# PowerSource

A publication of John Deere Power Systems — Marine Edition

Vol. 1, 2010

Devlin builds passion into passagemakers

Ultimate vacations aboard John Deere-powered vessels

Create your custom cruise kit

## Sailing high seas under auxiliary John Deere power

JOHN DEERE




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## RELIABILITY



## BOAT BUILDERS



## FEATURE



## REPOWER



## EFFICIENCY AND SPEED



## TECHNOLOGY

# The way to retire

The *SUNTOUR* cruises to a whole new speed of 17 knots at 1950 rpm with two new PowerTech 6081AFM marine engines in her hull.

## *Spending time aboard the newly repowered* SUNTOUR *suits this Washington couple just fine*

Richard and Carol Larsen know how to spend quality time with their grandchildren. The retired couple from Seattle, Washington, head out into Pacific Northwest for whale watching, fishing, and some good adventures aboard the 12.8-meter (42 ft.) *SUNTOUR*.

"We call it a grandparent trip," says Richard. For the grandchildren, the *SUNTOUR* is an on-the-water wildlife observatory as they witness the resident Orca pods of the San Juan Islands or the migration of Humpback whales, sea lions, and bird life. Dinner doesn't come from a fast food restaurant, either. These kids get their "happy meals" from pulling up a pot of prawns or Dungeness crab or reeling in one of four species of salmon. "We enjoy the adventure," says Richard, fondly. "We've had a lot of really fun times with them."

Safety and security are at the root of these good times. To ensure a good offshore boating experience, the Larsens recently repowered their 1984 Uniflite with a new pair of PowerTech 6081AFM engines.

"When a piston failed on our old four-stroke engines, we decided we had already spent our final dollar on them," recalls Richard. "There were a lot of choices for diesel repowers, but we were focused on durability, low maintenance, and longevity. Being retired, this was going to be my last repower. Our friends Jack and Marilyn Courrier repowered their Uniflite, *White Frog*, with the same John Deere engines and had good success with them. So I decided that John Deere was the right choice."

Keeping his original running gear, Richard coupled the John Deere engines to new ZF 286A transmissions and Glindenning marine controls. After experimenting with four different props and five pitches, he decided 24x23-inch (61x58 cm), three-blade Nibral props offered the best performance under maximum load conditions, especially when towing a 5-meter (17 ft.) Aqua Sport.

Hatton Marine, a John Deere marine dealer in Seattle, Washington, installed the engines and electronics. "When you get into a project like this, you want the feeling of an honest relationship with your vendor. I picked a dealer who was honest but also extremely capable. I can't say enough about them," relates Richard.

Today, the *SUNTOUR* cruises considerably cleaner and is faster and more fuel efficient than ever before. "I picked up a 25 percent increase in speed and about a 10 percent improvement in fuel economy," states Richard. At 1950 rpm, he cruises 17 knots and uses 11 gallons per hour (41.6L) per engine under half load and not towing. Another "sweet spot" is running 9.7 knots at 1250 rpm, dropping fuel consumption to a miserly 6.6 gallons per hour (25L) — both engines combined. "That's 1.5 mpg (.64 km/L)," says Richard. "We spend many cruising hours in that range."


Richard and Carol Larsen enjoy the *SUNTOUR* with their grandchildren Alex and Claire. The Larsens also spend summers as a couple cruising throughout British Columbia.

Richard revels in the new electronic controls, too. "I was able to get rid of cable controls, which was a huge benefit. We were able to add trolling valves to the engines for fishing. It also made it easy to add a cockpit control station. Now I can run the boat from the fly bridge, cockpit, or lower helm station.

"When you have brand new engines, great electronics, and a little experience, boating is very pleasurable," says Richard, "especially in retirement with your grandchildren."

The Larsens spend much of their retirement aboard the 12.8-meter (42 ft.) *SUNTOUR* in the Pacific Northwest.

| | |
|---|---|
| Engine Model | PowerTech 6081AFM75 |
| Displacement | 8.1L |
| Rated Power | 280 kW (375 hp) @ 2400 rpm |
| Cylinders | 6 |
| Aspiration | Air-to-air aftercooled |
| Distributor | Cascade Engine Center<br>Tukwila, Washington<br>(206) 764-3850<br>www.cascadeengine.com |
| Dealer | Hatton Marine<br>Seattle, Washington<br>(206) 283-5501<br>www.hattonmarine.com |

The Catana 50 won "Best Cruising Multihull" in *Cruising World Magazine's* 2008 Boat of the Year contest for being the best built and most stylish.

Not just for ordinary sailing: the Catana 50 tracks straight through wind and waves.

# Dream on!

## *French company offers dreamy cruises and charters in the world's most exotic locations*

For many of us, beaches, Bermudas, and bikinis are all we require for a dream vacation. But when you're a devoted sailor who loves the open waters, you need something quite different – a top quality craft, equipped with more than the bare essentials. Dream Yacht Charter offers just that: a choice of outstanding mono-hulls and catamarans, and 5-star service, to boot.

"No matter what level of experience our customers have — beginner, enlightened amateur, or experienced sailor — we offer a cruise to match," says Alain Rollet, Caribbean manager at Dream Yacht Charter. "If you're the adventurous type, you can rent an uncrewed boat to venture out on your own. For beginners and more relaxed holidayers, we offer a cabin or crewed cruise, with professional staff catering to all your needs."

**Floating luxury.** Whatever option you choose, all Dream Yacht Charter yachts are equipped to ensure a carefree, luxurious sailing experience. Features like a bimini top, autopilot option, GPS, additional ventilation, oversized water tanks and fridges, CD player with cockpit speakers, and dinghy with outboard engine are all included as standard.

As the name suggests, the company's *Dream Guadeloupe* Catana 50' catamaran sets off from the Butterfly Island of Guadeloupe in the Caribbean. Guests enjoy a graceful sail around the neighboring islands, not in the least thanks to the catamaran's two new PowerTech 6068SFM engines. "Because of the craft's greater clearance off the water, she remains quiet even when sailing in rougher seas," says Alain. "The 6068 engines complement that design. They cause little vibration and noise, which is important to guests who are expecting a luxury holiday."

The 16-meter (52 ft.) Catana 50' catamaran is built using high-grade resins and Kevlar glass, making it light, strong, and safe. The galley is well equipped, which is a rarity on a multihull. Below, the five spacious air-conditioned cabins with en-suite bathrooms can easily accommodate even the biggest of crewmembers.

Dream Yacht Charter takes customer satisfaction seriously: customers are asked to fill in a review form, which includes feedback on the engines. First reports are great: the John Deere engines got a thumbs-up!

| | |
|---|---|
| Engine Model | PowerTech 6068SFM50 |
| Displacement | 6.8L |
| Rated Power | 176 kW (236 hp) @ 2400 rpm |
| Cylinders | 6 |
| Aspiration | Seawater aftercooled |
| Distributor | Moteurs et Industrie Lhermite,<br>Vernouillet, France<br>+33 (0)2 37 42 88 90<br>mi.lhermite@wanadoo.fr<br>www.mi-lhermite.com |
| Dealer | Silenc'Air<br>La Seyne Sur Mer, France<br>+33 (0)4 94 87 47 04<br>ventes@silencair.com |

Bernard and his wife, Catherine, hope to be cruising the European canals during autumn 2010.

