POWER

FOR MARINE PROFESSIONALS | NO 3

Welcome to the commercial world of Volvo Penta!

VOLVO PENTA

CRAB BOAT SAVINGS

Hugh Green finished up the *Mine & Yours*' D13 repower by filling the fuel tank and loading the bait for owner Bart Stokes. It made sense; the stone crab season was starting the next day. Green is known for that kind of commitment to the customer.

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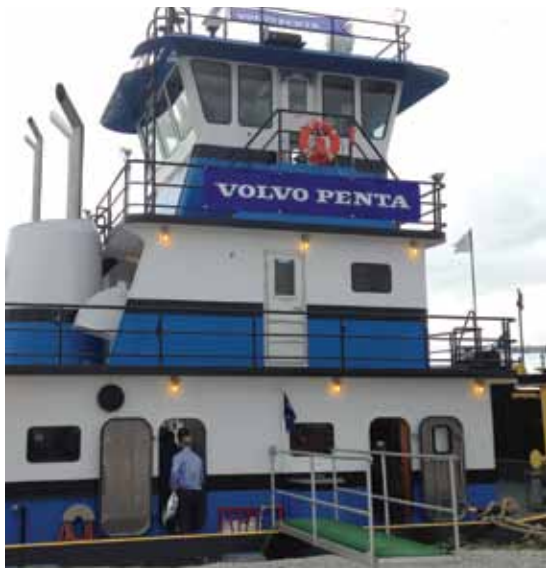

A new pushboat making a **bold statement**.

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On the bayou with **Allemand Industries**.

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The D16 Story in numbers.

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D13: Meeting Tier 3 and More

Engine manufacturers share a common challenge, to meet emissions standards while delivering even more power. Not many engines can accomplish this, but the D13 manages to do both while improving fuel efficiency.

The key is the cutting edge proprietary Electronic Vessel Control system (EVC). The digital "brain" can adapt the D13 to an amazing variety of applications, from IPS or conventional planing applications requiring a rating of 800 RPM at 2300 rpms, to a continuous duty rating of 400 HP at 1800 rpm for heavy workboats.

"The engine torque curve was developed specifically for marine applications and is a hallmark of Volvo Penta marine engines" said Volvo Penta's Jens Bering, Manager Product Management.

Because the D13 shares its robust architecture and many components with the D9, D11 and D16, maintenance is straightforward and refined, and parts are well stocked around the world.

THE BOLD NEW *TED KAYSER*

A new pushboat makes a bold statement, and the *Ted Kayser*, powered by twin Volvo Penta D16s, has already made some lasting impressions.

Perhaps the most important of these was made on the *Ted Kayser*'s captain, Capt. Calvin Millet. "The throttle response on these D16s is the best I've ever experienced," he said.

The choice of D16s was considered radical by some on the waterways. Although well proven by Stevens Towing on the East Coast and other applications around the world, Volvo Penta D16s were considered an unusual choice in the brown waters of Louisiana. The key to the inline six-cylinder D16's success is Volvo Penta's Electronic Vessel Control (EVC) technology. Those electronics are combined with traditional strengths like a robust block with ladder frame, high-pressure unit injector system, four valves per cylinder, twin-entry turbo and charge air cooler. The D16 delivers world-class torque while running cleaner and more efficiently than previously thought possible.

The *Ted Kayser*'s D16s are each rated 650 HP at 1800 rpm. The Twin Disc MGX-5222 reduction gear has a 5.04:1 ratio and the stainless four-blade Rolls Royce propellers are 62" x 40". There are Duraweld keel coolers and two 40 kW gensets from Allemand. The *Ted Kayser* measures 60 x 26 x 9.6 and was built by Eymard Marine Construction and Repair and designed by Entech & Associates.

The vessel's capacities are 15,000 gallons of fuel, 440 gallons of lube oil and 3,400 gallons of potable water.

