

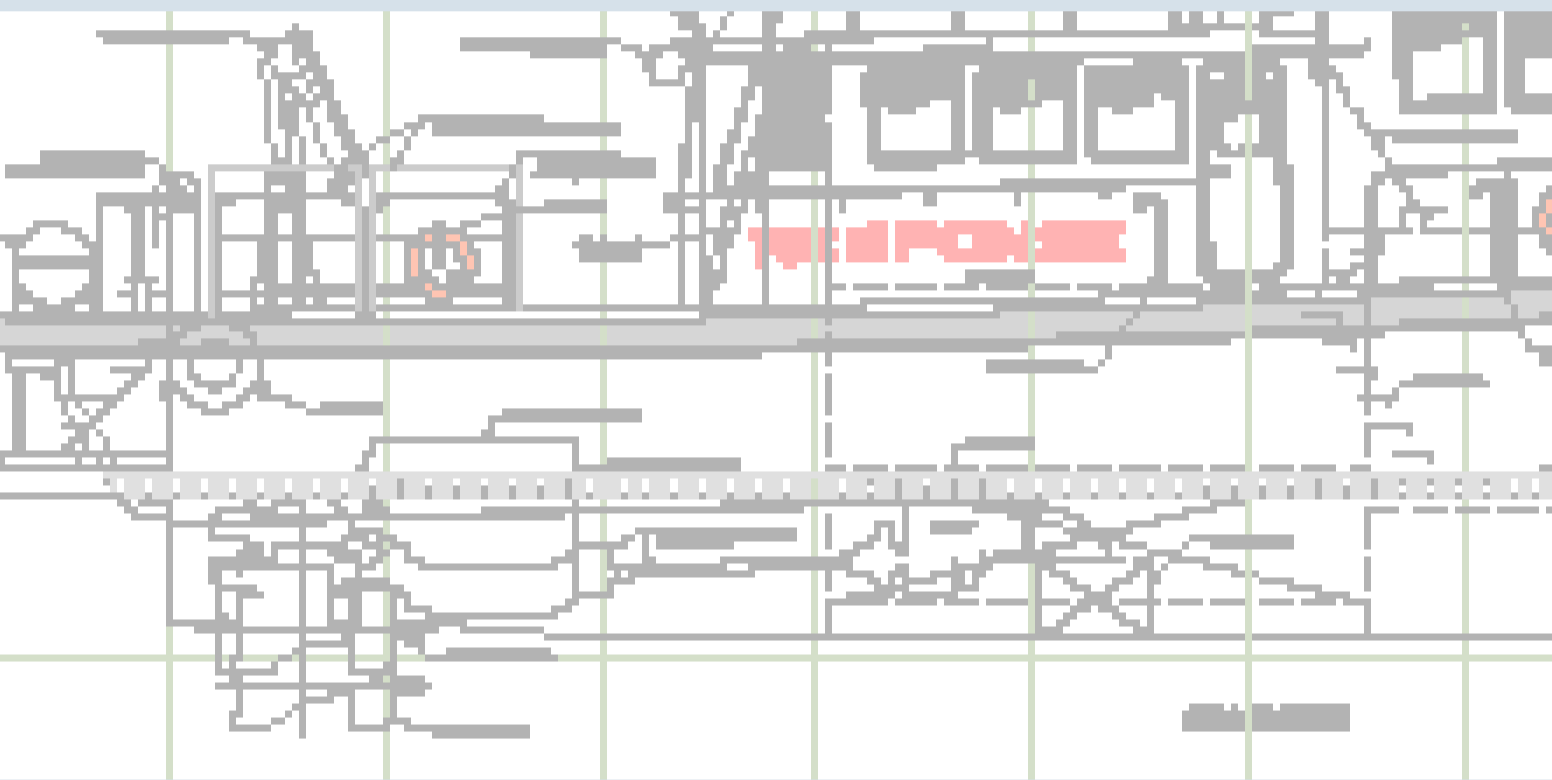
POWER

FOR MARINE PROFESSIONALS | NO 1

Welcome to the commercial world of Volvo Penta!

