

CASE STUDIES PACK

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Te Mataili - Navy

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William C Daldy - Preservation Society

"Now that the propellers have been professionally coated with Propspeed, we are confident they will remain clean and efficient until our next docking in two years." - Keith Ingram

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"Before using Propspeed, we had as much as 4 inches of growth on the propeller shaft. With Propspeed applied, our running gear is now free of growth." - Rick Gauron

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"Vast ocean crossings have put The Big Blue's machinery and construction to the test, and we are happy to say she handled the seas and distances without falter." - Gareth Sheppard

Auckland Airport Marine Department

"The work was carried out in a thoroughly professional manner and the outcome was tremendous, in that all my staff had to do was wipe the contaminants off the units with a cloth, which was time saving and non-labour intensive." - Steve Gibson

OVER 21 YEARS OF PROTECTING UNDERWATER ASSETSTM

The industry leaders in foul-release coatings.





Content:

Superyacht Captain Dave Andrews

"I knew it worked, and once a few others saw, it took off. Demand was doubling every 4 to 6 months."" - Dave Andrews

Junak - Crew boat

"We think that Propspeed was a 100% jackpot for our boat - it runs perfectly smooth due to the clean shafts and propellers." - Junak Captain

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MAJESTIC FAST FERRY - FERRY

Vessel

Ferry

Location

Singapore

Benefits

Protection against fouling More speed, less fuel

Majestic Fast Ferry Pte Ltd is a family-run ferry business operating in Singapore and Indonesia waters. In 2019 alone, Majestic Fast Ferry transported 2.5 million passengers.



Majestic Fast Ferry Pte Ltd, founded in December 2014, is a family-run ferry business operating in Singapore and Indonesia waters. In 2019 alone, Majestic Fast Ferry transported 2.5 million passengers, earning them the title of the largest ferry operator in Singapore.





Now with a ferry fleet consisting of 16 vessels, fuel costs comprise around 50% of the business' total operating costs, and so they are constantly looking for ways to reduce fuel consumption and improve vessel efficiency. The ferries are hauled every 2 to 4 months for hull cleaning, and there is always a noticeable build-up of barnacles and other marine growth on the metal running gear.



After learning about Propspeed, Max Tan, Managing Director at Majestic Fast Ferry, began the process of having it applied to all of the company's 16 vessels, with 12 ferries having Propspeed applied so far. While it has only been a couple of months, Tan is already seeing some savings fuel. Once Majestic Fast Ferry is fully operational following the easing of COVID-19 measures – that's around 80 trips per day – Tan is excited to see an even bigger difference.











TE MATAILI - NAVY

"Te Mataili is using on average 25 liters per hour less fuel than before the refit, equating to approximately a 15 percent reduction in fuel costs."

Frank Lobbi

Tuvalu Police, Maritime Wing

Vessel Location Benefits

Police vessel Tuvalu More speed, less fuel Cost savings over time

The HMTSS Te Mataili police vessel now patrols the waters surrounding the South Pacific island nation of Tuvalu with far greater efficiency.

Formerly known as the Ellice Islands, Tuvalu is a tiny Polynesian nation located midway between Hawaii and Australia. Just 26 square kilometres (10 square miles) in total landmass, it is the smallest Commonwealth realm, ranking 193 of 196 countries by area, eclipsed only by Tokelau, Monaco and the Vatican City. The HMTSS Te Mataili monitors the waters surrounding Tuvalu's three reef islands and six atolls, safeguarding a population numbering 10,640 as of its last census in 2012.

In 1982, the United Nations Convention on the Law of the Sea made several island nations, including Tuvalu, responsible for policing an ocean area far beyond their capability. Following requests for aid, the Australian government built 22 Pacific-class patrol boats then donated them to 12 South Pacific countries. Te Mataili, handed over in 1994, is one of these.

Tuvalu's Exclusive Economic Zone (EEZ), the sea area where it has special rights regarding the exploration and use of marine resources, dwarfs its landmass by a ratio of almost 1:28,000.







The Australian-built Tuvaluan police vessel had Propspeed applied for the first time in 2016.

In September 2016, Te Mataili underwent a planned docking at Tropical Reef Shipyard in Cairns, Australia. During this docking, Propspeed foul-release coating was applied to her propellers for the first time and closely monitored to assess its impact on fuel burn and vessel speed.



Te Matilli's propeller and shaft are now protected by the gold-standard foul-release coating.





