

HINTS FOR DRIVING “OFF THE BEATEN TRACK”.

(Prepared by Ralph Patford – October, 2005)

In terms of vehicle access there are three main categories of grids monitored by the VMRG :-

1. Those that can be accessed by conventional vehicles in all but exceptional circumstances,
2. Those that are best accessed by 4WD vehicles but may be accessed by conventional vehicles in the right circumstances, and
3. Those that can only be accessed by 4WD vehicles.

The advice proffered below is aimed at the last category, although many of the hints may be useful, at times, for members using conventional vehicles. It should also be noted that there could be considerable differences between the ability of high clearance and low clearance 4wd vehicles when it comes to driving ‘off-road’ or on bush tracks and access roads. More about this later.

The assumptions from here on out are that: -

- *The vehicle has been well maintained and is mechanically sound*
- *And that the driver has had some experience of four wheel driving and knows how to engage four wheel drive and low ratio.*

WHAT TO TAKE WITH YOU

The first thing to consider is preparation. The following list, by no means exhaustive, can be used as a checklist for recovery gear. Why you need to take them will, hopefully, become clear as you read on (if, indeed, it is not obvious).

- **Shovel*** - one with a long handle is easy to use than a folding trenching type.
- **Hessian bags** - 2 or 3 nice thick ones.
- **Pump or compressor*** - blowing up tyres is very hard work and a 12 volt compressor makes life easier. Forget about the real cheap ones. If you have one mounted in the engine compartment make sure the air hose is long enough to reach all wheels.
- **Tyre Deflating Valves** - allow you to deflate your tyres to a preset level with the minimum of fuss.
- **Tow Rope** - a quality, stout one. A quality synthetic one is safer than a steel cable type.
- **Snatch Strap*** - better, longer and more versatile than a towrope in many situations.
- **Snatch Strap or Tow Rope Extension.**
- **Hand or Power Winch** - the former is much cheaper, harder to use but can be more versatile in certain situations, the latter can cost big dollars but adds considerable to peace of mind and can get you out of dicey situations with the minimum of fuss.
- **Tree Protector** - to protect trees when using them to winch off.

- **Exhaust Gas Jack (Bull Bag)** - great devices when they are required but you need to know how to use them.
- **High Lift Jack** - they do what they say, can be useful and some can be used as mini-winches, in a pinch.
- **D-shackles** - 3 or 4 decent sized ones can be useful (use approved ones only).
- **Gloves*** - good quality work gloves.
- **Jacking Boards*** - you may need to spread the load when attempting to jack a vehicle up in soft conditions. Use hardwood or steel, not particleboard or pine.
- **Electrical Drying Spray (eg WD40)*** - in case vital electrics get wet.
- **Small Tarp** - may save you having to kneel or lie in the mud and slush.

* *Essential Items*

GENERAL APPROACH

Engage 4wd as soon as you leave the conventional roads. Many 4wd vehicles require the front wheel drive to be engaged by the driver and it is good practice to do so even when it may not look like it is really necessary. There are two reasons for this :-

- You may find yourself in a difficult situation without any warning and if you are in 4wd you are better equipped to extricate if all four wheels are being powered.
- Damage to tracks is minimised if all four wheels are engaged.

Warning. Be careful about driving in 4wd on sealed roads as 'differential windup' can occur and cause damage. This is not a problem for vehicles with permanent 4wd.

WHAT MAKES LIFE DIFFICULT.

There are a variety of reasons for needing a 4wd vehicle to access some of the grids.

1. The obvious one is sand - deep sand requires a vehicle to work much harder than normal and the sand is usually much thicker on corners. Sand dunes can multiply the power required considerably.
2. Ruts - this is where low-clearance 4wds may have difficulty.
3. Water - you need to know how deep it is.
4. Mud - nasty, messy stuff
5. Salt Pans - the crust can be deceptively thin and the slush underneath amazingly tenacious.

AVOIDING GETTING STUCK.

1. Driving in heavy sand.

The secrets are momentum and controlled aggression. Use a low gear, perhaps even low ratio, and keep the revs up. Try to avoid changing gears but if you have to then try to do so as quickly and as smoothly as possible. Deflating your tyres performs miracles. The deflating valves are great for this. Reduce the pressure to 20 psi, 15 psi or even as low as 10 psi.

