

Powernews

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Power Equipment – Australia, New Zealand & South Pacific

MAGAZINE

YANMAR

REPOWERS REJUVENATE

Sydney Harbour Ferries

Power
Equipment
CELEBRATING

25
YEARS



POWER EQUIPMENT
RELEASES NEW LINE OF
ENGINE CONTROLLERS

FEATURE



POWER EQUIPMENT
INTRODUCES TORQEEDO

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TORQEEDO
STARNBERG.GERMANY
The leaders in electric propulsion

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Power Equipment
YANMAR



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DEMANDING SUPERCAT FLEET POWERS AHEAD WITH **YANMAR**



Commercially rated Yanmar marine diesel engines have been selected and installed to re-power all four Supercat ferries, operating on Sydney Harbour. The vessels which were built in 2001, have each been repowered with a pair of Yanmar 6AY-WGT engines, boosting the power of each ferry by 200 hp.

The decision to re-power the Supercat fleet operated by Harbour City Ferries was made on technical and economic grounds. The 14 year old original engines were due for major maintenance but it didn't make good commercial sense to have the engines re-built.

"We looked at the Supercat project from all different angles and on every measure the decision to re-power with Yanmar came up as the best option" said Roger Harradence, Technical Superintendent of Harbour City Ferries.

"Management also seized upon the re-power program as an opportunity to remedy a range of issues with the Supercats. We wanted to get back to basics and remove the fickle electronic management systems fitted to the original engines. Engine room access for

routine maintenance was tough due to the narrow hulls and V configured cylinder blocks."

Prior to the re-power program, Harbour City Ferries did not have a single Yanmar powered vessel in the fleet. However following an exhaustive review process, the choice of engines came down to Yanmar and one other brand. The Yanmar 6AY-WGT won out due to the six in-line configuration and mechanical control system.

"Cost was also a major consideration," said Roger Harradence.

"We undertook a thorough analysis of the through-life costs of operating the engines and the Yanmar stacked up very favourably. The cost model extends far beyond the initial purchase price and fuel consumption data to

include the routine 500 hour maintenance schedules and also the longer term costs that we can expect in five and ten years."

The Yanmar 6AY-WGT is a six in-line cylinder engine with a displacement of 20.39 litres and a rated power output of 911 mhp (670kw) at 1,938 rpm. The versatile 6AY Series is extensively used in many applications including heavy displacement work boats but also in many high speed applications such as patrol craft and cray fishing boats. In Australia, the 6AY Series of engines has been exceptionally popular with ferry operators, both in new builds and re-power applications.

The Supercat ferries measure 34m long and have a beam of 9m. With a full load of 330 passengers and 4000 litres of fuel, the all alloy hull displaces 79 tonnes. The low draft

of 1m and 9m high superstructure makes these vessels a handful for skippers in a stiff cross wind.

To achieve the tight requirements of the commuter timetable, the Supercat skippers need to quickly achieve and maintain 25 knots. With the original engines installed, the top speed of 25 knots provided virtually zero margin for error.

As each of the four Supercat ferries is identical, the Yanmar re-power program gained pace with each vessel in turn removed from service, re-powered then pressed back into action.

Harbour City Ferries engineers removed the old engines and installed the new Yanmar 6AY-WGT engines at their Balmain shipyard. It was immediately apparent that the new Yanmar 6AY-WGT engines were the right choice. With an in-line cylinder block configuration, the installation envelope of the Yanmar engine was considerably narrower than the original engines.



Preparing the two 6AY-WGT Engines to be craned into position on the vessel.



6AY Flying high.

Through the repower project, the opportunity was taken to replace the control systems and also swap the exhaust to a two stage wet system. The props were also re-pitched.

While the repower project looked great on paper, the ultimate test was when the Supercat ferries went back into service. Gaining the endorsement of the Supercat skippers was a critical measure of success.

"The biggest change has been throttle response," said Master Charles Johnson. "The Yanmar engines are very responsive to the throttle and this gives us much improved control over the Supercat vessel."

"With the original engines there was a lag in throttle response and in reverse we only had 1000 rpm available to us. The new Yanmar 6AY-WGT provides us with the full rev range of 1970 rpm in reverse. The added bonus is that our top speed has increased to 27 knots."

Producing an extra 100 hp per engine, the 12% power gain delivered by the Yanmar engines has proven to be the single most important factor which has transformed the performance of the Supercat ferries.

"The bigger capacity of the Yanmar engines gets us up to full speed in just 30 seconds," said Master Charles Johnson.

"This helps us meet our stringent timetable obligations, but it's also a big help in an emergency stop. Sydney Harbour can be a very congested waterway and we need to have the capability to stop very quickly."

"Our high topsides and small rudders make the Supercat ferries difficult to operate under windy conditions. The additional power and control with the Yanmar 6AY-WGT engines has made our job so much easier."

The Supercat ferries have an average fuel consumption of 70 litres per engine per hour over the course of a full day of operation. Skippers have noted that compared to the original engines, the new Yanmar 6AY-WGT engines perform better, are quieter and operate with less vibration.

Roger Harradence who oversaw the entire Supercat re-power program is a very happy man too.

"The Supercat vessels are very demanding on engines and transmissions," said Roger Harradence.

"The skippers are mostly operating at full throttle, accelerating as hard as possible and some vessels have logged up to 1000 clutch engagements a day."

"We're thrilled with our new Yanmar engines and the support of Power Equipment. The technical and parts support has been well beyond our expectations."

Harbour City Ferries have been that impressed that they have ordered another 6 new Ferries from INCAT. Powering these Ferries will be the Yanmar 6AY for the main engines along with Mase Generators and PSS Shaft Seals so stay tuned as we will feature these vessels in upcoming issues of Power News.

Harbour City Ferries operates exclusively on Sydney Harbour and is considered one of the largest passenger ferry operators in Australia. The company carries 15 million passengers annually and boasts a fleet of 28 vessels.



The 6AY being loaded into position in the engine bay.

MATIRA

Re-powered



Matira dry docked during her refit.

Photos & details by Steve Martin and WaitemataWoodys.com

Builder: Collings & Bell (1956)

Designer: Alex J. Collings

LWL: 13m (42.5 feet)

LOA: 14m (45.93 feet)

Beam: 3.35m (11.0 feet)

Draft: 1.07m (3.5 feet)

Engine Details: Yanmar

Transmission Details: V Drive

Fuel Capacity: 800 litres

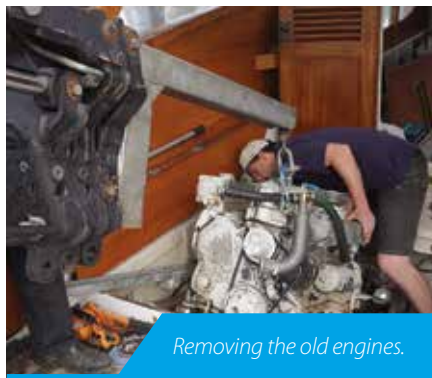
Water Capacity: 200 litres

Hull Construction: Single skin
kauri planked

Deck Construction:

Composite Teak/Cedar planked
(Fibreglass Skinned)

Matira was designed and built for Stuart Hopwood in 1955 by Alex Collings of Collings & Bell. Launched in 1956 she was one of the last motor yachts built by the company before they ceased business. At the time of launching would have been considered a most impressive boat on the Auckland Harbor.



Removing the old engines.



Replacing with the new Yanmar 110hp engine.

New owner, Guy Warman, has begun on bringing Matira back to the condition that a vessel of her size & provenance desires. In the year she has been hauled out at Okahu Bay & the team from Moon Engines have removed the old engines & installed twin 110hp Yanmar's.

On her recent sea-trial Matira comfortably cruised at 9.5 knots with a top speed of 13 knots with the reduction in noise & space being worth the expense alone, Matira has joined the CYA launch fleet so we look forward to seeing her attending a few events.



The Matira Back on the water again.



Bob Dover, Dover and Sons with Chris Guppy, QLD Power Products Manager.

YANMAR PREFERRED IN THE BUSH

Boonah is far enough away from Brisbane to be loosely regarded as in the bush. Yet this quintessential Queensland country town is close enough to get into the 'big smoke' in just a few hours. Yanmar Dealer Bob Dover heads a strong family business which has grown up with this rural community from the outset.

Dover and Sons is one of Queensland's oldest farm machinery companies which was established in 1895. At this time, Boonah was a farmers' center with the horse and cart being the principal form of transport. The first engine handled by Dover and Sons was probably in 1904 when they sold a line of kerosene fired steam engines.

Bob Dover is fifth generation and entered the family business in 1981 after first working with the Commonwealth Bank for 13 years.

Things changed for the better in this region when the Moogerah and Maroon Dams were completed in 1960 and 1974 respectively. Suddenly there was water available for irrigation and with dam water comes irrigators, pumps and engines.

The diversification into irrigation further consolidated the position of Dover and Sons. Bob Dover's best describes the Dover and Sons business of 2015 as being a farm machinery and irrigation business. Today the chosen brand of diesel engine is Yanmar.

They are used to power predominantly water pumps and electrical generators, but JCB engines are increasingly being sold in growing numbers for similar but bigger applications.

