



MASTERCLASS WITH PIP HARE

HOW TO REPAIR SAILS AT SEA

Those who venture offshore understand the importance of self-sufficiency: if something breaks we fix it out of necessity. This is especially the case when it comes to sail repairs. In my experience, with enough time and the right materials, pretty much anything can be repaired well enough to get back to shore. But just as sail materials have changed, so have the materials we can use to repair them.

Preparation

Don't rush at a repair; poor preparation will seriously affect the staying power of your handiwork. Aim for a flat, dry and clean surface. Smaller tears in spinnakers or headsails can often be fixed with a quick drop and repair on deck. Repairs to the lower portion of the mainsail can be reached by reefing. But if the damage is large or conditions too difficult don't procrastinate – get the sail below decks to dry as soon as possible.

Once dry, rub the whole area with acetone or alcohol to remove the last moisture and any salt or dirt residues that may hamper adhesion.

Making a repair on a flat surface can be harder than it sounds, especially when performing the operation on deck. For smaller repairs use a chopping board underneath, or perhaps a locker lid for bigger fixes. It pays to get the biggest area possible laid out and flat to avoid puckering. When sailing short-handed, I use clamps to hold the sail in place around the board. If fixing a mainsail in situ, have one or two people on the opposite side of the sail holding a board in place.

Sticky-backed Dacron

Sticky Dacron is my go-to solution for most repairs regardless of sail type; I normally carry several metres, preferably rolled and stored somewhere dry. Folding the Dacron can lead to it becoming detached from the backing paper along the creases and lose tackiness over time.

Dacron is fantastic for chafe patches, punctures and tears of any size – make sure you use decent-sized patches on both sides of the repair with rounded corners to avoid them getting lifted off. In cold weather, pre-warm patches to help the adhesive work then rub vigorously with a soft cloth after application, as this will also warm the adhesive and help it stick.

For leech and bolt rope repairs you can use Dacron wrapped around the edge of the sail and stitched in place; for the bolt rope, use a couple of stitches to cinch the fabric in at the back of the rope. Leech repairs can be layered for



A roll of sticky-backed Dacron is invaluable for emergency sail repairs large and small

strength and have a line of stitching following the existing leech tape. To ensure the leech line will still run, use a thin strip of 'back to back' Dacron over the line – so the smooth side is against the string.

Dacron is also great for repairing patches of delamination on older membrane sails. Again, don't skimp on size, cut enough to cover well outside the area that has broken down.

If spinnaker repair tape isn't available sticky Dacron will also provide short-term patches for spinnaker repairs and rips in tapes.

High-tech sails

Repairs to high load areas on laminate sails may require reinforcement with something stronger than Dacron. If you carry laminate sails ask your sailmaker for a couple of metres of suitable cloth to be stuck on with a separate adhesive; laminate sail repair tapes are also available but come in with limited widths.

If applying a laminate patch to a large tear, lay out the sail in the largest area possible to

align the edges. Small pieces of tape can be used across the back of the tear to hold the two parts together. If using epoxy to glue a patch in place it can be pretty hard to keep the sail in position so I prefer to Dacron patch one side of the repair first to keep everything in place while I put the load-bearing repair on the other side.

All-weather adhesives

For high load areas, laminate material or repairs that just won't stick, there is now quite a range of flexible, strong adhesives that can be used on wet surfaces. I have used polyurethane sealant for patch repairs, and epoxy repairs in particular are efficient for layering layers of cloth and webbing in clews and headboards.

There are many sealant adhesives on the market that will stick to pretty much anything. The important thing is to take your time, spread the glue out evenly across the patch and make sure you have something suitable to clean up the mess afterwards. Remember the repair will need time to cure – and unless the product is specifically for sails it may leave quite a mess for the sailmaker to clean up. But in extremis it should be possible to make a reasonable, if not pretty, repair to get you home. As with most things practice makes perfect, so if you've never used epoxy or silicone before take your time.

Quick fixes

Spray glue and double-sided tape are invaluable for holding parts of repairs in position as a temporary measure during a big job.

Double-sided tape will hold seams together before re-stitching and patching, while spray glue can be squirted under the edges of Dacron patches that are refusing to stick.

STITCHING

There is still a place for a needle and palm in your sail repair kit. Make sure you have both blunt and sharp needles – it is easier to guide a blunt needle through an existing hole. I use wool darning needles for this.

For heavy reinforcement through webbing or multiple layers of fabric, it will be essential to pre-make holes. This can be done with a sharp bradawl or even a battery drill with a sharp DSS bit.