down to 18 PSI and then 14 PSI if I had to get out. I would be hesitant of going below that. 5 PSI would be an absolute extreme measure to get out of a sticky situation such as an incoming tide. If this was the case then pressures should be immediately brought up to a safe level afterwards because at 5 PSI there is a very real danger of building up too much heat in the tyre and having a major failure or rolling the tyre off the rim, causing a roll over at speed. Even in the mud this is excessively low without bead locks, as with the sand, you run the danger of rolling the tyre off the rim and/or getting mud, sand, dirt and/or grit in between the bead and the rim. If you were to run this pressure it would be imperative to have the tyres stripped and cleaned to avoid damage later on. Of course, whenever you alter tyre pressures to suit off road terrain, it is absolutely essential that you immediately inflate the tyres back to road pressures once you hit the bitumen.

In summary Stu, there are always other options to get out of a tricky situation. But none are safer, quicker, easier and more controlled than using Air Lockers.

Regards

Matt Frost  
(Marketing Manager)

Dear ARB,

As the owner of a LandCruiser 200 Series, I am concerned by the recent Safety Recall Campaign issued by Toyota Motor Corporation. The recall relates to a problem with genuine Toyota bull bars, and possible fatigue that these bars can cause to the vehicle's chassis. Does this issue affect ARB bull bars?

Thanks, Paul

Dear Paul,

When we released the ARB bull bar for the LandCruiser 200 in the Winter 2008 edition of ARB 4x4 Action, we made the following statement...

"The frontal chassis characteristics of this vehicle necessitated the development of the most complex and sophisticated mounting system ever developed by ARB. This has resulted in a mounting system that actually strengthens the vehicle's chassis, ensuring the bull bar provides a huge amount of protection, and, in the case of the winch bar, serves as a superb winching platform."

Since releasing our range of bull bars for the 200, we have sold thousands of them in markets around the world, and we have not seen a single failure.

One of the unique characteristics of our bull bar mount for the LandCruiser 200 is a tension rod that extends over 200mm into each of the vehicle's chassis rails, securing to a specifically engineered clevis nut. This feature is an ARB innovation, and is found on all of our deluxe, commercial and Sahara bars. Also, our unique one piece mount brackets are

Hey ARB,

I'm a contract fencer and work in remote parts of western QLD and NT. I have a 79 Series LandCruiser and my everyday travelling is on rough dirt roads, station roads and through creek beds on fence lines. Every day I have heavy loads of post or steel on board. I also pull a bobcat on a goose neck trailer long distances between jobs. These are beginning to pay a heavy price on the old ute.

The springs and shocks are all still factory and are getting to become a bit sad. I was wondering what you thought would be the best suspension solution for my needs. I was thinking air bags under the back and maybe some Nitrocharger shocks all round might be a good option?

Cheers,

Anthony



further reinforced to the chassis by engaging at the lower section of the chassis sandwiched under the tow hook. This, combined with the tension rod, and the overall strength of our mounting system, ensures that the integrity of the chassis is totally uncompromised.

We constantly try and educate our customers on the importance of mounting systems, and the fact that more attention should be paid to what's behind the bar rather than its cosmetic appearance from the front. ARB has built its reputation on the integrity of its bull bars, and as stated in our catalogue, the mounting system is the single most important aspect of any bull bar design.

We sometimes receive criticism at ARB for the length of time it takes to develop equipment for new vehicles. In the case of the 200, we were one of the last manufacturers to release a bull bar. However, the long lead times are a consequence of the massive amount of design, development and testing work we undertake, to ensure our products function as intended, and have no adverse effect on any aspect of the vehicle's performance.

Rest assured Paul, you have absolutely no cause for concern if your LandCruiser is fitted with an ARB bull bar.

Regards,

Matt Frost  
(Marketing Manager)



Hi Anthony,

That's a demanding part of the world to work in, both for yourself and for what is expected from your vehicle.

Our many spring packages are designed around what weight the vehicle constantly carries. For your heavy use I would suggest spring part numbers OME859 & CSO15R. As for shocks, there has been a recent addition to the 79 range, part numbers N181 & N197, which were re-valved specifically to suit conditions similar to those you regularly encounter, giving greater stability and better ride quality.

Air bags can be a good add-on option. There are a few to choose from and they fulfill a purpose in their own right. But be aware they should only be used as a helper and not a substitute to a spring problem. While the 79 Series is built Toyota tough, its chassis is designed to carry the load through its original spring pick up points and not in any other position – extreme loads constantly focused at another point are not good for the life of the chassis. A well designed replacement spring will carry the load as it is designed to, and an air bag could then be used as a helper for the odd occasion if still required. Keep in mind though, that they can compromise the ride quality as well as limit the articulation of the axle.

I would suggest that you need all the wheel travel you can get to negotiate creek beds and the like. Nitrochargers, with their extra length and down travel, together with a good spring package, will greatly improve the vehicle's off road ability. Your best bet is to calculate the weight you typically carry including the tray itself, and armed with this information and the vehicle loaded to a typical day's work, take it and yourself in to see your local ARB store. Together you can discuss my suggestions and find the spring package that will best suit your needs. I strongly believe that the option of an air bag will not be required and a better result with no compromises will be achieved with our standard package.

Shane Fewster  
(OME Suspension Design & Ride Control Engineer)

Congratulations to **Stu Garrow**, who is our portable 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.

## Win an ARB Portable Compressor

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](mailto: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](mailto:sales@arb.com.au). We reserve the right to edit all letters for clarity.

## TYRE TALK

- Hot air?
- Fast
- Must have

# GOING DOWN

## TYRE DEFLATORS

Tyre deflators might not be the first thing you think of to add to your 4WD kit, but they are certainly a vital addition.

WORDS AND PHOTOS BY ANDREW HISCOCK

While visiting the Adelaide 4WD Show, I got to have a look at the ARB EZTyre Deflator. I'd already read about it in magazines and heard before of the very similar Currie deflator sold by Procomp and others. Looking for bargains, and wanting to spend some money on toys after making the 4-hour trip from home, Trevor and I did a deal with the ARB boys and got two for \$100. I was happy with the Staun Deflators that I have had for about six years, as was Trevor with his, but we both thought the EZ Deflator could be more versatile.

I threw my EZ Deflator into the door pocket of the Patrol and didn't give it another thought until we went to Robe after Christmas. I used my Stauns to get my tyres down to 17psi but, after reports of VERY soft beaches (one of our group was already bogged only 100-metres onto the beach), I used the EZ to go down to 13psi. I was immediately impressed by how quick it was and easy to use. A few days later, for the Canunda Beach Run, I went straight for the EZ Deflator and took the tyres down to 13psi. It seemed that the EZ Deflator was so much quicker than the Stauns but given that the Stauns are working on four tyres at once and the EZ can only do one at a time is it really quicker? To find out, I tested both in the comfort of my driveway at home, using the no-expense-spared test kit comprising a VDO pressure gauge, wristwatch, tyre inflator and 2.5hp compressor!

With the exception of on board tyre pressure adjustment systems, as used in the H1 Hummer, the Stauns have been the

best way to quickly and accurately deflate tyres to a preset pressure and seem to be used by a lot of recreational 4WDers. As such they are the defending champions in this test. Known drawbacks of the Stauns are that they are user set to a specific pressure and are fiddly to adjust using the 3psi per turn of the ring method. Many users are known to araldite the adjusting nut to stop it moving and this removes the ability to change to different pressures. Also it's hard to tell if they are out of adjustment, until one of your tyres is down to 5psi and you need to get the compressor out.

The ARB EZ Tyre Deflator is a smart update to my pre-Staun method of tyre deflation. I, like many others, used a valve tool to remove the valve core and take a guess as to when the tyre was down enough. Final, hopefully minor, adjustments were then made with the core back in. While the EZ Deflator works on a similar principle, it avoids the possibility of the valve core flying over your shoulder into the scrub and also allows you to quickly and repeatedly check the tyre pressure.

### TESTING, TESTING, ONE, TWO, THREE.....

For this test I used my Nissan Patrol with 305/70R16 tyres. All four tyres were pumped to 40psi (as per the inflator gauge) and then deflated to 17psi using both devices. The time taken was recorded from when the device(s) were attached to the first tyre until the



1. Conventional tyre inflator.
2. VDO pressure gauge.
3. Set of four Staun Tyre Deflators.
4. Stopwatch.
5. The ARB EZ Deflator.

This article has been reprinted with the kind permission of Overlander magazine.



# Additional Accessories for LandCruiser 200 Series

You would have already read in this newsletter about the new rear bars available for the 200 Series LandCruiser. But at the same time, a number of other products have also been released for this vehicle, including Air Lockers, side rails and auxiliary battery systems.

An ARB Air Locker is the ultimate traction aid for your 200 Series, providing instant traction at the flick of a dash mounted switch when you hit steep or unpredictable terrain. The new Air Locker models for the 200 Series have been designed to cater for this tough vehicle and are available for both front and rear diffs. Tested and built in Australia by ARB since the late 80s, this product can mean the difference between a vehicle continuing on unhindered and needing to winch.

Activated via an on-board air compressor, pneumatic pressure engages a locking mechanism, and with both wheels tied to the rotation of the crown wheel, the vehicle can proceed in a more controlled manner. With less reliance on momentum, fitting an Air Locker also helps prevent vehicle and environmental damage because it is possible to traverse more extreme terrain at slower speeds.