The *Ted Kayser* has a bold legacy to live up to. Ted Kayser, the man, is a pillar of the river industry, and he is celebrating his 50th year in the business. Starting out as an accountant with Nilo Barge Line in 1963, he ultimately became fleet manager of the Upper St. Rose Fleeting and co-founder of Marine Centre, Inc.

The *Ted Kayser* was put to work immediately after launch without a hitch. After having logged 1731 hours, everything was going smoothly. "The *Ted Kayser* is performing above expectations," declared Keith Savoie of Cooper T. Smith (formerly Kathryn Rae Towing) And he has a fleet of vessels to compare it to, including a sister-vessel repowered with another manufacturer's engines only six months before.

The most impressive figure offered by the D16s is the low fuel burn, which is 46 gph at 1800 rpms at a dead push, better than all other comparable vessels in the fleet.

Technical Data

Ted Kayser	
Length	60 ft
Beam	26 ft
Draft	9.6 ft
Main engines	Twin Volvo Penta D16 650 HP @ 1800 RPM
Description	Fleeting Barge

>> ALLEMAND INDUSTRIES continued.

VOLVO PENTA **ON THE BAYOU**

There may be no bigger challenge for an engine than a Mississippi pushboat. Pushing as many as 15 barges (3-wide) loaded with cargo on a winding river, these vessels can go for days or weeks with no break.

Engine reliability is critical when that much material is on a congested and vital waterway. There is no such thing as a small engine problem, and so 24/7 reliability and service support are essential.

Allemand Industries, the new Volvo Penta Power Center in Harvey, Louisiana, is perfectly situated to increase Volvo Penta's presence in the market. O'Neal Allemand and his sons Kim and Kirby formed the company in 1981. Each had been working with a different service company in the area, so together they had a lot of knowledge and a clear picture of what would work.

Knowing service was key; they went about establishing a reputation for delivering unsurpassed service on all the products they sold, from several different engine and genset lines to Twin Disk gears. They also started making custom pumps and compressors of just about any capacity.

More recently, it became clear that while the applications hadn't been changing much, engine technology had advanced a great deal. Of the new technology, Volvo Penta's seemed the most well thought out. If proven reliable on the river, that technology would become the new standard in the Mississippi towboat industry.

Volvo Penta Product Manager David LeBlanc, who had kept an eye on Volvo Penta military applications at a previous position, started looking into what Volvo Penta had to offer for heavy duty applications. The more thoroughly he looked, the better the fit seemed to be. He studied the success the East Coast based Stevens Towing has had with their D16 applications.

If there's one thing common to successful Mississippi towboat operations, it's thoroughness. Captains and engineers can tell you precisely how much fuel and oil their engines are burning, when they're due for regular maintenance and when their overhauls and rebuilds are coming up.

And there aren't many secrets on the river. If a boat has had a problem, it's apparent to all. If it's living up to or exceeding expectations, it will be broadcast faster by word of mouth than anything on the Internet. Towboat operators are careful, and generally speaking they need to see something work to believe it.

There had to be a customer bold enough to make that first step, and that was Keith Savoie of Kathryn Rae Towing. While a newcomer to Volvo Penta, Savoie was no newcomer to Allemand. About 15 years ago, after he'd been a happy customer for several years, and was disappointed because Kirby Allemand told him that they couldn't supply his engine servicing. They wouldn't make promises they could not live up to with high standards.

