

# Glacier Bay's diesel-electric propulsion hits recreational market



Wayne Goldman, Glacier Bay's vice president of sales and product marketing (left), and CEO Kurt Gallo take the test drive. PHOTO/CAPT. TOM SERIO

By Capt. Tom Serio

Diesel-electric propulsion systems have been around for a while, notably on larger ships. But as boaters look for more options as well as "green" solutions, one company has produced a diesel-electric propulsion package for recreational vessels that may just make skippers green with envy.

California-based Glacier Bay has developed an integrated diesel-electric propulsion system called OSSA Powerlite. Centered on variable speed, permanent magnet, brushless DC generators and common-rail fuel injection engines, this contained unit generates enough power for the OSSA propulsion motors as well as power management for other yacht systems.

Electric propulsion motors do not need transmissions or reduction gears, it's all done by changing the rotation of the motor.

Benefits abound with this technology. Yacht builders can design hulls around the generators as they do not need to be in-line with the motors, potentially offering more living space and smaller engine rooms. Low noise and vibration, higher fuel efficiency, less pollution, increased range and better weight distribution help in reducing the carbon footprint of a yacht.

The generators charge a bank of high-voltage batteries that are managed by a power distribution and safety system, which also manage the

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## LESSON LEARNED: Watermaker repair

# New membranes: 3,900 euros Trusting the manual: priceless

By Eng. Mike Sandiland

MALLORCA – Been here a week and the chef is annoyed about the white film on top of the water when he's boiling eggs. He's also annoyed that it's collecting on his pots and doesn't come off easily.

Even worse, the hot tub has a film on top of the water and on the surfaces, much to the chagrin of the chief mate. Engineer Idiot (that would be me) checks under "hard water," "calcium," "magnesium," and heaven knows what else. What to do?

Flash of brilliance. Re-circulate the water from the tanks through the watermakers and back. At least a couple of Internet sites say reverse osmosis is the best way to get rid of dissolved solids.

Check the system. The builder installed three-way valves on the sea water supply pumps, but not on the brine discharge. How did they expect me to clean these things?

No problem, three-way valves are easy to find.

The next day, the valves are installed and I'm ready to make the water cleaner than rain in the Rockies. Better check the manual, though. Not a word from the manufacturer about running fresh water through the system, just a note about running at low pressure and destruction of the membranes.

I charge ahead, caution to the wind. What do they know? And who's the engineer around here anyway?

Two days later, the water quality is marginally improved, nothing like what I expected. Doesn't matter; we're out of

here. Soon I'll have made enough fresh water from the sea and there won't be any more hard water in the tanks.

Once we're out of the harbor, it's time to spin up the watermakers. Hmm, product from No. 1 is down something like 60 percent. No. 2 isn't much better, down about 40 percent. Oh well, with both of them running, we'll make enough to get by ... I hope.

In Bonifacio, it's time to clean No. 1 and hope it gets better. The mate wants to connect to dock water. Nope, not till I clean the watermaker because I don't know how much chlorine is in the dock water.

The captain comes down a while later and wants to fill with dock water. When I tell him I'm nervous about chlorine levels, he says, "Oh, don't worry about it. I've done it lots of times."

I'm almost finished cleaning the membranes when the captain comes down again.

"Are you going to do this every time we stop?" he says. I managed to choke back the instinctive response, "Only if you keep annoying me."

Long story short, after three months we're back in Mallorca with a new set of membranes installed, at a cost of 3,900 euros. Expensive mistake. Except mistakes are something that happen by accident.

The moral here? When the manufacturer says *not* to do something, there's usually a reason, and they're usually correct.

Comments on this story are welcome at [editorial@the-triton.com](mailto:editorial@the-triton.com).

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# Generators automatically start with demand for more power

**ELECTRIC**, from page B4

flow of electricity to other devices and appliances. Having these generators eliminates the need for an additional generator, typically found on standard gas/diesel vessels.

Displayed on a 47-foot sailing catamaran at the Miami International Boat Show, the setup included two 25 kw generators and two 35 hp motors. Offering good maneuverability at low speed (idle can be set down to 50 rpm), the catamaran can top out at about 9 knots.