Four months after the application, Te Mataili's crew reported promising results thanks to Propspeed: an average decrease of 25 liters of fuel per hour, representing a reduction of roughly 15 percent in fuel costs. The HMTSS Te Mataili is the only surveillance capability Tuvalu has for protecting its waters from illegal fishing and drug-smuggling, so the economic and social impact of this savings is nothing short of profound.



Propspeed protects underwater metals from marine growth, reducing the downtime of Tuvalu's only surveillance boat.

"Te Mataili is using on average 25 liters per hour less fuel than before the refit, equating to approximately a 15 percent reduction in fuel costs."

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WILLIAM C DALDY - PRESERVATION SOCIETY

"Now that the propellers have been professionally coated with Propspeed, we are confident they will remain clean and efficient until our next docking in two years."

Keith Ingram

Marine Superintendent, William C Daldy Preservation Society

Vessel

Tug

Location

Auckland, New Zealand

Benefits

Improved efficiency Cost savings over time Protection against fouling Protection against corrosion



William C Daldy steam tug's propellers protected by Propspeed foul release coating

Built in Scotland in 1935, the William C Daldy is the world's last hand-fired, coal-burning heritage steam tug of her class still operating commercially today. "The fact that she remains largely original and fully operational contributes to her rarity," says Keith Ingram, marine





superintendent of the William C Daldy Preservation Society, who bought the boat from the Auckland Harbour Board when she was retired in 1977. These days, the Daldy is moored at Hobson Wharf in the heart of Auckland City and steams around the harbor on charters and local celebrations several times a year, including the Auckland Heritage Festival and Auckland Anniversary Day.

Listed as "a historic ship of unique significance and originality, worthy of preservation" on the World Ship Trust's international register of historic ships, the Daldy is now 83 years old and remains "Auckland's own" steamship, a living piece of maritime history.



Before Propspeed: "Fouling build-up on the props increased coal burn, and we were slower in the water," says Daldy superintendent Keith Ingram. The [cost per hour] increased by about 30 to 40 percent.

"Because the tug is the last surviving example of her type in the world today—she is still hand-fired, coal-burning, with two massive triple-fired Scotch boilers—hull efficiency is important to fuel burn," says Keith. "The tug, when steaming, will consume up to one ton of burning coal per hour. This is a significant cost to the Society."





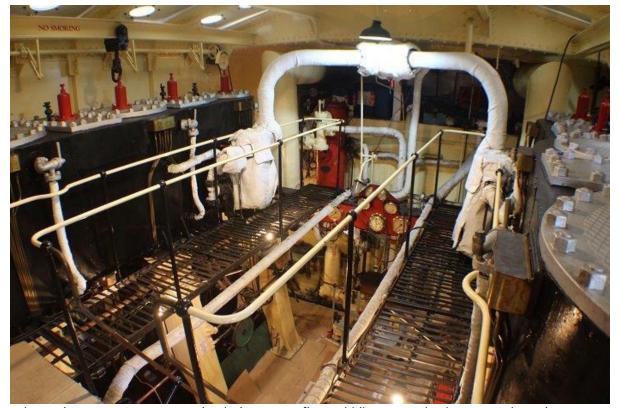


Propspeed's international sales manager Chris Gibbs (left) chats with an engineer. Chris met Keith Ingram through NZ Marine's Commercial Vessels and Big Engine Group, which he now chairs.

Why so much coal? The Daldy's twin triple-expansion engines are likely the largest operating in the Southern Hemisphere, each delivering 980 ihp. Together, they spin 115 rpm at 185 psi to power twin bronze propellers, each weighing 3.4 tons and measuring 11 feet, 9 inches in diameter. At full steam, the Daldy can still run a mile at 13.5 knots, her original sea-trial speed. In addition to the two main engines, 15 more rely on steam to power all manner of pumps, forced draft for the boilers, and a motor for the power generator and two main winches, among other things.







In the engine room: A seawater-circulating pump, fire and bilge pump, backup general-service pump, power generator, two main winches and steering cap-off are all powered by the hush of steam.

"Today, the tug looks better than the day the Society rescued her from the knacker's yard," Keith says proudly. "Credit must be given to the early members of the Society, who took on the role of guardians to preserve and restore the ship so that future generations would be able to enjoy the experience of a real living steamship."

A Piecemeal Makeover

From the time the Society took ownership, the Daldy has been restored bit by bit, one docking at a time. "Sponsors, trusts and government funders [needed to] see progress and value for money," explains Keith. "The challenge, then, was to keep improving her while ensuring that the public had reasonable access and could enjoy the experience of being on board.