While the latest technology is the strength of the Yanmar and JCB brands, Bob Dover is a traditionalist when it comes to marketing the business. There are not too many farmers in the district that Bob doesn't know. Word of mouth referrals and a man's word count for everything amongst farmers.



Another fine example of a Yanmar TNV engine powered application.



Bob Dover, 5th generation in the Family business.

Driving about the irrigated blocks around Boonah, an area known as the Scenic Rim, Bob Dover knows who runs each farm and who supplied each and every one of the seemingly endless number of irrigators that dot the rural landscape.

"There is a lot to like about the Yanmar brand," said Bob Dover.

"Across the board, the Yanmar brand is first rate in terms of quality and performance. It is very much a respected brand amongst our rural customers."

"The support that we receive from Power Equipment is excellent. Whenever we have needed support, it's been there for us."

In addition to loose Yanmar engines, Dover and Sons also takes a good number of Yanmar CPG (Centre Pivot Generator) units, purpose built for the irrigation market.

"In particular we really like the Yanmar powered IP pack supplied by Power Equipment. We received the Yanmar Irrigation pack which was a solid galvanized frame with a Yanmar engine installed and ready to run. All that we need to do is bolt up and align the pump and the unit is ready to go."

At Boonah, Dover and Sons operates from two locations; one a retail outlet in the main street and the second a sprawling machinery yard with workshops, new equipment and used machinery laid out on the large site. The workshops are used to make up a string of mobile pump units, typically powered by a Yanmar 4TNV98. Also, various Yanmar L series engines are used for smaller generator sets and for repowering farm machinery.

A second branch of Dover and Sons was established in the early 1950's at Beaudesert,

a rural town some 50 km south of Brisbane and 40 km from Boonah. While the business activities at both Boonah and Beaudesert are very similar (with the exception of irrigation equipment), the Beaudesert branch and stock were completely destroyed by fire on December 10th 2014.

Quitting is definitely not in the Dover DNA. Bob Dover and his team are absolutely committed to rebuilding and returning to business at Beaudesert stronger than ever.

In the meantime the business is operating from demountables brought on site at Beaudesert as an interim measure to support local customers.

Often we can all get distracted by the bright lights, greatest idea and new age technology. It is refreshing to see that successful Yanmar Dealers like Bob Dover can still thrive on the traditional values that embody that classic Aussie spirit.



The Dover and Sons premises in Beaudesert, Qld.

YANMAR OUR FIRST CHOICE IN MARINE DIESELS



Wandana Repowered in 2014 with Twin Yanmar 6HA2M-WDT / 405mhp engines.

The Queensland based Fodico Marine Group is a tightly held collection of associated companies, each falling under the ownership of the Toy family. After powering a number of new vessels, and repowering a number of existing vessels with Yanmar marine diesel engines, Dennis Toy of Fodico is adamant that Yanmar is their choice of engine brand.

The Fodico Marine Group comprises Fodico Pty Ltd, Hydro Tow Pty Ltd and East Coast Maritime Pty Ltd. Combined, the Fodico Marine Group includes 9 tugs, 3 landing craft, a special purpose vessel, 8 deck cargo barges, and 2 crew boats. While the operation is based in Gladstone the 'work anywhere' approach to business sees Fodico Marine Group vessels stationed in Gladstone and Brisbane, working domestically and internationally.

Fodico Marine Group is currently constructing the 'Pacific Titan', a new-build 26m 30T Bollard Pull shallow draft utility tug due for delivery in 2016. The 'Pacific Titan' has been specified with a full complement of five Yanmar marine diesel engines, including main engines (2 x 6EY17W) and gearboxes, generators (2 x 6CHL-TN), and hydraulic power unit (1 x 6HA2M-WHT).

Lindsay Toy of East Coast Maritime states "Having several existing vessels in the group with Yanmar engines, we know first-hand that they are reliable and economical to run."

"We chose the 6EY17W because the power output (2 x 1138HP) was exactly what we were after, plus it is a new-series engine. It made good sense to specify a full complement of Yanmar marine diesel engines. The 'Pacific Titan' is classed for unrestricted navigation, and as such reliability is paramount."

While Dennis Toy has a life time of experience in commercial shipping, he reached a defining point in his preferred marine engines when it came to repowering the 18m tug, Wandana. He had already done one rebuild on the original non-Yanmar engines which were installed in 1980. However he decided that when it came time for the next major overhaul, he would re-power Wandana instead.

"As a rule of thumb, a rebuild costs about half the price of a new engine," Dennis Toy said.

"There comes a point where it is simply bad business to be spending good money rebuilding engines which are based on outdated technology. I had always been pretty keen on an American brand, but they

had gone to electronic engine management systems and it didn't sit well with me."

"The Yanmar range included the Yanmar 6HA2 mechanical models which held great attraction for me. This series meets the relevant environmental standards which is important in the Queensland market."

"Besides, I had never heard a bad word said about the Yanmar brand."

In anticipation of the re-power project, Dennis Toy purchased two Yanmar 6HA2M-WDT engines and stored them in the shed for a couple of years until it was time to repower the Wandana. In 2014 the re-power was performed and the outcome has been nothing short of stunning. With more power and an increase of more than 10% in bollard tow, Dennis Toy is a very happy customer.

"The Yanmar engines are not at all stressed in the way that we operate Wandana. I have every expectation that these Yanmar engines will deliver over 30,000 hours of reliable operation," Dennis said.

A third vessel in the Fodico Marine Group is the Shackleton, a recently completed new build. This is a 15m, 60 tonne displacement multicat type tug built in Brisbane by South Pacific Marine. The vessel was designed and built to Fodico specifications which included a pair of Yanmar 6HA2-WHT(H) rating marine diesel engines.

"For the Shackleton, I wanted to fit another pair of Yanmar marine diesel engines that were in the Yanmar 6HA2 series. Common service parts would assist us with scheduled maintenance."

In the three years since the Yanmar 6HA2-WHT(H) rating engines were installed in the Shackleton, the only engine maintenance work performed has been routine servicing. This involves changing the oil and filters at 500 hours plus factory specified anode changes.

"The Yanmar engines in both Wandana and Shackleton run nice and clean. They have been completely free of any technical issues and I have been very satisfied with their performance and reliability."

"Yanmar is good in terms of price, certainly comparable with the other leading brands. The engines are easy to work on, they're not overly complex and considering the heavy work that they are doing, provide us with significant fuel savings."

Today, the Fodico Marine Group has a steadily growing number of Yanmar powered vessels in their fleet. The 'Pacific Tiger' is a 24m tug which was purchased overseas and arrived with a pair of S165 Yanmars' in the engine room which continue to deliver good economical service.

"I can certainly say that Yanmar is our first choice in marine diesel engines," Dennis Toy.



Dennis Toy standing in Shackleton's well equipped engine room.



Shackleton 15 meter Multicat built in Brisbane in 2012.



Shackleton is powered by Twin Yanmar 6HA2-WHT / 278 mhp and YX120 engine and transmission packages.

Power Equipment Name change in New Zealand

In February 2010 Whiting Power Systems in Auckland was purchased by Power Equipment Pty Ltd. Whilst the name of Whiting Power Systems remained as their trading name the Power Equipment name was mainly adopted for the wholesale distribution activities.

Over the last 6 years the company has evolved as we have adjusted to a changing market. We are pleased to announce that as of 1st July 2016 Whiting Power Systems we will be changing their trading name to Power Equipment Ltd and our Team in New Zealand is looking forward to continuing to deliver high quality products and services to the marine and industrial markets.



For more information, Please contact our Auckland Power Equipment office on
Ph: +64 9 358 7478 or
Email: sales@powerequipment.co.nz or
come and visit us in person at:
156 Beaumont Street, Westhaven, Auckland, 1011.

YANMAR

POWERS WORLD'S LEADING GROUND-PROBE SAFETY TECHNOLOGY

Yanmar industrial diesel engines have been selected as the exclusive power source for the world leading Ground-Probe slope monitoring radar systems. Ground-Probe is a wholly Australian owned company which invented the radar technology and has been employed in open-cut mining sites throughout the world for over a decade.

Ground-Probe developed the world's first Slope Stability Radar (SSR), a system which monitors and warns of ground movement in open-cut mines. This is a truly multinational business which evolved from an industry-funded PhD project at the University of Queensland in the 1990s. The first unit was built in 2000 and today there are more than 200 SSR's operating in 24 countries.

The Ground-Probe system is based on highly accurate and sophisticated radar technology. A radar beam is emitted from the Ground-

Probe unit, scanning the mine slope from a distance of up to 4500 m. The Ground-Probe technology is extraordinarily sensitive and is able to measure the movement of the walls in open-cut mines to within a tenth of a millimetre, allowing the early warning before a collapse occurs.

Through the advanced technology and real-time reporting capability, Ground-Probe is able to identify the amount, shape and degree of wall movement and precisely where that movement occurs. With this information, a

decision can be made by mine management about whether an area is stable enough to be mined, or alternatively, whether an area being mined should be evacuated of people and equipment.

In the first years of operation, it is estimated that more than 20 lives have been saved by Ground-Probe technology.

Eight Ground-Probe radar models are currently manufactured in Brisbane for world export, based on three radar families designed for Targeting Monitoring, Broad Area Monitoring



The world's first Slope Stability Radar which monitors and warns of ground movements in open cut mines.



