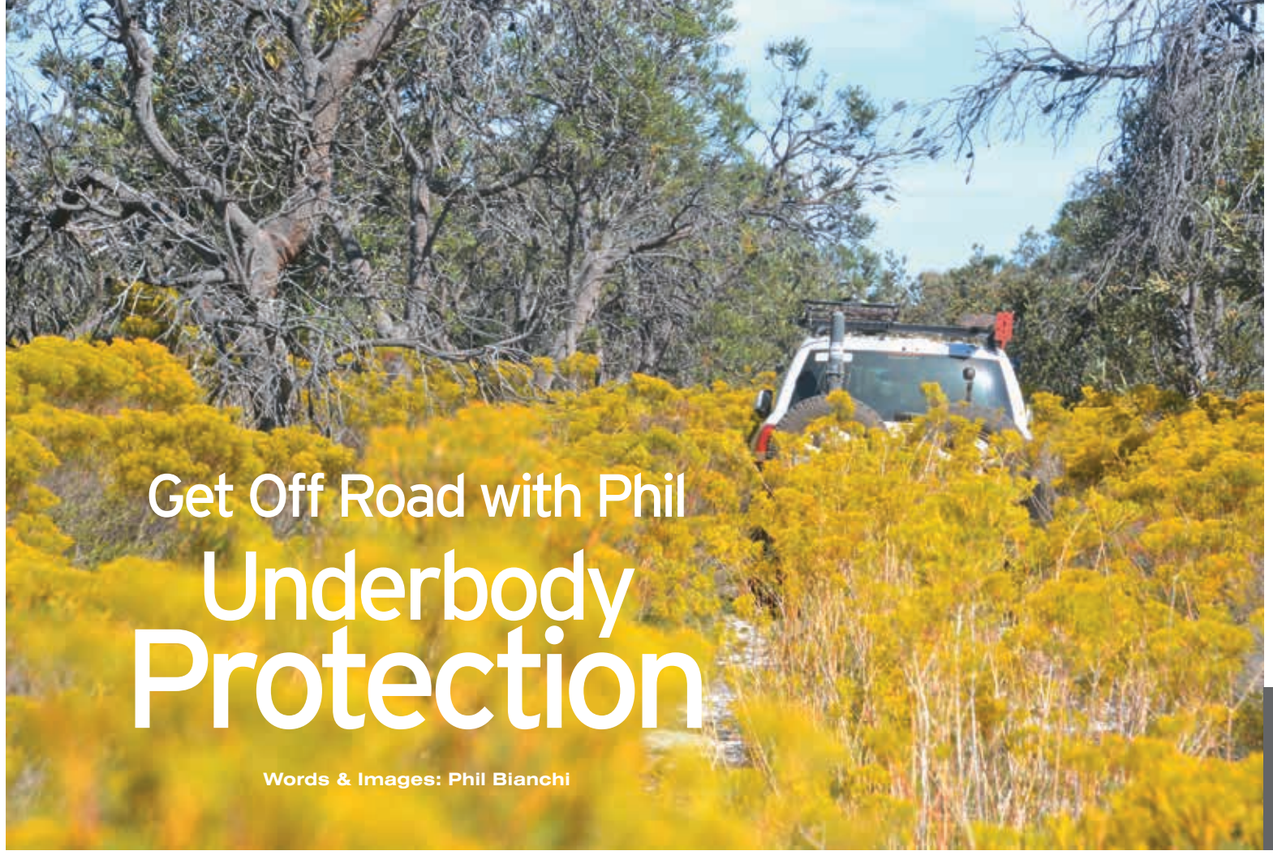

Get Off Road with Phil
Underbody Protection

Words & Images: Phil Bianchi

Many of today's four-wheel-drive vehicles leave the factory with thin metal or 'plastic' underbody protection. While these may be suitable for city and bitumen road driving conditions, they are not suitable for off-road driving. They're really splash guards rather than serious underbody protection guards.

Imagine driving along a sandy or scrubby track and hitting a hidden hard object, such as a rock or log. The factory fitted underbody guards will, in all likelihood, be severely damaged or punctured, possibly resulting in damage to vehicle components like radiators, intercoolers, sump, differential or suspension components.