Another practical accessory for owners of diesel 200 Series LandCruisers, is the fitting of an auxiliary battery system. When you're spending a lot of time out and about and want to run other accessories such as fridges and lights, this is an extremely useful addition. Due to the fact that the 200 Series already has two starting batteries as standard, the ARB battery system for this vehicle actually adds a third. This ensures you can easily run auxiliary accessories without the risk of flattening the main batteries. The complete kit comes with comprehensive hardware, bracketry and instructions to mount the tray, but consumers can also purchase this as a tray kit only, which is designed to suit an Exide ST460 battery.

So if you need to make your LandCruiser even more capable, these products, plus the selection of other ARB products already available (bull bars, fuel tanks, roof racks and OME suspension), can be sourced from stores around the country.

- Front Air Locker > Part no: RD141
- Rear Air Locker > Part no: RD64
- Side Rails > Part no: 4415010
- Battery tray > Part no: 4215010
- Battery kit > Part no: 4315010

*Note: ARB battery trays and kits are designed for RHD Australian engine bay layouts.*



To complete the range of protection equipment for the 200 Series, side rails have also been released. Due to the uniqueness of the bull bars for this vehicle, these side rails required a special design and engineering process to ensure they would complement the vehicle and function correctly. They also had to take into account the vehicle's side air bag compatibility, and as a result the original equipment steps were retained. These side rails are manufactured from strong, tubular steel and will provide excellent vehicle protection, especially for the front guards and headlight assemblies.



last tyre was at the required pressure and the device removed. Valve caps were left off for the duration of the testing.

## TEST ONE Four Staun tyre deflators used to drop the pressure in four tyres from 40psi to 17psi.

From fitting the first Staun until taking the last one off took 6min 35sec. They are very easy to use – walk around the car screwing them onto the tyre valves and then remove them as each one stops releasing air. After removing the Stauns I checked the pressure in all four tyres and found that three had 17psi and one had 18psi. I was very impressed as I had set them over five years ago and hadn't adjusted them since, despite using them many, many times.

## TEST TWO ARB EZ Tyre Deflator used to drop the pressure in four tyres from 40psi to 17psi.

From fitting the EZ to the first tyre to removing it from the fourth tyre took 4min 30sec. Having previously checked the

accuracy of the gauge on the EZ Deflator, and found it read about 3psi lower than the VDO, I let the tyres down during the test to an indicated 14psi to give me a deflated pressure of 17psi. Given that I could only do one tyre at a time it was an impressive 2-minutes quicker overall than the Stauns. With more use/practice I believe this time could even be improved.

## TEST THREE Staun tyre deflator used to drop the pressure in one tyre from 40psi to 17psi.

From fitting the Staun until taking it off took 4min 50sec.

## TEST FOUR ARB EZ Tyre Deflator used to drop the pressure in one tyre from 40psi to 17psi.

From fitting the EZ to the tyre to removing it from the tyre took 55-seconds.

So there are the results, the EZ deflator is quicker and more versatile than the Stauns, but is also more labour intensive as you are on the go the whole time you are using it whereas the Stauns are a stand back, watch and wait product. Although I had to work harder, the EZ Deflator was a clear winner in this test, especially given that it is much more flexible than the single set pressure of the Stauns. If I'd done the test on smaller tyres or used a lower starting pressure, the results would have been closer but the EZ Deflator still wins – it's the flexibility that impresses. Are my Stauns now redundant? No way, I've reset them to 25psi and keep them for airing down on outback/dirt track trips. I have to admit that this is the second time I thought that a new 4WD product was just a gimmicky toy but then found it was a brilliant and now indispensable tool. The first time? About nine years ago when the Stauns were released... 📷

Staun Deflator screwed onto the tyre valve.

# Aussies In Africa - Part 5



> Ron driving through a big mob of zebra, Serengeti



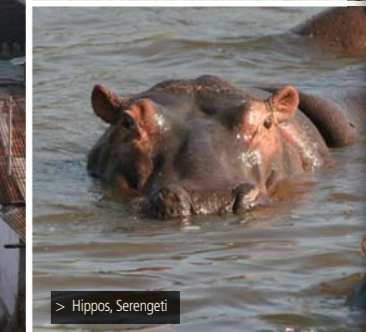
> Helen, Neil, Ron and Viv looking pretty geeky, Zanzibar



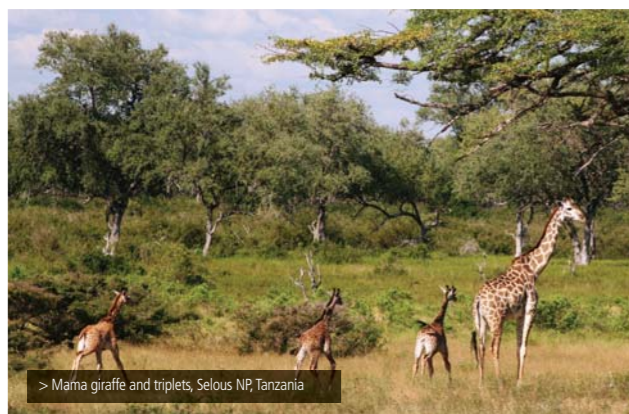
> Fish market from our hotel window, Zanzibar



> Lion, Serengeti



> Hippos, Serengeti



> Maiba giraffe and triplets, Selous NP, Tanzania

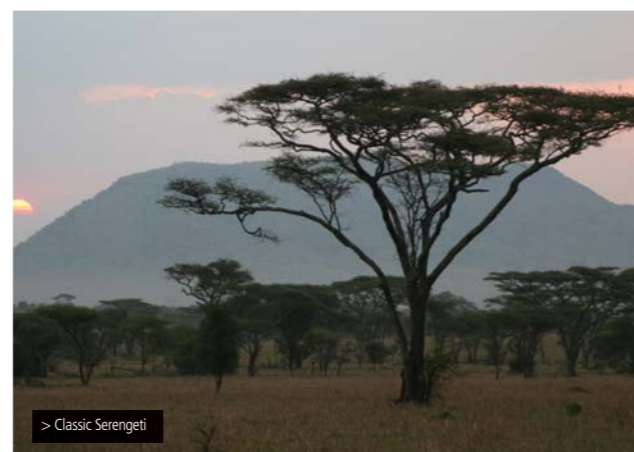
There are quite a few well-known game parks in Tanzania, such as the famous Serengeti, Ngorongoro and Lake Manyara National Parks which we intended to visit, but firstly we headed for the lesser known Selous Game Reserve (a world heritage site). Apparently only about 1% of visitors to Tanzania visit Selous which is the largest wet wilderness area in Africa, covering 50,000km<sup>2</sup>. Most of the visitors, unlike us, fly in, which is understandable when you see some of the conditions you have to drive through.

We were driving on a pretty good bitumen main road when I came around a bend and it just stopped and turned into what can only be described as a very rough dirt track, full of deep washouts and bog holes. I couldn't believe we were on the main drag. You didn't have to worry about going fast, although the speed that the passenger buses maintained was almost suicidal for the conditions. By the time we reached camp, it was well and truly dark, and hot and humid as we set up on the banks of the Rufiji River, listening to the sounds of the hippos. Also around, we were warned, were lions and leopards. It had been a long, hard day, and after we had eaten we all had a delightful cold shower before turning in. None of us needed rocking to sleep that night.

Over the next couple of days we went game spotting and came across elephant, wildebeest, many giraffe, impala, kudu, hippo and just near the end of the day an African wild dog, which are not often sighted. Unfortunately we didn't see any lions of which there are supposed to be 4000 in the reserve. At one stage Ron and I had to get out the trusty shanghais and drive off baboons that had invaded camp. At the end of the day it was beautiful to sit down with a cold drink, watching the sun set on the river and listening to the sounds of the jungle.

Next, we made our way to Dar es Salaam, the capital of Tanzania, a city with a population that is growing by 10% per year. On the way in I inadvertently drove through a police checkpoint but they didn't chase me. We arrived at a backpackers camp at Mikadi Beach, just south of the CBD, run by an Australian couple, Jules and Andy. They have been in Dar for ten years and their campground had a great feel about it. It is very popular with the overland trucks, and is situated on a lovely beach complete with swaying palm trees. Jules and Andy made us very welcome, especially as we were Aussies.

During the eight days we were in this area we managed a four day trip to the exotic island of Zanzibar, once the hub of the slave trade in Africa. We went sailing in a dhow which was most enjoyable and visited some spice farms in the northern parts of the island. We also spent quite a bit of time shopping in the famous Stone Town, which is like going back a hundred years in time.



> Classic Serengeti

Once back on the mainland we headed north to the slopes of Mt. Killimanjaro near the town of Marangu. The weather was quite cold even though we were near the equator, which can be attributed to the fact that we were at an altitude about the same as that of Mt. Kosciusko. Unfortunately we could only see a few thousand feet of the 19,000ft Mt Killimanjaro – it was living up to its nickname of 'The Shy Mountain'. We had a great meal at the old pub that night, including real old fashioned service and a lovely open fire.

We decided to go to Arusha, Tanzania's third largest city (pop. 350,000) to top up with supplies. As is the case with most African cities, it was bedlam. We did meet up with a group of South African overlanders that were taking much the same route as ourselves through Africa, but their timetable was a fair bit tighter than ours.