# Canal cruiser

*Hydraulic propulsion system turns old canal barge into a smooth-cruising dream boat*

Relaxing takes a lot of work! Just ask Catherine and Bernard Gautier, who are refurbishing a 1931 canal boat into a houseboat to fulfill their dream of retiring and sailing the canals of Europe. "We bought the boat three years ago, and hope to move in permanently next autumn," they explain. Why is it taking so long? An engineer, Bernard started from the bottom up with his restoration, modifying everything from the hull to the living quarters, and designing a unique new propulsion system.

**The hull story.** A Freycinet gauge boat, the original vessel measured 38.5 meters (126 ft.) long, 5.05 meters (16.57 ft.) wide, with a 1.8-meter (5.91 ft.) draft. Bernard wanted to reduce the length to approximately 30 meters (98 ft.) and make the boat into a comfortable home. The bodywork was performed by Chantier Naval Raimondo / EVEZARD WR in Marseilles-Les-Aubigny, France.

"Inside, we first modified the bargeman's quarters at the rear into a basic but livable space," Bernard explains. With a WC, bathroom, kitchenette and fold-out bed, the couple can use the boat while the rest of the work is being carried out. This includes modifying the hull into a dining room/open kitchen, living room, and two guest cabins.

**Smooth hydraulic propulsion.** When the boat was in dry dock, however, Bernard discovered a problem. "The propeller shaft and rudder were completely worn and needed to be replaced," Bernard sighs. After considering the options, they decided to design a new hydraulic azimuth (pod) propulsion system. Bernard made all the mechanical drawings and calculations himself. "We wanted simplicity and smoothness," he explains. "Similar systems have been used in other types of canal barges, but never for a Freycinet gauge boat. We were delighted with the maneuverability when we tested it in port."

Selecting the right engine to go with the new hydraulic system was a big job, because everything — weight, fittings, power — has to match. Bernard looked into all the brands and talked to many boat owners before he decided on the John Deere PowerTech 6068TFM engine. "I knew the brand was very rugged," he says. "I discussed all the possibilities with Patrick Sticker at John Deere engine distributor MIL. He was very thorough. Then I chose the 6068TFM for the power and fuel efficiency — and because it met the CCNR2 emissions regulations. That was a critical point.

| | |
|---|---|
| Engine Model | PowerTech 6068TFM75 |
| Displacement | 6.8L |
| Rated Power | 150 kW (201 hp) @ 2600 rpm |
| Cylinders | 6 |
| Aspiration | Turbocharged |
| Distributor | Moteurs et Industrie Lhermite, Vernouillet, France<br>+33 (0)2 37 42 88 90<br>mi.lhermite@wanadoo.fr<br>www.mi-lhermite.com |

"What's more, I wanted a wet exhaust. The water cools the exhaust gas, and you can use flexible pipes instead of metal pipes, so the engine room doesn't get as hot. It's a lot safer and less noisy, and I could accomplish all of this with the John Deere engine."

There were a lot of modifications necessary to fit the new azimuth propulsion system and engine. The shipyard made a frame to support the engine and then helped install it. "But all the bolting, bracketing, connections, wires, tubes, etc., I did myself," Bernard says.

**A taste for more.** Bernard is very happy with the 6068TFM. "It's been trouble-free and purrs like a kitten when I turn it on," he smiles. "When the hull work was done, we sailed down to Burgundy to complete the restoration work: 210 kilometers (130 mi.) in 8 days, going through about 80 locks. It was very leisurely: a nice taste of what's to come!"

Bernard compares the John Deere 6068TFM engine to a purring kitten – silent and smooth.

The Devlin 45 features a PowerTech 4045TFM diesel engine coupled to a ZF transmission with a 3:1 gear ratio. Swinging a 30x20-inch (76x51 cm) prop, the vessel runs 8.5 knots at 1800 rpm.

# Elegant simplicity

## *Sam Devlin pours his heart and soul into creating the ultimate passage maker*

Sam Devlin is more than just a designer and builder of custom wooden trawler yachts. Talk with him for a while, and you'll quickly understand that his passion for the craft qualifies him as more as a *creator* than anything else.

"Each boat is very individual," says Sam fondly of his Devlin vessels. "We're responsible for the original concept, execution, and performance. We sweat over it, bleed over it, have joy over it, and sorrow over it. These vessels are an extension of us; they're like our children."

Sam is someone who devotes upwards of 14,000 hours over a span of a year and a half on a Devlin 45, making sure every detail is handcrafted to perfection. He uses a stitch and glue method of hull construction that he writes about in his book *Devlin's Boatbuilding*. This state-of-the-art method involves using a single layer of imported marine plywood to create the initial hull shape, followed by additional layers to make a strong, rigid hull. "To the elements, we look like a painted fiberglass boat," explains Sam, "but we have the strength, warmth, and beauty of wood."

Located at the heart of these Devlin vessels is John Deere marine power.

"To power our full-displacement hulls, we need a slower speed engine with the torque to swing bigger props," explains Sam. "We also want economy, unbelievable quietness, smoothness of operation, and longevity. We looked at product availability, quality, performance, and service, and came up with John Deere."

Knowing that many of his clients would be cruising long distances, fuel economy is important to Sam. Cruising 8.5 knots, the Devlin 45, powered by a PowerTech 4045TFM, consumes just 8.3 liters (2.2 gph) running 1800 rpm.

"It's unbelievable," states Sam. "I'm very, very happy with that. If I wanted to crack the throttle down to 7 knots, then I'm under a gallon per hour. We're burning a fraction of the fuel that equivalent boats are running."

Aside from the Devlin 45, the John Deere 4045TFM also powers the Devlin 38 and the Devlin 41. Even his personal boat, a converted 1934 commercial fishing vessel, features an older model 4045T engine.

"I'm going to pour the best products that I can into my boats," says Sam. That's my criteria. I have a John Deere engine on my own boat, and if I were to build my dreamboat someday, I would have a John Deere on it," says Sam. "I wouldn't even think twice about it."

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|---|---|
| Engine Model | PowerTech 4045TFM50 |
| Displacement | 4.5L |
| Rated Power | 112 kW (150 hp) @ 2600 rpm |
| Cylinders | 4 |
| Aspiration | Turbocharged |
| Distributor | Cascade Engine Center<br>Tukwila, Washington<br>(206) 764-3850<br>www.cascadeengine.com |

Sam Devlin handcrafts his wooden hulls using a stitch and glue method of construction.


Sam Devlin's personal boat, the *Josephine*, is a converted salmon troller powered by an older model 4045TFM engine.

The steel construction on the Frisian Cruiser 1100 is superb in quality and finish.

The PowerTech 4045TFM engine drives a 4-blade, right-turning 24x15-inch propeller.

# Creativity flows in Dutch waters

*Frisian marina owner turns passion into a real craft*

Designing and building boats requires three-dimensional insight, dedication, and skill. These are ingredients that Frisian marina owner and boat designer Douwe Hokwerda and his daughter Yke have in abundance.

