

CASE STUDY

200-AIP Lithium Battery Hits the High Seas



A 43ft yacht is upgraded to an LBS-12200-ME-AIP house battery system in preparation for a journey to Vanuatu in the south Pacific

In this LBS case study, we were able to strip out over 100kg of weight out of the yacht by replacing 2 x 180Ah Deep Cycle AGM batteries with a single 200Ah AIP 12V house battery system. The integrated solar controller and the DC-DC converter made the system less complex to install and operate.

The vessel had:

- A diesel 5KVA Generator
- Magnasine MS2712E charger / inverter
- 500W of solar panels permanently mounted
- Folding solar panels for when under anchor
- Standard 12V distribution for lights, radios, coms gear etc
- 240V for a few AC only appliances

The new battery system fitted in place and was electrically interchangeable with the old AGM batteries.

After installation all systems were tested and with the generator running the Magnasine was producing 60-70A of charge. This started to reduce when the battery reached top of charge. We were then able to sync the top of charge into the existing Enerdrive SOC Shunt resistor battery monitoring system and screen.

We could have used a new LBS monitoring Screen but to save budget the current system was able to made to work perfectly well and this saved work in mounting a screen.



**LBS-12200-ME-AIP
12V 200Ah Lithium Battery**



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The house system was able to be put into parallel with the start batteries using a high current rotary switch. When bridged, the start side alternator was able to produce up to 30A of charge when underway with the motor running.

The boat had an autopilot system that uses 12V servos driving the tiller position. This load was approaching 100A momentarily. The LBS battery was highly capable at these high current situations and provided low lag voltage drop supply to these loads.

The boat also had electric winches and again this approached 100A and again was easily handled by the LBS lithium battery.

To protect the battery against the elements faced on the open seas, it was placed inside a sturdy but light weight utility box.



In summary the LBS 12200-ME-AIP was easy to install and integrate into the current systems on the boat.

The heavy loads were easily handled and the massive weight saving was a major reason for choosing the LBS Lithium battery.



**LBS-12200-ME-AIP
12V 200Ah Lithium Battery**

The LBS range of start and house batteries are well regarded in the marine industry.

LBS marine batteries:

- 1) Are safer to use because they don't vent flammable gases like the hydrogen which is emitted from lead-based batteries;
- 2) Provide power to high amp loads like winches and autopilot systems with little voltage sag; and
- 3) Offer massive weight reduction.

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