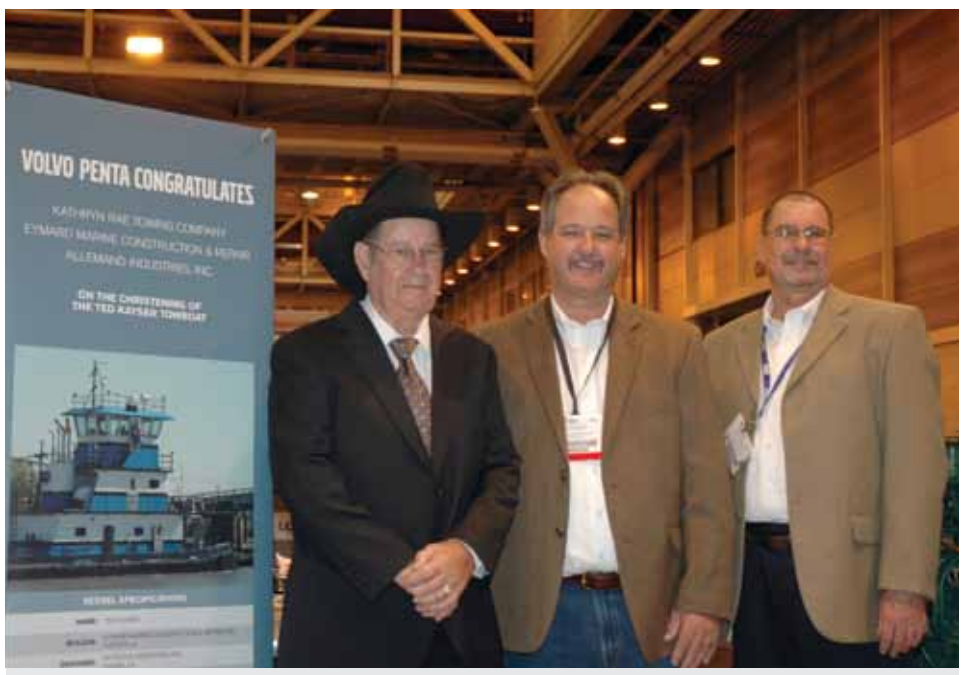
Allemand's new affiliation with Volvo Penta put the relationship in a whole new light. "When the possibility of working with them again came up, I was open-eared!" said Savoie. Leblanc and the Allemands explained the technical advantages of Volvo Penta, and then together along with about a dozen other professionals travelled to the Volvo Penta plant in Sweden. That left an indelible impression on Savoie. "I was extremely impressed with Volvo Penta's dedication." Savoie already had full confidence in the Allemands and had seen enough of Volvo Penta to make the bold move.

The timing of everything coincided perfectly with the construction of a new vessel, the *Ted Kayser*, named after one of the industry stalwarts. Any new vessel is an important statement, but choosing a new power package for it makes it the statement even stronger.

While the Allemands and LeBlanc are confident that Volvo Penta has the right products for the river, they are under no illusions that talk alone will not motivate operators to move to Volvo. They know the path to success in the mid-Gulf Coast region is not easy or short, but is worthwhile.

"We're proud to be part of Volvo Penta and looking for a long-term relationship," explains Kirby Allemand. "Service is the key, and of course the engines will have to speak for themselves."

The *Ted Kayser's* D16s are talking up a storm and folk are listening.



The Allemand family (l-r): O'Neal, Kim and Kirby.

COMMERCIAL **ENGINE RANGE**

DIESEL INBOARD

Volvo Penta's engine range offers combinations of high power, low weight, low fuel consumption and emissions that only a few years ago were inconceivable.

Note: (1) This power is intended for pleasure craft applications, and can be used for high speed planing craft in commercial applications with special limited warranty, see warranty and service book. (2) Solas approved.