Douwe's experience includes building wooden sailing boats and steel yachts, boat interiors, boat repairs, yacht chartering, and running a marina. He started his current company RFU as a marina, catering to all the needs of boating enthusiasts, from mooring, cleaning and repair facilities to winter storage. Over time, Douwe's passion for designing and building cruisers turned into a business opportunity. "My head was full of design ideas; it was time to turn them into reality," he says.

| | |
|---|---|
| Engine Model | PowerTech 4045TFM75 |
| Displacement | 4.5L |
| Rated Power | 101 kW (135 hp) @ 2600 rpm |
| Cylinders | 4 |
| Aspiration | Turbocharged |
| Distributor | Nagel Power Systems B.V.<br>Nijmegen, The Netherlands<br>+31 24 371 6620<br>power@nagel.nl<br>www.nagelpowersystems.nl |
| Dealer | Gebroeders de Jong B.V.<br>Joure, The Netherlands<br>+31 513 412 205<br>www.scheepsmotoren-gebroedersdejong.nl |
| Boat Designer | www.frisiancruiser.nl |

The 101-kW (135 hp) John Deere engine and ergonomic hull construction pair up well for pleasant cruising.

**The Frisian Cruiser.** Douwe's drive was to create "boats that no one else has," and nobody can doubt his success! His first design, the Frisian Cruiser 930, is a nostalgic craft, built for cruising inland waterways. Its height can be lowered to 1.90 meters (6 ft.), making passage under low bridges child's play. When introduced in 2007, it was cheered by the trade press for its smart design and classy finish. Its new big brother, the Frisian Cruiser 1100, exceeds the 930 in both power and personality. At 11-meters (36 ft.) long, with 6-mm (.24 in.) steel plating on the hull, it weighs a mighty 16.5 tons, making it a heavyweight among peers.

Yke's contribution is to the interior design of the craft, and like her father, she shows unique three-dimensional thinking. She explains how she was inspired by sailing boats: "They are ingenious when it comes to using limited space effectively," she explains. For instance, in the Cruisers, a sliding hatch replaces the doors to the main cabin while a bench in the cockpit leads to a second cabin. In the bedroom, the double bed is positioned at an angle, so that the available space is used most efficiently.

**Making light work of rough waters.** But the true test of any cruiser is how it performs in the water. So how does the 1100 stack up? "On such a heavy craft, thrust must be 100 percent reliable," says Douwe.

Having done business with local John Deere engine dealer Gebroeders de Jong for years, Douwe opted for a John Deere PowerTech 4045TFM, 101 kW (135 hp) engine. "With the John Deere 4045, the 1100 picks up speed fast," he enthuses. "At 1400 rpm, it cruises 6.5 knots with a fuel consumption of 6 liters per hour (1.6 gph)."

Both the first prototype of the 1100 and its engines have proven themselves in successful tests in the rough Ijsselmeer, the Waddenzee and inland waterways. "With other brands of engines, we experienced some leakage in the bilge, but the 4045 engine is as clean as a whistle," Douwe says.

Douwe is confident that his 1100 — the "boat that no one else has," both inside and out! — will find its way into the boating community's heart, and into Dutch and foreign waters.

# Sharing the Bounty

## HMS Bounty *keeps the art of square rig sailing alive*

Most of us sadly show our age as the years go by. But the *HMS Bounty* seems to be getting younger all the time. In 2000, the ship was "sinking at the dock," recalls captain Robin Walbridge, who has skippered the *Bounty* since 1995. Following two major renovations — below and above the waterline — *Bounty* now sails the world, delighting the public and educating enthusiasts.

**Saved by a star.** Built in 1960 for the movie "Mutiny on the Bounty," the *Bounty* was scheduled to be burned in a scene for the film. Thank goodness star Marlon Brando refused to let it happen! The ship moved from port to port, changing owners, until purchased by Robert Hansen in 2001. His timely intervention resulted in a much-needed below-the-waterline renovation. "Actually, it was slightly disheartening," Robin comments. "Since the work was below water, visitors couldn't see it. They would say 'Someone should fix this old ship', but we knew how much had already been done!"

Further renovation in 2006 changed that. Replacing the topsides and renovating the cabins brought the *Bounty* back to its original glory. "Now, people's first reaction is 'Wow,'" smiles Robin.

**Entertain and educate.** The *Bounty* is now an "attraction ship," sailing to port festivals where visitors can take a tour and learn the history of tall ships. It has also appeared in many movies, including "Pirates of the Caribbean 2 & 3." "We got eaten by a giant squid in one of the films," Robin laughs.

But perhaps more importantly, *Bounty* operates as a training vessel. "We're keeping the art of square rig sailing alive," explains Robin. *Bounty* programs include corporate leadership and teambuilding, a Sail Away Summer Camp and dockside education for school children.

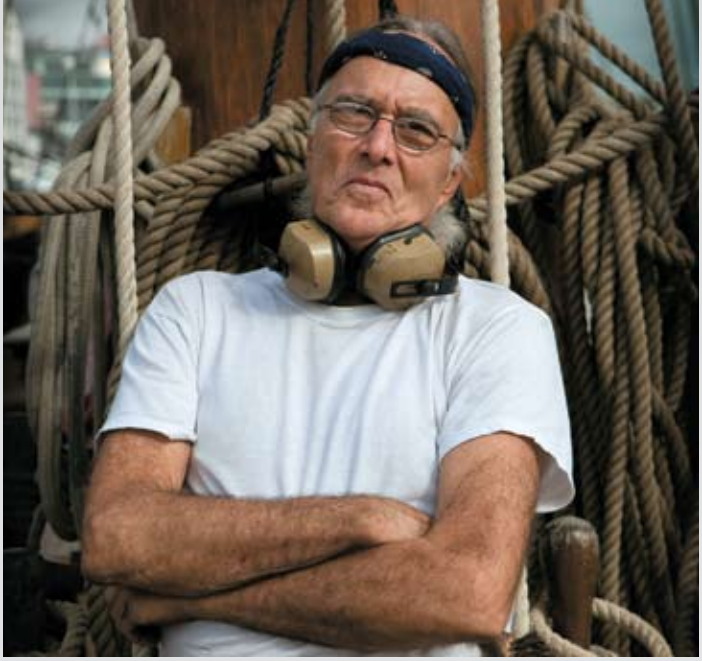
**John Deere engines keep the *Bounty* moving.** During the first yard period in 2001, an innovative electric-diesel system was installed, but it had to be replaced because the gearboxes repeatedly broke. Twin PowerTech 6081AFM marine engines were installed instead. Robin had experience with John Deere engines in land equipment, and knew the brand was durable and reliable. "The only problems I ever saw on John Deere engines were the result of operator error," he insists.

The *Bounty's* engines have lived up to his expectations. "Of course, we use the sails as much as possible, but we use the engines just under 50 percent of the time. They have logged over 8,000 hours and only ever needed routine maintenance," Robin comments. *Bounty* engineer Bill Hayes adds servicing is quick and easy — "it only takes me 45 minutes," he says.

Robin is especially impressed with the fuel efficiency. "We usually run at 1600 rpm, cruising at 5 to 6 knots, with the engines burning 19 to 23 liters per hour (5-6 gph) each," he explains. "I'm blown away by how those engines move that big ship using so little fuel!"

Recently returning from a six-month tour, including stops in Bermuda, Ireland, and the Netherlands, *Bounty* will stay in dock until April 2010. Then it's back out to sea. "I love being captain of the *Bounty*," Robin concludes. "At sea, nature doesn't care who you are, just if you are prepared. Everything seems clean and honest — the way I like it."

This year's six-month voyage is by no means the longest the ship has done. Its 2005-6 schedule kept it traveling for 14 months.



"Cruising at eight knots, both engines run at 1,200-1,600 rpm. Combined, they burn about 946,5 liters (250 gal.) of fuel per day."