The unit is mobile so it can be deployed to any location.

and Long Range Monitoring. The Ground-Probe SSR-FX is a broad area monitoring unit which can scan through a 180 degree arc in less than two minutes. The Ground-Probe SSR-XT provides targeted monitoring for known, safety-critical risk areas, while the SSR-SARx is for long range monitoring.

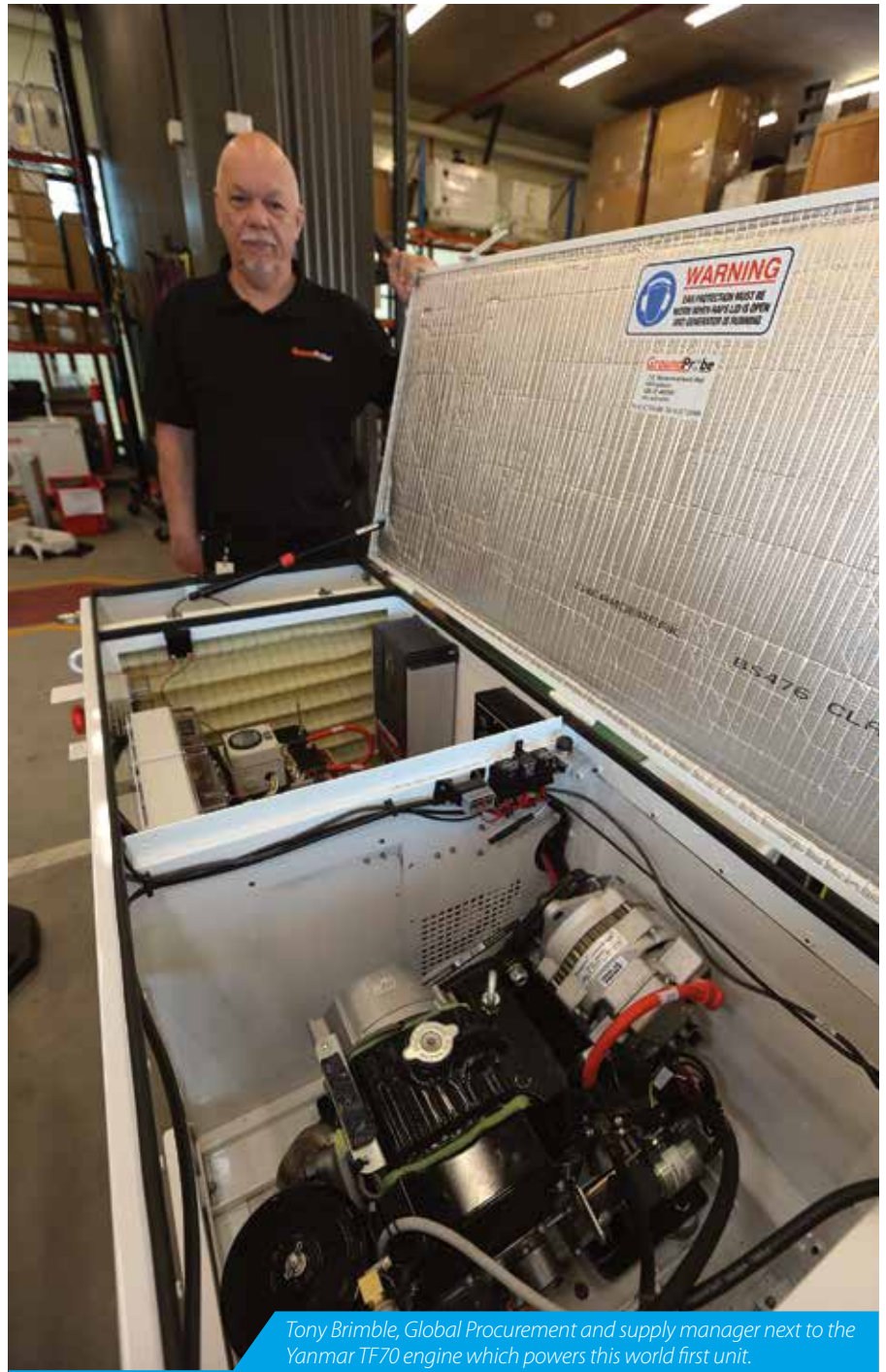
Ground-Probe has used Yanmar diesel engines in their radars for the last five years. The Yanmar models supplied to Ground-Probe are the Yanmar 2TNV70 and Yanmar TF70.

This Yanmar 2TNV70 diesel engine develops 13.3hp (9.91kW) at 3600 rpm. It is a compact, state of the art, two cylinder engine noted for its quiet operation and low fuel consumption. Being a water cooled engine greatly assists in keeping the noise levels low and well within the required OH&S standards.

The Yanmar TF70 is a single cylinder, water cooled industrial engine which develops 7.0 hp at 2400 rpm. This is an easy to operate, simple to service engine which is supplied to Ground-Probe as an electric start model. Both Yanmar engines are programmed by Ground-Probe to operate at 65% load.

Typically, Ground-Probe's radars operate in a hostile environment. The equipment is mostly in remote locations, where the climate is stifling hot and frequently humid or freezing cold. The nature of the location, often deep in a pit, can at times limit solar power as a sole power source and more often than not, there is no mains power available at the site where the Slope Stability Radar is positioned.

Therefore, to provide 24/7 operation, the self-contained SSR units require a constant supply of high quality power. This is achieved through a bank of batteries which are automatically charged on-demand by the engine driving an alternator.



Tony Brimble, Global Procurement and supply manager next to the Yanmar TF70 engine which powers this world first unit.

"This is highly sophisticated equipment where precise levels of power are required," said Tony Brimble, Global Procurement and Supply Manager at Ground-Probe.

"We use Yanmar engines as we know that Yanmar is a reliable and dependable brand which we can put into our Slope Stability Radars and then ship with confidence worldwide."

"We chose the Yanmar TF70 as the physical size of the installation is compact and it has proven to be reliable when coupled with our system and maintenance plans. As a global brand, we have easy access to Yanmar parts throughout the world."

The application of Ground-Probe SSR's can vary enormously, from a when-needed situation to constant 24/7 monitoring. The

engines are required to work long hours, or be ready to operate after a time in storage.

"We have some Yanmar engines which have logged 15,000 hours and these are still running as reliably as the day we installed them," Tony Brimble said.

"Across both Yanmar models the Distributor, Power Equipment, have stood by their product with excellent technical and sales support."

The key to the operational success of the Yanmar engine is maintaining a regular service schedule. Medium term maintenance involves replacing oil and filters every 4 to 6 weeks. The long term maintenance schedule is set at a 6 to 8 month cycle. Yanmar engines are swapped out and the Ground-Probe unit repowered on a four to five year cycle depending on the operating environment and hours logged.

Power Equipment appoints Power Products Area Manager

Power Equipment has announced the appointment of industry veteran Steve Harvey to the position of Power Products Area Manager – Vic/Tas/SA. This position was previously filled by Mark Butterfield, who was recently promoted to the position of National Marine Sales Manager at Power Equipment.

Steve Harvey joins Power Equipment following a lifetime of technical and management experience in the engine industry. He commenced his career at a large engine reconditioning business where he rose through the ranks to ultimately enter management.

Steve Harvey went on to work in the diesel parts sector, supplying parts for European and Japanese trucks and buses. Prior to joining Power Equipment, Steve Harvey was in a sales manager's role for a company supplying small diesel engines to trade customers.

"Steve Harvey knows the diesel engine market better than most," said Noel Heritage, Business Manager at Power Equipment.

"Steve has an enviable and impressive track record of achievement and success within the diesel industry. Not only does he know the Dealer network exceptionally well, but his knowledge of applications is first rate."

"Bringing Steve Harvey into the Power

Equipment family to represent the Yanmar and JCB brands represents a massive benefit for our Dealers. Mark Butterfield enjoys a wonderful relationship with our Dealers and the transition to Steve Harvey has proceeded without a hitch."

Throughout his professional life in the diesel engine industry, Steve Harvey respected the Yanmar brand as a formidable competitor. Yanmar is Australia's market leading brand, and now that Steve Harvey has joined Power Equipment, his regard for the brand has grown further.

"Yanmar is definitely the number one brand for quality and performance. We always found it tough going when we faced Yanmar in a competitive pitch," Steve Harvey said.

"Now that I am in my new management position at Power Equipment I can see that the Yanmar range is much bigger than I ever thought. The Yanmar product range is extensive and the management support from Power Equipment is phenomenally strong."



Steve Harvey, brings a wealth of experience to Power Equipment.

"Power Equipment maintains a large inventory of stock ready for immediate delivery. This is of significant benefit to our Dealers. Wherever a Dealer has a special application, customising a stock Yanmar engine through Power Equipment's own workshop is the most efficient way of supporting the needs of end users."

"This is a very polished and structured operation which provides great back-up to both staff and the Dealers. Power Equipment is a leader on so many levels."

With the JCB range of engines also available through the Power Equipment network, the extended power range gives Dealers the opportunity to satisfy all of their diesel power needs from the one supplier, Power Equipment.

"There are new opportunities and market sectors which I want to tap into with Yanmar and JCB," Steve Harvey said. "There are exciting times ahead and I'm very privileged to be on the Power Equipment team."

