

MALAYSIA'S ONLY ENGLISH 4WD PUBLICATION

# 4 Wheel DRIVER

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**PETRONAS**

# WINCHES

By Noor Azam Osman

**I**n the real world, we find that offroaders who use their winches a lot like those in the logging activities and those involve in serious 4WD competitions chose a PTO winch. PTO winch last longer in a frequent use environment as there's no motor to get heated up. It is also because it relies on the engine rather than the battery for its power, hence it's more powerful. Also, with a PTO we can select the recovery speed by selecting different gears.

Drawbacks? Yes, a PTO has a few disadvantages as well. Firstly, if you were to sell your vehicles, it is not easy to remove a PTO as you can with an electric winch. If you did, a hole will be left in your floor – where the engagement lever was. A PTO for one vehicle usually doesn't fit another vehicle of different make. Added to that, A PTO doesn't work if the engine has stopped.

By far the electric winch is more popular as it can be fitted to the majority of 4WDs including the more recreational variants. They are relatively much easier to use and provided to be reliable if they are regularly look after and serviced. The drawbacks of electric winch lies in the power requirements. It demands a lot of battery power and can tax as much as 300 to 400 amps under load. This means that our average NS70 battery may be flattened in about 15 minutes if our charging system (alternator) is not in good order.

The answer to the above problem would be to keep the engine running while winching but it would be much better to have a dual battery set-up. This adds cost to winch installation. On a positive note, having two batteries is always better as the second battery may be isolated from the main one, ensuring a sure-start drive after a winching exercise. The second battery may also be used as a source of electrical power at campsites.



## Winch Location

One of the limitations with any type of winch is that they are usually mounted at the front of the 4WD. In some situations where forward progress is not possible or by choice the driver wish to back track, the winch is tricky to use. For the serious offroaders, they would possibly add another winch at rear or opt to have a versatile mounting system such that the winch may be quickly and conveniently removed and fitted to the rear ala the Hayman Reese towbar connections. This is a good idea indeed but must be completed with the proper mechanical and electrical joints.

## Accessories and Equipments

Venturing the beaten path with vehicles fitted with winch is like winning half of the battle. To be more self sufficient and to some extent out of necessities, winch should be augmented with some accessories and equipments such as a tree trunk protector, shackles, snatch block, choker chain and gloves.

Tree trunk protectors are a short inelastic strap used to wrap around trees when using them as anchor points. Ensure that your shackles are of good quality with safe working load (SWL) or work load limit (WLL) ratings stamped on it. If in doubt, buy them from reputable 4WD shop or check out with specialist.

Snatch block is essentially a pulley block. (I personally think it is a misnomer to call it a snatch block. It is never used with a snatch strap and not intended to be used in any snatching exercise) It halve the load that your winch need to pull. For example if you are stuck with an 8000lb vehicle; using one correctly rigged snatch block, your winch need to provide about 4000lb of effort to extricate it. Thus less burden is put onto the winch. As with shackles, buy only quality snatch blocks with rated load limits. Those with greasable metal bushes are good and should last for years.

Choker chain is another useful recovery item, it can be used to anchor to rocks, big logs and mounted on both chassis rails of a vehicle to provide an even pull.

Last but not least, good quality heavy duty leather gloves are very essential. Through heavy usage and frictions, winch cables can invariably have small metal splinters or frays that can injure your palm and fingers. So, never leave home without a pair of gloves.



### Safety

Winching exercise is a specialized recovery process. The proper use of winch and its associated accessories and equipments along with the correct techniques should be learned from the experience persons. One way to do is by joining accredited course or have those knowledgeable persons to organize for you.

During winching, the forces needed for a recovery are great. Accidents did occur even though precautions have been taken. Cases where winch cables snapped, anchor points failed, strap broken etc has resulted in injuries and damage. Make safety a top priority.

Stay clear from winching areas. Use top quality and well maintained winch and equipments. Wish our readers safe winching exercise.

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