

Automatic Rope to Chain (R2C) Winches Tips.

While the R2C winches are great they must be setup properly to ensure problem free operation. These winches are a piece of fine engineering and live in a severe environment hence maintenance is something best not forgotten. In most cases the difference between a R2C Winch setup that works very well and one that gives problems is around \$200 often a lot less.

Here is a brief list of tips we have found over the years.

The Winches:

Install them properly. Use the recommended electrical wire size, as getting it wrong will just decrease the life, efficiency and pulling power of the winch. Make sure the hole in the deck where the anchor rode (the rope and chain) goes through is clean and smooth to prevent the rope snagging on anything. Make sure you line the winch up well. As a general rule the warp must be within 5 degrees of being dead straight to the bow roller, outside that will cause poor performance and highly accelerated wear of everything.

Anchor locker depth. The depth of the anchor locker will govern how well the system works. As a rule you need a locker that leaves, at least, 300mm (400mm min. is better) between the bottom of the chain gipsy and the top of the anchor rode pile, when all of the rode is in the locker. More depth = better performance and rode choices you will have.

My Mate. While your mate may have been in the navy 20 years ago and a damn good bloke, it does not mean they are up to date with the latest in technics and materials. A noticeable number of problems have been caused by 'mates' doing the install and splicing. If you have any doubts about your mates ability get someone who does know what they are doing to do the work.

Maintenance. Winches have motors, gearboxes, seals, etc just like the outboard motor you maintain regularly. A fresh water wash after use will not make the winch dissolve. Periodically, depending on use, regrease the clutch cones with good quality marine grease, a lithium type is good. Remove the motor and get the brush dust blown out. Half a plastic milk bottle fixed over the motor in the locker is not a bad idea NB: the motor must be able to breathe so leave a decent hole for airflow. Giving the motor a spray with CRC Soft Seal or the like is also a good idea.

Use the winch properly: These winches are designed to get the anchor from the seabed to your boat NOT to get your boat to the anchor. Winching your boat to the anchor will just damage the winch and rode.

The Anchor Rode:

These winches will work only as well as the Anchor Rode lets it. Short cutting on the rope and chain quite often will just decrease the winch performance, often dramatically.

Rope and Chain sizing. Each winch is made for one size of chain only so make sure you have the right one. Generally 99% of the winches on the market use these rope/chain size combinations – 6 or 7mm chain to a 12mm rope and 8mm chain to a 14mm rope. These combinations are 'matching sets' both for performance and strengths.

Chain Choices. The chain is always a 'short link' and should be calibrated as much as possible. Most of the winch manufacturers do not like you using Chinese manufactured chain due to calibration issues; some manufactures even go as far as saying using Chinese made chain will void the warranty. In NZ it is recommended you use MAGGItaly or PWB made chains only. If you have any doubt about the chain just ask for a 'Test Certificate' which will show the chains manufacturer and details. Asian made chains are slowly improving in quality but as yet they do have some serious reliability issues and are weak.

Rope Choices: The rope is a large determining factor when talking winch performance and the largest cause of winch problems so getting it right is very important. Generally there is only 3 choices of types, a 3 strand laid, 8 Braid and a Double braid (like a yachting rope).

The 8 Braid is great for shallow lockers due to its floppiness and is becoming the preferred rope by most. Most winches run 8 braid well but a couple don't, so find out if your winch will run it before spending the money.

The 3 Strand will run on all winches but does have 3 downsides to be aware of. One is that it tends to go hard a lot quicker than the 8 braid and these winches tend to not like hard stiff ropes. Secondly, the 3 strands need a deeper locker than the braids. The other occasional problem is some anchors can spin a lot on the way up and down which can result in the rope 'unlaying' and becoming useless or letting the splice come apart resulting in the chain and anchor falling off. To minimise the possible spin problem use a good anchor swivel.

The last choice is a double braid rope. This rope type is good but it is recommended that only very experience winch users use this as it can be torn apart easily if used wrongly.

As a rule use only a Nylon rope all though the odd winch can run Polyester. Not all grades of Nylon are the same and generally it is a lot more economic to spend a few dollars extra to get a high-grade nylon, like a type 66, which will last years than buying cheap every year or two.

We only recommend to ropes for use on R2C winches. One is a T66 Nylon 8 Braid and the other is a T66 PR Nylon 3 Strand. While these ropes aren't the cheapest to buy they are the cheapest when talking performance and 'lifetime cost'. In other words these ropes will out last and out perform the cheap ropes by a long way.

The Splice: While it looks easy (see 'My Mate' comments above) it is a very important connection between the rope and chain. The splice is a \$20-30 item that can mean the difference between joy and hair pulling. DON'T short cut on this; it is less than 1% of the total cost and a major cause of performance problems.