CONGRATULATIONS to Jesse Pye - Marine Engineer

Jesse Pye, his 2 brothers Mitchell Pye and Scott Landsdowne plus Jesse Low Service Manager and Brian Macken General Manager from Whiting Power Systems celebrating Jesse Pyes graduation as a Marine Engineer. Jesse started with Whiting in 2010 as an apprentice. After a slow start here he really took advantage of the opportunity and applied himself well to the training and learning from the senior staff.

Jesse is part of the Boating industry Training Organisation apprentice program. This is one of only eleven such programs running in New Zealand. It is a credit to the marine industry in general we have such a successful training organisations with a 95% pass rate.

Since his graduation Jesse has taken advantage of his skills for the benefit of the company.

When he is not working on engineering projects he is an active sports person, rugby, cricket, tennis to name a few and now the proud owner of a custom motorbike.



L to R: Jesse Low, Mitchell Pye, Jesse Pye, Scott Landsdowne, Brian Macken.

"Waikhaya"



Crossing oceans powered by **YANMAR**

Schionning Designs are an Australian multihull design company, supplying detailed construction plans and pre-cut composite kits to both amateur and professional builders around the world, working from a design office in Port Stephens, NSW.

In 2009 the opportunity arose for the team to deliver composite power catamaran 'WAIKHAYA', a 16 metre Sea Shanty 1600 design that was soon to be launched in Knysna, South Africa to her new home in Auckland, New Zealand. The trip would cover more than 16,000 nautical miles and see us cross the South Atlantic, North Atlantic, Caribbean and Pacific in the process. 'WAIKHAYA' was a beautifully appointed vessel, with superb luxury finishes throughout, spacious deck area, cabins and living space and of course - two Yanmar 315hp turbo diesel engines to get us there safely.

The Yanmar engines performed flawlessly on each leg of the delivery, driving the 18,500 kilogram vessel effortlessly and allowing us to reach top speeds of 26 knots - a fast speed for a cruising 'trawler' design on fuel efficient semi-displacement hulls. As a crew member servicing the engines became one of my regular tasks, given that we were running them day and night the engine hours clocked up quickly. Set aft in the transoms, access to the engines was from above using a large hatch and this allowed a moderate amount of space around the engine for working. Using a hand pump to extract the oil from each sump, the filters were easily located and could be swapped out by hand. Large Racor fuel filters ensured any water or other contaminants were separated.

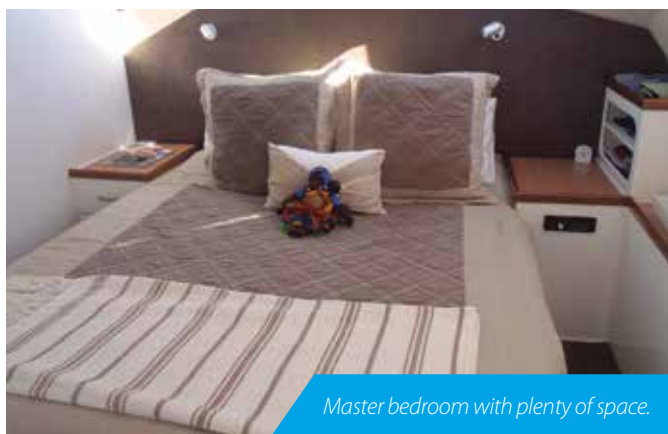
The trip was not all smooth sailing with a few mishaps and lively rough seas testing our patience - and equipment - along the way. While filling the port diesel tanks in Panama, a loose hose clamp lead to the fuel line disconnecting from the filler cap fitting into which the fuel pours. This meant that although to us on the deck it appeared as though we were filling the tank, down below diesel was pouring directly into the engine room. The



Ben Schionning working in the Bilge of the Waikhaya

float switch on the bilge pump engaged, and alerted us due to the large slick appearing around our vessel! Upon opening the engine hatch, we found only the top 20 cm (8 inches) of the engines visible. Stopping the float switch, we managed to pump the majority of the diesel into drums and cleaned up the spill using specialised diesel pads and booms. Following this incident, the engines fired up without a problem and continued to power our journey for another 10,000 nautical miles - and run smoothly to this day. A credit to the manufacturer and an excellent choice when considering engine and power options for recreational or commercial vessels.

For more information on any Schionning multihull designs, see their website <http://www.schionningdesigns.com.au>



Master bedroom with plenty of space.



The Luxury galley will make meal preparation a breeze.

TORQUEEDO

STARNBERG.GERMANY

Power Equipment introduces Torqueedo - The world leader in electric propulsion

Monday 9 May, Melbourne:
Power Equipment unveiled the newest member of its high quality power brands – the world’s leading electric marine propulsion, Torqueedo.



L-R: Nick Lee, National Engineering and Customer Support Manager Power Equipment, Daniel Hofmeier, Vice President Quality and Assurance Torqueedo, Holger Reinhardt, Senior Specialist Torqueedo Service, Luke Foster Business Development and General Manager Power Equipment, Jason Hodder, Torqueedo Product Manager Power Equipment.

Jason Hodder, Torqueedo Product Manager said, "Power Equipment is extremely proud to have secured the Australian and New Zealand distribution for the Torqueedo range.

"For the last 25 years we have been passionate about delivering the very best brands, and Torqueedo fits seamlessly into our stable of the highest quality marine products.

"Torqueedo is a pioneering German brand at the global forefront of marine motor technology. It's known for its innovation, convenience and eco-friendliness – we're excited to be bringing them to local rivers, bays and oceans."

Founded in 2005, Torqueedo has set many standards, ensuring every product meets the criteria of superior technology and revolutionary benefits.

The range includes an outboard for every purpose – from the super-quiet motors fitted to kayaks for peaceful fishing trips, to the Deep Blue model suited to commercial vessels providing operators a better choice for the environment and eco-tourism applications.

And they're smart, enhancing safety for all boaties.

As part of Torqueedo's standard equipment, the motor's on-board computer has an inbuilt

range monitor so you know how much further you can go with the current battery life.

The additional Torq Trac app overlays range information with a map of your current location to show a visual representation of how far you can travel at a given speed based on current battery power.

The motors are also extremely efficient and use powerful and safe lithium batteries which are completely solar chargeable. The five-tier safety system used by Torqueedo for the lithium batteries includes safe battery chemistry and safe packaging of individual battery cells, which is achieved through a

Power Equipment will be distributing four models including:



Ultralight (1HP equivalent) ideal for canoes and kayaks



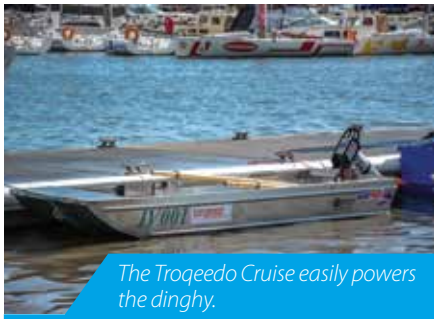
Travel (1.5HP and 3HP equivalent) suited to dinghies and tenders and daysailers up to 1.5T



Cruise (5HP, 8HP and 20HP equivalent) for motorboats and sailboats up to 10 tons. Pod Drive models available.



Deep Blue (40HP and 80HP equivalent) used for green boats and commercial operators



The Torqeedo Cruise easily powers the dinghy.



All models are fitted and removed easily from the back of the boat.



Auquyak Kayaks seamlessly fitted with the Torqeedo Ultralight to provide power



Key Marine media at the Torqeedo Launch at Power Equipment Head office.

precise and clean production process that incorporates a Battery Management System (BMS) with redundant safety features while meeting the waterproof IP67 standard.

What's even more enticing is with a ban on two-stroke outboard engines imminent, boaties can say goodbye to carrying petrol on board – making it safer and cleaner, and providing the confidence of not running out of fuel.

These innovative and eco-friendly motors enhance safety, are low maintenance and provide long-term savings on fuel costs, motor services and environmental impact. Price range starts from \$2,500.

The motors are currently available at selected dealers nationally and Power Equipment welcomes interest from other dealers interested in Torqeedo.

For a full list of current dealers, visit the Power Equipment website: www.powerequipment.com.au/dealer-locator.

To unveil the new range, Power Equipment held a launch at their Melbourne head office on Monday 9 May. Guests from the boating, fishing and sailing industries were privy to a tour of the state-of-the-art facility, a first-hand look at the motors on display and a presentation by Torqeedo Product Manager, Jason Hodder.

Guests were then shuttled to Sandringham Yacht Club and treated to on-water demonstrations of the Ultralight, Travel and Cruise models and experienced the pioneering Torqeedo technology in action.

Jason Hodder said, "This is an important shift in where the future of boat propulsion is heading. What Tesla has done for cars in making electric accessible and acceptable, we believe Torqeedo will create similar waves on the water."

Want to See Torqeedo First Hand? Torqeedo will be traveling to all the major boat shows in 2016/17 including Melbourne, Sydney, Mandurah and The Wooden Boat Festival so make sure you pop past our stand and have a look at these world leading electric motors.

More information can be found at the Power Equipment website: www.powerequipment.com.au/products/torqeedo.