This most recent haul-out, Propspeed was among these sponsors, supplying 8 liters of Propspeed - effectively one liter per blade—for Henley Engineering to complete the job. "This 'haircut and shave' docking still required a budget of over \$130,000"—not factoring in hundreds of donated tradesman and volunteer hours, goods and services. "The true cost of this docking would have been close to \$200,000 [NZD]."



A beautiful behemoth: Each 3.4-ton propeller is nearly 12 feet (3.58 meters) in diameter, generating 980 ihp at 115 rpm.

This year's Propspeed application, *Daldy*'s first, came more than two years after the first attempt in August 2015, which was scuttled by a dock-sharing conflict. Before that, it was "polished props or a variety of coatings from lanolin to hull-hard antifoul paints, with varying success—or not." Between dockings, the *Daldy* experienced a massive efficiency loss: "Fouling build-up on the props increased coal burn, and we were slower in the water. The cost-perhour's steam in distance traveled increased by about 30 to 40 percent."





With the Propspeed now on, Keith is looking forward to a return to optimal performance, a comfortable 8 to 9 knots at half steam. "Accumulated barnacles and other marine growth severely impacted the tug's performance. At the end of our cycle, we had to steam full ahead and could reach only 7 or 8 knots." Keith and the Society are grateful for the outpouring of support from the Auckland Council and local businesses. "Getting Propspeed to supply Propspeed and Henley Engineering to clean and check the propellers is of significant value to the Society and makes our operating efficiencies so much better. We're very comfortable about the protection we now have underwater," which also includes 40 sacrificial zinc anodes. "A dead weight of 365 tons of steel immersed in saltwater is a recipe for corrosion, so we have to take all due care. We're really pleased to have Propspeed partner with the William C Daldy Preservation Society to help protect our underwater features and give us operating efficiencies by improved speed through water. Now that the propellers have been professionally coated with Propspeed, we are confident they will remain clean and efficient until our next docking in two years."

"Now that the propellers have been professionally coated with Propspeed, we are confident they will remain clean and efficient until our next docking in two years."

Keith Ingram

Marine Superintendent, William C Daldy Preservation Society





YANKEE FREEDOM III – FERRY

"Before using Propspeed, we had as much as 4 inches of growth on the propeller shaft. With Propspeed applied, our running gear is now free of growth."

Rick Gauron

Captain, Yankee Freedom III

Vessel Location Benefits

Ferry Key West, Florida Protection against fouling Environmental value-add

Improved efficiency

Yankee Freedom III travels 150 miles a day, seven days a week. Propspeed is a no-brainer for keeping her running gear marine growth-free.

Yankee Freedom III is the official ferry of Dry Tortugas National Park, one of the world's most unique eco-attractions, 70 miles from Key West, Florida.

The high-speed catamaran operates seven days a week, carrying passengers to the park's seven small islands and its crown jewel, historic Fort Jefferson. Once used as a prison during the Civil War, the massive brick fortress is now one of Florida's most popular tourist attractions, and its scenic surroundings and turquoise waters offer visitors ample opportunities for snorkelling and nature exploration.



Passenger ferry Yankee Freedom III travels daily to Dry Tortugas National Park, Florida Keys, all year round.

As its name suggests, Yankee Freedom III is the third vessel in the fleet, having replaced Yankee Freedom II in 2012. The ferry covers 150 miles seven days a week year-round, with a working speed of 29 knots and passenger capacity of 175.





Prior to using Propspeed, the vessel had significant growth on its prop shafts, which caused severe strain on the engine. When a diver was sent down to inspect the running gear, he noticed as much as 4 inches of grey moss growing along the shaft.

Yankee Freedom III's captain, Rick Gauron, knew there was a solution out there, having heard rave reviews of Propspeed from boat owners throughout Florida and the Caribbean. The powerful adherence of Propspeed's etch combined with the environmental benefits of using a biocide-free foul-release system rather than traditional antifoul made Propspeed the obvious choice.

Propspeed was promptly applied to Yankee Freedom III's props and shafts at her next haulout and is now an essential part of her servicing every year. She hasn't had any marinegrowth issues since.

Rick has become such a fan that he insists on having Propspeed on his 35- foot Henriques sport fisher to help protect his own running gear.



Every year, Yankee Freedom III gets a new coating of Propspeed foul release to keep her running gear free of marine growth.

"Before using Propspeed, we had as much as 4 inches of growth on the propeller shaft. With Propspeed applied, our running gear is now free of growth."