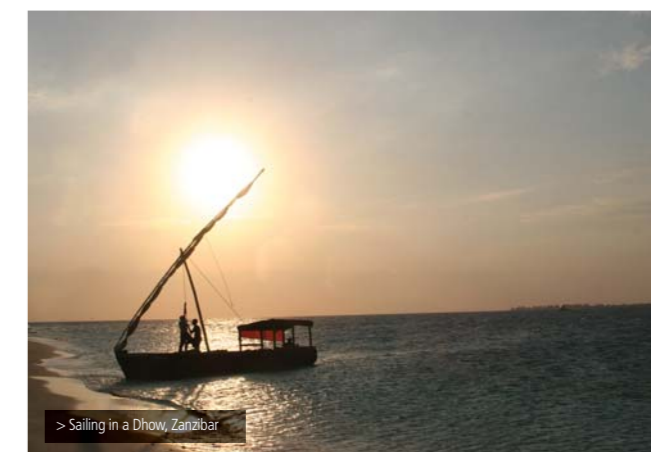
Lake Manyara is a small national park that is often overshadowed by the more famous Ngorongoro and Serengeti parks which are a little further to the west. We set up camp at the Twiga (which means giraffe in Swahili) campground in the small town of Mto Wa Mbu. Lake Manyara NP might be small in comparison to the others but nonetheless is very interesting. It is heavily forested along the bottom of the escarpment, and even more so along the many streams that flow down from the hills. Quite quickly the forest thins and then all of a sudden you break out onto the flat grassy flood plain that separates the forest from the lake. Out on the plain we could see around 50 elephants grazing, and a group of giraffe closely watching a number of lions trying to creep up on them. When the giraffe thought the lions were way too close they took off across the plain with surprising speed, even if they did look like they were moving in slow motion.

Manyara is famous for their tree-climbing lions, and we were lucky enough to see a number of them, as well as a leopard with a kill. There were also lots of buffalo, zebra, wildebeest, hippo, impala and many other animals. We had an easy afternoon back at Twiga, catching up on a few chores. During the night we were woken by the sound of yelling and whistle-blowing. The guards were trying to catch someone who had climbed the wall surrounding the campground. This went on for

quite some time until they finally cornered him and proceeded to belt the crapper out of him with clubs. There was much screaming and then silence. The next morning I saw where they had caught him and there was a lot of blood on the ground. Justice is swift, painful and often deadly in Africa.

A lot of people think Ngorongoro Crater is better than Serengeti. It was good, but for me Serengeti is the ultimate African game park. The endless plains with the purple mountains in the far distance and the flat top acacia trees silhouetted against the sunset are classic Africa. On those plains are hundreds of thousands of animals, in fact, wildebeest numbers alone reach one and a half million during the Great Migration, something we were most fortunate to witness. During the nights you can hear lions roar, hyena with their almost evil laughing yelp, wildebeest grunting and other noises of the wild all around us. There are no protective fences around these camps – Africa in the raw!

After Serengeti we headed northwest toward Lake Victoria, the world's largest tropical lake and second largest freshwater lake. It covers an area the size of Ireland and is also the source of the Nile. Once we reached the sprawling waterfront town of Musoma we set up camp in the lakeside grounds of the Tembo Beach Hotel. Now we are looking forward to crossing into Kenya, and then Uganda to the source of the Nile, which we will, more or less, follow to the Mediterranean Sea.



> Sailing in a Dhow, Zanzibar

# NITROCHARGER SPORT

**THE NEXT EVOLUTION IN  
4X4 SHOCK ABSORBERS IS HERE.**

## In the beginning...

In 2006, Old Man Emu's three ride control engineers launched an exhaustive development program to establish the credentials of an exciting new shock absorber with the capacity to deliver vast improvements in ride control, durability and vehicle specific fine tuning.

This new shock absorber's potential was not only linked to considerable advances in key components within a twin tube shock absorber, but to a significant and innovative new valving concept that presented almost infinite tuning options for OME's engineers.

The new valving concept incorporated three individual tuning points within the shock absorber, comprising a total of twenty-six deflective discs. Each disc could be altered in thickness and diameter, influencing a vehicle's levels of ride control, comfort and handling. This presented our engineers with an opportunity to develop an even more precise, vehicle specific valving system... one greater, even, than OME's legendary Nitrocharger shock absorbers.

Initial testing was carried out on the LandCruiser 100 Series IFS and 80 Series due to their different suspension designs, their popularity among 4WDers, and the ease in which the shock absorbers could be removed and refitted to the vehicle.

"The process was incredibly involved," says Stuart Fooks, one of the OME ride control engineers behind the development project. "Each vehicle's four ride master shock absorbers were built in-house and then fitted to the vehicle for test driving. We'd find that while they may provide a marked improvement in corrugations, highway travel might cause the vehicle to wallow. So we'd take the shocks back into the lab and run simulations on how each shock would react after the replacement of a disc with perhaps a thicker or smaller one. Once we were satisfied with the data, we'd refit the revalved shock absorbers and head out for field testing and analysis once again."

The results were so outstanding it was decided this new shock absorber deserved its own range and name.

**Nitrocharger Sport was born.**

### VEHICLE SPECIFIC BUSHES

High quality polyurethane and rubber materials for extended life.

### NEW DIRT SHIELD

Impact resistant, polyethylene dirt shield provides additional protection from stone chips and off road debris.

### PISTON ROD

Super strong 18mm induction hardened chrome piston rod engineered to handle rigours of heavy loads and tough 4x4 touring.

### NITROGEN GAS

Increases the temperature operating range and improves oil flow through the valving, ensuring optimum performance.

### NEW HIGH FLOW PISTON

Free flowing design reduces aeration and high oil temperature, extending shock absorber performance under harsh conditions.

### NEW HIGH QUALITY OIL

Petroleum based, high performance formula designed to resist fade and aeration for improved durability and shock absorber performance.

### RESERVE TUBE (1.6MM WALL)

Heavy gauge steel reserve tube is 23% more effective than common 1.3mm wall tubing to protect internal components from stone damage.

### NEW TRIPLE LIP OIL SEAL

Large, durable seal incorporates new gas retention check valve design to virtually eliminate contaminant damage while providing outstanding gas and oil retention.

### NEW ROD GUIDE DESIGN

Large, low friction Teflon impregnated bronze bushing for long lasting durability.

### NEW SLIP RING

Teflon infused bronze slip ring ensures a more consistent and uniform damping performance by providing better control of oil flow between the rod and rod guide.

### NEW DUAL-STACK DEFLECTIVE DISC TECHNOLOGY

Durable rebound and compression multi deflective disc stacking on either side of the free flowing piston allows infinite tuning options.

### NEW MULTI STAGED TUNING

Further enhancing the tuning options of the piston-based rebound and compression valving is another compression valve assembly at the base of the pressure tube. The combination of these three valving areas allows OME ride control engineers to produce the most finely tuned shock absorber on the market. Specifically tailored to individual vehicle models, their driving characteristics and their intended uses, this new assembly also enables the shock absorber to instantly adapt to the road surface, guaranteeing rapid response improvements for ride quality, handling and control.

### NEW MULTI-DISC COMPRESSION VALVING

Six valving discs allow greater valving options for maximum ride and handling performance.



# The Nitrocharger Sport Advantage

Being linked to the original Nitrocharger shock absorber in name, the Nitrocharger Sport range takes the next step in vehicle specific valving and offers the most cohesive, balanced and finely tuned valving system on the market. This is made possible via its twenty-six deflective discs, which are separated into three individual and tuneable stacks:



**6 disc compression valving stack** – located at the base of the pressure tube inside the shock absorber, this stack offers significant valving advantages by combining the bleed disc with five thinner discs (rather than three thicker discs found in the Nitrocharger). This translates to a more rounded and comfortable ride over patchy and uneven road conditions. And by using different diameter discs, a second advantage is found by the creation of a multistage compression stack which generates a comfortable ride together with a stronger second stage that gives more control in rougher conditions.

**10 disc compression valving stack** – unique to Nitrocharger Sport and located above the new high flow piston, the compression stack influences oil flow returning above the piston. This area of compression is tuned in conjunction with the base compression valving to produce dynamically balanced oil distribution throughout the shock absorber, which in turn permits vehicle specific fine tuning. This creates better control and more comfort over all road surfaces and ensures there is no lag in the valving response time when uneven terrain is encountered.

**10 disc rebound valving stack** – located below the new high flow piston and similar to the piston compression stack in design, the rebound stack allows multi-staging through all speeds from initial control over small road imperfections to more commanding control when harsher conditions are encountered. Various disc thicknesses and diameters determine ride control by restricting the amount of oil flow allowed past the stack, allowing OME engineers to finely tune the stack to specific conditions and vehicles.

To complement the advanced valving system, a new high flow piston has been engineered with a less restrictive design and open apertures to ensure a more uniform oil flow through the disc stacks, resulting in more consistent control. The advantage gained is improved control over a higher temperate

range – as the shock absorber heats up, oil flow over the valving remains stable, giving dependable, fade free damping. The oil itself is a petroleum based, high performance formula designed to resist fade and aeration, further extending shock absorber durability and performance in harsh conditions.