Power Equipment



The new PE-AUTO Engine Controller is the top of the range model in the 3 model Power Equipment range.

and JCB customers can benefit with the latest enhanced features and data displays.”

The features across the new range of Engine Controllers vary. The PE-NANO controller (which supersedes the EC-90) has keyless start and stop, oil pressure and coolant temperature protection plus optional low coolant level and a water-in-fuel sensor for JCB engines.

The PE-MANUAL controller (which supersedes the EC-150) controller takes the functions of the PE-NANO and includes extra functionality of 2 wire start/stop, twin float start/stop, fuel pump pressure monitoring and protection, loss of prime, 99 hour run timer and for JCB applications only, water-in-fuel.

The top of the range PE-AUTO controller goes further on the PE-MANUAL with the addition of 7 day repeatable start/stop timer and individual daily start/stop. Power Equipment will also be rolling out added optional features on the PE-AUTO unit from July 2016. These include Remote 3G monitoring and control telemetry.

In response to customer demand, the “Remote Stop Shutdown” feature with current Engine Controllers is no longer standard. It can be ordered as a plug in option across all three new controller models in applications where required.

As an aid to reliability, the previous two-piece control harness has been replaced by a new design, one piece 2m long wiring harness.

“Our new line of Engine Controllers provide Yanmar and JCB engine customers with a range of state of the art protection and system controls. All backed up by a system designed to maximise ease of use and overall system reliability,” said Noel Heritage.

Power Equipment is also committed to support the superseded range of Engine Controllers (the EC-90, EC-150 and ACP-200) with both product and technical backing. These controllers continue to deliver excellent operational service for existing customers.

Power Equipment has launched a completely new range of Engine Controllers to support Yanmar and JCB industrial diesel engines. The new line up of Engine Controllers has a fresh design, refined functions and operate on the very latest technology platform.

There are three models in the new range, with each model superseding an equivalent model in the Power Equipment range. The models are the PE-NANO (supersedes the EC-90), the PE-MANUAL (supersedes the EC-150) and the PE-AUTO (supersedes the ACP-200).

All the new models were displayed for the first time at the Irrigation Australia Conference in May in Melbourne and will be also attending the Agquip Field Days on the 16th – 18th August and the Dowerin Field Days on the 24/25 August.

The new range of Engine Controllers represents a significant upgrade in technology,

functionality and physical appearance. The sturdy case on the PE-MANUAL and PE-AUTO has a weather seal to protect against dust and water. The PE-NANO, even without a case, is rated at IP65 for longer protection.

“Our goal has been to make the new controllers as simple, reliable and easy to use as possible,” said Noel Heritage, Business Manager at Power Equipment.

“The superseded range of Power Equipment Engine Controllers had been in production for some years, so it was an ideal time to undertake a significant upgrade. Technology has developed rapidly, so now our Yanmar

RELEASES **NEW** LINE OF ENGINE CONTROLLERS



PE-AUTO

- Keyless Start & Stop
- Tachometer
- Hourmeter
- Low Oil Pressure Protection
- Engine Coolant Temp Protection
- Battery Monitoring
- Water in Fuel
- 99hr Run Timer
- Fault Indicator
- Fault Error Log
- 3 Wire Start/Stop
- Twin Float Start/Stop
- Pump Pressure Monitoring & Start/Stop
- Loss of Prime
- 7 Day Repeatable Start/Stop Timer
- Individual Daily Start/Stop timer (Mon-Sun)

Additional options:

- Remote Stop (E-stop)
- Remote 3G Monitoring and Control Telemetry Package
- Remote Wireless Start/Stop (avail late 2016)
- Low Coolant Level

Suits Engine Model:*

- Yanmar L Series/TF Series – Electric Start only
- Yanmar TNV Series
- JCB DieselMax Series



PE-MANUAL

- Keyless Start/Stop
- Tachometer
- Hourmeter
- Low Oil Pressure Protection
- Engine Coolant Temp Protection
- Battery Monitoring
- Water in Fuel
- 99hr Run Timer
- Fault Indicator
- Fault Error Log
- 2 Wire Start/Stop
- Twin Float Start/Stop
- Pump Pressure Monitoring & Start/Stop

Additional options:

- Remote Stop (E-stop)
- Remote Wireless Start/Stop (avail late 2016)
- Low Coolant Level

Suits Engine Model:*

- Yanmar L Series/TF Series – Electric Start only
- Yanmar TNV Series
- JCB DieselMax Series



PE-NANO

- Keyless Start/Stop
- Tachometer
- Hourmeter
- Low Oil Pressure Protection
- Engine Coolant Temp Protection
- Battery Monitoring
- Water in Fuel
- 99hr Run Timer
- Fault Indicator
- Fault Error Log

Additional options:

- Remote Stop (E-stop)
- Low coolant level

Suits Engine Model:*

- Yanmar L Series/TF Series – Electric Start only
- Yanmar TNV Series
- JCB DieselMax Series

*Features and Options many vary based on Engine Model.

JCB DIESELMAX

Pays for itself in fuel savings

Nashy Produce is a respected farming business which grows avocados, snow peas and tomatoes. Situated at Kinkuna and alongside the Elliot River (Qld.), the farm has an excellent water allocation.

The 6 hectare plot of avocado trees at Nashy Produce was first planted out four years ago, with additional trees planted three years ago and then two years ago. All up, there are currently some 6500 avocado trees, neatly

planted in rows 10m apart with 5m between each tree in the row.

The local Power Equipment Dealer, Sunfam, has enjoyed a long association with Nashy Produce. Sunfam designed and installed the watering system for the avocado plantation four years ago before the first trees were planted. This involved laying 6000m of water lines plus the sprinkler system and pumping station. When the pumping

station was destroyed by fire, Adam De Zotti (Horticulturist at Nashy Produce) took the opportunity to work with Sunfam and design an even better pumping station.

"Our watering needs vary enormously throughout the year depending on rainfall and the growth cycle of the avocado fruit," Adam De Zotti said.

"Our new pumping station needed to be matched to our existing sprinkler system, our



A fire which destroyed the pumping station at an avocado farm outside of Bundaberg, provided the timely reason for a completely new JCB DieselMax powered pump installation. Now, two years after commissioning, the JCB DieselMax is delivering fuel savings of more than 30%, compared to the previous engine, while also delivering outstanding performance.

water allocation rights and the peak demand during summer. During the growing season the sprinklers run for up to 20 hours a day. Our EnviroSCAN soil monitoring equipment provides us with an excellent guide for soil condition and watering.”

Based on the criteria supplied by Adam De Zotti, the JCB DieselMax powered pumping station specified by Sunfam is both efficient and effective.

The JCB DieselMax powered pump is mounted close to the water source with a 200mm diameter pipe feeding the pump while a 150mm diameter outfeed pipe is used. Integrated into the irrigation installation is a simple fertiliser injection system which allows Adam De Zotti to fertilise the avocado plantation as and when needed.

The pump itself is driven by the JCB DieselMax via a belt and pulley system allowing the JCB DieselMax engine to operate at the 1400 rpm while the pump turns over at the correct speed to deliver water at the rate of 90,000 litres per hour at 60 psi pressure at the pump.



Adam Zotti gives thumbs up to his JCB Dieselmax engine which pumps water for all his crops.



The JCB DieselMax is a 4 cylinder, diesel engine which is ideally suited for such industrial applications. The specific model installed at Nashy Produce is the 63kW variant.

This is a water cooled engine which displaces 4.4 litres and has a net intermittent power output of 63 kW at 2200 rpm. The cylinder head features 4 valves per cylinder to deliver high torque at low speeds. The JCB DieselMax is one of the very finest engines in its class on the market and carries a market leading warranty policy of 3 years or 4,000 hours on major components or 2 years or 4,000 hours on minor components. Quiet operation is an added bonus as is the low fuel consumption.

Supporting the JCB DieselMax installation at Nashy Produce is the Power Equipment Engine Protection System (EPS). This monitors engine performance and is programmed to shut down the engine in the event of

overheating, belt breakage or lack of oil pressure. In addition to its safety functionality, the EPS also has a series of on-board engine management features.

At the pumping station a 2200 litre diesel fuel tank is installed. While the previous engine was reliable, it was heavy on fuel, draining the fuel tank every week and a half. Now with the JCB DieselMax installed, Adam De Zotti says that the fuel consumption is more than 30% less for the same output.

“We have logged up 2000 hours on the JCB DieselMax at an average of about 200 hours per month,” Adam said.

“While the JCB DieselMax may have been a bit more expensive to purchase, it has more than paid for itself with the fuel savings. At about 8 litres per hour, this is the best fuel consumption for a diesel engine that I have ever come across.”

AUSSIE **YANMAR** SEAMASTER

...*designed for a life at sea*

Aussie Pumps' unique 4.8HP Seamaster pump has been a huge success since it was introduced around fifteen years ago. With pump components that are absolutely compatible with salt water, the pump is superbly matched to a Yanmar L48 air cooled diesel engine. Test results indicate lots of power available to deliver peak flows of up to 720 litres per minute and heads as high as 37 metres.

Standard elastomers supplied with Aussie's Seamaster compact salvage and firefighting pump is Buna N. That elastomer material is compatible with salt water, diesel fuel and oily waste water. Optional seals in Viton are also available for transferring of potentially caustic liquids.

