

How to replace a drysuit zip

You need to prepare carefully, but replacing a drysuit zip is an extremely useful skill to master. **Alex 'Woz' Warzynski** offers a step-by-step guide

How a dry zip works

Like any zip, it's made from some teeth that knit together and a slider with some wedges in it. As you move the slider, the wedges force the teeth together and they click into place. On a dry zip, these teeth click together on the inside on the small brass teeth. It makes a seal just inside

these, where the smooth zip surfaces are pressed together. The slide is pulled into a rubber block at the end of the zip that makes a seal between it and the slider block.

When you open it, the slider has a V-shape that forces the teeth apart. This

is why a dry zip has a service life – the more frequently it's used, the easier the brass teeth are to click together as they wear in over time. Plastic zips are slightly different – as they look just like a regular coat zip and form a seal on the face of the teeth down the middle of the zip.

How to tell if your zip is ready to be replaced

The most common problems with a brass zip are:

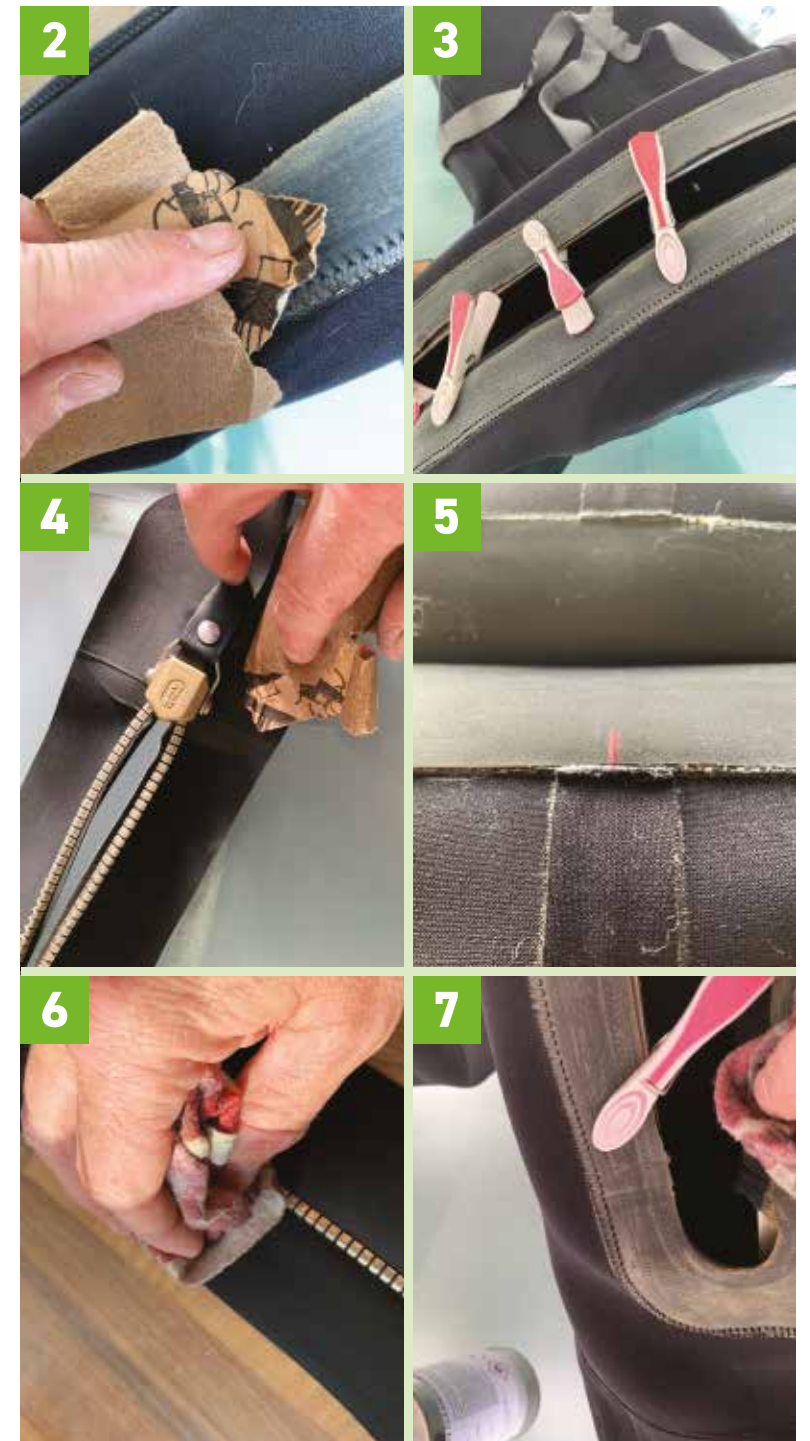
- **WORN OUT BACKING RUBBER:** If you look behind the big teeth on the outside of the zip, you'll see where the slider rubs on the zip rubber. Over time, this wears out and eventually gets through the rubber and exposes the cloth underneath. At this stage you'll be getting a dribble that gets wetter over the course of a few days. It's not a trip ending problem, just a bit annoying. If the dribble is at the end where the slider is when it's fully open, then closing the zip just past this point and gluing the inside with Aquasure can keep you dry, as long as you have enough length left in the zip to get in and out of the suit. If at the other end, then you just have to put up with a wet arm.
- **PULLED TEETH:** The brass teeth on the outside of the zip have a rubber core that runs along the length of the zip. If the zip is bent too tight, this rubber core snaps and creates a gap. As you close the zip, the slider catches the tooth and pulls it out of the zip. At this point, if you're careful, you can push the tooth back in and pull the slider over the top but you'll only be able to do this a couple of times before the zip needs replacing.
- **WORN TEETH:** The small teeth on the inside of the zip wear out and stop clicking together. The zip now can't be used at all and needs to be replaced.

