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Liz Wardley: Account and analysis of the dismasting



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This Monday morning, Liz Wardley is aboard the *Soloceans One-design* under jury rig and 160 nautical miles from Cascais Harbour (Lisbon - Portugal). She will be there in around 30 hours sailing at 5,5 knots on average with surfs at 8 knots. After losing the mast - which fell without breaking - on Thursday morning, the 17th December, 158 nautical miles West of Madeira and 619 nautical miles Southwest of Lisbon, she is sailing back the *Soloceans One-design* without outside assistance. During the weekend, the sea was strong and confused. She slept a little bit, with the life raft constantly on her side and with her survival suit on in case a wave bigger than the others would have been fatal: a dreary atmosphere making things hard for her to keep her spirits high. Nevertheless, Liz Wardley took the time to send us an account of the dismasting and the reasons behind it. At the end of this analysis, her conclusions are clear: *"I love this boat, the Soloceans One-design and its concept, I feel confident sailing her. I hope we can get a new rig and sails as soon as possible. It would be great to get sailing again quickly to train for the Route du Rhum 2010 and the Soloceans 2011 - 2012."*

Account of dismasting

"We were reaching at 80° to the wind with about 25 knots gusting 32 and I was lying on the floor trying to sleep. I noticed the NKE alarm as "MAITRE ABSENT", so I new that the pilot would keep working on compass mode for a while. So I quickly turned on the second pilot and switched the NMEA input into it. I put my helmet on so I could drive. As I was going on deck, the boat wiped out and went into a tack.

The boat was completely laid over with the mast in the water. It took me a long time to re right the boat and get tacked again. I then set the boat on a more downwind angle, put the second pilot on and started trimming the sails and cleaning up the cockpit.

As I was doing this, an alarm started going off on the second pilot and it stopped - the boat went into a fast wipe out and once again I was on my side, mast in the water and all, but not tacked.

I got the boat back upright - stayed hove to and went and looked at second pilot - it said error between command and calculator. I started the motor to make sure I had enough power. Then went on deck, brought the boat back onto its course, and turned the first pilot back on as "MAITRE ABSENT" had disappeared."

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"I then cleaned up the boat, went and sat down and started explaining to the camera what had happened and BANG - then there was alarms going off everywhere.

At the time of the dismasting, the autopilot was functioning correctly, I had to turn it off to try use the speed of the boat to turn around the mast and get downwind of it so the boat was being pushed away and not onto the mast in the water.

The mast started to sink quickly so there was no way to try keeping it, but I managed to get a fender between the mast and the hull.

As I had two reefs in the mainsail when I dismasted I tried cutting the main sail in half but with waves crashing over the boat it was too dangerous so I gave up and cut it off the boom to save the boom.

I got the toolbox for the hacksaw, knives, wire cutters and from the port runner, started a circle round the boat cutting everything attached to the rig, saving blocks and clips when I could.

As I got to the mast base I cut the wiring and the mast came up and smacked me in the head, I had a few moments of stars, but felt no pain till later.

I cut thru halyards and lazy bags - I just cut and cut and saved bits of rope and cut and the thing kept sinking and bobbing into the hull - I had to go fast.

Cutting through the two forestays took three hacksaw blades and when they were gone the only thing holding it was the remaining side stay and runner. Runner was easy to cut but the side stay was over the side of the boat and all the life lines were gone so very dangerous with the waves. I decided to try take out the pin - it took a lot of hammering but I found a force inside me and got it out, leaving a small screw driver in there that just snapped like a twig... then silence... absolute silence except for the waves crashing over the boat and the pelting rain..."

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"I then went inside, has a little crisis, called my best friend to try and calm myself down coz I was a wreck and talking rubbish; once he calmed me down, I called the shore team and left a voice message.

I then went on a full tour of the boat inside to check there was no hole - which there was not. I also got the second life raft and TPS and brought them to the living quarters as I knew a big storm was coming and I would be an easy target with big seas and no mast.

I called the shore team and got thru, asked them to check with Météo Strategy for best destination.

By that time the sun was coming out. I went on deck to pull all ropes on deck. I saved all I could and tried and raised the dagger-boards to at least deck level. The port dagger board was shattered so I had to pull it up manually by putting my arms down the cases and getting full of carbon splinters. I then lashed it up - drilled a hole thru it and tied it hanging and lashed it so it couldn't damage the case. I put everything in the cockpit, checked again nothing was in the water, checked my destination and started motoring to Lisbon...

Went and put my dry suit on and then started coiling ropes, folding lazy bags and putting everything inside, whilst thinking of a jury rig and how I was going to get the boom in a standing position... and quickly before the strong wind came."

Reasons and analysis of this dismasting

"The mast came down as the boat fell off a wave. The boat slammed hard and the mast took the shock seconds after. I believe it was the port shroud that broke or its fixture to the mast. I believe the mast went into the water intact. The shrouds and inner forestay had been changed in September for safety reasons just before my start.

I honestly believe that the mast finally broke out of fatigue caused by all these misadventures; each crash gybe or wipe out was really violent. A mast seems to have a memory; it can take a punishing and break two days later in light airs. For me however I still had strong breeze with violent gusts and a big seaway. That said I had been through gale force winds without any problems at all whilst passing Ushant in a horrible confused sea."

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"Just after the start in Caen on the 29th of November, I had experienced two crash gybes in 35 - 40 knots of wind. These wipe outs were extremely violent, more so than when I lost the mast. These two incidents were caused by autopilot malfunctions

During these crash gybes in the English Channel, I was very happy to have the SolOceans One-design wing mast and not a conventional rig as found on some of the IMOCA 60's. If that had been the case, I am sure I would have dismasted on the first incident!

I believe that the mast itself or its conception is not at fault. I believe the mast and rigging were bullet proof and perfectly suited to the SolOceans One-Design. It made the boat easy and safe to manoeuvre. The combination between that mast and the new North sail wardrobe the boat was performing really well in all wind ranges.

Since the start in Caen, all crash tacks, gybes and wipe outs have occurred whilst on port tack or gybe - there is logic that it was this shroud that took all the extreme efforts, probably leading to its final breakage

In 2007- 2008, between Caen and Wellington (NZ), with Charles (Caudrelier Benac) we had one round up due to autopilot malfunction. This time, between Caen and the dismasting, in less than 10 days of sailing, I did five crash gybes or wipe outs

The SolOceans One-Design is a safe boat that is the philosophy of this offshore one-design. At the moment the autopilot is its weak point. We need to find a solution to make our autopilot as safe as the rest of the boat. That is the challenge that faces us now and then it'll be a great boat to sail solo round the planet!"