The machine's body, impeller and volute are all manufactured from 30% glass-filled polyester. That material, developed initially for the United States NASA space program, provides strength, resilience and resistance to corrosive elements.

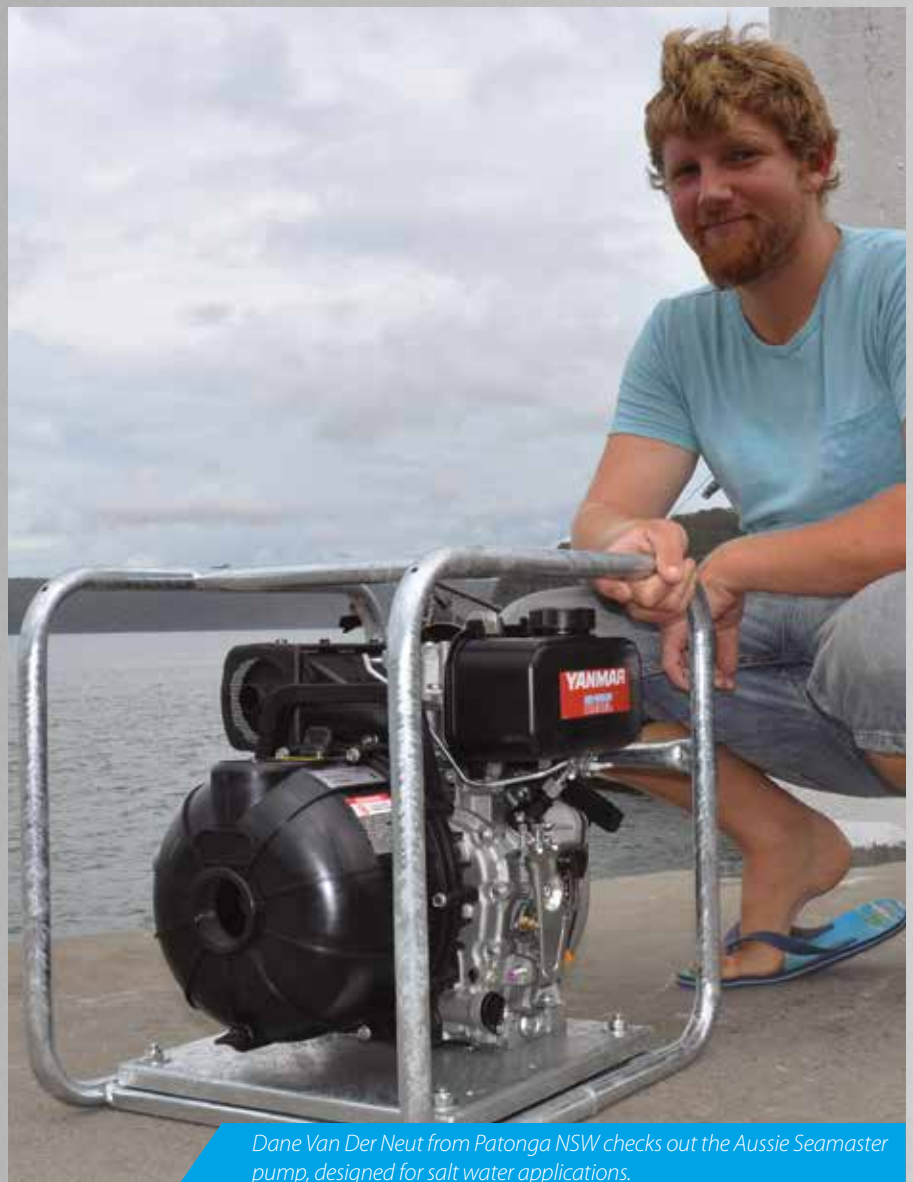
Aussie Pumps chose the L series Yanmar air cooled diesel for a number of reasons. "Yanmar's direct injection technology, providing maximum combustion efficiency by matching the combustion chamber and injection system is a big advantage," said Aussie Pumps Chief Engineer, John Hales. "We also like the low vibration and low noise. That leads to happier operators and of course longer life, not just for the engine but for the pump that it is driving", he said.

The Yanmar engine also has the big advantage in terms of its compact size and low weight. One of the main drivers for the design of the Seamaster, after dialogue with both the marine industry and Navy Defence personnel, was for a lightweight portable pump that could be used for both salvage and emergency firefighting.

"In an emergency at sea, nobody wants to lug a 200kg pump around the deck of a tug, barge or even warship," said Hales. "Those big pumps are impossible to manoeuvre through hatches and require a lot more than a two man lift," he said.

The Aussie Seamaster is available in both two and three inch configuration. Standard equipment includes hot dipped galvanised roll frame with sub base and anti-vibration mounts. Stainless steel frame version, nicknamed the "Minehunter Spec" is also available.

The 2" Aussie Seamaster's high performance and efficiency means that the pump can operate at a high head, say 30 metres, approximately 40 psi, with a flow of 100 litres



Dane Van Der Neut from Patonga NSW checks out the Aussie Seamaster pump, designed for salt water applications.

per minute! In salvage applications the pump will deliver much more water, up to 600 litres per minute at 5 metres head.

The 3" version provides even more performance without any extra horsepower. Aussie's 3" Seamaster delivers up to 720 litres per minute on open flow. This makes it ideal for emergency salvage work at sea.

Aussie Seamasters are being used in a wide range of other applications.

New versions will be released this year with polypropylene bodies for handling AdBlue and API is working on a 316 stainless steel version too.

YANMAR & JCB

The Perfect Duo for Sunfam

Bundaberg irrigation specialist, Sunfam was one of the very first Dealers in Australia to use a JCB DieselMax in an irrigation application.



The JCB DieselMax engine continues to grow its presence in QLD.

As a long standing Yanmar Dealer, Ian Loeskow at Sunfam recognised the opportunity which the JCB brand presented and had no hesitation in recommending this engine to his customer.

In the 1950's the Loeskow family company was focused on drilling for water in the Bundaberg region. Since the incorporation of Sunfam in 1986, the business has evolved with an emphasis on the design of efficient irrigation systems.

"Early on we recognised that the Bundaberg region had a high demand for the design and installation of watering systems," Ian Loeskow said.

Farming in this region is varied and extends well beyond cane farming, with Macadamia and Avocado trees plus vegetables prominent. Irrespective of the farming operation, there is a year round demand for water on the land.

In 2004 Sunfam was appointed as a Yanmar Dealer. Prior to their appointment, Sunfam had broad experience with the Yanmar brand having serviced and supported various Yanmar engines operated within the region.

"Since 2004, we have been buying Yanmar TF and Yanmar TNV engines for use in our custom designed and built pumping installations," Ian Loeskow said.



Sunfam's offices in Bundaberg.

"We take great pride in designing and installing pumping systems which are purpose matched to the individual applications. We select the best pump for the job then couple it with the most efficient engine."

"Yanmar is our dominant diesel engine brand. The Yanmar range up to 40 kW is excellent for our pumping applications, where continuous duty cycles are required. We prefer to keep the engine speed below 2500 rpm and with bigger output engines, we aim to keep below 1900 rpm."

Sunfam first introduced the JCB DieselMax into their irrigation systems after their previous engine manufacturer of over 40 kW engines, changed their minimum operational speed specifications. Applications where a single pump unit was required to perform multiple duties with engine speeds between 1200 & 2000 RPM could no longer be met, Ian Loeskow needed to find an alternative.

"We have always enjoyed a strong relationship with Power Equipment, so we were aware of the new JCB DieselMax engines which had just become available in 2009. JCB was a brand that we knew and respected with strength in construction equipment around the world, so we were confident that the JCB DieselMax would work well in our installations."

The first JCB installation was a replacement for an old Bedford diesel engine which was driving the pump on a center pivot irrigator.

"The customer wanted a heavily built, reliable engine to replace his Bedford," Ian Loeskow said.

"The JCB DieselMax was readily accepted by the customer. Following the installation, the customer was amazed at the fuel savings."

From that point, Sunfam has installed more than 10 JCB DieselMax engines in Bundaberg and the surrounding regions.

"When assessing the JCB DieselMax we had to be confident that the brand was competitive in the marketplace," said Ian Loeskow.

"Our customers needed to be comfortable with the initial purchase price, the operational costs, (by way of fuel and spare parts) needed to stack up and there had to be timely access to spares. In all respects the JCB DieselMax has proven to be outstanding."

According to Ian Loeskow, the JCB DieselMax continues to be an ideal engine, able to handle a broad range of water pumping duties on the land. There are situations where the one pump installation is used by the same farmer for flood irrigation one day, trickle irrigation the next and a high pressure traveler the following.

"The JCB DieselMax can be set up to operate at speeds from 1200 rpm through to 2000 rpm to deliver the specific pressure and volume required," Ian Loeskow said.

"The strength of the JCB DieselMax is that it can operate efficiently at a variety of engine settings. These are very reliable engines which we can specify and install with confidence in remote locations."

Sunfam continues to rate highly their relationship with Power Equipment. Sunfam operates from two locations in Bundaberg with a JCB DieselMax on the showroom floor as a glowing endorsement of the brand.

"The real strength of the Yanmar and JCB brands is the reliability of the product," said Ian Loeskow.

