

## Recovery and Repairs

# TOOLBOX ESSENTIALS

Like many off-roaders we used to carry several toolboxes, with contents that would allow a major 4x4 rebuild in the bush. However, experience over the past 30 years has taught us that we're unlikely to do a major rebuild in the scrub. All repairs to our own and other people's vehicles have been limp-home jobs that have been done with simple tools.

Our tools now fit easily into one small box, instead of the multiple large boxes we used to carry during the learning days.

## Spanners

Our toolboxes used to groan under the weight of a full set of SAE and metric spanners, including duplicate socket sets, but now we've condensed

We've picked the spanner sizes to suit our vehicle and its ancillary equipment, rather than taking every available size.

- ✚ Set of ring/open ender spanners
- ✚ Set of sockets
- ✚ Small ratchet driver
- ✚ Set of ratchet ring spanners
- ✚ One large ratchet socket drive
- ✚ One plain bar drive, with extensions



## Adjustable Spanners

We have one small adjustable spanner but in the larger sizes we've had more joy using multi-size ring spanners – the ones with swivelling eyes – and an open-jawed ratchet adjustable.

We've found our Stillson wrench much more durable and useful than screw-type adjustable spanners – doubly so because it tightens under pressure and works on pipes and bars as well as on hex flats.

## Vice and Multi-Grips

Our multi-grips are the type with radiused tracks for the jaws to bear on and they've proved to be more durable than the multi-hole pin-type. They get used for anything from holding a pipe end to lifting a hot camp oven lid.

Vice grips are indispensable and are as useful sometimes as a spare pair of hands. They're most commonly used for holding a nut captive while a bolt is tightened, or temporarily clamping a hose.

## Pliers

We carry one needle-nosed pair and one large pair of pliers. For many years we carted around a set of circlip pliers, but we never had the need to repair a hub in the bush, so they remained unused. They're in the shed now.

The other set of pliers that has proved invaluable is the wire stripping type. We struggled for years with the el cheapo numbers and finally bit the bullet and bought a pair of the posh ones with sprung-loaded wire stripping jaws. They're brilliant and make wiring repairs – by far the most common fix-it we get to do in the bush – a breeze.

## Screwdrivers

We used to have a full set of screwdrivers, but they took up far too much space, so now we've consolidated. We have two medium-sized, long-shaft blade and Phillips head drivers and one multi-head ratchet type that can be fitted with a straight shaft or a flexible shaft. The flexible shaft is a boon in today's crowded engine bays.

We also pack a compact screwdriver kit that has blade sizes that suit the screws in cameras and spectacles, as well as normal sizes.



Another prized item is a small driver with a powerful magnet in its handle that can be lowed into inaccessible places to collect dropped screws, nuts and washers.

## Multimeter

Multimeters are cheap and vital for analysing electrical problem in the bush. Make sure you have a back-up power supply battery in your kit.

## 12-Volt Soldering Iron

Our soldering iron gets used on most of our long bush trips, because some electrical component on at least one of the convoy vehicles needs repair, we've found.

The iron clips onto the battery terminals and is ready for business in a few minutes. It's not big enough to repair radiator tank leaks, but with resin-cored solder it'll do a reasonable job on wire joins.

## Jumper Leads

Quality jumper leads with anti-zap technology are vital equipment. Plain leads can give your on-board electronics a crippling spike, so make sure you spend the money and get protected ones.

## **Tyre Levers**

The tyre levers have been with us for years, long after we needed them for split-rim tyre repairs. Nowadays, tubeless plugs make temporary bush tyre repairs much quicker and easier.

The main reason the tyre levers have stayed in our toolbox is their extra-curricular usefulness. Many bush repairs require the use of a lever and the usual tool for the purpose is a large screwdriver, but a tyre lever does the job much better.

Tyre levers also make handy supports under a wire mesh cooking grate and three can make a cooking pot tripod.

## **Hammer**

We have a serious ball peen hammer in our toolbox. For many years we carried a claw hammer, but we found that it wasn't heavy enough for serious smacking and we didn't use the claw anyway. Then we swapped to a tomahawk as a combination smacker/cutter, but found it didn't do either job very well – hence the purchase of a heavy ball peen job.

Accompanying the hammer are several drifts, a cold chisel and a centre punch.

## **Hacksaw**

We struggled for years with traditional hacksaws and blade saws that just didn't suit bush repair work, before we discovered compact frames for hacksaw blades that didn't have the normal large support frame that got in the way all the time.

The compact frame lets the hacksaw blade be used as a penetrating saw, as well as a traditional frame saw. This type of use is harder on blades than the full-frame type, but it's much more useful around a 4x4. We always carry a couple of spare blades.

## **Multi-tools**

The multi-tool has replaced the traditional belt knife for many bush travellers and it's surprising how many repairs can be done with these handy gadgets.

We have a Leatherman Wave and a Bushmaster that between them have a wide range of blades and tools. The Leatherman is a better quality tool that has more cutting blade variety, but the Bushmaster has a useful set of screwdriver heads and Allen keys.

In many cases we can effect a quick repair with the multi-tools, without having to unpack the toolbox at all.

## **Files**

Our Leatherman multi-tools have fine file blades that are useful for repairing gouged screw slots and we back them up with larger files: a round file, a square file and a flat file in our toolbox.

Files are essential for fairing bush-made brackets, enlarging holes, cleaning off paint before bonding, welding or soldering, repairing rounded hex flats, sharpening screwdriver blades and a host of other bush duties.