The *HMS Bounty* still runs on the twin John Deere PowerTech 6081AFM engines installed during the first renovation in 2001, which have now logged about 8,000 hours each — and show no signs of stopping according to the captain.

| | |
|---|---|
| Engine Model | PowerTech 6081AFM75 |
| Displacement | 8.1L |
| Rated Power | 224 kW (300 hp) @ 2200 rpm |
| Cylinders | 6 |
| Aspiration | Aftercooled |
| Distributor | Bell Power Systems, Inc.<br>Essex, Connecticut<br>(860) 767-7502<br>www.bellpower.com |

*HMS Bounty* has appeared in many films, TV shows and documentaries. "Whenever they need a square rig ship, they call us," says captain Robin Walbridge.

Images were provided by Peter Sandground.

# Giants of the sea

*You're in for a whale of a good time aboard the* Princess Monterey

Captain Leon Oliver never gets bored aboard the *Princess Monterey*, a whale watching excursion vessel that operates out of Fisherman's Wharf in beautiful Monterey, California.

"Every trip is different; you never know what you're going to see," says Leon, who has taken passengers out on whale watches for the past 23 years. "We have a 99 percent success rate at seeing one of many species, including gray whales, humpback whale, orcas, and the enormous blue whales. Friendly whales often come over and look at us and play with the boat," says Leon with a chuckle. "And when they do, they sometimes blow, shooting us like a fire hose."

The 30-meter (100 ft.) *Princess Monterey* carries up to 150 eager passengers to see these sea giants in action. And now she makes her trek to the whale watching grounds faster and more efficiently now that her power comes from two new PowerTech 6125SFM marine engines. The new diesels were purchased through the Carl Moyer program, which offers governmental grants to fund the replacement of polluting diesel engines. The engines power 31x32-inch (79x81 cm), four-blade propellers driven by Twin Disc transmissions with a 2:1 gear ratio.

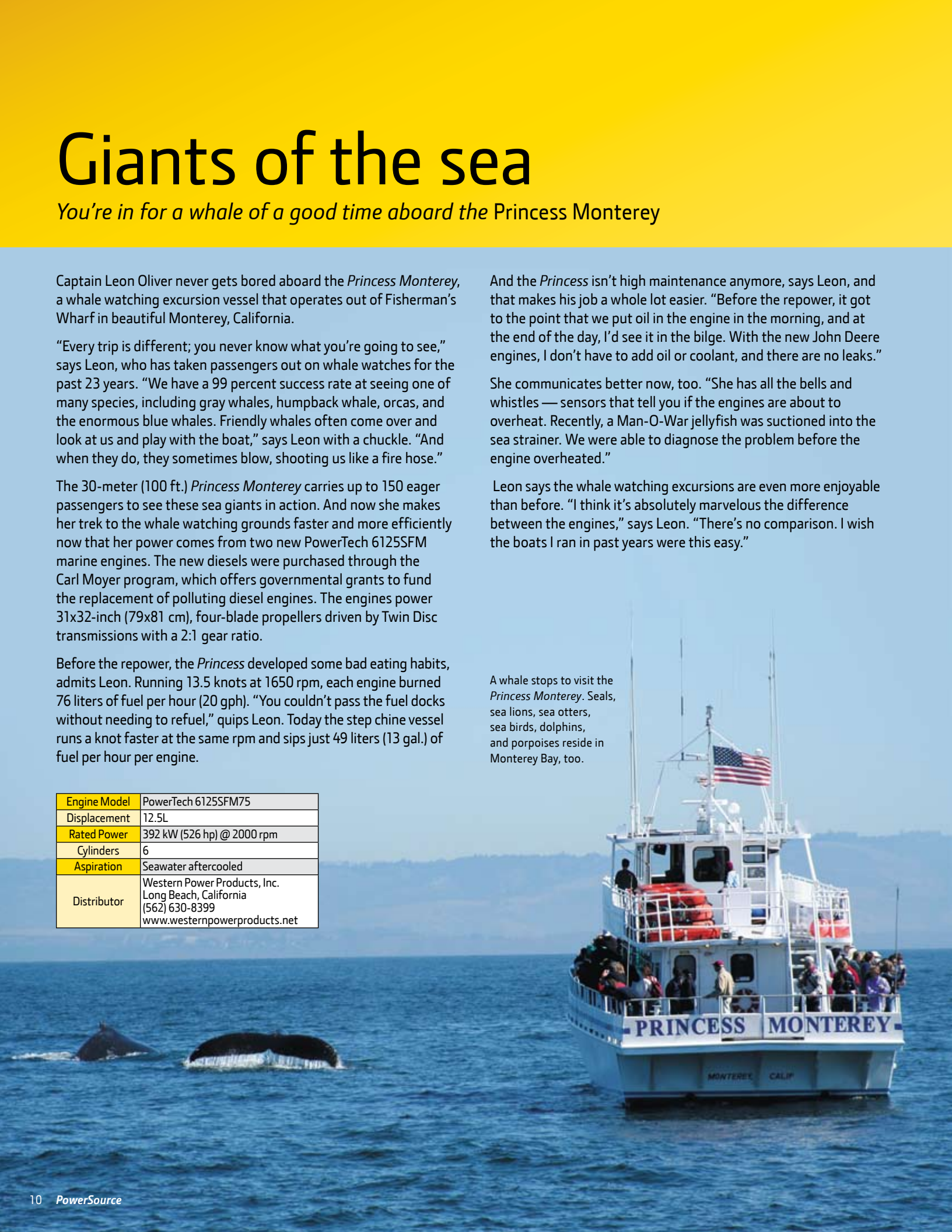
Before the repower, the *Princess* developed some bad eating habits, admits Leon. Running 13.5 knots at 1650 rpm, each engine burned 76 liters of fuel per hour (20 gph). "You couldn't pass the fuel docks without needing to refuel," quips Leon. Today the step chine vessel runs a knot faster at the same rpm and sips just 49 liters (13 gal.) of fuel per hour per engine.

| | |
|---|---|
| Engine Model | PowerTech 6125SFM75 |
| Displacement | 12.5L |
| Rated Power | 392 kW (526 hp) @ 2000 rpm |
| Cylinders | 6 |
| Aspiration | Seawater aftercooled |
| Distributor | Western Power Products, Inc.<br>Long Beach, California<br>(562) 630-8399<br>www.westernpowerproducts.net |

And the *Princess* isn't high maintenance anymore, says Leon, and that makes his job a whole lot easier. "Before the repower, it got to the point that we put oil in the engine in the morning, and at the end of the day, I'd see it in the bilge. With the new John Deere engines, I don't have to add oil or coolant, and there are no leaks."

She communicates better now, too. "She has all the bells and whistles — sensors that tell you if the engines are about to overheat. Recently, a Man-O-War jellyfish was suctioned into the sea strainer. We were able to diagnose the problem before the engine overheated."

Leon says the whale watching excursions are even more enjoyable than before. "I think it's absolutely marvelous the difference between the engines," says Leon. "There's no comparison. I wish the boats I ran in past years were this easy."




A whale stops to visit the *Princess Monterey*. Seals, sea lions, sea otters, sea birds, dolphins, and porpoises reside in Monterey Bay, too.

# Jewel of the Portland waterfront

*Music fans are no longer singing the blues thanks to a new John Deere marine engine*

One of highlights of the year for Kevin and Patti Miles is a long weekend rockin' and a rollin' to their favorite Blues musicians at the Portland Waterfront Blues Festival, perched atop their 11-meter (37 ft.) *C Jewel*.

