

# Front and Rear Bars

**You only have to see how serious 4WDs are dressed up for bush work to appreciate that out-of-the-box 4WDs are underdone for Outback travel and off-road driving. The most obvious addition that most people fit is a bull bar.**

At the outset it needs to be said that a 'bull bar' on a 4WD is no such thing – it's at best a 'roo bar'. If you're unlucky enough to hit a scrub bull one dark night when your lights aren't working you'll discover – if you survive – the immovability of such beasts.

Much has been written about the need for bull bars on 4WDs that spend all their time negotiating suburban car parks and the hazards that bars pose for pedestrians, but there's no doubt about the necessity of a frontal protection bar on a 4WD that's headed bush.

An emu or kangaroo strike at the front of your 4WD can damage your air conditioning condenser, oil cooler, radiator and lights, and finish your trip right there.



Bars are made from steel, aluminium and synthetic material and will continue to be built that way. There's a market slot for each type.



There's no question that for high-risk 4WDs – vehicles that are likely to encounter wandering wildlife frequently – a steel bar is best. From the rig testing we've seen, a steel bar offers more impact strength than aluminium or plastic, but where weight and compound curving enter the equation the lighter materials come into their own.

Our testing of metal bar durability has shown that a one-piece, welded-together bar is a much better bush proposition than a bolted-together one. We've found it necessary to tighten the bolts and screws of multi-piece bars several times on long bush trips.

Whatever bar you fit needs to be spaced away from the bodywork, by at least six centimetres. That way if the bar flexes or bends it won't press easily back into the bodywork or the lights. Close-fitting bars may look trick, but they're almost useless.

It shouldn't need to be stated, but mounting points are critical – particularly in the case of monocoque – chassis-less – 4WDs such as the Pathfinder and Pajero. Mountings and fasteners need to be premium quality.



Airbag equipped 4WDs have airbag triggers that are calibrated to deploy the bags at the optimum time in a frontal collision, so any bar fitment needs to be airbag compatible. Factory-sanctioned and after-market bars have airbag compatibility ratings.

**The final check you need to make with any bar fitment is that the inner mudguards have been replaced tightly after the original bumper has been removed and swapped for a bar.**

Another consideration is airflow through the bar structure. Modern 4WDs need all the engine-bay airflow they can get, so cut-outs in the original bumper moulding need to be replicated in the bull bar.

Spotlight brackets are required by law to be mounted within the side-view profile of the bar, so it's tempting to mount the lights very close to the grille. However, the closer to the grille the lights are the more they obstruct airflow through the radiator.

A bar that's spaced away from the grille allows more flexibility for spotlight mounting.

Yet another requirement on any bar is a pair of recovery points. Heavily-made bars have them incorporated – usually loops or eyes – but an alternative is to fit cast hooks at the points where the bar mounts to the chassis.

Speaking of bar mountings, we've noticed that some factory-optional bars have 'fiddly' brackets and dealer fitters sometimes don't bother doing a proper job. Toyota's aluminium Prado bar is a case in point, relying on a series of struts as part of its connection. If these aren't fitted properly they can rub through other components – notably the air conditioning plumbing.

The final check you need to make with any bar fitment is that the inner mudguards have been replaced tightly after the original bumper has been removed and swapped for a bar. Most 4WDs have their engine air intakes in their inner mudguard spaces and ill-fitting inner mudguards can allow puddle-splash water to blast into the air intake.

## Rear Bars

The standard bumpers on 4WDs are plastic affairs that can't withstand a slight bump, let alone being squashed between a heavy 4WD and a tree or a rock.



A steel replacement bumper can also double as a towbar, if it's designed and mounted correctly.

The most popular type of rear bar carries a swing-away spare wheel or two. This positioning gets the spare out from under the vehicle, making room for an additional fuel tank and is a better place than a roof rack to carry a spare wheel.

A swing-away bar and spare wheel can make a useful 'ladder', for roof rack access.

## Driving Into Trouble

In 35 years of bush driving we've never run into a kangaroo. How come? We avoid driving in 'roo areas at dusk or after dark – that's how. We're camped by then.

On one memorable occasion we did have to drive the Barrier Highway horror stretch at night, between Yunta and Broken Hill, so we did it at 70 km/h, with the spotties at full amps.

Yep, it was a slow trip, but we managed to thread our way around the flying 'roos, while the bloke in the truck that overtook us several times at 110 km/h managed to hit plenty. We passed him every time he stopped to pull mashed roo out of his bull bar and from underneath his tanks and axles, and we arrived at The Hill the same time he did. And we didn't have a stoved-in grille, a busted headlight and dislodged brake lines.