Zip replacement

Before you start, assemble the bits you'll be needing:

- 2-part glue (Bostik 2402 or similar)
- Old mug (Sports Direct ones are perfect for this)
- Cleaner / thinner solvent
- Half inch cheap and cheerful brush
- Former **1**
- Sandpaper
- Lint free rags
- Clamps (or strong clothes pegs) **3**
- Screwdriver with a round handle or a seam roller
- 38mm rubber tape
- Cylindrical thing (about the size of a pony bottle)

You can make your own former out of wood, or I made one from steel. You can do the repair without a former, but it's much easier with one. It fits inside the suit and has a slot for the brass teeth to sit in, so you can hold the suit and zip in place and have something solid to press down on.



Taking the old zip out

The zip can be peeled out of the suit if you carefully heat up the old glue with a hairdryer to soften it. Some manufacturers stitch the zips in – you'll need to carefully cut the stitches. Pull the old zip out using a nice, steady force. If the zip really won't come, then you can, with care, cut the teeth and end stops out of the existing suit and stick the new zip on top of the old backing. Any stitching will need to be trimmed back with scissors or even a beard trimmer.

Preparation

It's essential that the suit and zip is properly prepared so the glue has a nice, clean, rough surface to stick to. Use some sandpaper to rub over the suit to clean off any old glue and roughen it up. **2** This is where the former comes in useful, as it holds the suit while you work. **3** Do the same with the zip – the end parts especially are very smooth when new and need the surface sheen to be taken off. **4** At this point, use a tape measure to find the centre of the zip and mark it with biro so you can position it later. **5** When you have finished with the sandpaper, use solvent to clean all the sanded areas down **6 7**

The gluing process

GLUE: Mix up some two-part glue in an old mug following the instructions for the part A and part B supplied with the glue. Mix thoroughly.

ZIP GLUE: With the zip laid out on a flat surface with some rags underneath, apply a thin, even layer of glue and leave it until it's touch dry. **8** Apply another two layers, leaving each layer to dry in between applications.

SUIT GLUE: Working from one end, apply the three coats as above, covering only a short piece at the end where the zip puller is to be in the open position. **9** Don't put any glue on the rest of it yet.

POSITIONING THE ZIP: Use your biro marks to align the suit and zip so that it's in the centre of the suit. Carefully lower the zip on to the glued end of the suit. Don't press the zip and suit together until you are sure it's in the right place. Fold the zip back on itself. **10**

GLUING THE REST OF THE SUIT: Now you have the zip started in the right place, you can apply the three coats of glue to the rest of the suit, as you did on the zip. **11**

POSITIONING THE REST OF THE ZIP: Starting from the end that's already fixed on, carefully lower the zip onto the suit, working a little bit at a time, making sure it's in the right position. If you don't press the zip and suit together, it can be peeled apart and repositioned if you need to adjust it slightly. **12**

FORMING THE BOND: Using the rounded end of a screwdriver, or a wallpaper seam roller, press the zip and suit together as hard as you can, working from the middle out to push any air out, until the whole length of the zip is stuck down hard. **13**

CLEANING UP: Using solvent and a rag, clean off any excess glue so it looks neat and tidy. **14 15**



Adding the backing tape

The backing tape adds waterproofing and strength to the zip.

Measure how much tape you will need and cut off the amount from a roll. To apply glue to a length of tape without it going all over the place, first clean it using solvent, then apply a dab of glue to the end and stick it to a large cylinder such as a pony cylinder. **16** Wrap the tape round in a big spiral and secure with another dab. This gives you a nice, hard surface that you can use to brush the three layers of glue onto and the tape won't curl and stick to itself. **17**

After a sand and a wipe down with solvent, **18 19** apply three layers of glue to the suit. **20** If you are gluing onto fresh neoprene, thin the glue down with some solvent so that it soaks into the nylon. The first layer of glue should almost disappear as it soaks away.

When dry, carefully peel the end of the tape off the cylinder and stick it down, starting at one end and lightly pressing it onto the suit, making sure the middle of the tape is on the join between the zip and the suit. **21** Trim the ends to the right size. When you're sure it's in the right position, press it down firmly from the middle outwards using a screwdriver handle or seam roller. **22**

Do the same with the other long side, and the two short ends, brushing glue over the ends of the long tape. **23** Just before pressing it down firmly, trim the tape so that it lines up with the long tape you've just stuck on, **24** then with a cloth soaked in solvent, clean up any excess glue. **25** When it's complete, it should look nice and neat. **26**



Zip maintenance

It's the most expensive component of the suit, so taking care of it is important for a long service life. The rubber core of the brass teeth is the most vulnerable part - when storing the suit, close the zip and fold the suit so that the bends on the zip are as large as possible. I store mine hung up with the zip closed as this keeps the zip nice and straight.

Excessive pulling when moving the slider can damage a zip, so keeping it clean and lubricated is important. A block of beeswax works okay, but is difficult to apply in the cold. I prefer a bottle of liquid wax zip lube, warmed up in a mug of hot water then painted onto the zip.

Over time, the small fabric lip on the teeth will get a bit furry as it wears through. It's not

a disaster if this happens as the fabric here isn't on the sealing side. A careful trim with some sharp scissors to remove the worst of it, followed by running a lighter along the zip to burn off and melt the finer threads will stop it from getting worse. Do this before lubricating the zip, not after, otherwise you will set fire to the whole zip. Bitter experience here...