"The price of parts is okay and the reaction times to our parts orders from Brisbane and Melbourne, is also very good."

"The high number of repeat Sunfam customers who specify either Yanmar or JCB is a strong endorsement of the two diesel engine brands which we use in our irrigation systems."



YANMAR

at The Boat Works

Australia's Greatest Boat Yard

Frequently the sales hype surrounding a business and the reality fail to meet when a customer experiences operation. In the case of the Boat Works situated at Coomera on the Gold Coast, this is definitely one instance where the hype and the experience line up perfectly.

The brain child of ex V8 Supercar champion Tony Longhurst, the Boat Works is a huge boat maintenance and re-fit facility spread across a 22.7 acre waterfront site. Conceived as a one-stop shop for boat servicing, the Boat Works is indeed a comprehensive complex which offers everything from the small stainless steel bolt all the way through to a major re-fit and everything in between.

Located just a stone's throw away from Power Equipment's Queensland branch office at Coomera, the Boat Works enjoys a very strong relationship with the Yanmar brand. CEO Tony Longhurst has a pair of Yanmar 4JH4-TE Saildrives and Gori Propellers installed on his own multi-million dollar catamaran.

One of Power Equipment's key Gold Coast Dealers, Marine Mechanical Solutions, is a key tenant at the Boat Works being kept very busy with the number of boats passing through the complex.

"We saw a gap in the market for a superior boat maintenance facility," said Tony Longhurst.

"As an avid boatie, I was very aware that there are already plenty of marinas, heaps of

Power Equipment's Ray Harris with
Tony Longhurst – CEO of The Boat Works.



Some of the vast on water and hard stand facilities available at The Boat Works.

mobile mechanics and lots of good marine trades spread around waterfront areas. The opportunity was to bring all the best trades and support services together onto the one, expansive site."

"So in a nutshell that's the Boat Works. We aim to provide the full gamut of support services for boaters and then undertake to have the best in the business operating on site at the Boat Works."

The telling barometer of success at The Boat Works is the number of lifts performed by the Sealift and Travellifts. On average there are over 20 movements per day.

Boats up to 110' in length and 100Tonne can be lifted from the Coomera River at The Boat Works. Once on the hard stand the lifted vessel can be transported to the appropriate workshops for all kinds of maintenance.

Alternatively, boats of all sizes can be parked on the hardstand for owners to do their own work. If a quick turnaround is required on a simple hull clean and anti-foul, the crew at the Boat Works can do the job quickly.

In addition to the marine trades on site at the Boat Works, the complex also boasts a brand new floating marina and the appropriately themed Galley Restaurant/café. DIY and transient boaters make excellent use of the new ensuite and laundry facilities. There are even courtesy cars available if required.

"If the Boat Works isn't Australia's Greatest Boat yard, then we would certainly like to hear about it," enthused Tony. Power Equipment is proud to be associated with the Boat Works and the standards of excellence which it actively promotes.



70 & 100 Tonne Travellifts together with a Hydraulic Sealift Trolley easily cater for all hull types.

YANMAR is of the marine solution

Rob Arnold is a successful Yanmar Dealer who has followed the classic pathway from an apprentice through to accomplished business owner. Operating his business, Marine Mechanical Solutions, with a staff of five is testament to how far Rob Arnold has come over the 26 year journey.

As a school leaver, Rob Arnold joined Monty's Marine Technical Services at Runaway Bay to take up a position of an apprentice. After an eight year stint, Rob left the marine industry to work on oil rigs and big ships performing maintenance work. However, this work was repetitive and lacked the stimulation that he was seeking.

Returning to the Gold Coast, Rob Arnold followed his passion for the marine industry. He established Marine Mechanical Solutions in 2005 working alone and performing mobile marine work.



Rob Arnold pictured with his fourth year mechanical apprentice Jacob Crookshank.



MMS Premises and Van at The Boat Works.

"I was literally working from a shed in my back yard," Rob Arnold reflected.

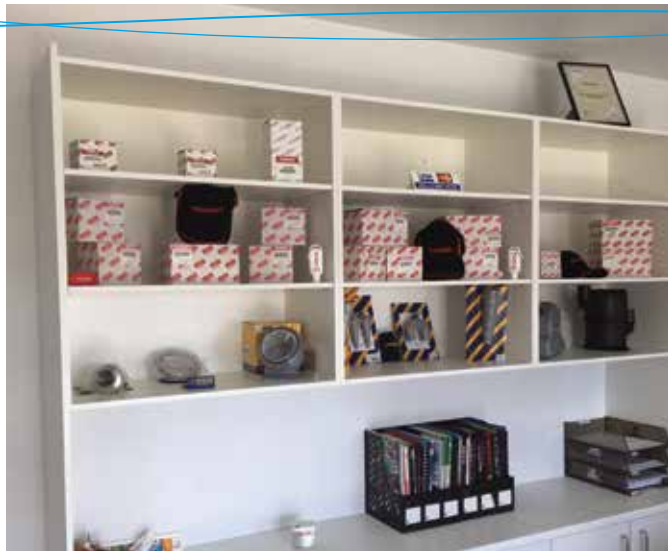
"From there I took a lease on a factory in Southport and then in mid-2014 I decided to take the big step and relocate to The Boat Works complex on the Gold Coast."

The relocation to The Boat Works has been responsible for an amazing upsurge in business for Rob Arnold. Now, in the heart of a busy marine precinct, customers are literally walking through the door whereas they would never have appeared at Rob's factory in the industrial Southport complex.

"We are a Yanmar Dealer with the Yanmar signage proudly out the front and Yanmar product in the reception area. Customers can walk from their boat to my workshop. We're on the spot and ready to assist."

It is because Marine Mechanical Solutions is on site at the marina that problems can be sorted out quickly and with minimum fuss. The Boat Works has added benefits over many

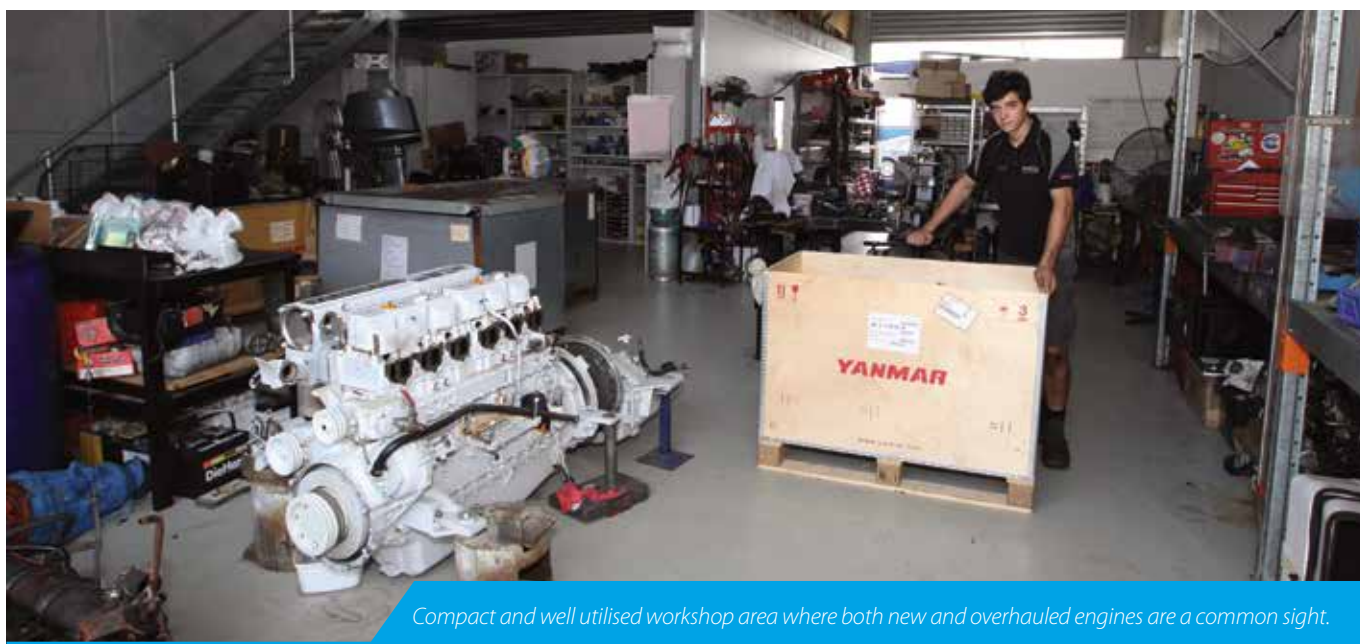
an essential element



New Yanmar Marine maintenance service kits displayed prominently in the main office area.



The Full range of Yanmar oil & coolant products are stocked by MMR.



Compact and well utilised workshop area where both new and overhauled engines are a common sight.

other locations. Due to the owner's (Tony Longhurst) personal interest in yachting, there is a larger than normal representation of larger yachts and cats at this location. A second major bonus is the Travel Lift and Sea Lift equipment for hauling boats from the water and onto the hardstand.

The transformation from working alone from a service vehicle to fully fledged Yanmar Dealer has been exceptional. It has been a long but worthwhile journey, with Marine Mechanical Solutions now comprising a team of five on staff.