VOLVO PENTA

CHARLESTON **PILOTS**

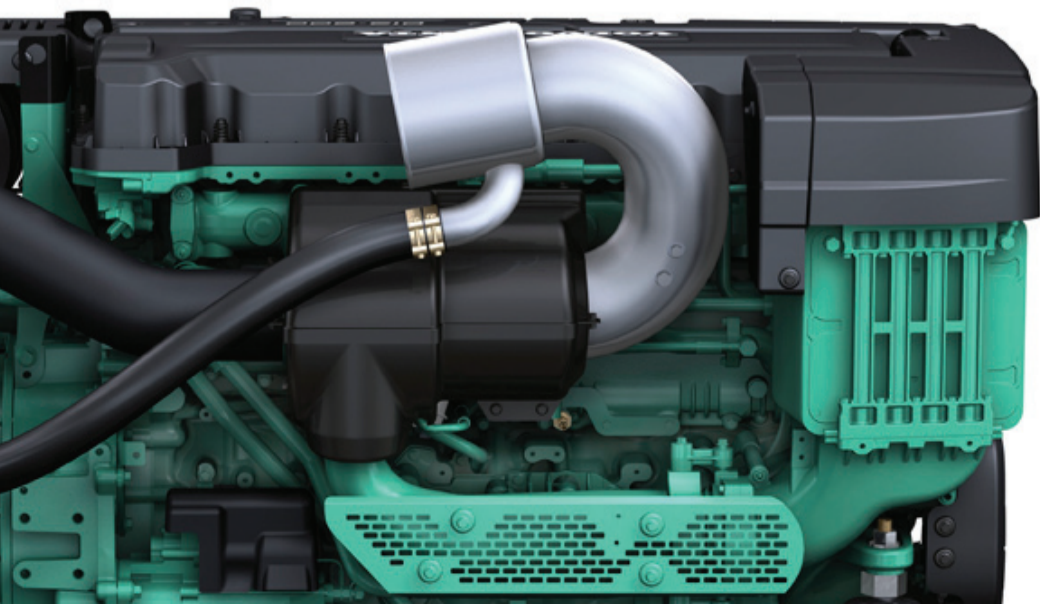


AND **VOLVO PENTA IPS**

Things move pretty fast on the waterfront. While many people escape to the seaside to enjoy gently lapping waves and warm sunshine, folks who work on the water are more concerned about the changing tides and shifting winds.

"The marine business is constantly evolving," says Walter Prause, Port Manager at Charleston Navigation, "the key is to stay ahead of the game." >> [Continued on page 4](#)

The New D13: More Power with Lower Emissions and Less Fuel Consumption

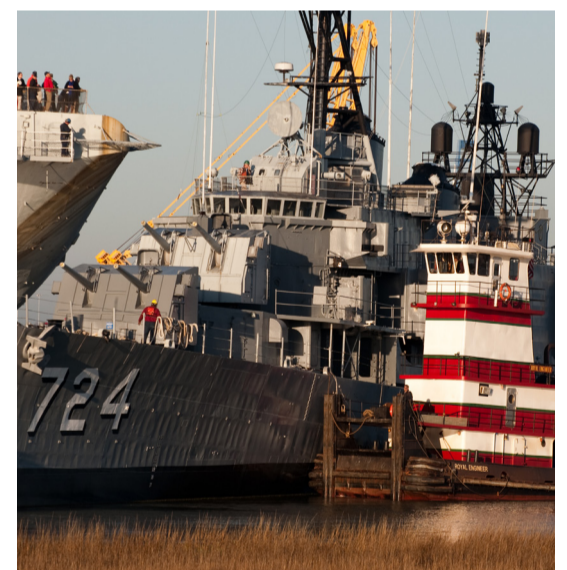


After over 730,000 hours of durability and reliability testing, the compact, super fuel efficient, 13 litre engine is ready to tackle the rigorous demands of the marine market.

>> [Continued on page 4](#)



Superior Diesel – Keep up or **get out of the way.** >> [Page 2](#)



Stevens Towing – **Moving history.** >> [Page 2](#)



Unrivalled performance in every respect. >> [Page 3](#)

KEEP UP OR GET OUT OF THE WAY

Keep up or get out of the way – that’s the mantra in the world of diesel power.