The Oregon couple anchor out weeks ahead to get front-row seats for an unforgettable waterfront fireworks display just yards from the stage where Kevin, Patti and the rest of the Miles clan listen to the likes of Pine Top Perkins, Paul Delay, and Curtis Salgato.

Kevin used to sing the Blues himself — the old smokin' diesel blues —when a bellow of exhaust smoke would emit from his old diesel. "It used to spoil the mood when I first got the *C Jewel*," recalls Kevin. "The other Blues fans were not too happy when it started up. They were holding their noses."

Kevin no longer sings those Blues. That's because it's "gone, baby, gone" — replaced by a new emissions-certified PowerTech 6068TFM engine. "I was impressed that John Deere could meet emission standards with such a simple design," says Kevin, a mechanical engineer with an intimate knowledge of diesel engines and emissions technology.

Kevin purchased the new engine from Cook Engine and Company. The local John Deere marine dealer installed the engine, removing the old V-8 engine through a hole that had to be cut through the roof. Cook Engine coupled the 168-kW (225 hp) PowerTech 6068TFM to a ZF transmission with a 2:1 gear ratio. A 26x22-inch (66x56 cm), four-blade propeller puts the *C Jewel's* cruising speed at 7.5 knots at 1600 rpm. Kevin estimates that the engine's fuel consumption averages 5.7 liters per hour (1.5 gph) at that speed.

Kevin's sing'n a new tune about his repowered *C Jewel*. "This baby, I hit the start button, and it's there for me," says Kevin. "It's trouble free. I would recommend this engine and marine dealer to all of my waterfront mates."

| | |
|---|---|
| Engine Model | PowerTech 6068TFM50 |
| Displacement | 6.8L |
| Rated Power | 168 kW (225 hp) @ 2600 rpm |
| Cylinders | 6 |
| Aspiration | Turbocharged |
| Distributor | Cascade Engine Center<br>Tukwila, Washington<br>(206) 764-3850<br>www.cascadeengine.com |
| Dealer | Cook Engine and Co., Inc.<br>Portland, Oregon<br>(503) 289-8466<br>www.cookengine.com |

Kevin and Patty Miles enjoy cruising the Columbia and Willamette rivers near Portland, Oregon, aboard the John Deere-powered *C Jewel*.

A newly refurbished and repowered *Sew Sew* runs along the Ohio River.

| | |
|---|---|
| Engine Model | PowerTech 4045DFM70 |
| Displacement | 4.5L |
| Rated Power | 60 kW (80 hp) @ 2500 rpm |
| Cylinders | 4 |
| Aspiration | Naturally aspirated |
| Distributor | Superior Diesel<br>Rhinelander, Wisconsin<br>(715) 365-0500 |

# Tailored beauty

## *A once-dilapidated houseboat revels in perfect power and a whole new look*

When Bob Blom first set eyes on the houseboat that he would come to buy a decade ago, he wasn't all that impressed. Nearly destroyed by floodwaters, the 12.8-meter (42 ft.) Tucker suffered a blow to the hull that lead to water filling the engine compartment. "I didn't know whether I wanted it or not," recalls Blom. "But I wanted a project, so I welded up the aluminum hull, put it back in the water, and pushed it up the Ohio River back home."

After three years of restoration and refurbishing, Bob's houseboat is now a thing of tailored beauty. It certainly doesn't hurt that Bob owns and operates Odyssey Canvas Works, a Ripley, Ohio, upholstery business known for its interior and exterior marine canvas products, including bimini tops, seat covers, curtains, and mooring and storage covers.

Not surprisingly, Bob changed his houseboat's name to *Sew Sew*. But her looks are anything but "so-so." Her once-dark interior now gleams bright with a fiberglass-insulated white vinyl walls and light marine blue and light grey upholstered furniture and curtains. Mirrors on the walls and ceilings add to the feeling of spaciousness.

Below deck, she sports a new set of engines — twin 60-kW (80 hp) 4045DFM marine diesels that Bob purchased from Superior Diesel. "I was looking for a diesel engine to replace the two gas hogs," says Bob of the old 8-cylinder gas engines. "I researched several high rpm diesels but wasn't interested. When I found out that I could buy a John Deere diesel that would turn 1200 to 1600 rpm and burn less than half the fuel, I said 'Here I am!'"

The new engines couple to Twin Disc transmissions with a 2:1 gear ratio, turning 23x23-inch (58x58 cm), four-blade props. Her planing hull brings her to a speed of 12 knots at 1400 rpm, and Bob is impressed with her fuel efficiency at 4.5 liters per hour (1.2 gph) per engine. "I'm very pleased," says Bob after his maiden voyage on the Ohio and Tennessee rivers. "These are very cost effective to run."

Smooth, too. "The engines are slow turning, so they don't vibrate," relates Bob. "The low rpm means these less noise, too. I don't hear that roar that I used to hear with the old engines.

"I get a thrill every time I turn them on," says Bob. "Hit the button, and they're running. I just love them."

Twin John Deere PowerTech 4045DFM engines make the houseboat economical to operate. Between them sits a bank of batteries that power the bow thrusters.

Bob Blom takes to the helm with co-pilot Carol Stivers.

# My lady's rescue

*Down but not out, a historic schooner gets another chance to strut her stuff*

The schooner *Merrie Ellen* has a long and winding work history that is a diverse as the power sources that have driven her over her 87 years. Originally built as long-line fishing vessel, the 33-meter (107 ft.) halibut schooner relied solely on wind and burly men to navigate her. After World War I, she became a steam-powered tugboat and was later converted to diesel power, until she was eventually left floating on a mud flat to rot. Before her full demise, she was recovered, restored, and rigged in her original fashion to serve as a charter vessel. But after changing hands of several owners, she was eventually grounded again to serve as a cabin in the woods on Vancouver Island.

For the *Merrie Ellen*, it could have been her last chapter in history. But then, John Holbert came along.

"She was in really sad shape when we bought it," recalls John. "But I wanted one of the old schooners. I wanted an original."

John cut no corners to restore her. "We needed 10,000 board feet (3,048 m) of clear cedar planking, so we bought the logs and milled it ourselves," relates John. "It's an interesting process to steam the planks and bend them into place." John even forged 5,000 ship spikes. "You can't buy them, nobody makes them, and so we fired a forge and hand-forged them. We worked on it every day for five months. Rebuilding the boat was such an attraction in town."

While John has gone to great lengths to maintain much of her authenticity, this beauty is not without the benefits of modern technology, including the PowerTech 6081AFM that powers her when she's not under sail.

"I went to Mark at Shoreline Marine Diesel, who is my local John Deere marine dealer, and talked to them about the boat. He felt the high-pressure-common-rail engine would give me the best fuel mileage. They use the same engine in the *Carlisle II* (a local historical passenger ferry built in 1910). The operators are extremely pleased. It's hard to swim against that current."

| | |
|---|---|
| Engine Model | PowerTech 6081AFM75 |
| Displacement | 8.1L |
| Rated Power | 224 kW (300 hp) @ 2200 rpm |
| Cylinders | 6 |
| Aspiration | Aftercooled |
| Distributor | Cascade Engine Center<br>Tukwila, Washington<br>(206) 764-3850<br>www.cascadeengine.com |
| Dealer | Shoreline Marine Diesel<br>Port Townsend, Washington<br>(360) 379-8344 |

After a complete restoration and repower, the *Merrie Ellen* begins a new chapter in life with her owner and captain John Holbert.