A large rod guide incorporates a new beefier triple lip oil seal capable of handling greater internal pressures and higher temperatures for long lasting durability. The seal also features a new gas retention check valve design to virtually eliminate contaminant damage and provide outstanding gas and oil retention. And to ensure reliable performance across the shock absorber range, a Teflon infused bronze slip ring has also been incorporated into the new rod guide to guarantee tight manufacturing tolerances are maintained.

Keeping off road touring in mind, the 1.6mm heavy gauge steel reserve tube protects internal components from stone damage, and has been further enhanced with an impact resistant polyethylene dirt shield for additional protection.

All of these new components allow for greater durability, functionality and resistance to high operating temperatures, and incorporate the construction and design advantages of a twin tube shock absorber that are so well suited to the demanding and harsh conditions OME suspension is expected to cope with.

## How we valve Nitrocharger Sport

Individual vehicle specific valving work requires constant test driving and analysis of the shock absorbers, which often results in multiple compression and rebound valving changes before the ride control engineers are satisfied with the improvements in ride, handling and control characteristics.

As all valving work is carried out at ARB's head office in outer Melbourne, OME's ride control engineers have access to a range of driving surfaces, including suburban roads with good bitumen, secondary roads where bitumen is poor, windy and dipping mountain roads with rooftop tents or roof rack gear fitted, and corrugations.

Whether too firm on corrugations or too much float at high vehicle speeds, the specific valving change is tested on all road conditions to ensure improvements on one road surface do not negatively impact others. In every case, the various weights of an unloaded or fully loaded vehicle are tested. Where heavier loads are required, the addition of accessories or weight bags and the fitment of heavy springs are carried out. One vehicle alone required 64 different valving configurations before the ride control engineers were satisfied with the vast improvements Nitrocharger Sport provides.

# Beyond Broken Hill

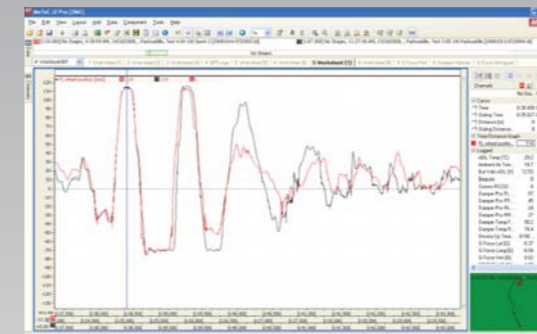
Final testing of Nitrocharger Sport took place in real Outback conditions beyond Broken Hill, NSW, and involved multiple vehicles, multiple suspension system designs, and a complex Motec data acquisition system to accurately and impartially assess the shock absorber's capabilities in differing terrain during a week of extensive testing.

To measure key suspension performance indicators, a number of sensors were mounted to the vehicles, including a temperature sensor, G-force metre and potentiometer for travel, speed and movement of the shock absorber. Video cameras were also fitted to provide visual references of suspension behaviour.

One trait examined was the effect of shock absorber temperature on vehicle control. New Nitrocharger Sport shock absorber valving options were benchmarked against the high standard set by the Nitrocharger, and many hours were spent searching for suitably aggressive corrugations to heat up the shock absorbers. A bump at the end of this corrugated section gave the suspension system adequate input for analysis via the data acquisition system.

The results found that despite extreme high operating temperatures, Nitrocharger Sport used full wheel travel to negotiate the bump and showed rapid recovery afterwards, demonstrated by reduced wheel travel after the bump, enhanced control and considerably reduced front-to-back pitching experienced by occupants inside the vehicle. Put simply, the vehicle sat flatter when hitting and recovering from the bump.

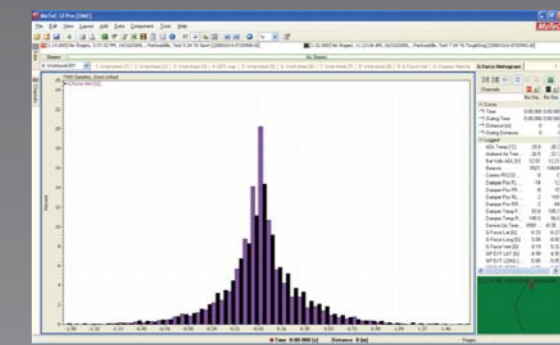
Graph 1



— Nitrocharger Sport — Nitrocharger

This graph shows the vehicle negotiating a large bump and clearly illustrates the Nitrocharger Sport's ability to recover sooner than the Nitrocharger, demonstrating enhanced control.

Graph 2



— Nitrocharger Sport — Competitor brand shock

This histogram analyses comfort over corrugations and shows that the Nitrocharger Sport (when compared to competitor brand shocks), spent a greater percentage of time around zero G, making for a more comfortable ride.

A second trait, very important for off road travellers and tourists worldwide is comfort and control on corrugations. Measured by the percentage of time the vehicle spent at zero G while travelling on corrugations, the Motec data acquisition system showed that Nitrocharger Sport spent more time experiencing zero G (felt by occupants as a smoother ride) than a competitor's product which experienced more positive and negative G (felt as a harsh, rough ride and vehicle jolting).

After three years of engineering and development, the scientific results confirmed what the OME ride control engineers already knew – that Nitrocharger Sport delivers better control, more comfort, and faster reaction times than both our trusted Nitrocharger shock absorbers and competitor brands. The extensive travel across extreme corrugations further revealed that Nitrocharger Sport has outstanding resistance to high operating temperatures that is superior to both Nitrocharger and our competitors. And most importantly, Nitrocharger Sport's precision tuning means that these benefits are individually tailored to your vehicle and are immediately felt across all road surfaces.

The team at ARB is very excited about the new shock absorber. OME Product Manager, Syd Groves, states, "Nitrocharger Sport raises the bar in 4x4 shock absorbers, with performance and durability that other brands will not be able to match. And despite all this, the price is extremely competitive – our customers will be thrilled."

**Nitrocharger Sport comes with a three year, 60,000km warranty, and is available now for a range of 4WDs.**

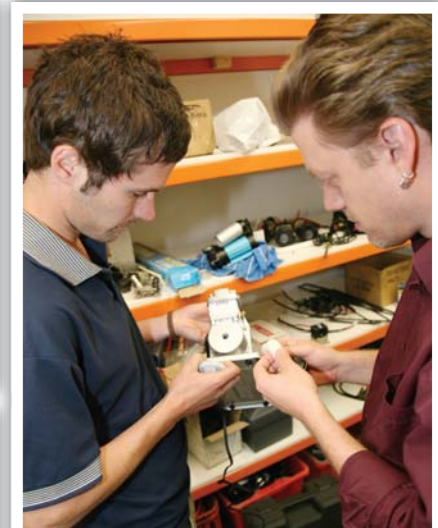




The ARB compressor is fully protected in a hard case.



Pictured here on the right is the rocker switch that is automatically switched off when the lid is closed.



Sam Steward (left) and Daniel Bongard (right) are the engineers that designed and built the CKMP12 air compressor.



Finned alloy head keeps the compressor cool, while the protected air cleaner housing is mounted below, out of harm's way.



High flow couplings on high temperature air line that easily unrolls.



The heart of any 12 volt device – a quality copper coil. The ARB coil uses quality copper, is tightly wound and properly terminated.



The ARB engineers designed and built their own compressor Dyno system to test and help build their own CKMP12.

# Clever Compressor

Words and photos by Mark Allen

**Having been asked to test all the portable 12 volt air compressors on the market for Overlander Magazine, I figured on asking for the use of the dedicated ARB Air Compressor Dyno Room to back up our own real world results.**

Initially, we undertook real world tyre inflation testing for all 21 compressors. Times were recorded for inflating a 33 inch tyre from 0 PSI to 35 PSI (simulating repairing a flat tyre) and from 20 PSI to 35 PSI (simulating returning tyres to road pressures after sand driving). We then asked the ARB engineers, Daniel Bongard and Sam Steward, to measure airflow rates, air pressures, current draw and temperatures of various parts of each compressor to provide as much technical data as possible for the magazine article. With all this real world info, together with the ARB generated technical info, surely that's all we'd need to make a call on which compressors were better than others! Wrong – that got us part way there, but with the help of Daniel and Sam, we found that the internals of a compressor make for interesting testing, as well as a few shocking discoveries along the way.

While some of the lesser brands seemingly pumped equivalently to the more credible brands in our short term testing, having seen the internal horrors of some of the not-so-well built brands, it's easy to see why dishing out your hard earned money on a quality item makes more sense in the long term. Some of the poor engineering feats we saw in other brands were:

- The use of packaging cardboard as a head gasket, plastic pistons that melt, and air filters that really don't do much filtering at all. The lack of solid attachment points for the copper coil of the electric motor, lack of water resistance to the motor, no vibration reducing materials, air hoses that soften with temperature and no pressure cut-outs when they were claimed to exist! A number of the lesser brands (in some cases no-name brands that have been rebadged by all and sundry) are simply not engineered to do the job required or advertised.

In contrast, some of the clever design features of the ARB compressor are:

- When closing the hard lid of the CKMP12 box, the compressor is switched to 'off'. This ensures the compressor won't overheat in the event of the lid closing during use, won't melt the lid or

box, as well as ensuring no sparking when you first attach the alligator clamps to your battery – a great safety feature.