Rick Gauron

Captain, Yankee Freedom III





THE BIG BLUE - SUPERYACHT

"Vast ocean crossings have put The Big Blue's machinery and construction to the test, and we are happy to say she handled the seas and distances without falter."

Gareth Sheppard

Captain, The Big Blue

Vessel

Location

Benefits

Superyacht

West Palm Beach, Florida

More speed, less fuel

Propspeed protects the running gear of this 138-foot Troy Marine yacht and has since Day 1. Logging tens of thousands of nautical miles each year, The Big Blue is saving big on fuel.

From the photos below, you can see that the Propspeed foul-release coating on The Big Blue's propeller is looking a little worn. According to chief engineer Andrew Dias, at the time, The Big Blue had just travelled 32,000 nautical miles on a single application done more than two years ago, so the wear is quite understandable!





Though the Propspeed here is looking a bit worn, it's held up very well for more than 32,000 nm and over two years.

From her very first launch, The Big Blue has always had Propspeed on her running gear, applied by Marine Group Boatworks in Chula Vista, California. While this unfortunately ruled out the possibility of "before" and "after" fuel-savings comparisons, the 138-foot 2009 expedition megayacht continues to travel long distances; a recent 10-month voyage from Florida to





Southeast Asia and throughout the South Pacific logged 22,000 nautical miles. With an average cruising speed of 11 knots, the savings and performance benefits were significant—particularly with the added load of a helicopter on her helipad.



In all her glory: The luxury motoryacht weighs 399 pounds and has a maximum speed of 13 knots.

"Vast ocean crossings have put The Big Blue's machinery and construction to the test, and we are happy to say she handled the seas and distances without falter," says captain Gareth Sheppard.

Refitted by Derecktor Florida in 2013 to include the helipad, The Big Blue was nominated for best refitted yacht at the 2014 World Superyacht Awards. After a complete repaint in 2015, she underwent extensive maintenance and upgrades at Rybovich Shipyard from 2016 to 2017 and had both of her generators completely overhauled in 2018. Now located in West Palm Beach, she is up for sale and promises to be pleasant surprise for her new owner, "surpassing all expectations by way of comfort, cruising range, fuel economy, stability and all-round functionality."







Back in effect: looking brand-new after a repainting by Marine Group Boatworks in Chula Vista

"Vast ocean crossings have put The Big Blue's machinery and construction to the test, and we are happy to say she handled the seas and distances without falter."

Gareth Sheppard

Captain, The Big Blue





AUCKLAND AIRPORT MARINE DEPARTMENT

Location

Benefits

Auckland, New Zealand

Protection against fouling

I am in charge of the Marine Department at Auckland International Airport. In the initial purchase of our new fleet 5 years ago, we found we had a problem with the fouling of our jet units on Airport Marine Control which was moored in the Pukaki Creek. Previous vessels were launched and retrieved so this fouling problem was never an issue. We were having to take this vessel out of the water every month to water blast and clean the hull as well as the jet units.

A fellow officer recommended us to follow up with a call to Propspeed who have a product called "Propspeed," primary a protective covering for the jet units. Chris Gibbs was contacted, and we arranged a meeting on site, I was then informed of the process and actions for this product to be applied to this particular vessel.

The work was carried out in a thoroughly professional manner and the outcome was tremendous, in that all my staff had to do was wipe the contaminants off the units with a cloth, which was time saving and non-labour intensive.

We were also informed that the more the vessel was used the better the out-come and that re-application of the product was every two years, so this could be budgeted for, very happy with the service and outcome.

Regards,

<u>Steve Gibson</u>

Crew Chief





SUPERYACHT - CAPTAIN DAVE ANDREWS

"I knew it worked, and once a few others saw, it took off. Demand was doubling every 4 to 6 months."

Dave Andrews

Superyacht captain and Propspeed distributor

Vessel

Superyacht

Location

Fort Lauderdale, Florida

Benefits

More speed, less fuel Protection against fouling Product performance

In 2000, Captain Dave Andrews, now a 38-year industry veteran, was working aboard Sally Ann, a 151-foot 1996 Delta. A large-displacement yacht, Sally Ann had sat in Southport in Queensland, Australia for several solid weeks before departing for Auckland for her five-year survey haul-out.

Early in their journey, Captain Dave noticed that the vessel's fuel burn was unusually high; at the rate they were going, they would run out of fuel before they reached their destination. Making an unscheduled stop on Lord Howe Island—approximately 460 miles from Brisbane and 960 miles from Auckland—Captain Dave dived on the yacht to investigate the cause. It turned out that Sally Ann's running gear was heavily fouled.