Shoreline Marine coupled the 224-kW (300-hp) engine to a ZF transmission with a 4.5:1 gear ratio. The prop is a 48x35-inch (122x89 cm), 3-blade bronze propeller mounted to the original 6-inch shaft. Added, too, were dual alternators and a 24-volt starting system.

"When I was told what fuel economy to expect at cruise, I didn't believe it. I was used to burning 16 to 18 gph (61 to 68 L) at cruise. When I was told 3.5 to 4.5 gph (13-17 L), it sounded like a great pitch, but I actually do get the fuel performance proposed. I'm ecstatic."

Now fully restored inside and out, the *Merrie Ellen* charters the Canadian Gulf Islands between Vancouver Island and mainland British Columbia, and she's thoroughly appreciated by her new captain.

"Sailing an old wooden schooner is just a dream come true for me," says John. "There are people who will work night and day to keep these historical sail ships going, but there's not a lot of us."

# Addicted to adventure

*The Hamiltons will fulfill their passion for passagemaking aboard a John Deere-powered Nordhavn 52*

The Hamiltons are frequent contributors to *PassageMaker* and Pacific yachting magazines, and authors of *Waggoner Cruising Guide's Cruising the Secret Coast: Unexplored on British Columbia's Inside Passage.* The Hamiltons welcome readers to learn more about their new John Deere-powered Nordhavn 52 by visiting their blog at http://blog.mvdirona.com.

Freedom to cruise at a moment's notice holds great appeal for boating authors and explorers James and Jennifer Hamilton of Seattle, Washington.

"Our long-term desire and dream is complete flexibility," says James. "We are adventurers. What we love more than anything is going off the beaten path and traveling to unusual places."

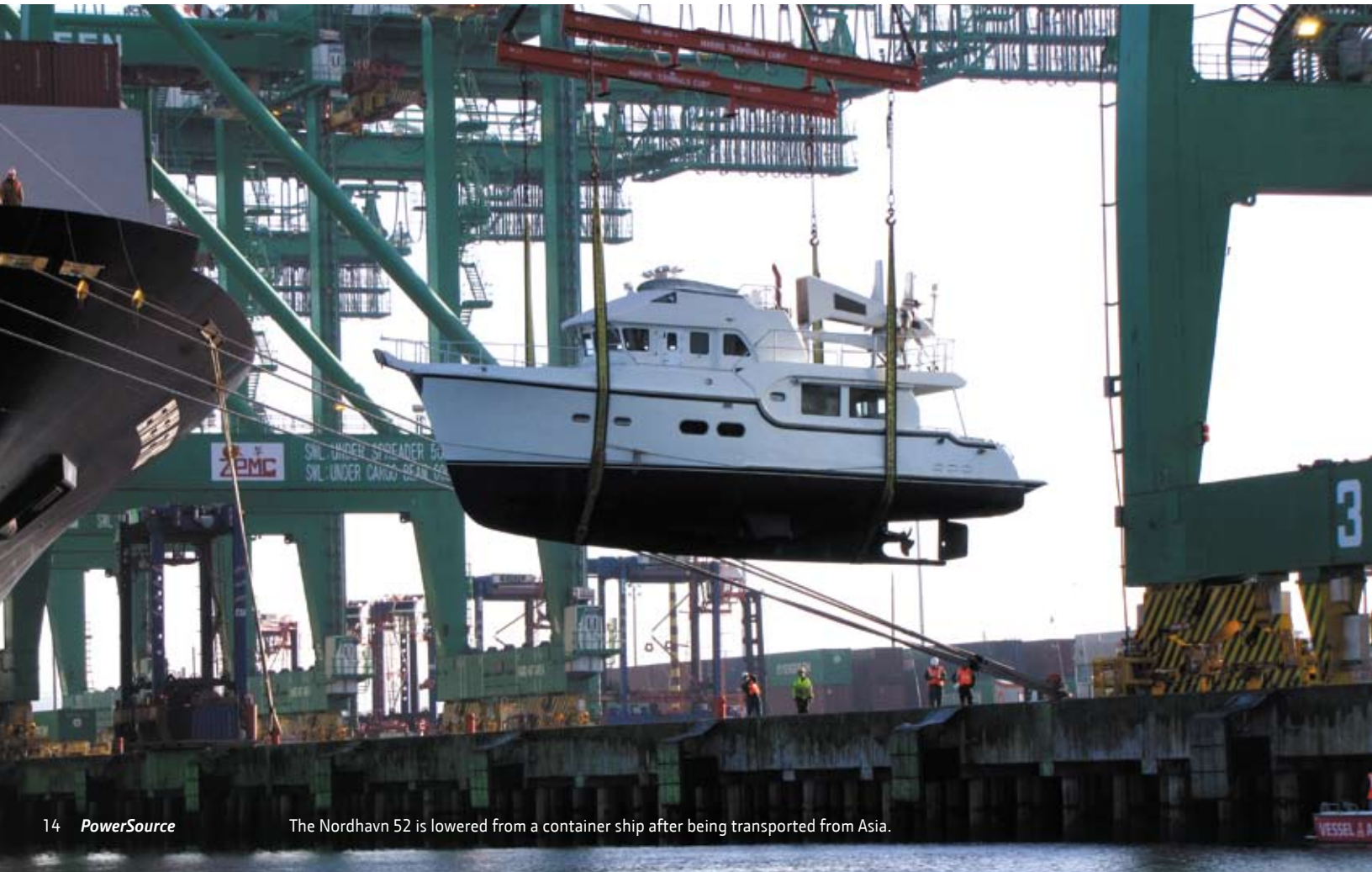
The couple is finding that freedom on the *M/V Dirona*, a new 15.8-meter (52 ft.) Nordhavn yacht that they will permanently live on — and leave whenever the mood strikes. And that's pretty often. "Both of us have time-intensive jobs, but when we're not working, we're on the boat and traveling three weekends out of four," says James. "We boat very heavily."

After living on a 12-meter (40 ft.) trawler in Bell Harbor, Washington, for the past year, the couple grew to enjoy the liveaboard lifestyle. So they sold their house and car, and decided to take permanent residence on a Nordhavn 52. Its functional design not only offers the comforts of home, but it also offers the safety, security, and range to travel far and wide. "Since this is our only home, having a washer, dryer, and dishwasher is important to us," says James. Also, we love cruising secluded locations, so having sufficient space for items like a generator, large freezer, and life raft matters to us."

The Nordhavn will also take them the distance. "The Nordhavn 52 is very seaworthy, carries a lot of fuel, and is a proven world cruiser," says James. "Nordhavns can, and frequently do, cross oceans and many have circled the globe."

Wanting to do some passagemaking of their own, the Hamiltons wanted a marine diesel with the best longevity, efficiency, and range. That all came packaged in a PowerTech 6068AFM engine — John Deere's latest marine engine.

"Rather than opting for the standard engine on the Nordhavn 52, we specified the John Deere 6068AFM to achieve a bit more horsepower, a closer to continuous rating, and increased fuel efficiency," says James.




The Nordhavn 52 is lowered from a container ship after being transported from Asia.

James and Jennifer Hamilton toast to another great day on the water.

| | |
|---|---|
| Engine Model | PowerTech 6068AFM75 |
| Displacement | 6.8L |
| Rated Power | 198 kW (265 hp) @ 2400 rpm |
| Cylinders | 6 |
| Aspiration | Aftercooled |
| Distributor | Cascade Engine Center<br>Tukwila, Washington<br>(206) 764-3850<br>www.cascadeengine.com |

The new Nordhavn 52 will be home for the Hamiltons, as well as a vessel for international travel.