- The air compressor is water tight. With an extended breather hose on the air inlet (just like adding a snorkel to our 4WD), the CKMP12 will work under water – great for those that hard-mount their compressor in their engine bay.
  - The unique, large-diameter, washable, sintered bronze air cleaner has been engineered to prevent bull dust from entering the compressor internals – a must-have design for a product that generally gets placed on the ground to use.
  - The inbuilt pressure cut-off switch allows use with an air tank and allows the unit to be left switched 'on' when the air line is removed from a tyre – a handy feature, especially for those that upgrade to an air tank to run air tools.
  - A 40 amp in-line fuse protects the vehicle electrical system should something go wrong – some other units had no fuse, while one had a fuse that couldn't be purchased aftermarket if replacement was needed – not very clever!
  - A high pressure air line that is easy to uncurl and roll up – oh, so relieving to not have to unravel a knotted hose every time you use your compressor.
- A side note to this hose is that it's a very expensive, high tech material not used by any other compressor manufacturer/supplier in Australia.
- Auxiliary hose fittings to inflate soccer balls, air beds and all general camp gear are included with the CKMP12, as is a (male end) quick coupler for a hose fitting.
  - Air line fittings have been designed to allow maximum air to pass through – pretty obvious to know not to obstruct the airways, but some lesser units had slow flowing valve connectors. The ARB team developed their own fast flow, easy connect system to ensure their pump was not compromised.
  - The hard case that houses the CKMP12 ensures no damage while in transit or use – it was sad to see some of the other well-built (as well as some of the lesser-built) compressors housed in soft carry bags, with precariously positioned air filters. I wonder how many people have snapped their air filter cover off simply by bumping their soft carry bag in the wrong spot?
  - Price – most people will want to pay as little as possible for anything, but as always, quality costs... but not necessarily an arm and a leg. The CKMP12 is far from being the most expensive compressor and is actually lower priced than many big name brands that it outperforms.

## Get ready for the EMU-lution – the rebranding of Old Man Emu



The release of the Nitrocharger Sport shock absorber range marks an evolution in 4x4 suspension that has instigated the launch of a fresh new look to the Old Man Emu branding.

The launch sees the Old Man Emu logo brought into the 21st century, with a modern appearance that still features the iconic emu which has been synonymous with the brand since 1979. It is expected that the new logo will further strengthen the brand both in Australian and overseas markets.

Incorporating sharp, sleek lines while retaining the famous 'OME yellow', the logos will appear on all Old Man Emu packaging, stickers, catalogues and merchandise, while existing merchandise will be updated in due course. Keep an eye out for the new Nitrocharger Sport advertisement which will feature in various 4x4 magazines across the country in coming months, while a redesigned Old Man Emu hat, stubby holder and bottle opener key ring are due for release shortly.

The launch of the Nitrocharger Sport and branding introduces the next generation of Old Man Emu. We appreciate your tremendous support to the Old Man Emu brand and hope you continue to embrace it as we begin this new journey.

- It's small – the CKMP12 is a very compact-by-design air compressor, that simply defies most people's thoughts that a fast air compressor has to be physically large – wrong, wrong, wrong! Just like smaller car engines can develop larger power outputs than large capacity engines, so too can a cleverly designed air compressor produce higher flow rates than a larger, poorly designed unit.

Unfortunately, most people will never get the chance to see the internals of any air compressor; the ARB CKMP12 internals relate somewhat to today's high tech car engine in design – lightweight, quality alloys are utilised, high tech seals and other materials enhance longevity and clever design principles ensure the product works and works well.

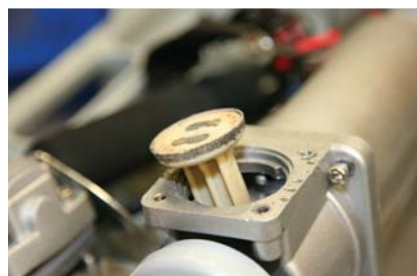
How can the CKMP12 be so small and outperform many physically larger units? Piston, conrod and crankshaft design is ever important, as is the designed revolutions per minute of the motor, the compact nature of the high quality copper coil and the fitment of all these parts in a small, sealed, air cooled body are the secrets to ARB's successful new compressor.

Being a 4WD journalist and photographer with an engineering background, as well as a 4WDer, camper, owner and user of most 4WD and camping related

accessories available, I appreciate and understand the importance of a well-designed product. It's refreshing to know that ARB actually employs qualified engineers with real life experiences to design and manufacture their equipment. While a qualified engineer can do a good job for a company, a clever and practical engineer can do a brilliant job.

Am I one-eyed in my thoughts on this ARB product? Not by a long shot! If I wanted the fastest compressor available, regardless of price, there are others that will outperform the CKMP12. If I wanted the cheapest compressor on the block, there are plenty to choose from. But, if I wanted one of the best all-round packages on the market, that combine good inflation performance and impressive additional features, is well priced, easy to use, has availability of spare parts back-up, and has been cleverly designed by clever engineers in Australia... then I'll stand behind my educated thoughts on recommending the ARB CKMP12 as the 12 volt air compressor to buy.

Be sure to get your hands on a copy of the January 2009 edition of Overlander magazine to see the full test results of the 21 air compressors.



A plastic piston in a device that generates a lot of heat – not clever!



Part of designing a new compressor is to pull apart all the competitor's units to ensure yours is built smarter.



The ARB conrod utilises roller bearings instead of ball bearings to provide a superior rolling surface.



Air cleaners aren't all the same – the ARB sintered bronze unit (second from right) is designed to keep bull dust out and is washable. Some other's foam filters are a little suspect and couldn't be relied on.



The ARB piston and conrod (left) is larger diameter and a shorter throw than others, which is one way of making the overall design smaller.



During testing, we found cheap imports utilised packaging cardboard as gaskets – not clever!

# Ford F250/350 Sahara Bumper



ARB's innovative Sahara bumper has been engineered to provide strong frontal protection for the Ford with a stylish design that complements these particular vehicles. This process also takes into account the vehicle's air bag compatibility and winching capacity, accommodating up to a 15,000lb Warn low mount winch to increase its off road capabilities.

Like many of our recent Sahara bumper designs, this one is available with or without the 76mm polished centre tube, affording customers more choice with their bull bar options. The bumper also features ARB's exclusive 'tilt forward centre tube' which allows the bonnet and grill to clear the centre tube when raising the bonnet, maintaining the bumper's overall sleek and well proportioned look.

With reinforced Hi-Lift jacking points in the pan of the bumper to allow a Hi-Lift jack to be used directly onto it, heavy duty towing eyes are also incorporated for extra assistance during recovery situations. Featuring quality urethane buffers, and the standard Sahara style injection moulded fog light/turn signal surrounds that help protect these components from damage, the bumper also has provision for two aerial mounts and IPF driving lights. Finished in a grey powder coat with the option of colour coding also available, the Sahara bumper for the Ford F250/350 will provide excellent frontal protection for vehicle owners.

Part no: 3936150



Getting the vehicle ready at ARB Kilsyth



Dylan & Ashley at ARB with Marketing Manager, Matt Frost



(L-R) Nick, Chris, Ashley, Dylan, Andrew & Mitch with the Troopy

## Round Oz on a Shoestring

Neil Cocks is a regular contributor to the ARB newsletter... and now get ready to meet some other members of the family. Two of Neil's grandchildren, Dylan and Ashley, are heading off on a trip around Australia with a group of friends, and will be bringing us regular updates in upcoming issues of ARB 4x4 Action.

**"What are you going to do when you leave school?"**

If I had a dollar for every time I was asked that question in the past two years, I wouldn't have had to work so bloody hard to fund my answer.

**"I'm travelling round Australia."**

Probably not the answer most people were expecting, but not all that surprising considering how I've grown up.

My grandfather, Neil Cocks, is pretty well known for his itchy feet, and he has well and truly passed this gene onto his kids, and then they passed it onto us – the third generation of wanderers. The philosophy in our family is pretty much to work your butt off, make some money, then go see what's 'out there'.

So, two years ago, when I started talking about this, the idea kind of caught on. Now there are six of us – my cousin Ashley; friend and neighbour Nick; footy mate Mitchell and school mates Andrew and Chris, and myself – all preparing to cram ourselves and all our gear into a Troopy and take off. Oh, and if you're wondering to where, well the plan is to point the car west and see where it takes us.

The decision to go was by far the easy part. About half way through 2008, we realised we had better start actually doing something towards making it happen.

The first step to getting ready was to get some money behind us. We all had part time jobs while we were studying, but we were going to need more. So while most of our friends were planning their fortnight long party at schoolies, we were looking for ways to earn and save as much money as we could. So, when the last exam finished, work started.

For some of us it was the mind-numbing monotony of stacking shelves, for others it was the 'joys' of customer service during the Christmas rush, and for the rest it was sweating it out as labourers in Victoria's hottest spell on record. It didn't matter how it happened, all we cared about was the pay cheque at the end of the week that brought us that little bit closer to our adventure.

Money was going to be a very important aspect of our trip, but I couldn't just work until the day of departure. There was preparation to be done on the car and organising the gear to take along.

Our car, an 88 LandCruiser, aka 'The Troopy', has been in my family for as long as I can remember and is the most reliable car I know.

Years ago, when the time had come to update the family 4WD, Dad found he just couldn't let the Troopy go. So, kind of like a progressive family heirloom, it got passed down to my older brother (who also took it round Australia in 2007) and now onto me. With two more brothers following me, our old workhorse will owe us nothing by the time we're through! Needless to say it has done a few k's and so needed some TLC before heading off.