Engines	Rating 1 Crankshaft kW / hp-rpm	Rating 2 Crankshaft kW / hp-rpm	Rating 3 Crankshaft kW / hp-rpm	Rating 4 Crankshaft kW / hp-rpm	Cylinders	Displacement litres / cui
D3-110				81 / 110 - 3000 (1,2)	5	2.4 / 146
D3-150				110 / 150 - 3000 (1,2)	5	2.4 / 146
D3-170				125 / 170 - 4000 (1,2)	5	2.4 / 146
D3-200				147 / 200 - 4000 (1,2)	5	2.4 / 146
D3-220				162 / 220 - 4000 (1,2)	5	2.4 / 146
D4-180				132 / 180 - 2800 (2)	4	3.7 / 224
D4-225				165 / 225 - 3500 (2)	4	3.7 / 224
D4-260				191 / 260 - 3500 (1,2)	4	3.7 / 224
D4-300				221 / 300 - 3500 (1)	4	3.7 / 224
D6-280				206 / 280 - 3500 (2)	6	5.5 / 336
D6-310				228 / 310 - 3500 (2)	6	5.5 / 336
D6-330				243 / 330 - 3500 (2)	6	5.5 / 336
D6-370				272 / 370 - 3500 (1,2)	6	5.5 / 336
D6-435				320 / 435 - 3500 (1,2)	6	5.5 / 336
D9-425			313 / 425 - 2200		6	9.4 / 571
D9-500				368 / 500 - 2600	6	9.4 / 571
D13 MH	294 / 400 - 1800 331 / 450 - 1800 368 / 500 - 1800	404 / 550 - 1900 441 / 600 - 1900			6	12.8 / 780
D13-700			515 / 700 - 2300		6	12.8 / 780
D13-800 MC				588 / 800 - 2300	6	12.8 / 780
D16 MH	368 / 501 - 1800 405 / 551 - 1800 442 / 601 - 1800 479 / 651 - 1800	552 / 751 - 1900			6	16.1 / 984

DIESEL STERNDRIVE

Volvo Penta diesel technology delivers performance without sacrificing reliability. Whether electronically controlled or mechanically governed, all marine diesels in the range provide the necessary performance for applications requiring fast acceleration and high top speed.

Note: (1) This power is intended for pleasure craft applications, and can be used for high speed planing craft in commercial applications with special limited warranty, see warranty and service book. (2) Solas approved.

Engines	Rating 4 Propshaft kW / hp-rpm max	Rating 4 Crankshaft kW / hp-rpm max	Cylinders	Displacement litres / cui
D3-140	98 / 133-4000 (1,2)	103 / 140-4000 (1,2)	5	2.4 / 146
D3-170	119 / 162-4000 (1,2)	125 / 170-4000 (1,2)	5	2.4 / 146
D3-200	140 / 190-4000 (1,2)	147 / 200-4000 (1,2)	5	2.4 / 146
D3-220	154 / 209-4000 (1,2)	162 / 220-4000 (1,2)	5	2.4 / 146
D4-225	158 / 215-3500 (2)	165 / 225-3500 (2)	4	3.7 / 224
D4-260	184 / 250-3500 (1,2)	191 / 260-3500 (1,2)	4	3.7 / 224
D4-300	214 / 291-3500 (1)	221 / 300-3500 (1)	4	3.7 / 224
D6-280	198 / 269-3500 (2)	206 / 280-3500 (2)	6	5.5 / 336
D6-310	219 / 298-3500 (1,2)	228 / 310-3500 (1,2)	6	5.5 / 336
D6-330	233 / 317-3500 (2)	243 / 330-3500 (2)	6	5.5 / 336
D6-370	261 / 355-3500 (1,2)	272 / 370-3500 (1,2)	6	5.5 / 336

VOLVO PENTA IPS

Volvo Penta IPS (Inboard Performance System) is a revolutionary propulsion system. With dramatically increased efficiency compared to inboard shafts, Volvo Penta IPS offers higher top speed, faster acceleration and all the performance you want. And thanks to significantly reduced fuel consumption, cruising range is also greatly improved.

Car-like manoeuvring gives easy docking and perfect high speed handling. With minimal vibrations and sound, plus virtually no exhaust fumes, onboard comfort takes a giant leap forward. Traditional inboard benefits, such as propellers under the hull plus extensive use of bronze and stainless steel, are retained.

Engines	Propshaft kW / hp	Crankshaft kW / hp	Rated rpm	Cylinders	Displacement litres / cui
IPS400MC	217 / 295	228 / 310	3500	6	5.5 / 336
IPS450	230 / 314	243 / 330	3500	6	5.5 / 336
IPS800	417 / 567	441 / 600	2300	6	10.8 / 661
IPS1050	556 / 756	588 / 800	2300	6	12.8 / 780

POWER CENTER CONTACTS

Contact one of our Power Centers for engine quotes:

For Canadian customers, please contact Volvo Penta Canada at (604) 872-7511.