"On the horsepower front, the PowerTech 6068AFM is rated at a conservative 265 hp (198 kW) and has an M2 rating, meaning that it can run at that speed for 16 of 24 hours, and it can run at 231 hp (172 kW) continuously," says James. "We also wanted an under-stressed power plant, so we had a goal of at least 2.5 hp per 1,000 pounds of vessel (1.86 kW/.45 metric tons). The PowerTech engine provides 2.65 hp/1000 pounds (1.98/.45 metric tons), which is more than the standard engine, and at 6.8L, it's the largest displacement engine that would fit our boat."

James also likes the engine's efficiency. "Although some people don't want an electronic engine, I do. The efficiency of an electronic, high-pressure common-rail engine is very attractive to us. The 6068AFM is 14 percent more efficient at rated rpm compared to the standard engine on the Nordhavn 52. That's equivalent to adding 234 gallons (776 L) of fuel to the standard 1,670-gallon (5,563 L) tank. That will lengthen our range, lower our costs, and it will be better for the environment. In addition to being more efficient, the engine is quiet and doesn't smoke at cold start."

And that's important for a full-time residence. "This is really designed to be our retirement home, and while working, we'll equip it the way we want and prepare our skills for long-distance cruising," says James.

Their future travel plans for the Nordhavn 52? "I would like to head north to visit Dutch Harbor, Alaska, home of the crab fishing fleets," says James. "Jennifer wants to cruise south to visit Ernest Shackleton's grave in Grytviken, South Georgia in the Antarctic."

No doubt, this couple will make it happen.

"We wanted the ability to go anywhere in the world without constraint," says James. "Now we have that flexibility. One day, when we decide to retire, we'll be able to leave the next day."

A fuel-efficient PowerTech 6068AFM engine will give the Nordhavn 52 greater range for passagemaking trips.


| | |
|---|---|
| Engine Model | PowerTech 6068SFM50 |
| Displacement | 6.8L |
| Rated Power | 224 kW (300 hp) @ 2600 rpm |
| Cylinders | 6 |
| Aspiration | Seawater aftercooled |
| Distributor | Flint Power Systems<br>Albany, Georgia<br>(229) 888-1900 |
| Dealer | Altamonte Automotive Services<br>De Leon Springs, Florida<br>(407) 539-5316 |

The new engine is placed into the *Wood Stork* by crane through the galley and salon sole.

# A new bird

## *Bill Boles transforms the old* Wood Stork *into a highly efficient and navigable recreational vessel*

When Bill Boles retired from his career as instrumental chemist, he redirected his skills to marine electronics and all things nautical. Wanting a change from years of sailing, Bill decided his retirement project would be a 13-meter (44 ft.) 1985 lobster boat that he would convert into a modern recreational trawler that he and his wife, Sandy, could enjoy.

"It was in terrible shape," Bill says of the *Wood Stork*, which once served as a prop in the 1995 movie *Captiva Island*, starring Ernest Borgnine. So he and Sandy took the vessel to a do-it-yourself boatyard and began the process of a complete renovation above and below the waterline. They modified the hull, added new fiberglass and paint, refurbished the interior, and replaced virtually all the wiring and electrical system components. Before long, the well-wired vessel was sporting radars, integrated navigational systems, a chart plotter, four GPS units, an electronic compass, and commercial autopilot controls.

"With all that accomplished, the *Wood Stork's* old four-valve propulsion and gen-set engines begged to be gone," admits Bill. "Researching different engine features, John Deere rose to the top," says Bill. "And so did John Deere marine dealer, Craig Cornell of Altamonte Automotive Services, who several fellow boaters recommended. Even a competitive marine dealer recommended Craig!"

Craig suggested a new 224-kW (300 hp) PowerTech 6068SFM seawater-aftercooled engine. After removing the old engine, Craig custom built a new aluminum-reinforced engine bed, engine mounts, and a custom exhaust elbow. Craig coupled the John Deere engine to ZF-85 transmission with a 7-degree down angle so the engine could sit level. He recommended a 26x22-inch (66x56 cm) four-blade prop mounted to a new 45-millimeter (1¾ in.) shaft.

"Craig did a wonderful job. The removal of the old engine and setting of the new one were truly spectator events," recalls Bill. "Craig has done this before using an established local crane service. You just had to be there to appreciate it."

Today the *Wood Stork* flies faster, with a top end speed of 17 knots. "The sweet spot is running 8 knots at 1,480 rpm," says Bill. "At just under 4 gallons per hour (15 L/h), that's where the vessel's fuel efficiency is at its best. I'm tickled to death with it."

Bill says he loves electronic capabilities of his new PowerTech engine. "A lot of people say they don't want an electronic engine, but I love the CAN BUS engine. I trust it. I walk up, turn the key, and I know it's going to go. I can monitor the engine functions. I was amazed that it has a built-in full fuel monitoring system. It even has a water sensor at the bottom of a fuel filter. If you have water coming in, the engine knows about it and alarms you. Those little features of the CAN BUS control system are really nice."

"I'll keep this boat forever," he says. "It's pretty sweet to run."

The well-wired *Wood Stork* sports two radars, two integrated navigational systems, a chart plotter, four GPS units, an electronic compass, and commercial autopilot controls.

The newly refurbished *Wood Stork* glistens in the water at dockside.

# Create your custom cruise kit

*Keeping essential engine parts onboard adds confidence to your journey*

While John Deere marine engines are well known for their exceptional reliability, stocking some essential spare engine parts onboard is strongly recommended when you are miles away from shore.

We consulted the John Deere marketing and customer support group to ask for a basic checklist of parts that you may want to consider stocking onboard. This list works equally well for propulsion engines as well as marine gen-set engines. Here's what they suggest:

- Belts
- Oil filter
- Fuel filter
- Air filter
- Fuel water separator
- Zinc anodes
- Seawater pump repair kit
- Pressure cap for the cooling system
- Thermostat
- Plus-50 II oil
- Cool-Gard II coolant
- Fluid analysis kit
- Coolant test strips
- John Deere FUELSAVER antimicrobial additive
- John Deere diesel fuel conditioner
- John Deere engine operation and maintenance manual
- John Deere Parts and Service Directory


Keep in mind that the exact spare parts you need really depends on the model of your John Deere engine and the extent of your travels. "What may be essential for cruisers of the Intercoastal Waterway may be different than for a passagemaker," advises Joby Javellana, John Deere regional sales manager. "So consult your local John Deere marine dealer for a recommended list of parts for your specific engine and travel plans."

Beyond the needs of the engine, Joby recommends keeping fuel filters on hand for the vessel's primary fuel filtering system. He also suggests performing a yearly sea trial to ensure your vessel is performing at its optimal level.

Know your engine. "You owe it to yourself to become familiar with your engine, not only for the sake of gaining knowledge or conducting routine service, but also to perform repairs in mid-voyage, if necessary. Your John Deere operation and maintenance manual can be a wealth of information in times of need," says Joby. Also, the John Deere Parts and Service Directory is your resource for locating a John Deere distributor or marine dealer during your travels.

Also, make sure to register your engine warranty, advises Matt Dewey, product manager of parts marketing for John Deere Power Systems. If your marine engine is registered, it streamlines the entire process if you have a warranty situation. So if you haven't done so already, it's easy to register by contacting your local John Deere distributor or service dealer. If you are in North America, you may also go to www.JohnDeere.com/warranty and click on "Warranty Registrations."