Rapid advancements in Volvo Penta’s line of commercial power products would be impossible without a sales and support system capable of keeping up. “We’ve had to retool our equipment and retrain our technicians,” says Superior Diesel president, Arthur Bailey, “and Volvo has been with us the whole way.” From Superior’s headquarters in Charleston, South Carolina, Bailey sees his company’s role changing in the years to come. “We’ll be doing less repowering and more repair and maintenance,” he says. With advanced products like four stroke engines and electronic controls, Volvo’s latest line of power plants will run longer on less fuel. But keeping these engines tuned is far outside the realm of a shade-tree mechanic.

“The days of DIY repairs are over,” Bailey says, “our technicians are trained to diagnose and repair these highly technical engines.” As a result, Superior is positioned to provide the economically viable and environmentally sustainable products and service that will meet the needs of commercial power clients far into the future.



Arthur Bailey President, Superior Diesel

Launch in Canada

The Nanaimo Port Authority has recently taken delivery of a Daigle Welding & Marine Ltd. built EagleCraft 39’ aluminum pilot/patrol boat powered by twin Volvo Penta D6-370i with HS80IV 2.49:1 gears. The ‘NPA Osprey’, designed by Steve Daigle and his naval architect Felipe Garcia, will be a multi-task vessel constructed specifically to meet the duties of a pilot boat, patrol vessel, fire boat and water ambulance for the Port of Nanaimo in British Columbia, Canada.



>> STEVENS TOWING continued.

MOVING HISTORY

They called her “The ship that would not die.” After storming Normandy, surviving Kamikazis strikes off Okinawa, colliding with a sub-chaser in San Francisco, observing nuclear testing at Bikini Island, and maintaining the blockade of North Korea, the destroyer USS Laffey was considered indestructible.

Then, 65 years after her commissioning, the steel hero almost succumbed to old age. The retired ship was enjoying her golden years at Patriot’s Point Naval History Museum in Charleston, South Carolina, when she sprung over 100 leaks in her steel hull. Without a major repair, the ship that had survived some of history’s greatest conflicts was going to sink at the dock.

This time it was America’s turn to save the *Laffey*. After securing funding and finding a capable repair facility, Patriot’s Point staff searched for a towing company that could move the 376 foot-long wounded warrior.

Enter Charleston’s own Stevens Towing. The local specialists won the million-dollar job by guaranteeing that the *USS Laffey* would be transported to and from dry dock without incident.

“Other companies refused to take liability or charged too much,” says company president, Johnson Stevens, “but we were in a unique position to take advantage of this opportunity.”

Not only is Stevens the largest area towing fleet with specialized equipment for performing delicate jobs, but the company had recently upgraded six of its flagship tug boats with Volvo Penta’s D16 4-stroke diesels. “The fuel efficiency and low-end power open new opportunities for our company,” Stevens says.

That’s because Volvo’s D16s save the company hundreds of thousands of dollars each year-savings that can be passed on to the company’s clients. “We estimate an \$80,000 fuel saving per boat,” Stevens says, “that adds up to \$480,000 annually.”

Add that to an extended lifespan and

expanded maintenance schedule and the savings really pile up. “Engine life has increased from 8,500 hours to over 35,000 hours,” Stevens adds, “and we only shut down for routine maintenance.”

But the advantages don’t end on the spreadsheet, the D16s produce less noise, vibration, and smoke than a comparable 2-cycle allowing the engines to exceed EPA environmental requirements. In fact, Stevens has received matching grants from the federal government that will allow them to replace even more outdated engines.

It all came together when it was time to move the *USS Laffey*. In August 2009, Stevens Towing carefully transported the last Sumner Class Destroyer to its dry dock at Detyens Shipyards . Two years later, when the repairs were complete, the company’s Volvo-powered tugs and cranes safely returned the ship to its home at Patriots Point. “Volvo gave us the confidence to do the job,” Stevens says, “and it went exactly as we planned.”