Being young and 'green' as the older folk put it, we've had no shortage of advice. Sometimes it can be a bit mind blowing trying to take it all in, but we're really lucky to be able to use the experience of my well travelled family, and people like Matt Frost at ARB to make sure the car was in top condition and that we had all the necessary gear.

So here we are, only two weeks out from D-Day (D being 'departure') and we can't wait!

There are still some things to prepare, and some fun to be had trying to fit everything in, but all is going as planned.

We'll update you from a place somewhere west of Melbourne and let you know how we're travelling.

Thanks for reading and seeya down the track!

**Dylan, Ashley, Mitch, Nick, Chris & Andrew**

# ARB KIDS

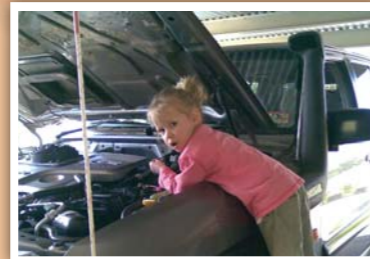


Hey, kids, Fourby here!

You will be glad to hear that Ariel is safe and well. I was pretty scared when she went missing, but luckily I got heaps of emails telling me where to find her. And if you missed out on a prize this time, you can always send me a photo, letter or drawing for another chance to win some cool Fourby gear.



G'day all at ARB. Thank you to ARB Bendigo for the stickers for my tractor. This is a photo of my little sister (Charlotte) and I snatching out my Dad's Patrol. From Billy



\* G'day guys, My name is **Cearne** and I am 4 years old. This is a photo of me getting my Dad's truck ready to go to the beach for a holiday.



\* Four year old **Kate** has sent in this great drawing of the family in her Dad's Troopie, driving towards Rainbow Beach.



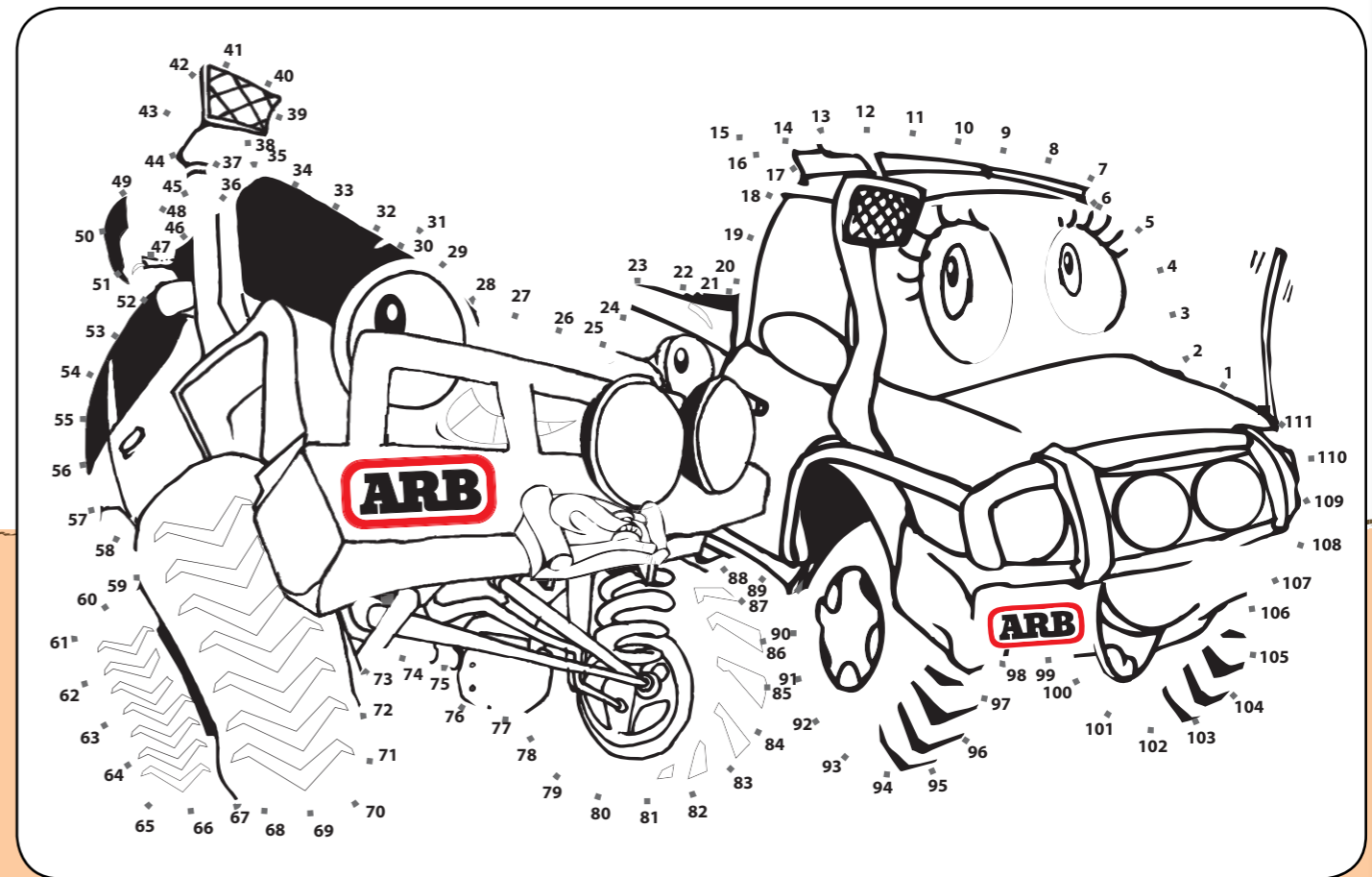
\* **Connor** (age 11) from Lucindale in SA put a lot of effort into this giant, A3 sized cut down Land Rover. Good work Connor!



\* This is a pic of me and my family's recent 4WDing trip to the coast. **Zoe**



\* As you can see from this drawing, 8 year old Harvey loves camping with his family and ARB gear, including all the things he's listed.



## Fourby & Ariel Dot-to-Dot

Connect the dots to draw a picture of Fourby and Ariel.



\* Thanks to eight year old **Aaron** from Lewiston in South Australia who sent in this drawing of a decked out 4WD.



\* Hi my name is **Blake** and I'm 9 years old. This picture is my Dad and I going through mud. I love going 4 wheel driving. Hope you like my picture. Bye!

**Fourby** thanks all the kids who helped him find Ariel in the last issue:

Sally-ann, Raymond Terrace NSW; Alex, Ferny Creek VIC; Jacinta, Orange NSW; Lachlan, Zillmere QLD; Ella, Maryland NSW; Tamsyn, Cornubia QLD; Andre, Quinns Rocks WA; Jamie, Chirnside Park VIC; Gracie-Mae & Sam, Lake Leake TAS

## Kids' Giveaway

Send your letters, drawings and photos, including name, 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

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.*





> An aerial view of Mark Lowry's (ARB's Product Development & Evaluation Manager) Kinglake home following the devastating bushfires.

## Black Saturday – ARB offers support to Victorians

February 7th, 2009, now officially known as Black Saturday, will go down forever in Australian history as a day of indescribable tragedy and loss. The nation, and in fact the world, watched on in horror and disbelief as Victoria endured the worst bushfires Australia has ever experienced.

Extreme climatic weather conditions on this day saw the mercury in Melbourne top out at 46.4°C, its hottest day ever on record. These high temperatures, combined with gale-force winds and a vicious wind change, in a region that was already tinder-dry from over ten years of drought, was a lethal combination. Conditions were reminiscent of those experienced on Ash Wednesday and Black Friday, and firefighting crews worked tirelessly to control the numerous blazes that raged out of control across the state.

Hundreds of thousands of hectares of bushland were destroyed, and entire towns were wiped out as the fires literally swept through the countryside. Many people had no way of knowing the ferocity that was charging toward them and were unable to evacuate, some emerging with miraculous tales of survival, others not being so lucky. At the time of print, 210 people had been confirmed to have perished in the fires, but there are still fears this number could rise as the difficult task of cleaning up continues. More than 1800 homes were destroyed, with the bulk of these, more than 1500, in the Kinglake-Yea-Murrindindi area. As a result, 7000 people have been displaced, with nowhere to go and no homes to return to.

It's going to be a long road to recovery, but from the ashes, the spirit of the Australian people has remained strong and determined. The entire nation has united

over the tragedy, offering a phenomenal amount of support. Significant cash donations have been collected, as well as goods such as food, clothing and temporary accommodation for those affected.

ARB's head office is located in the outer eastern suburbs of Melbourne and a number of employees have been directly impacted by the fires, losing buildings, belongings and livestock. The company was determined to do all it could to support not only the individual employees affected, but all those Victorians suffering as a result of the tragedy. ARB invited its employees and associated entities to make cash contributions to the Red Cross, and agreed to match, dollar for dollar, the total received. Together, the ARB community pledged \$42,100, resulting in a total cash donation to the Red Cross of \$84,200.

Contributions not only came from within Australia, but all across the world from customers, suppliers and employees. Along with this, the corporation and many individual stores organised separate fundraising events and raffles, donating additional money and ARB products to provide further assistance. On behalf of the company and the residents of Victoria affected by this tragedy, ARB would like to extend a big thank you to each and every one of you who donated to the cause.