Finally, you can count on genuine John Deere maintenance products to give you the best quality and value. Genuine John Deere replacement parts and products are specifically designed and engineered by John Deere for John Deere engines, says Matt. "Our parts restore the original quality and performance of your marine engines so that you can enjoy the journey with peace of mind."

Visit your local John Deere marine dealer for a specific list of recommended parts for your vessel, engine model, and travel plans.

Your John Deere marine dealer can perform a yearly sea trial to ensure your engine is performing at its optimal level.

# The lowdown on ultra-low-sulfur fuel

*Understanding ULSD will help you get the best performance from your John Deere engine*

Tighter emissions regulations continue to drive the development of emissions-control technologies, including diesel fuel formulations with lower levels of sulfur.

The most recent to emerge is Ultra-Low-Sulfur Diesel (ULSD). This ultra-clean burning diesel fuel has 0.0015 percent (15 ppm) sulfur content, 97 percent less sulfur than low-sulfur diesel (LSD) at 0.05 percent (500 ppm). There are many benefits to ULSD. According to EPA estimates, the move to ULSD will result in annual reductions of 2.6 million tons of nitrogen oxide emissions and 110,000 tons of soot or particulate.

The move to lower sulfur occurred first in the European Union and then moved to the United States, beginning with the on-road market. Non-road diesel fuel was required to move to 500 ppm sulfur content in 2007. By June 2010, non-road diesel must meet the ULSD fuel standard of 15 ppm sulfur content.

John Deere strongly recommends the use of diesel fuel with 0.10 percent (1000 ppm) or less. Use of diesel fuel with sulfur content of 0.10 percent (1000 ppm) to 0.50 percent (5000 ppm) may result in reduced oil and filter change intervals. Use of diesel fuel with sulfur content greater than 0.50 percent (5000 ppm) is not recommended. In all cases, diesel fuel should meet ASTM D975 or EN 590 standards.

When using ULSD, there are three points to consider:

**Lubricity.** The refining process to reduce sulfur removes natural lubricating agents. Along with other benefits, John Deere Premium Diesel Fuel Conditioner (and Biodiesel Protect 100 for Europe) ensures proper fuel lubrication and is specifically formulated to work with LSD and ULSD fuels. John Deere warns against the use of engine oil and other lubricating oils as additives.

**Bacteria.** In North America, particular attention must be given to ULSD and biodiesel blends, which are more susceptible to microbial growth. To prevent or attack microbial growth and plugged fuel system components, we recommend John Deere FUELSAVER.

**Deposits.** ULSD is more prone to oxidation than previous fuels and can pose challenges to today's high-pressure fuel systems. Deposits can form inside the injector, resulting in misfire, instability, smoke and possible power loss. Rather than replacing the injector, John Deere recommends restoring performance of the engine by cleaning the injectors. See your John Deere dealer for more information on an injector flush service solution that can remove these deposits.

For more information, refer to your John Deere operator's manual or visit your John Deere dealer.

# Plus-50™ II: advanced protection for your engine


As engine technologies advance, John Deere continues to engineer oil formulations to ensure the optimum running performance and longevity of its engines.

Introducing John Deere Plus-50 II — a 15W-40 and 10W-30 engine oil developed to provide the best performance and wear protection of your John Deere diesel engine. Here's why:

- Plus-50 II oil offers superior oxidation stability, corrosion control, viscosity retention, cold fluidity, and an unsurpassed 10.5 fresh oil TBN to effectively neutralize acids.
- PLUS-50 II can be used with ultra-low-sulfur-diesel (ULSD), low sulfur diesel (LSD), and biodiesel fuel blends like B20 for extended service duration up to 500 hours.
- PLUS-50 II is 100 percent backward compatible and suitable for engines with and without emission control devices, on-highway, off-road, heavy duty, light duty, diesel, gasoline, compressed natural gas, and marine engine applications.
- PLUS-50 II is the only CJ-4 oil that successfully passed the new 500-hour JDQ-78X engine test with full load and rated speed, 140-degree C oil-sump temperature, B20 biodiesel blend, and zero fresh oil top-off. (For comparison, two market leaders of premium CJ-4 brands failed the same JDQ78X engine test at approximately 400 and 450 hours, respectively).

For more information on Plus-50 II oil and other products, contact your local John Deere dealer or visit our Web site at www.johndeere.com/engines.

Look for John Deere engines at these upcoming tradeshows, conventions, and exhibits.

# CALENDAR

| | |
|---|---|
| FEBRUARY 5-14, 2010 | BÅTMÄSSAN - GÖTEBORG BOAT SHOW<br>Göteborg, Sweden |
| FEBRUARY 10-12, 2010 | SEATEC<br>Carrara, Italy |
| FEBRUARY 11-15, 2010 | MIAMI INTERNATIONAL BOAT SHOW<br>Miami, Florida, USA |
| FEBRUARY 13-16, 2010 | PASSENGER VESSEL ASSOCIATION<br>Tampa, Florida, USA |
| MARCH 10-14, 2010 | AUCKLAND INTERNATIONAL BOAT SHOW<br>Auckland, New Zealand |
| MARCH 16-18, 2010 | FISH AFRICA<br>Cape Town, South Africa |
| MAY 3-10, 2010 | OFFSHORE TECHNOLOGY CONFERENCE<br>Houston, Texas, USA |
| MAY 18-20, 2010 | NAVALIA<br>Vigo, Spain |
| MAY 20-23, 2010 | SANCTUARY COVE INTERNATIONAL BOAT SHOW<br>Brisbane, Australia |
| JUNE 8-10, 2010 | GLOBAL PETROLEUM SHOW<br>Calgary, Alberta, Canada |
| JUNE 9-10, 2010 | COMMERCIAL MARINE EXPO<br>New Bedford, Massachusetts, USA |
| JUNE 15-17, 2010 | SEAWORK<br>Southampton, UK |
| JULY 29-AUGUST 3, 2010 | SYDNEY INTERNATIONAL BOAT SHOW<br>Sydney, Australia |
| SEPTEMBER 7-10, 2010 | SMM<br>Hamburg, Germany |
| OCTOBER 2-10, 2010 | GENOA BOAT SHOW<br>Genoa, Italy |
| OCTOBER 28-NOVEMBER 1, 2010 | FORT LAUDERDALE INTERNATIONAL BOAT SHOW<br>Fort Lauderdale, Florida, USA |
| NOVEMBER 2010 | PACIFIC MARINE EXPO<br>Seattle, Washington, USA |
| NOVEMBER 16-18, 2010 | METS<br>Amsterdam, The Netherlands |
| DECEMBER 1-3, 2010 | INTERNATIONAL WORKBOAT SHOW<br>New Orléans, Louisiana, USA |
| DECEMBER 8-11, 2010 | MARITIMA<br>Paris, France |
| DECEMBER 14-16, 2010 | POWER-GEN INTERNATIONAL<br>Orlando, Florida, USA |

# When you can't see the shore, reliability takes on a whole new meaning.

JOHN DEERE

Worrying about your propulsion or generator engine is the last thing you want to do. That's why boat owners have been relying on John Deere engines for more than 30 years. John Deere PowerTech engines are durable, fuel efficient, and easy to maintain. And they are backed by a company you can count on for service and support — no matter where you work.

www.JohnDeere.com/marine

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