Glacier Bay is developing a system for a 73-foot trawler that will include five 200 kw generators and two 800 hp motors.

Thinking green, Island Pilot Yachts has sea trialed its new multi-hull 12m yacht, outfitted with the Glacier Bay propulsion system but with combined energy sources. Solar panels on the deck and cabin tops supply enough power to run the Powerlite electric motors at speeds up to 6 knots without running any generators.

If there's demand for more power, the generators kick on automatically. Catana Catamarans is also using the Powerlite system.



Glacier Bay Ossa Powerlite generator/engine unit.

PHOTO/CAPT. TOM SERIO

"There is growing demand for hybrid propulsion," said Patrick Gilot, export manager at Catana. "People are asking for it."

The 65-foot Catana catamaran features two 50 kw generators and two 67 hp motors from Glacier Bay (the energy management folks, not the catamaran folks from Washington).

Maybe not up to the megayacht market yet, but keep an eye on Glacier Bay. They may be onto something green.

Comments on this story are welcome at [editorial@the-triton.com](mailto:editorial@the-triton.com).

## Today's fuel prices

Prices for low-sulfur gasoil expressed in US\$ per cubic meter (1,000 liters) as of Feb. 15.

Region	Duty-free*/duty paid
U.S. East Coast	
Ft. Lauderdale	751/801
Savannah, Ga.	768/NA
Newport, R.I.	834/NA
Caribbean	
St. Thomas, USVI	842/NA
St. Maarten	885/NA
Antigua	871/NA
North Atlantic	
Bermuda (Ireland Island)	826/NA
Cape Verde	840/NA
Azores	859/NA
Canary Islands	773/928
Mediterranean	
Gibraltar	769/NA
Barcelona, Spain	804/1,584
Palma de Mallorca, Spain	NA/1,621
Antibes, France	870/1,777
San Remo, Italy	972/1,888
Naples, Italy	835/1,779
Venice, Italy	899/1,767
Corfu, Greece	875/1,781
Piraeus, Greece	856/1,758
Istanbul, Turkey	827/NA
Malta	780/920
Bizerte, Tunisia	784/NA
Tunis, Tunisia	767/NA
Oceania	
Auckland, New Zealand	797/NA
Sydney, Australia	801/NA
Fiji	907/NA

\*When available according to customs.

## One year ago

Prices for low-sulfur gasoil expressed in US\$ per cubic meter (1,000 liters) as of Feb. 16, 2007

Region	Duty-free*/duty paid
U.S. East Coast	
Ft. Lauderdale	528/564
Savannah, Ga.	490/NA
Newport, R.I.	535/NA
Caribbean	
St. Thomas, USVI	681/NA
St. Maarten	605/NA
Antigua	675/NA
North Atlantic	
Bermuda (St. George's)	761/NA
Cape Verde	569/NA
Azores	519/NA
Canary Islands	504/635
Mediterranean	
Gibraltar	491/NA
Barcelona, Spain	526/1,235
Palma de Mallorca, Spain	511/1,205
Antibes, France	550/1,310
San Remo, Italy	690/1,510
Naples, Italy	695/1,550
Venice, Italy	645/1,450
Corfu, Greece	1,061/1,310
Piraeus, Greece	774/1,258
Istanbul, Turkey	510/NA
Malta	485/NA
Tunis, Tunisia	518/NA
Oceania	
Auckland, New Zealand	554/NA
Sydney, Australia	606/NA
Fiji	627/NA

\*When available according to customs.



