

Tyre Deflators

The use of a tyre deflator removes the guesswork in deflation by automatically reducing to a predetermined pressure. There are many different brands and types of tyre deflator available. DFES uses the SOI5 Tyre Deflator made by the Staun Company, usually provided as a kit, containing two warning tags and six deflators. The deflator simply screws onto the valve cap and will deflate the tyre to the set pressure. The warning tag is hung on the internal rear vision mirror of the vehicle to warn the driver to proceed with caution.



Caution:

Tyre deflators can malfunction and let the tyre down completely.

It is important that tyre deflators are set up properly so they will reduce to the correct pressure. This should be done as per the manufacturer's directions and back at your unit/station before you need to use them. This can be time consuming, but once they are set up, they can be used over and over without the need for adjustment.



Staun Tyre deflator



See SOP 37 – Driving emergency vehicles (SOI 5 – Deflating tyres for off-road driving) for details of tyre deflation.

Driving in Mud

Stop before entering muddy areas or muddy parts of the track and, if possible, take the advice of locals on the ground. Physically check the obstacle on foot, and decide whether or not it has to be entered and if so, the best route. If there are existing wheel tracks, try and use these as they should be firmer, but be aware of the height of the central ridge between the ruts. If too high, the under chassis of the vehicle may get hung up

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If available, fill the ruts with rocks, dead branches and other material. Be cautious even where the top crust seems hard; many vehicles have been bogged well past the axles in spots where the ground appeared firm at first glance.



When driving through mud or slush select L4 second or third gear and maintain a constant but moderate speed that will maintain momentum. However, do not exceed about 25 km/hr as the ability to steer the vehicle will be greatly reduced. Momentum is more important than power as with sand driving.

Change direction gradually as sudden turning can cause a loss of traction at the front wheels; instead of the vehicle turning, the front wheels may be pushed forward and downwards like plough blades.

DO NOT change gears as momentum will be lost. Avoid revving the engine in low gear to prevent wheel spin.

If forward progress is halted the following steps should be taken:

1. Foot off the accelerator and declutch.
2. Assess the situation.
3. Do not try to 'spin your way out' as it can cause serious damage to the vehicle, particularly if it is fitted with a limited slip differential
4. Do not try to 'spin your way out' as it can cause serious damage to the vehicle, particularly if it is fitted with a limited slip differential.
5. If bogged, try rocking the vehicle by alternating between forward and reverse gears.
6. Take appropriate recovery action if the vehicle cannot be driven out.

If the wheels are spinning on a hard, slippery surface, deflating tyres to the previously recommended pressures may increase traction and assist vehicle recovery. If tyres are deflated, be sure that you can re-inflate them afterwards.



Was there another way around?

Ascending Muddy Gradients

Driving up (or down) hill in wet and muddy conditions is particularly hazardous. Should traction be lost during an ascent, simply use the stall recovery procedure previously described in this section. This will enable control to be regained. However, avoiding the situation is much better than trying to correct it so always look for an alternative, safer route to the top.

Descending Muddy Gradients

When driving down hill in wet, slippery conditions, select L4 first gear and avoid applying the brakes if possible. Allow the vehicle to descend under engine compression. Changing direction is done by slight corrections of the steering wheel and a gentle 'stab' of the accelerator. Avoid large steering wheel movement as this often leads to rear-end skid and increases the danger of roll over.

Water Crossings

Water crossings can be extremely dangerous as well as harmful for vehicles, and should be avoided if at all possible. Although most 4WD vehicles have features such as greater ground clearance that enable them to cross water more easily than conventional vehicles, too much water will stop any vehicle. This may occur due to the following reasons:

- Water entering the electrical system or through air intake.
- Loss of traction due to the nature of the stream bed.
- Loss of traction due to the vehicle being either floated or washed off the bottom.

The last of these reasons is particularly hazardous and has resulted in a number of fatalities over the years. Drivers of fire appliances should always be aware that the buoyancy of the vehicle will dramatically increase as water in the tanks is used up. Therefore, while the journey in may be uneventful, the journey out may be a different story.