



Above: This is our Blue Treasure, the pristine waters of the Friendly Isles. Right: *ICE* in front of Swallows Cave, Vava'u Islands — diving in the cave is simply stunning.

# GAME ON!

Wreck diving and filming documentaries are in store for Don and crew this year, in the interim Don is keeping *ICE* safe in a hole for cyclone season

**W**ell, it has taken three years of frustration, time and effort but our [www.BlueTreasure.me](http://www.BlueTreasure.me) plans have finally got to the stage where next season, it will be game on! We start filming the doco and diving wrecks... WOW! We believe big things are about to happen, though it is never over till the fat lady sings. Right now I'm in China, talking to some experts, sourcing more

equipment to ship out and increasing my knowledge on Ming Dynasty porcelain. Hmm? So watch this space.

*ICE* is sitting in a hole on the hard at Vuda marina in Fiji for the cyclone season, awaiting our return in early April. My mate Mark is very busy in Tonga continuing our efforts.

It has been a good year. Tonga is a nice place to get frustrated, or just hang out. Come join us.

Earlier in the year, we were visited by one of Australia's

pre-eminent landscape photographers Steve Fraser (see [www.stevefraser.com.au](http://www.stevefraser.com.au)). He spent just two weeks with us on *ICE* and took some awesome shots.

## GAME OVER!

Nothing is certain in life, which makes it all the more exciting. I mean think about it. If everything happened just the way it was meant to, or the way you planned it, there would be no surprises. You would always get what

you expect, nothing more and nothing less. Weather forecasts would become a reflection on life, boring, as they would always be correct. There would never be a sense of anticipation, the building blocks for excitement and that would be a disaster. So you have to accept the good with the bad in life, as being the essence of it. Nonetheless, it can sometimes be a bummer.

Just weeks ago Tobias Fahey set off from Hobart to sail solo nonstop around the world. A few days later he had to give up and return to base. He is a capable sailor, with an excellent boat and all the right gear. He had completed a successful three-day sea trial following a refit, so packed up and cast off. While heading deep-south for the Southern Ocean below New Zealand he rang me on his satphone with a problem. Five minutes later I told him he would have to return. It was devastating

news for Tobias. His brand-new 800amp battery bank was fried.

He phoned to explain he couldn't get power into or out of his batteries and was virtually running his engine all the time. Solar panels and wind generator were not helping either. In a few short minutes on the phone, we conferred on the problem. A simple mistake by an electrician, who installed two small wires in the wrong spot, may have ruined Tobias's day... but how?

With new fully-charged batteries installed for the first time, Tobias pulled away from the dock for sea trials. He switched the engine off, hoisted sails and had a three-day blast down into the Southern Ocean, returning all smiles and declaring she's ready to go. The solar panels and wind generator kept up with the power, so the engine was not needed to top-up batteries. Weeks later, with final preparation completed, he set out for the last time. The challenge

had begun. Now he started using his engine to charge batteries via a high-output alternator and regulator controller.

Alternators pour huge amounts of electricity into batteries. When the batteries accept that power, the voltage starts to rise and a sensor from the alternator fitted to that battery tells the alternator via the regulator controller to slow the output so that batteries are not overcharged and damaged beyond repair, or worse, explode.

Like most engines, Tobias's also has an engine-start battery and a second separate small alternator to charge that. When the electrician installed the new



I would hate to fry my 24V batteries — all 2V cells that weigh 700kg and cost a fortune — but I very nearly did when a regulator failed while underway.



Top: The island of Tofua, Tonga, has an active volcano where you can walk to the crater's edge and look into the bowels of the earth, dodging the lava — double the fun! Above inset: Tobias Fahey gave his solo round-the-world sail a good shot, but not quite good enough for now. He will be back bigger and better next season, holding his dream high and with a strong heart. Above: ICE about to be placed in its cyclone hole at Vuda marina, Fiji — possibly the best cyclone-shelter in the Pacific.

RIGHT NOW I'M IN CHINA, TALKING TO SOME EXPERTS, SOURCING MORE EQUIPMENT TO SHIP OUT AND INCREASING MY KNOWLEDGE ON MING DYNASTY PORCELAIN

batteries, somehow, inadvertently, the small engine alternator voltage sense was put on the 800amp house battery bank and the large alternator voltage sense was put on the engine start battery. They should have been the other way round. The power outputs from both alternators were installed correctly.

When Tobias ran his engine to charge the house batteries they were accepting 140amp continuously as the voltage sense reading was not going up, because it was reading voltage from the wrong engine start battery, which just sat there. So, the big alternator power just kept pouring in, while the actual battery voltage went through the roof — lucky not to explode. Meanwhile, the small engine alternator reading that extreme

voltage just shut down, so the engine-start battery voltage stayed normal... game over! It doesn't take long to cook very expensive batteries. You cannot sail around the world solo without batteries if you want to break a record.

Two years ago, a brand-new 52ft trawler blew up and later sank after a huge battery explosion. I have experienced a faulty "runaway" regulator controller, that set my big alternator on full output and could have fried my \$8000 batteries, but it did not. Why? Only because I always take voltage readings of my house batteries while charging and I noticed the voltage climbing through 29V (on a 24V system) so I shut it down. The moral of the story: if you really care, you should check your voltage



My fried 12V battery bank from last season, courtesy of a faulty DC/DC charger — they expanded and cracked but didn't explode!

meter regularly while charging batteries, even if you have a high-voltage alarm.

Other financial and time issues have hit Tobias, so the only certainty in his life right now is that he will be back again next year, raring to go, with a great sense of anticipation.

Have a Merry Christmas and a Happy New Year. Stay safe and remember, an adventure a day keeps the grey away. 🍷