Prices provided by  
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#### EAST COAST USA TO MEDITERRANEAN

Newport	08-08	→	Oibia	08-08
Newport	08-08	→	Palma de Mallorca	09-08
Newport	05-08	→	Taranto	06-08
Ponce	05-08	→	Palma de Mallorca	05-08
Port Everglades*	04-08	→	Genoa	04-08
Port Everglades	04-08	→	Genoa	04-08
Port Everglades	05-08	→	Genoa	05-08
Port Everglades	10-08	→	Genoa	11-08
Port Everglades	11-08	→	Genoa	12-08
Port Everglades	07-08	→	Oibia	08-08
Port Everglades	04-08	→	Palma de Mallorca	05-08
Port Everglades	07-08	→	Palma de Mallorca	09-08
Port Everglades	09-08	→	Palma de Mallorca	10-08
Port Everglades	05-08	→	Taranto	06-08
Port Everglades	04-08	→	Toulon	05-08
Port Everglades	07-08	→	Toulon	07-08
Port Everglades	09-08	→	Toulon	10-08
Port Everglades	10-08	→	Toulon	11-08

#### EAST COAST USA TO CARIBBEAN

Newport	10-08	→	Freeport	10-08
Newport	11-08	→	St. Thomas	11-08
Port Everglades	05-08	→	St. Thomas	05-08
Port Everglades	09-08	→	St. Thomas	09-08
Port Everglades	10-08	→	St. Thomas	10-08

#### EAST COAST USA TO PACIFIC WEST COAST

Port Everglades	06-08	→	Ensenada	07-08
Port Everglades	11-08	→	Ensenada	12-08
Port Everglades	06-08	→	Golfito	06-08
Port Everglades	11-08	→	Golfito	12-08
Port Everglades	11-08	→	La Paz	12-08
Port Everglades	11-08	→	Vancouver	12-08

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#### EAST COAST USA TO SOUTH PACIFIC

Port Everglades	06-08	→	Auckland	07-08
Port Everglades	12-08	→	Auckland	02-09
Port Everglades	06-08	→	Brisbane	07-08
Port Everglades	12-08	→	Brisbane	01-09
Port Everglades	06-08	→	Papeete	07-08

#### EAST COAST USA TO UNITED ARAB EMIRATES

Port Everglades*	04-08	→	Dubai	05-08
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#### VOYAGES FROM THE MEDITERRANEAN

##### MEDITERRANEAN TO EAST COAST USA

Genoa	04-08	→	Port Everglades	05-08
Genoa	05-08	→	Port Everglades	06-08
Genoa	10-08	→	Port Everglades	10-08
Genoa	11-08	→	Port Everglades	11-08
Genoa	12-08	→	Port Everglades	12-08
Marmaris	08-08	→	Newport	10-08
Marmaris	08-08	→	Port Everglades	09-08
Palma de Mallorca	10-08	→	Newport	11-08
Palma de Mallorca	04-08	→	Ponce	04-08
Palma de Mallorca	04-08	→	Port Everglades	04-08
Palma de Mallorca	09-08	→	Port Everglades	09-08
Palma de Mallorca	10-08	→	Port Everglades	10-08
Taranto	08-08	→	Port Everglades	09-08
Toulon	05-08	→	Newport	06-08
Toulon	04-08	→	Port Everglades	04-08

Toulon	06-08	→	Port Everglades	07-08
Toulon	09-08	→	Port Everglades	09-08
Toulon	11-08	→	Port Everglades	12-08

#### MEDITERRANEAN

Marmaris	08-08	→	Taranto	08-08
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#### MEDITERRANEAN TO CARIBBEAN

Genoa	12-08	→	Martinique	12-08
Marmaris	08-08	→	St. Thomas	09-08
Palma de Mallorca	05-08	→	Martinique	06-08
Palma de Mallorca	11-08	→	Martinique	11-08
Toulon	01-08	→	Martinique	01-08
Toulon	04-08	→	St. Thomas	04-08
Toulon	05-08	→	St. Thomas	05-08
Toulon	10-08	→	Martinique	10-08
Toulon	11-08	→	St. Thomas	12-08

#### MEDITERRANEAN TO SOUTH PACIFIC

Genoa	05-08	→	Auckland	07-08
Genoa	05-08	→	Brisbane	07-08
Genoa	05-08	→	Papeete	07-08
Genoa*	10-08	→	Brisbane	11-08

#### MEDITERRANEAN TO UNITED ARAB EMIRATES

Genoa*	04-08	→	Dubai	05-08
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