Allemand Industries, Inc.
1008 MacArthur Avenue
Harvey, LA 70058
Phone: (504) 340-5581
Fax: (504) 340-5592
Servicing: AL, AR, LA, MS, TX

CK Power
1100 Research Boulevard
St. Louis, MO 63132
Phone: (314) 868-8620
Fax: (314) 868-9314
Servicing: IA, IL, IN, KS, MN, MO, ND, NE, OK, SD, WI

Coastal Marine Engines, Inc.
4300 11th Avenues NW
Seattle, WA 98107
Phone: (206) 784-3703
Fax: (206) 784-8823
info@coastalmarineengine.com
Servicing: AK, ID, MT, OR, WA

Helmut's Marine
619 Canal Street
San Rafael, CA 94901
Phone: (415) 453-1001
Fax: (415) 453-8460
hja@helmutsmarine.com
Servicing: AZ, CA, HI, NV, UT

Power Products
107 Audubon Rd., Building 1 Suite 10
Wakefield, MA 01880
Phone: (781) 246-1811
Fax: (781) 246-5321
info@powerproductsystems.com
Servicing: CT, MA, ME, NH, RI, VT

Superior Diesel, Inc
6881 Bulldog Drive
North Charleston, SC 29406
Phone: (843) 553-8331
Fax : (843) 553-7536
sales@superiordieselengines.com
Servicing: GA, KY, NC, SC, TN, VA

TAW Power Systems
1500 NW 15th Avenue
Pompano Beach, FL 33069
Phone: (954) 977-0202
Fax : (954) 977-9249
dan.noble@tawinc.com
Servicing: FL

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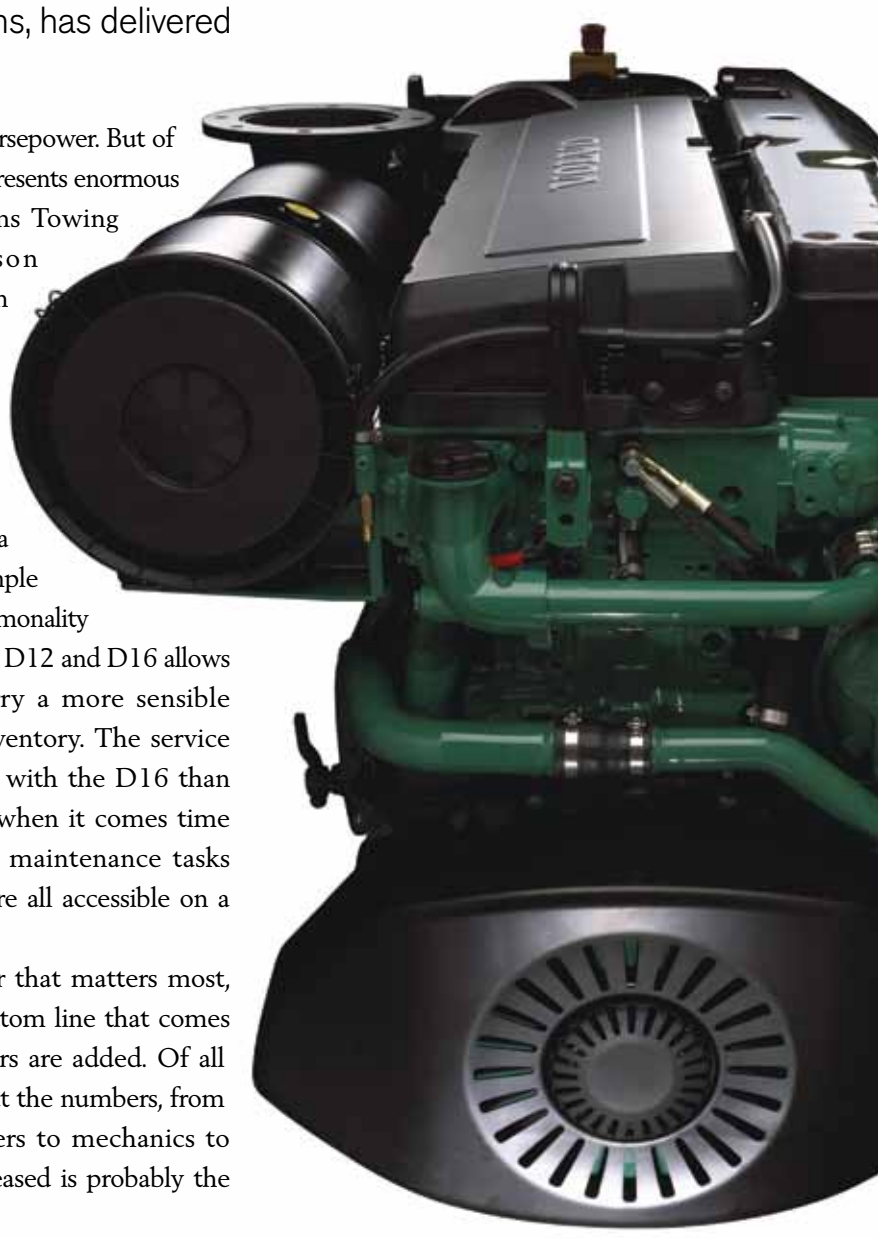
VOLVO PENTA

