

POWERSOURCE

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ON THE COVER

Grote Stern keeps a watchful eye over ships entering the Port of Rotterdam.

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COVER STORY

16 Patrolling Holland's Rotterdam harbor requires a keen eye and a patrol craft that's reliable, responsive, and fast. That's what the port authority gained when it repowered *Grote Stern* with a new PowerTech 6135SFM75 marine engine. Now affectionately called 'the tractor boat,' *Grote Stern* flies across the water at 45 kph (28 mph) to regulate transgressors.



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John Deere Power Systems
Attn: Marketing Communications Dept.
P.O. Box 5100 Waterloo, IA 50704-5100
Phone: (800) 533-6446 in the U.S.
Email: jdpower@JohnDeere.com

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Editor: Christine McClintic
European Contributing Editor: Hester Regoort

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Jets propel *Tymac Wave* to a top speed of 37 knots. Photo credit: Tremain Media Inc.

JET-SETTERS

Tymac Launch water taxis travel the British Columbia coast with John Deere-powered jet propulsion

What reaches speeds of up to 37 knots, turns on a dime, and maneuvers sideways left and right?

Jet-propelled water taxis operated by Tymac Launch Service of Vancouver, British Columbia, that's what.

Twin John Deere PowerTech 6090SFM85 Tier 3 engines each deliver 373 kW (500 hp) of on-the-water power, compliments of Frontier Power Products in Delta, British Columbia.

Tymac Launch Service of Vancouver, British Columbia, took delivery of *Tymac Wave* and *Tymac Crest* earlier this year. Daigle Welding and Marine in Campbell River,

British Columbia built the aluminum-hull Eaglecraft boats. The boat builder installed the John Deere engines and paired them to Hamilton Jet 322 water jets through ZF 305-3 transmissions with a 1:1 gear ratio.

Measuring 11.27 meters (37 feet) long and sporting a 3.96-meter (13-foot) beam, the taxis carry up to 12 passengers. Tymac Launch uses the vessels to swiftly transport boat pilots, shipping agents, marine surveyors, and other officials to and from the deepwater ships in the port city of Prince Rupert.

"We run 24 hours a day, seven days a week, 365 days a year," says Drew Hemmingson, Tymac's operations manager.

The marine transportation company has been servicing ships at the Port of Vancouver for over 80 years. Since 1997, its fleet has been powered by a comprehensive array of 6-cylinder John Deere marine engines.

Tymac Wave and *Tymac Crest* join two other jet boats also powered by John Deere engines. They are *Tymac Storm* and *Tymac Spray*, built by Kvichak Marine Industries in Seattle, Washington. The taxis feature twin 317-kW (425-hp) PowerTech 6090SFM85 marine engines from Cascade Engine Center in Seattle. These boats service ships in Vancouver harbor.

Tymac also recently added a new tugboat to the fleet. *Tymac Tide* pushes barges




Tymac Wave and Tymac Crest are the newest members of Tymac Launch fleet of water taxis. Photo credit: Tremain Media Inc.

with twin 272-kW (365-hp) PowerTech 6135AFM75 marine engines that bolt to ZF W325 transmissions with a 3.4:1 gear ratio.

“It’s a tough-duty application, and we want a lot of horsepower without overworking the engine,” says Mike Phillipson, Tymac’s vice president of marine operations. “We require a lot of ponies to get the boat moving, but I also want lots of displacement and an engine that runs at a fairly low rpm. There are engines out there that can develop tremendous horsepower, but at higher rpms, our experience has shown you get less life out of this type of engine.”

Although props propel the tug, jet propulsion continues to grow in popularity at the port. And as Tymac Launch Service renews its fleet of water taxis over the years, it will transition to jet propulsion.

“We sustained a lot of prop damage over the years from debris in the water, which is costly in downtime and repairs,” says Hemmingson. “We wanted to try something new, and so far it has been a success. If we are to build some more launches, we would go with jets again.”

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Tymac Tide pushes barges with twin 272-kW (365-hp) PowerTech 6135AFM75 marine engines.



Tymac’s new water taxi, Tymac Wave, demonstrates agility with twin PowerTech 6090SFM85 marine engines. Photo credit: Tremain Media Inc.