

# Recovery Gear

## Snatch Strap



Snatch straps are normally used in the case of sand and mud boggings, but a gentle snatch pull can often work well in rocky terrain, lifting the stranded vehicle over an obstacle. This flexibility makes the snatch strap compulsory equipment on all bush trips.

Snatch straps are usually quite short, but can be extended by coupling to a winch extension strap or by adding a second

snatch strap.

Some means of joining straps is necessary as well: a rolled-up magazine is ideal and won't hurt bystanders if the assembly flies apart.



Don't over-snatch – an 'S' fold about one metre long in the middle of the strap is plenty of slack.

## Shackles



*D-shackles* are shaped like a 'D', with parallel sides and '*bow*' shackles are more rounded. Either type is acceptable, so long as it's stamped with a working load limit figure and is in good condition – no bends or scars.

D-shackles are fine for hook and single rope or strap eye attachments and bow shackles give more room for multiple rope or strap layers.

Whatever shackles you choose you need a minimum of two that fit the recovery points at the front and rear of your 4x4. Paint the pin threads with anti-seize compound or spray them with silicone.

Never leave shackles swinging on recovery points, because it's very easy for them to get damaged on rock shelves and the pins will wear prematurely.

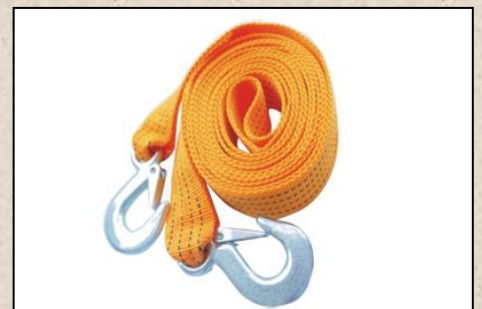
The golden rule with shackle use is always to attach them to something metal – never as rope or strap joiners. We have vivid memories of a shackle flying through the windscreen and back window of a 4x4 wagon when joined straps parted.

For short tows or snatch operations tighten shackle pins by hand and then back them off half a turn to prevent the load locking the pin in the bow eye. If you're using shackles for a long tow you should tighten them and wire the pin to the bow so it can't vibrate loose.

## Tow Rope

It's surprising how many well-equipped 4x4s don't carry a tow rope: they've got recovery bags with the full kit of extraction gear, but no simple tow rope.

You can use a snatch strap for this purpose, but the elasticity of a tow rope is the last thing you want when you're flat-towing and need the two machines to keep as uniform a speed as possible. Heavy towing will also 'kill' that elasticity, making the snatch strap useless for its intended role.



We've seen people using a partly-unspooled winch cable as a tow rope. This practice will damage the winch and the cable lacks the necessary flex to cushion towing shocks. Chain makes a poor tow rope because it lacks 'give'.

A webbing winch extension strap can double as a tow rope, if you 'quarter' its length by means of multiple folds between the two vehicles, then twist the folded strap slightly to keep the four strands together.

## Tree Trunk Protector

Trees are the most commonly used recovery points when winching and a purpose-designed tree sling is a necessary attachment point. A winch cable should never be wrapped around a tree - this practice damages the tree and stresses the winch cable at the point where the hook grabs onto the cable.

Fit the tree sling as low down the tree as possible, to minimise the risk of tearing the roots out of the ground.

If the only available trees are small it's possible to connect two or more of them together, using a winch extension strap or a snatch strap.



## Second Jack and Jacking Plate



A second jack is essential backup for your 4x4's standard lifter. Fashion suggests that the second jack should be a high-lift type, but very few modern 4x4s can use one. A high lifter is fine if your front and rear bars and your sidesteps are heavily made and have proper jacking points built in. High lift jacks are quick in operation, but they're awkward to pack and they're heavy.

Another second jack possibility is a bull bag. This exhaust-powered inflatable has the power to lift a loaded vehicle easily, but needs to be used carefully. Under body or ground protrusions can puncture the bag if it's not carefully positioned.

Our experience is that a second hydraulic jack is the most useful backup for most 4x4s.

With a spare hydraulic jack you should pack a ground plate of plywood or metal that will prevent the jack burying itself in soft ground. At a pinch a solid shovel blade will do the trick.

## Tool Kit

Many recovery operations demand some tools. Our kit contains Metrinch spanners and sockets, because they fit metric and SAE fasteners.

We've got a multi-head screwdriver with a flexible shaft and a magnetic tip for retrieving dropped fasteners.