Remember not to drive too fast or too far on deflated tyres, as they will overheat. Besides, it doesn't do the sidewalls any good.

2. **Driving in Ruts**

It is often easier to stay in the ruts but if they are too deep you risk leaving vital parts of your vehicle behind. You need to know what your vehicles capabilities are in this regard. Look ahead as far as you can because swapping ruts is sometimes very difficult. Attempting to change ruts at speed can end in disaster. Staying on top of the ruts is harder, as it requires more skill and concentration, but sometimes the better choice.

3. **Negotiating Water Hazards.**

If in doubt, first check the hazard for depth, potholes and ground surface. Water on a track often indicates a firm surface underneath, but not always. Momentum is important but too much speed can cause water to get into vital parts. Don't attempt deep water unless you are experienced and know what you are doing. Because of the high compression ratio, water entering a diesel engine can cause the engine to blow up. Differential breathers and a snorkel can save a lot of damage if the water is deep.

4. **Negotiating Mud**

It might be a messy task but finding the best way through on foot before you have a go in your vehicle may be the wise thing to do. If you have choice, try to keep out of the ruts. Deflating your tyres usually doesn't help and is probably going to make things worse. Momentum is, again, the key. If you start to slide sideways try to correct without losing too much momentum. Sometimes easier said than done.

GETTING UNSTUCK

The circumstances and conditions will dictate, to a large extent, what you can do, but here is a checklist of things to try.

- **Straighten** the front wheels as much as possible. Steering wheels turned even marginally act like grader blades.
- Try to **reverse** out, staying in the wheel tracks you made on the way in.
- Engage **4wd**.
- Engage **low ratio**.
- Try '**rocking**' - alternating from first to reverse quickly and smoothly.
- Try to avoid excessive **wheel spin** - if you are not going backwards or forwards you are probably going down and making things worse.
- Get a **tow** or a '**snatch**' (see below).
- Get to work with the **shovel**.
- Get something under the wheels - the hessian bags or timber.
- **Jack** the car up - a bull bag comes into it's own when you have all but eliminated any ground clearance.
- Start **winching** - use another vehicle or something solid like a tree for an anchor point. If nothing lends itself create your own anchor by burying your

spare wheel, angled backwards (hard work, but it might get you out of a tough spot).

USING A SNATCH STRAP

A snatch strap is designed to multiply the towing force applied to the vehicle needing to be towed. They have a certain degree of elasticity and stretch when being used and the combination of these two things mean that they apply a much greater towing force when compared with a normal towrope. In most circumstances they can be used like a normal towrope, i.e. take up the slack gently and then move off slowly. If this doesn't work, back up until the strap is slack and then accelerate forward. As the strap becomes tight it will stretch and snatch the towed vehicle. Try to keep the amount of aggression to the minimum required for success. In most circumstances it will be much easier if the towed vehicle is also working, as the pull required is often quite minimal. 'Dead' towing requires much greater effort.

RECOVERY AND SAFETY

The forces in play when a vehicle is being towed, snatched or winched can be very high. Consequently, the potential for disaster exists and needs to be recognised. Some basic safety rules :-

- Try to avoid towing with a steel rope - a synthetic rope is kinder to the vehicles and is not so dangerous if it breaks.
- Stay well clear of a winching cable - a whipping winching cable can kill, and has.
- A hessian bag placed over a winching cable will help to lessen cable whip in the event of a break.
- Try to avoid joining towropes or snatch straps with shackles - a shackle on the end of a whipping, broken snatch strap is lethal (they have been known to penetrate right through the rear door of a towing vehicle). Snatch straps can be joined by looping through the end loops.
- Never climb under a vehicle supported only by a jack. This applies particularly on unstable surfaces such as sand, mud and sloping or uneven ground.
- Make sure you attach ropes or straps to proper towing points - a piece of bodywork sailing through the air is both dangerous and expensive.

A COUPLE OF MORE THINGS

- Watch you don't flatten your battery while either using an air compressor or winching. An auxiliary battery comes in handy. Run the engine if in any doubt. Modern cars will often 'close-down' if the battery gets too low so as to prevent damage to the various computers.
- Drinking water and a few basic supplies are well worth stowing away in case of emergency. A small single burner, butane stove doesn't take up much room and can be quite useful.