The loss and heartache resulting from Black Saturday will be felt for many years to come, but it is reassuring to know that the Australian spirit is alive and kicking, as demonstrated by the nation uniting to support each other. Overall, the total amount donated to the Red Cross now exceeds more than \$200 million and will certainly play an integral part in helping those affected get back on their feet.

## Losing our house

12 year old Shaun Robertson, a resident of Kinglake West, sent in this heartbreaking account of his experience on Black Saturday. We thank Shaun for sharing his story with us and wish him and his family all the best as they set out to rebuild their lives.

*This is a tough story for me to tell for it is heartbreaking and disappointing.*

It started off as an ordinary day in Kinglake, nice and hot, which was unusual because Kinglake is on a mountain and usually very cold. I got up, smelling the fresh air from the trees that surrounded our home. I climbed down the ladder of my bunk, glancing around my room and looking at all the things I got for Christmas. After brekkie, I went and turned the computer on, and loaded up Byki Greek Software, for I had been learning Greek for nine weeks and had just downloaded 256 new phrases. I started learning them and heard mum get up. As she went past I said, "kalimera." (which means 'good morning' in Greek). She replied, "Good morning."

I stayed on the computer for a while until my sister Tara got up and we went outside and hopped on our bikes. We did the usual, daily course: Round the backyard's fireplace, through the veranda, across the stones, round the car and up the steep hill at the same time, and extra fast down through the stones past the veranda where the course starts again.

After an hour or two, I realised the sky was red with smoke. Dad announced: "Let's go over to Frank Thompson Reserve." I took my bike up the hill and I could see the smoke and glow of the fire and for some reason I thought of Pompeii and volcanos. After a couple of minutes I got bored and went back to the house.

I got back to the house safely and by then the whole sky was glowing fire red. Mum, dad and Tara came back not long after. Soon the phone rang and it was my friend saying that they were coming to our place for the fire had reached their place and they had just escaped.

Not long after, the phone rang again and this time it was my mum's brother who was in Whittlesea at the time. He said that he could see smoke and flames near where we lived. Our refugees arrived and they got out of the car teary. Murray sobbed, "We're going to lose our house." "What!" I said surprised.

Afterwards I kept riding my bike until I heard this rumbling roar. It sounded like a jumbo jet flying low above us. I thought it was a jumbo jet but just to be sure I asked Murray. He said, "That's the fire!"

Suddenly the lights and power turned on and off, on and off until it eventually turned all off. I heard my mum's brother on the phone say, "Get out! Get out of there, it's just the house!" Mum said, "Ok, we'll get ready." My mum hopped off the phone and gasped, "What is that noise!"



> Shaun Robertson (right) & his friend Murray

"That sounds like it's getting worse, I'll go check up top," dad announced. He ran up and then straight away he ran back down and yelled firmly, "Get in the car! Grab all your stuff! Let's get out of here!" I gasped, ran to my room and grabbed the things that I wanted most, all my deceased nanna's stuff. I ran outside and chucked it in the car. Then I ran back to the house and saw my St. Basil's Cathedral model that I had won 2nd prize in the Whittlesea show. I chucked that in the car and ran back to my bedroom with my heart beating 1000 times a minute and my mind panicking like mad. I grabbed my phone, PSP and the games for it.

I went to run inside again but dad yelled, "No more time for stuff! Let's go!" Tara, Dad and I jumped in our 4WD and mum jumped in her new Holden Commodore. Murray and that were already in the car. Everyone started up their cars and zoomed up the driveway. We had to leave two cars, two cats and a bird. I rang my friend Travis. While I was sobbing and talking I saw something and screamed, "Is that the fire!?" "Yes." Dad replied. "OMG" I said to myself.

We eventually got to where we were heading, the Kinglake West oval. Next to it was the Kinglake West fire station. After about 15 minutes a firewomen walked to us and said there was going to be a wind change that would bring the fire to where we were. Tara and I were put in mum's car and we drove off. Eventually the air started to get thicker and thicker with smoke until it was hard to breathe. At an intersection it turned black as night even though it was 4 o'clock in the afternoon. Fire was on the side of the road coming closer and closer. My mum pulled over and it felt as if all the happiness was taken from the world. I got a major headache and my lungs hurt. We all said "I love you" to each other. My mum was trying to ring my aunt and eventually got onto her. She said that they were going to the Kinglake West fire station. My mum did a U-turn and was on course.

Eventually we got there. It was real smoky and hard to breathe. You couldn't see 10 metres in front. We went inside and saw some people that in the end became friends. Soon my friend Maria (the one that can talk Greek) arrived and gave me a hug. It was a long, sad night that I spent talking to friends most of the time. I only got two hours of sleep. Now we are living in 'The Mill Park Best Western Motel' with heaps of stuff that generous people have kindly offered.

# Earth Trek 08



**Renowned artist and photographer, Richard McKenna, headed off last year on Earth Trek 08, an expedition that visited some of the most scenic landscapes in the country and documented the unique reptiles that inhabit them. In the next few issues of the ARB newsletter, we'll be following his journey as he explores regions of NT and SA to photograph wildlife and Outback wilderness regions.**

*Images and copy by Richard McKenna*

The choice of a Toyota HiLux for our photography expedition was an easy one considering its practicality and robust build history. There is an array of aftermarket accessories for many 4WDs and the HiLux definitely improves on performance and styling when fitted with ARB gear. The list of accessories for this was long – including everything from front and rear diff locks to a suspension upgrade, as well as fitment of a Sahara bar, roof rack, Warn winch and dual battery system. IPF lights were a must for all the anticipated night travel, and a good pair of fogs completed the list. The vehicle was outfitted at ARB Brighton and further modifications were made at the Richmond store. To see how all this gear was assembled to the vehicle, I attended the Brighton workshop to photograph the modifications.

With the vehicle complete and all the plastic replaced for metal, we test-drove the vehicle around Little Desert National Park before heading for the big one up north. Little Desert is a great testing ground for 4WD accessories as it has soft sandy patches, giving the vehicle a good

pre-trek workout. Here was also an opportunity to try out the Maxtrax in sandy conditions. These recovery tracks are a must for when tyres get bogged down in the soft stuff. With a quick shovel of sand aside and the Maxtrax wedged between the sand and tyres, it was an easy glide out onto the surface once more.

Our on-board compressor was fully utilised for reinflation of the MTRs, and the ARB air pressure gauge made life easy in alternate sandy terrain. There's another reason for visiting Little Desert apart from the great 4WD travel. I am currently working on building my photo library with images of reptiles, especially lizards. Little Desert is the perfect environment to encounter numerous common lizards and we were fortunate enough to capture on film many of these little critters as they scoured the sandy trails of Outback Victoria. Shinglebacks, blue tongues and bearded dragons were most common during our visit. At particular times of the year, especially around September, these lizards are more abundant on our roads due to mating season, so it's best to keep a look out to avoid running over them wherever possible. Shinglebacks are especially common and during mating season these odd looking lizards are often seen in pairs as they carry out their courtship ritual.

There's a great article in issue 52 of Australian Geographic which shows the life cycle of the Shingleback lizard. I worked on the illustrations for this article over a number of weeks and used live specimens as subjects. Commonly called 'sleepy lizards', due to their slow nature, Shinglebacks can be easy subjects to sketch and photograph. In the wild they tend to be more aggressive than those bred in captivity, so beware, as they give a nasty bite and are very hard to dislodge if bitten.

With the vehicle fully tested and spacecases packed, we were then ready to head off to Arkaroola, Lake Eyre and then onto central Australia.

Due to a late start, we decided to head straight up the Stuart Hwy to Alice Springs and do the salt lake country and Arkaroola in South Australia on the way back to Melbourne. We had a couple of photography assignments with galleries in Alice, and needed to fast track in order to complete the work on time.

After a few days we proceeded to Chambers Pillar on the Old South Road. The graded road runs along the famous

Finke track, a 4WD and trail bike track designed for the Finke race held every year from Alice Springs to Finke. This is red centre country with deep red sand and wide open spaces. The track from Maryvale to Chambers Pillar was corrugated to hell and the HiLux took a heavy pounding even at reduced speeds to help take the edge off the harsh ride. The OME suspension however, took this extreme hammering with ease and I was more concerned with other components of the vehicle coming loose. There is no question that corrugations have far greater detrimental effects on a vehicle than standard off road driving. Australia is full of these hell highways, making a suspension upgrade essential. The worst I have encountered is the Plenty Hwy in Queensland, but that is another story.

The location around Chambers Pillar is pure Outback and one feels quite alone out there. On this occasion however, I was not alone as park rangers were constructing camping divisions within the car park. The rangers were using Toyota 78 Series vehicles with standard suspension. It's not uncommon for their vehicles to get regular spring replacements due to the high kilometres they cover in this area.

The Pillar itself is a large protruding sandstone monolith formed by wind and rain which rises 50 metres above the barren landscape. Like all these surreal places in the Outback, Chambers Pillar is becoming more and more recognised as a major tourist attraction for the Outback traveller. Inscriptions left on its base leave a reminder of human visitation over 147 years and its historical value will undoubtedly need to have stronger protection from modern graffiti in future years to come. After a short stay at the Pillar I proceeded back to Alice to continue some more photographic work at the galleries.