Technical Data

Island Tide	
Length	54.1 ft
Beam	24.5 ft
Draft	8.6 ft
Main engines	Twin Volvo Penta D16
Classification	Uninspected inland Push Boat

Technical Data

Island Pilot	
Length	65 ft
Beam	26 ft
Draft	9 ft
Main engines	Twin Volvo Penta D16
Classification	Uninspected inland Push Boat

Technical Data

Royal Engineer	
Length	60.6 ft
Beam	22.2 ft
Draft	9.2 ft
Main engines	Twin Volvo Penta D16
Classification	Uninspected inland Push Boat

Technical Data

USS Laffey	
Length	376 ft 6 in
Beam	40 ft
Draft	15 ft 8 in
Propulsion	60,000 shp (45 MW); 2 propellers
Classification	Allen M. Sumner-class destroyer

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
D3-130	90 / 122-4000 (1,2)	96 / 130-4000 (1,2)	5	2.4/146
D3-160	114 / 155-4000 (1,2)	120 / 163-4000 (1,2)	5	2.4/146
D3-190	133 / 181-4000 (1,2)	140 / 190-4000 (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:

Blue Water Marine

30201 South River Road
Harrison Township, MI 48045
Phone: (586) 468-6960
Fax: (586) 468-7737
bluewater.marine@yahoo.com
Servicing: MI, OH

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@superiordieselenines.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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For up-to-date information, there is no better place than the Volvo Penta website.

Visit www.volvopenta.com/us to find your nearest dealer and download operator's manuals for most Volvo Penta engines.

VOLVO PENTA

>> THE NEW D13 continued.

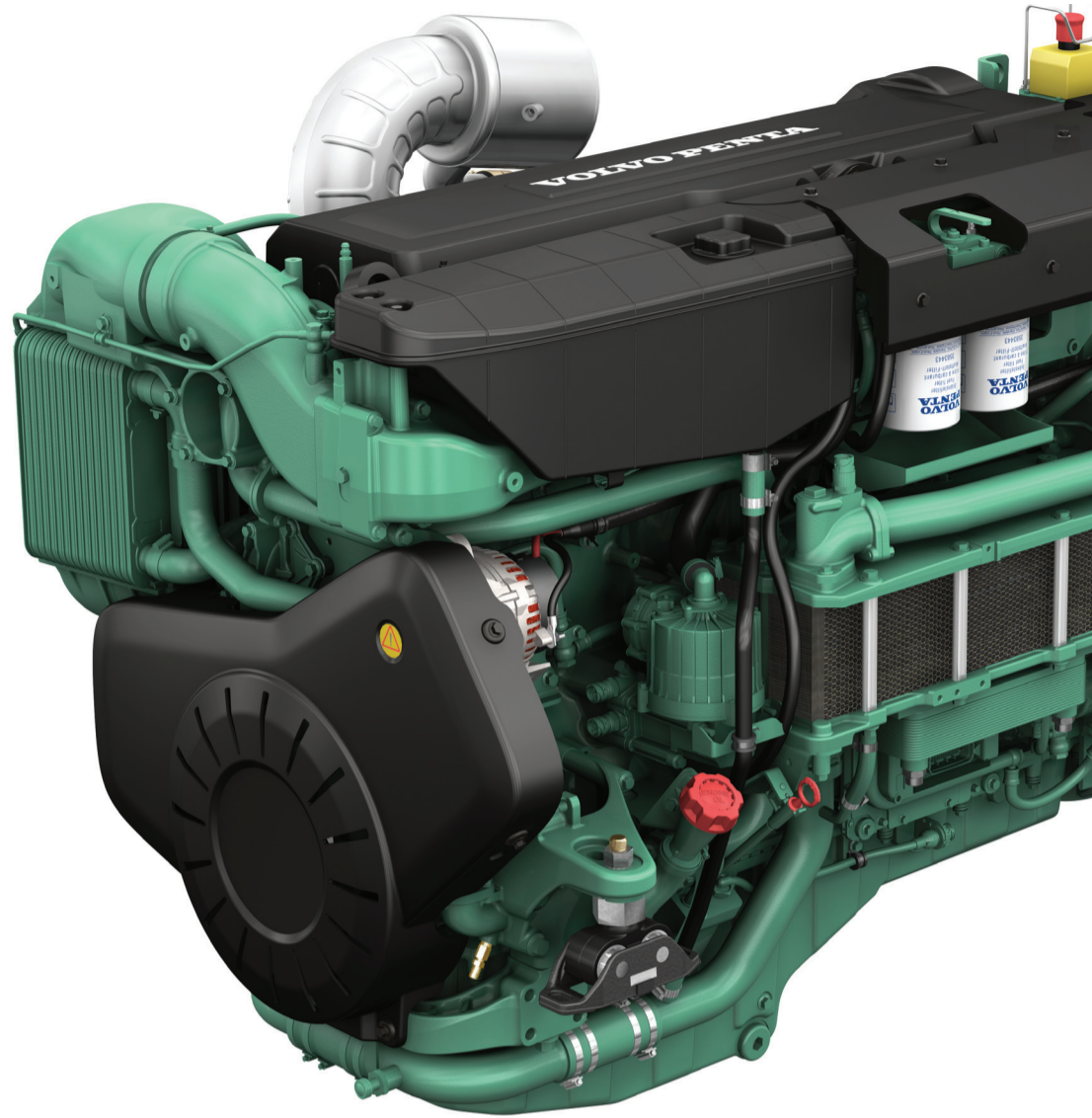
Featuring the same clean and quiet 4-stroke technology that made its big brother popular, the D13 packs a powerful punch in a smaller package. The root of the D13's power is Volvo's highly efficient twin-entry turbo which produces low torque over the entire speed range. This incredible power is controlled by the newest generation of Electronic Vessel Control, which is ergonomically designed to allow for maneuvering with fingertip precision in any situation. The helm station can be completed with Volvo Penta gauges including the new 7-inch color display. But despite the D13's technical advantages, it's the system's impressive cost savings that make it most popular. Volvo's EMS 2 engine control system optimizes fuel and engine conditions to achieve efficient combustion lowering fuel consumption and