Here are a few examples of what can happen as a result of poor underbody protection:

- A friend was driving along an outback gravel road in a heavy downpour. His front wheel flicked a large piece of wood up into his engine bay tearing off the bottom radiator hose. The heavy rain disguised any heat or steam coming from the engine bay and the vehicle's engine was completely destroyed. The repair bill was in excess of $12,000.
- On one of my trips I came across a broken down vehicle that had a cracked sump; the result of hitting a rock hidden in the low shrubbery in the middle of the track. The owner had been held up for the best part of a day and was about to complete a temporary repair by doing a bush welding job on the sump. Luckily for them they had the gear and experience to tackle the problem.
- I have an IFS 100 series Landcruiser and, on a number of occasions, sticks have pierced the rubber covers on the CV joints and other front-end suspension components. It has proven to be a very expensive exercise to have new boots fitted; in particular to the CV joints. CV boots aren't very expensive to purchase, but to fit them the whole CV joint needs to be removed.

There are a number of solutions to prevent such mishaps and resultant expensive repairs: robust underbody, sump and diff guards, robust sidesteps/rock sliders, guards in front of front suspension rubber boots, and protectors for shock absorbers.

Also very important to protect front of vehicle components is a bull bar. A front end animal strike on a vehicle without a bull bar could result in radiator damage and damage to other components, including engine fan, intercooler and airconditioning. It's just not worth taking the risk when travelling in the outback without beefing up protection.

Underbody and sump guards

Aftermarket underbody guards, including sump and transmission guards, are vehicle specific in their design; suppliers, such as TJM and ARB, have a large range available to fit most makes and models of four-wheel drives. Those produced by TJM are made from electro coated three-millimetre thick black steel and are folded to ensure maximum strength. Drain and access holes are provided for access to sumps and transmissions. Such is the quality of manufacture and design that most of these guards bolt on using existing holes.

Probably the most important of these guards is a front underbody guard, which is fitted between the bull bar and the horizontal underbody guard.

I have all three guards for my Landcruiser; the front, underbody and transmission/gearbox guard, and only fit the rear transmission guard when I know I'm doing extreme off-roading. Some owners of 200 series Landcruisers have had transmission failure due to heat build up when a transmission guard was fitted. Beware and do thorough research.

Differential guards

Differential guards are custom made to fit each vehicle. Some are made to replace existing diff covers; others bolt on around existing diffs. Although some people feel differential covers are only used by competition and four-wheel-drive racers, I feel they are cheap enough and provide good insurance and peace of mind to anyone doing off-road touring.

Robust sidesteps/rock sliders

Factory fitted sidesteps will not survive the rigours of off-roading as they do not have the strength and durability. There are many aftermarket suppliers of vehicle-specific robust sidesteps/rock sliders. Some mount horizontally and others at an angle. Check around before buying to ensure what you purchase suits your needs.

In addition to providing protection to the sides of vehicles these sidesteps also provide a solid step to access a roof rack and act as a shield to keep mud and water under the vehicle and not splashing up the sides.

Guards for front suspension rubber boots

Damaged CV and other boots allow dirt and grime to mix with the grease that, in turn, damages and significantly limits the life of the suspension components especially CV joints.

I have fitted homemade guards in front of the six boots on the front suspension of my vehicle that have stopped almost all damage and realised significant cost savings.

To make the guards I first made a cardboard template, once I had the correct shape I used five millimetre rubber matting (available from Clark Rubber stores) to make the final design. These guards are fixed in place using quality cable ties. They work very well; on a number of occasions sticks have pierced the guards but not the boots.

Fuel tank protectors

Although available aftermarket for some vehicles I feel they are more suited to competition use. Original equipment fuel tanks have protection plates in place or are double skinned to reduce fuel tank puncture risk.

Shock absorber stone guards

The bottom section of shock absorbers, especially those on the rear, often suffer impact damage that can result in shock absorber failure.

A number of suppliers, including TJM and ARB, have these guards; some are model specific and some will fit any model of shock absorbers. They are usually made of metal or urethane, and are bolted or clamped in position.

I have used metal shock absorber guards for many years and the pounding these have taken clearly show that, for little expense, you can protect expensive vehicle components.

See you in the bush. ❖

Clockwise from far left:
Underbody guards reduce damage risk from hidden obstacles. ❖ A costly repair. ❖ ARB's replacement diff plate. ❖ Bash plate on author's vehicle. Note the dents and the boot protectors. ❖ Eye patch-like CV boot protectors. ❖ Underbody protection gives you confidence to get out there and get back home. ❖ Old Man Emu shock absorber protectors do the job well. ❖ Old Man Emu shock absorber protectors.