THE D16 STORY IN NUMBERS

The Volvo Penta D16 diesel, in all its configurations, has delivered an impressive collection of numbers.



For the heavy-duty commercial vessel captain, the low-end torque offers truly special capability. The engineers at Volvo Penta approached the challenge from several angles to come up with the right solution. The special twin-entry turbo enables pulse charging, while the latest Volvo Penta Electronic Management System (EMS) ensures peak efficiency in virtually all conditions. The power curve is telling: the D16 delivers over 110% of maximum torque while comparable engines are struggling to achieve 90%. There is no substitute for low-end torque.

Some of the most important numbers when considering any engine are the emissions numbers. Largely because of the ever-evolving EMS, Volvo Penta has been able to stay ahead of the most stringent regulations in the world. The D16 exceeds all current requirements, including EPA Tier 2, and the engines are being used in many applications in Europe where emissions are even more closely regulated.

At first glance the D16's fuel consumption curves don't look much different than many other manufacturers'. The difference may only be three or four percent at a given horsepower. But of course four percent presents enormous cost savings. Stevens Towing President Johnson Stevens estimated an $80,000 per year per boat savings after repowering six vessels in his fleet with D16s.

Some Volvo Penta advantages aren't simple to quantify. The commonality of parts with the D9, D12 and D16 allows an operator to carry a more sensible and streamlined inventory. The service intervals are longer with the D16 than other engines, and when it comes time to perform regular maintenance tasks the service points are all accessible on a compact package.

But the number that matters most, of course, is the bottom line that comes after all the numbers are added. Of all the people looking at the numbers, from captains to engineers to mechanics to CEOs, the most pleased is probably the accountant.

>> CRAB BOAT SAVINGS continued.

The repower to the 43-foot Torres has been a tremendous success, particularly at the fuel dock. "They're reporting they use about 30 fewer gallons a day," says Green. "The engines are smoother and lighter." *Mine & Yours* logs a lot of fishing days and so the savings are substantial over a given fishing season.

Volvo Penta repowers have been and positive and important part of Mattos Marine for several years. Repowers range from replacing gas I/Os with D4 Volvo Penta duoprops to giving aging but productive commercial vessels many more years of productivity. "Because of the hours commercial operators log in these waters, repowers are often a very smart call," says Dan Noble of TAW Power Systems, the regional Volvo Penta Power Center.

It's no surprise that the commercial crabbers turn to Hugh for their repowers. He follows through on each and every project. "You can't just walk away once the iron's in," he explains.

Technical Data

Mine & Yours	
Length	43 ft
Beam	14.6 ft
Draft	4 ft
Main engines	Volvo Penta D13-700
Description	Crab Boat