

# **Rope runners and Backstays.**

## **Benefits and how to fit to your PETTICROW Dragon**

After the ISAF rejected the request from IDA to allow rope runners and backstays in 2008 we underwent a program of testing in 2009 with several top teams sanctioned by IDA trailing the system.

The results of this testing enabled IDA to re present the rule change request to ISAF and this time it was approved.

Now it is class legal to have the whole system ( below and over deck ) in rope.

A very important part of making rope runners work is the selection of the rope. Also the correctly designed fittings in the boat.

We tried several types of rope and by working with our rope supplier LIROS ended up with a DYNEEMA rope made from SK78 Grade that is pre stretched down to 3.5mm from 5mm.

This is Ultra Violet stable , has very low stretch , and has a breaking point similiar to the 7x19 stainless wire it replaces.

Benefits of the rope over wire are:

- Lighter
- Less damage to sail
- no corrosion on mast when travelling / storing the mast
- leeward runner releases much easier
- does not go stiff over time
- can be changed without the need of tools

### **Parts List necessary for a complete and successful change**

1. 3 x “rope special” through deck fittings
2. 2 x large harken hi load blocks for under deck runners
3. 1 x small harken hi load block for underdeck backstay
4. 2 x harken through bulkhead sheeves
5. 2 x “ rope special” mast runner fixings ( bones)
6. 2x underdeck rope runners in prestretched SK78 grade UV resistant DYNEEMA
7. 2x overdeck runners in prestretched SK78 grade UV resistant DYNEEMA
8. 1x underdeck backstay in prestretched SK78 grade UV resistant DYNEEMA
9. 1 x overdeck backstay in prestretched SK78 grade UV resistant DYNEEMA

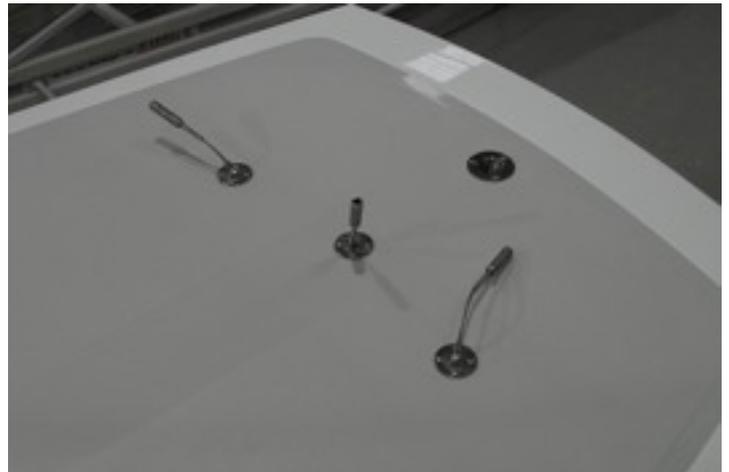
**We can install this system on your new Dragon  
OR if you like to change on your existing PETTICROW Dragon we can supply all  
ropes and fittings .**

Listed below is an explanation of the parts we recommend to change when transferring from a Dragon that has wire runners/backstays to a rope based system.

**There are 4 important fittings areas that need to be changed.**

**1.The through deck fittings.**

These have a larger diameter hole to allow for the pre spliced rope to pass through and soft corners so the rope is not damaged.



**2.Under deck Harken runner/backstay blocks.And bulked lead block.**



These need to be changed as the wire will have created sharp edges on the wheels.

### 3. Mast runner fixings . We call them “Bones”

These are the same as for the wire but with soft holes so not to damage the rope.

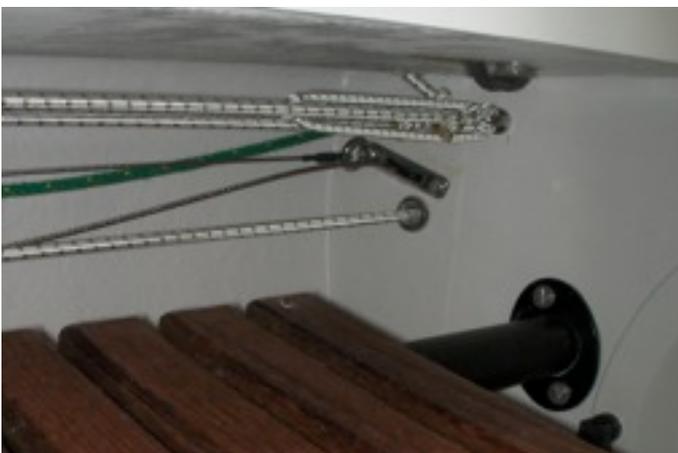


These are fixed to the mast with an M10 HEX head machine screw.



### 4. Change the through bulkhead Harken sheeves.

This is necessary as when they have been used with wire there will be damage on the wheel that will damage the rope.



**Another very important feature of the rope runners is the method of connecting the lower ( under deck part ) to the overdeck part.**



**We tried several solutions and the favourite was the splice , similar to the solution used on the rope shackle for the genoa sheets.**

**The above part has a sliding splice. You open this , put through the knot on the end of the lower part and slide closed.**



**Its easy and is also easy to open , even after its been under tension for a long time.**

**To connect to the mast head crane or runner “ BONES” copy the method on these pictures.**



## **Precautions !!!!**

**If you fit this system on a mast with adjustable jumpers the tip weight will almost certainly still be OK.**

**On a mast with fixed jumpers it WILL be necessary to correct the tip weight to comply with class rules.**

**It is strongly recommended to check this and before championship sailing have the mast remeasured by an official Dragon Class measurer.**