We carry a set of spare globes for our standard lights and the spotties, a stack of blade fuses, a wire stripper, a 12-volt soldering iron and wiring and connectors of different sizes.



We also have a set of hoses and belts.

Also in the toolbox are pliers, multi and vice grips, side cutters, spare nuts and bolts, hose clamps and shocker bushes.

The 'stick-together' drawer holds Araldite, epoxy putty, Bars Leaks tabs, duct tape, electrical tape, amalgamating tape and zip clips.

The 'cut it up' drawer has a knife, hacksaw and files.

The 'give it a smack' drawer holds a big hammer, several drifts and punches.

You don't need to carry half your workshop - select tools and spares that will do bush repairs to get you to professional help.

## Shovel



One of Michael Palin's characters in that hysterical TV series, 'Ripping Yarns' was Eric Olthwaite. This anti-hero was interested only in "shooovels" and "precipitaaation" and was so boring that his family left home and begged him not to follow them. If you find discussions of the relative merits of different types of spades/shovels potentially boring, take a leaf from the Olthwaite family book and move to the next item. Those with a higher boredom threshold may wish to stay with us here.

In the world of hardware semantics there's some confusion about the differences between a spade and a shovel. The Oxford

Reference Dictionary cites the principal difference being the fact that a shovel is predominantly for 'shovelling' (eg coal, sand or gravel) and has turned-up sides, while a spade is for digging holes.

Under this broad description shovels and spades can have either square or rounded blades.

Common usage when we were growing up was that a shovel had a rounded blade and a spade had a square one.

Regardless of whether you ask for a 'spade' or a 'shovel' what you need is a long-handled affair, with a rounded blade, for 4x4 recovery purposes. The long handle lets you dig underneath a bogged vehicle without risking smashing your fingers on the side steps and a rounded blade won't stab a hole in a tyre.

Short, folding shovels are fine for emergencies and for trips with the date roll.

As for brands, Eric Olthwaite knew his shovels and recommended a Spear & Jackson number, but our choice is the American-made Rigid brand.

## Tyre Repair Kit

Nearly all today's 4x4s have tubeless tyres on one-piece rims, but those old stagers with split rims and tubed tyres don't need our help in telling them what to pack.

Small punctures in tubeless tyres are easily plugged by jamming a plug in the hole. All 4x4 accessory shops sell tyre plug kits that come complete with applicators, plugs and lube or vulcanising liquid.



A big hole that can't be blocked by one or two plugs is probably beyond bush repair. Even if you could fix a large hole or tear the tyre casing is likely to be severely damaged, making the tyre a high-risk affair.

Another essential in your tyre kit is a pump of some description. There's a wide choice of portable compressors available.

A cheap foot pump is another item in our tyre box – just in case.

You need a couple of tyre pressure gauges and, if you're regularly lowering pressures for rock hopping or sand driving, a set of Staun valves or an ARB deflator is a good investment.

Plugged tyres need professional repair ASAP and thereafter may be suitable only as low-speed, bush travel spares.

## Winch and Snatch Block



If you're on a solo-vehicle trip a winch of some description is essential. It doesn't take much to get a 4x4 bogged and you must be able to get out of whatever you're stuck in.

A hand winch is fine if you've got a fit, strong crew along for the ride, but otherwise it can take a long time, with many breathers, before you can extract your 4x4. Still, it's streets ahead of carrying nothing.

An electric winch is by far the most popular self-recovery choice.

The lowest cost type of winch is the one mounted on another vehicle – nice work if you can get it!

A snatch block, to halve winch loads is as essential as the winch.

When winching, safety is paramount: one person is the boss and all unnecessary people should be well clear of the operation.

## Anchor

Like a winch, an anchor is essential if you're on your own. There's no point having a top-shelf winch and an extension strap if there's nothing to hook on to – a common situation in deserts. Even if your solo trip is in heavily wooded areas you can't rely on having a large tree in just the right place.

Of course, if you're in a convoy of 4x4s the other vehicles can be considered 'anchors' that you can winch off, or get a tow from.

Anchors can be purpose-designed, like the plough types with long shafts that are favoured by 4x4 competition people, or can be improvised. There's always the option of burying a log across a shallow trench or a spare wheel in a hole as a ground anchor.

There's a misconception that using a snatch block at an anchor point halves the load on the anchor, but this is not the case. A snatch block halves the load on the winch, but the load on the anchor point is the same, whether a snatch block is used or not.

If in doubt about anchor strength, use two anchor points, with a 'bridle' made of chain or winch extension strap between them.