Palm Valley was next on the list and I was excited to set up camp in this beautiful location. The 4WD track is your standard Outback trail through sand, creek crossings and more sand. Within the interior, once past the campground, the track turns into rock, and traversing it is reasonably simple as long as you have the ground clearance and good observation skills. Diffs can scrape the rocks on low clearance vehicles so it pays to ride the trail with care. It's a great drive and not too difficult but does have its fair share of seasonal 4WD traffic. The valley itself is true Northern Territory Outback with scenes from earth's past history when life before man ruled this planet, and camping here is a must. We logged onto Google Earth and checked out the track in the valley. It's rewarding to see just where you have travelled from a satellite's perspective in this very ancient land.

On returning to Alice via the Larapinta Drive, we headed into the ARB Top Gear workshop for a quick inspection of the expedition vehicle's OME suspension. The Dakar springs checked out all good so we topped up on a few extras in the showroom before heading out to Rainbow Valley and Uluru. So far on the trip we have been very impressed with the ride dynamics of the suspension upgraded HiLux. The OME kit really dampens the harsh ride compared to the standard unit and we are so glad we made the change before heading out.

**Stay tuned for the next ARB newsletter where the Earth Trek 08 journey will continue. To view more images and trek notes, log onto [www.wildcapture.com.au](http://www.wildcapture.com.au).**





## 2008 Rainforest Challenge

**Congratulations to the overall winner of the 2008 Rainforest Challenge – the Malaysian team of Wong Kock Phin and Mak Chee Ming.**

After the drama and destruction of the 2007 RFC which saw unprecedented monsoonal conditions and evacuation by boat, the 2008 RFC saw many competitors returning to once again tackle the extreme conditions and attempt to overcome the wrath of Mother Nature's fury.

Even before its official starting date on the 5th of December, the monsoon was already wreaking havoc, with floods in many areas in Kelantan and Terengganu. With continuous rain lasting more than 24 hours, and rainfall exceeding normal levels, both states were put on 'red alert' for flood evacuation, and all leave for rescue and armed forces put on hold. The rains were predicted to last till January 2009. Veterans of the RFC knew that all this would have serious repercussions in the days to come.

But what a relief that D-Day was without rain! The sky was cloudy and overcast with cool monsoonal winds blowing from the South China Sea, but the weather was fair. The opening ceremony went off with the full razzmatazz of culture and tradition from the state of Terengganu without a glitch, and was officiated by the Right Honourable State Minister for Tourism, YB Datuk Za'abar bin Dato' Mohd Adib. The 2008 event

welcomed teams from all over the world: Poland, Russia, New Zealand, Denmark, Sri Lanka, Indonesia, Thailand, USA, Austria, and of course Malaysia. Together with media, touring, support and official 4x4s, 110 4WDs were involved, covering a variety of makes and models.

Following the SS's (Special Stage) on the 6th, the convoy began moving in various groups to the pre-planned campsite of Sg Ulu Loh. But what a night it turned out to be! First, the main road to Paka was flooded with the heavy rains, so a detour had to be arranged. The late afternoon turned into night before most of the groups reached the off road tracks leading to the campsite.

More surprises! The supposedly 15km easy track to the campsite had been transformed by the rain. All uphill ascents had turned into a major struggle to get to the top. And adding to their woes, a fresh landslide midway to the campsite meant that driving and recovery went on all night long.

The convoy was separated into five groups that night. Some kept struggling from 10pm right up to dawn, while others gave up halfway and camped where they were. It took between 9 and 13 hours to reach the rendezvous campsite, with some not making it at all. This turned out to be a taste of things to come – transport stages turning into major struggles, backtracking and regrouping the order of the day.

Raining was non-stop, and at night a furious rainstorm assaulted all the campsites. Unknown to everyone, this was a major monsoon tempest which also swept right

across the peninsula from east to west coast. In the jungle this resulted in the creation of some awesome obstacles including swollen rivers, huge gullies, fallen bamboos, slippery ascents, descents and worst of all, major landslides which the participants would find out about later.

By the 8th December, the order was given to rendezvous in the town of Kuala Berang. Getting out of the campsite to tarmac is another story of great struggle; some took longer than others, but by late evening, most of the competitor teams and half of the media support trucks had made it. After refuelling and resupply, they moved to the Sg Kertiah campsite. With conditions worsening again, however, the two entry points, one for the competitors and one for the media, turned into a nightmare.

Finally by the afternoon of the 9th, most of the convoy reached the campsite at last. For the time being, heavy downpours ceased, though intermittent rain continued and the sky was still cloudy. After the regrouping, the SS's could be resumed where they left off at the Prologue.

The first stage of the Twilight Zone is also known as the Hill of No Return, a continuous uphill climb which requires winching in many places. Some teams took up to three hours to conquer it. Moderate rain began to fall again, making the going much harder. But many parts of the ground were already soggy and soaked, so the going was fairly tough anyway. Fallen bamboos are a common occurrence in the jungle, but in the monsoon season, can require double the effort to clear them. A major landslide had caused more than a 150ft gap, and with glutinous mud further up the track, it proved too much to handle.

At the southern sector (Hill of No Return), the order from HQ on the 11th December was to retreat from the Twilight Zone. The decision was made to withdraw to fight another day, rather than risk more vehicle casualties and a repeat of the previous year with stranded vehicles left in the jungle. The retreat from the Twilight Zone to Sg Kertiah proved to be as challenging as going in, but by nightfall of the 12th, everyone had made it to the campsite.

The final SS's were staged within the vicinity of the campsite Sg Puah on the 13th. After all the retreating and backtracking, it was action time again. This was followed by a night SS in which all the remaining teams went into full throttle, with a sense of relief after all the sweat, thrills and spills of the difficult transport stages.

In the end the original designated destinations were no longer the objective in the 2008 RFC. Rather the journey of getting in and out of these difficult and tricky tracks safely became the essence of the year's episode. The unfinished business unfortunately remained unfinished. Despite a completely different RFC from the previous year, participants once again faced the undeniable truth that Mother Nature rules supreme, and it is she who ultimately decides the outcome of the event.

Despite the obstacles, hardships and ordeals faced by participants, it was still an extremely rewarding and successful event, with all those who participated winners in their own right. The 2009 event is on track to be held from 29th November till 8th December and is sure to lure those competitors back to conquer their unfinished business.

## > INSIDE ARB

Northern Territory  
AUSTRALIA

# Top Gear Car & 4WD Centre

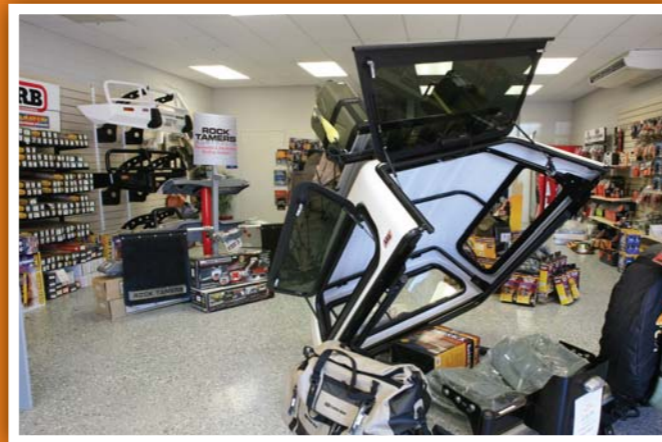
This issue's Inside ARB is on one of our Northern Territory stores, Top Gear Car & 4WD Centre in Alice Springs.

Owner, Ian Johnson, opened the store back in 1993 and as the sole employee, started building up the business. Prior to that, he'd been living in Adelaide working as a motor mechanic. Upon moving to Alice Springs in the early 90s, while he found he didn't enjoy his job as much as he wanted to, he liked the town, so decided to stay on and set up his own shop.

Originally starting off as a mobile business, Ian, together with wife, Lyn, who now co-manages the business, expanded by gradually introducing different services as customer demand grew. When they found themselves doing a lot of work with local motor vehicle dealers, they discovered a requirement for good quality 4x4 accessories, and started stocking a selection of ARB products, which slowly grew to include the broad range of ARB accessories offered today.

When Ian's not busy working in the shop, you can usually find him out in one of his 4WDs (he owns two currently – a GU Patrol and a LandCruiser ute) either fishing or headed off for a weekend away with the camper hitched on the back. But failing that, he'll be spending time with his other vehicle, a mountain bike, tearing up the local bike tracks.

Top Gear Car & 4WD Centre now boasts a staff of six, and offers a huge lineup of ARB gear, along with a selection of other products to help make your off road adventures more comfortable and convenient. Whether it's fitting a bull bar to protect your vehicle, installing an audio system to keep you occupied when you're out travelling, or offering advice for your next off road trip, Ian and his team are there to help out. So next time you're passing through, feel free to drop in and say hi.





## **4X4 ACCESSORIES**

**HEAD OFFICE: ARB 4X4 ACCESSORIES**

42-44 Garden Street, Kilsyth, Victoria 3137 Australia **Tel:** (03) 9761 6622 **Fax:** (03) 9761 6807 **Email:** [sales@arb.com.au](mailto:sales@arb.com.au) **Web:** [www.arb.com.au](http://www.arb.com.au)

All ARB 4x4 accessories are available from these ARB stores, and stockists in most major regional towns. Please contact the ARB office in your state for details of the one nearest you.