Captain Dave first discovered Propspeed in 2000, as captain of the Sally Ann. Because of heavy marine fouling, Sally Ann was burning excessive fuel on her way from Queensland to Auckland.

"I have never seen barnacles so large!" recalls Captain Dave. "They were about 4 centimetres in diameter and so many that they were on top of each other."



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After a quick clean-up, Sally Ann continued on to New Zealand as planned, running slower than usual to conserve fuel. Orams Marine Service Center performed the haul-out once Sally Ann arrived. Just as she was about to go back in the water, a service manager told Captain Dave about a coating that protected propellers from fouling while increasing speed and reducing fuel consumption. After the fouling issues they had experienced, Captain Dave was keen to put these claims to the test and had Propspeed applied to Sally Ann's propellers before relaunch.

"A year and a half later when I dry-docked in Miami, the props looked like the day I'd launched in Auckland!" Captain Dave reports. "I asked a rep from International Paint if they had anything like Propspeed. They did not." Dave, his wife Yvette and a captain friend named Charlie Johnson then formed Propspeed USA and began importing the revolutionary gold-coloured coating. "We airfreighted three or four small loads then started bringing in pallets with 200 to 300 kits at a time. Charlie and I went to a lot of boatyards and crawled around under boats, teaching application."

But Propspeed, like many new things, wasn't embraced immediately. "Yards and captains were sceptical; someone even called it snake oil. But the results quickly became apparent." Several of Dave's well-known captain friends sang Propspeed's praises in local trade magazines, which elevated Propspeed's profile and accelerated sales.







Captain Dave (right) with a tech at RMK Merrill-Stevens shipyard in Miami, circa 2002. This application was done on the motor yacht Cakewalk. Dave's polo sports the old Propspeed logo.

"We slowly began to get orders. My enthusiasm sold product—and the need for a product that would do what Propspeed does. I knew it worked, and once a few others saw, it took off.

Demand was doubling every 4 to 6 months. Captains and yards saw the clean, or relatively clean, running gear as the boats would haul out. After the choices we had before—antifoul, which wouldn't stick, or nothing at all—Propspeed was a no-brainer."

As Propspeed's popularity exploded, distribution was transferred to Oceanmax, a New Zealand marine coatings company with a nationwide, and eventually international, presence.

Having logged approximately 325,000 nautical miles over the course of his career, Dave's expertise in matters of vessel performance and fuel consumption is second to none. He continues to captain luxury superyachts and is currently helming Kismet, a 312-foot Lürssen that travels to the Mediterranean, Caribbean, Southeastern United States and Bahamas. Kismet is currently for sale by Moran Yacht & Ship.





"Over a decade later, Propspeed remains the industry leader, with no competition. I continue to use and recommend Propspeed."



Dave now captains Kismet, a 312-foot Lürssen superyacht sailing to the Mediterranean, Caribbean and Bahamas. But he's still a Propspeed fan!

"I knew it worked, and once a few others saw, it took off. Demand was doubling every 4 to 6 months."

Dave Andrews

Superyacht captain and Propspeed distributor



More speed, less fuel



JUNAK - CREW BOAT

"We think that Propspeed was a 100% jackpot for our boat – it runs perfectly smooth due to the clean shafts and propellers."

Captain of Junak

Vessel Location Benefits

Crew boat Croatia Product performance
Protection against fouling

Powered by 3 fixed pitch propellers with a combined brake horsepower of 4200, Junak's running gear needs to be kept free of marine growth to keep her operating at a comfortable



Junak is a crew boat owned by Brodospas, a marine company operating in Croatia. Founded in 1947, Brodospas was originally tasked with clearing Croatian ports, shipyards and frequent sailing routes of numerous obstacles left behind from World War II. Today, Brodospas is a private company with more than 70 years on the sea, providing towage, salvage and shipping services.





36-metre Junak was delivered in 2009 to serve as a crew boat. Powered by 3 fixed pitch propellers and with a combined brake horsepower of 4200, Junak operates at a comfortable 26 knots.



After having Propspeed applied to her propellers and shafts 7 months prior, here's After having Propspeed applied to her propellers and shafts 7 months prior, here's what Junak's Captain had to say; "All 3 propellers and shafts are in perfect condition and the Propspeed paint has the same gold colour as when it was painted in April. We think that Propspeed was a 100% jackpot for our boat – it runs perfectly smooth due to the clean shafts and propellers."







"We think that Propspeed was a 100% jackpot for our boat – it runs perfectly smooth due to the clean shafts and propellers."

Captain of Junak