Rode Maintenance: Life living in an anchor locker is not good for anything and a little maintenance will make the rode work and last longer. When you retrieve your boat and are giving it a wash stick the hose in the anchor locker and give the rope a flush. This gets rid of salt build up that will stiffen the rope over time. Once a year, if not more, pull the whole rode out and put it in a fish bin full of COLD fresh water and a splash of fabric softener (fragrance of your choice), give it rode a good stir up and leave it for a day or so then remove and give a good rinse. Heat will make nylon harden prematurely so don't use hot water or leave it sitting in direct sun. This is also a good time to give the whole rode a visual inspection. If anything looks a bit dodgy it probably is so sort it out ASAP.

The Biggest Problems we see:

Generally the biggest problems we see (and we have seen some spectacular stuff) with poor or non-performing winches are rope choice. Basically just the wrong one being used either type or size. The cost difference between a good and a bad rope is far far smaller than the performance differences. Sure paying \$0.50 per metre of the rope is good but not if it doesn't work.

The other problem is the splice. Often it is just done poorly which will give problems. While the splice looks easy they need to be done right and the right one used for the winch.

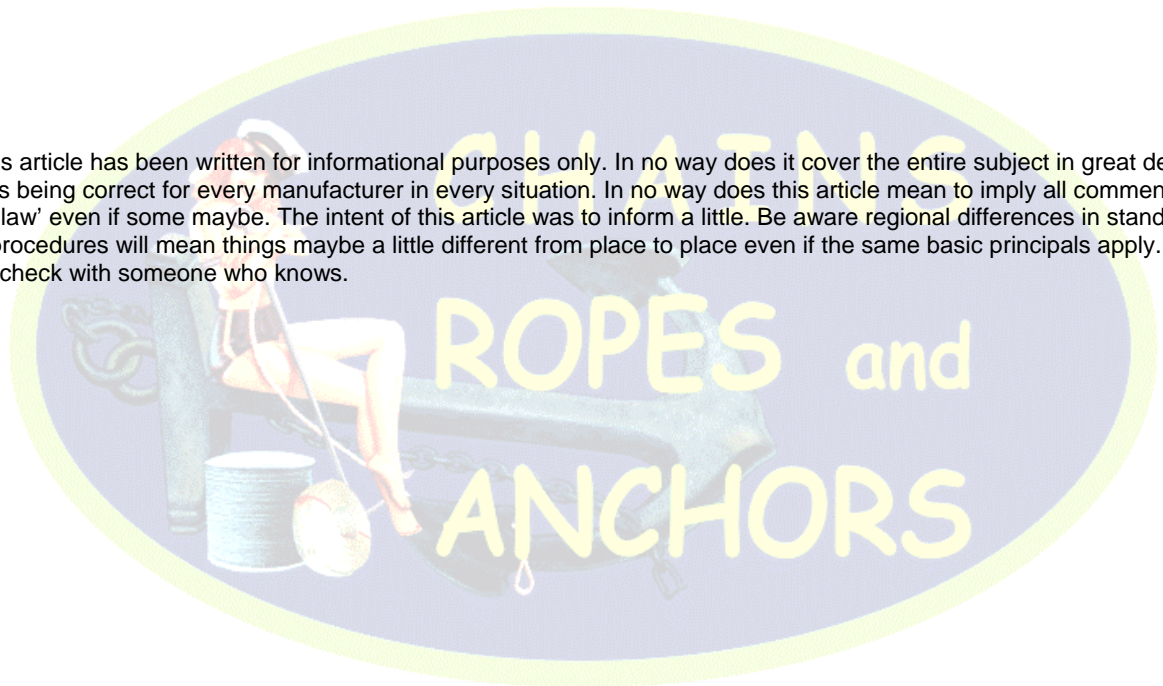
Occasionally the wrong chain is used which can work out very expensive if it blows the winch apart, it has happened more than you would expect sadly.

If nothing else:

It is great being able to sit down the back and push buttons to retrieve your anchor but can you see and cuts or problems in your anchor rode? An answer of Yes is good but an answer of No is dangerous.

Check you rode and the splice. You would freak at how close some have come to coming apart before anyone noticed. Do you want it coming apart at 3am while your asleep?

NOTE: This article has been written for informational purposes only. In no way does it cover the entire subject in great depth or is meant as being correct for every manufacturer in every situation. In no way does this article mean to imply all comments made are 'law' even if some maybe. The intent of this article was to inform a little. Be aware regional differences in standards, laws and procedures will mean things maybe a little different from place to place even if the same basic principals apply. If in any doubt check with someone who knows.



The Maritime Bondage Specialists