Technical Data

D13 400-800	
Configuration	In-line 6-cylinder diesel with turbo, compressor and charge air cooling.
Displacement	12.78 l
Dry weight bobtail	3263 / 3439 lb
Crankshaft power	400-800 hp
Rating	1-4

producing minimum exhaust. This allows the D13 to exceed EPA Tier 2 and new Tier 3 emissions requirements – making the engines environmentally viable well

into the future. "Volvo needed an engine in this bracket," says Arthur Bailey at Superior Diesel, "it's perfect for applications where you need a lot of power in a small package."



>> CHARLESTON PILOTS continued.

As an example, Prause points to recent developments in the industry that opened a gap in his current fleet of service vessels. To fill the hole, the company needed to design a 65-foot ocean response vehicle that could carry passengers and light cargo while having the ability to respond to tanker fires. "We are trying to bring services into Charleston that don't exist now," he says.

But Coast Guard requirements and NOAA restrictions constrained the boat's design and left Prause asking, "How do I do all of that with one boat?"

The answer was provided by Volvo Penta's new D13-powered IPS950 pod drive system. Not only is this propulsion system more powerful, lighter, more compact, and easier to operate, but the big selling point is the D13's ability to power both the boat and the fire system. Here's how it works. Under normal conditions, all three engines drive the boat. Then, during fire-fighting operations, the two outside engines continue to maneuver the boat while the center engine drives the fire pump. "It was a perfect fit," Prause says.

Making it all fit was the job of Somerset, Massachusetts based shipyard, Gladding-Hearn. Company President, Peter Duclos recalls, "We were in the middle of designing the boat with traditional power when Volvo came to us with their new system." After some erasing and redrawing, the boat was redesigned to accept



Volvo Penta Sweden field testing a typical pilot boat application.

triple D13 engines and IPS drives. "What started out as an overweight, inefficient boat suddenly became a very reasonable package," Duclos says.

Prause is pleased, too. "Other companies think we're crazy," he says, "but we're happy and so is the Coast Guard."

The new design has even received GSA approval, which means any federal agency can order the same boat.

After two years of design and redesign, Prause is excited as a kid on Christmas, "We've got 16 months until I can drive it," he says, "I can't wait."