The workshop is busy and like any service shop, it could be bigger. In this space the mechanics strip and rebuild engines as required. In-house there is a lathe, welding

gear and hydraulic presses. Cylinder head work and injector servicing work is sent to outside specialists.

As an authorized Yanmar Dealer of many years standing, Rob Arnold has an affinity for the brand. Yanmar is the only new diesel engine that he sells and installs. The range of Yanmar marine diesels sold spans everything from smaller sailing engines right through to the full range of Yanmar Power Boat engines.

His showroom has a Yanmar 6LPA, Yanmar 4JH4 and MASE I.S.5.0 on display along with posters and teardrop banner. The mobile service van is also dedicated to the Yanmar brand, being a moving billboard. This is a very well presented business, proud to display and promote the Yanmar brand.

"There is a lot to like about Yanmar," Rob Arnold said.

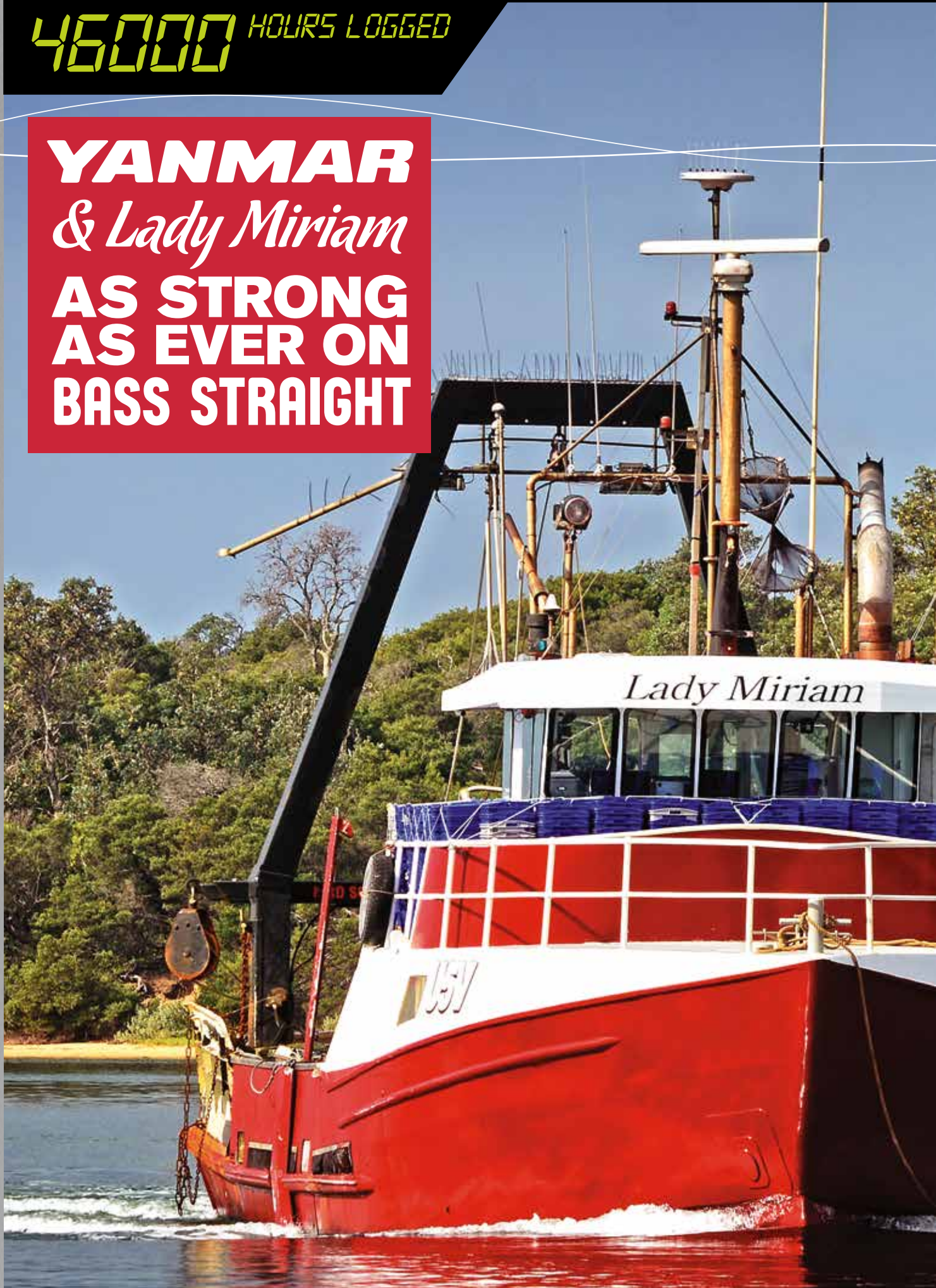
"At the heart of it, Yanmar is a simple and reliable product. Customer acceptance is very high, the product support from Power Equipment is excellent and there are plenty of Yanmar engines on the water to keep us busy."

Beyond the product itself, there are other elements which contribute to growth and success. In Rob Arnold's case he attributes his achievements to the simple rules of customer service.

"We make a point of doing a job well. We do it right the first time and rely on our good work to generate positive customer feedback and referrals."

46000 HOURS LOGGED

YANMAR
& Lady Miriam
**AS STRONG
AS EVER ON
BASS STRAIGHT**





Tony Guarnaccia, Captain of the Lady Miriam



The ever reliable Yanmar 6HYM-ETE in the engine room.

Commercial fisherman Tony Guarnaccia repowered his deep sea fishing trawler, the Lady Miriam, with a Yanmar 6HYM-ETE in 2009 and has now clocked an amazing 46,000 hours of operation.

That's an exceptional achievement for a vessel which operates in Bass Strait, one of the toughest waterways in Australia.

The Lady Miriam was built in Tony Guarnaccia's home port of Lakes Entrance (Vic) in 1980 by the Newman family. This is a heavy steel hull which measures 19.9m loa with a beam of 6.6m and displacement of up to 140 tonnes heavy-ships. Trawling in Bass Strait for up to seven days at a time, in sea conditions with up to 40 knots of wind, demands a tough boat and an equally tough crew.

Originally the Lady Miriam was powered by a USA sourced 14 litre automotive based marine diesel engine. This engine had one major rebuild, but when it started to show signs of age and needed a second re-build, Tony decided that it was time to install a brand new engine.

"I wasn't unhappy with my original brand of engine," Tony Guarnaccia said. "However, rebuilding an old engine for the second time was bad business."

"When I decided to fit a new marine diesel engine, the manufacturer of my original engine didn't have a suitable replacement in their current range. So I researched the market and settled on Yanmar. The Yanmar 6HY series is a 13.73 litre in-line 6 cylinder design which is commercially rated by Yanmar."

The re-power was undertaken in May 2009. The original 6:1 reduction transmission was rebuilt and retained. Similarly, the 60" x 59" Mikado prop was used with the new Yanmar engine powered drivetrain.

Yanmar's 6HYM-ETE model engine is a purpose built commercial grade marine engine. It includes Yanmar's latest combustion chamber design named ASSIGN; a system originally pioneered by Yanmar on their large bore, medium speed propulsion engines.

This technology, combined with Yanmar's own mechanical fuel system, delivers impressive fuel consumption results and gives commercial fishermen exceptional fuel economy.

The 500hp (441 kW) twin turbo develops peak power at 1950rpm and is the perfect engine for skippers who demand that their engine runs at full throttle for up to 24 hours. The cylinder head is a quad valve design. This Yanmar engine works hard in conditions demanding continuous commercial use. The engine weight is 1385 kgs without marine gear.

Following the re-power, Tony Guarnaccia has been happy with the new lease of life which the Yanmar has given Lady Miriam.

"Fuel consumption has improved by a litre or two per hour combined with a noticeable improvement in our trawling speed," Tony said. "I have plenty of power now to trawl the heavy nets through the fishing grounds and the Yanmar 6HYM-ETE has been extremely reliable."

In addition to the Yanmar 6HYM-ETE in the engine room, there is also a 4 cylinder diesel powered generator plus an 8.3 litre diesel engine which drives the hydraulic pumps and winches. All up, the combined fuel consumption of the three engines is calculated at 53 litres per hour on an extended seven day fishing trip.

While the Yanmar 6HYM-ETE has now logged 46,000 hours of operation, at 38,000 hours a routine top end service was performed in line with Yanmar's recommended maintenance regime. This is an in-situ service which involves replacement of liner seals and piston rings along with a cylinder head and turbo charger service. The original cylinder liners, pistons and bearings were inspected and re-installed as they were in great shape.

While the Yanmar 6HYM-ETE engine was installed in Lady Miriam in 2009, Yanmar has since made some minor component upgrades to ensure compliance with the current IMO emissions regulations. The model number subsequently was changed to 6HY-WET which just like its earlier predecessors, is continuing to make a name for itself with low fuel usage, high reliability and overall low cost of ownership.



Yanmar 4TNV98 provides ideal power for pumping.

YANMAR a core strength at **The Lister Specialists**

The Lister Specialists was established in Perth in 1989 with the sole objective of servicing, supplying and installing diesel engines. Owner Peter Boam has enjoyed a twenty year association with the Yanmar brand.

Today, through the vagaries of tough market forces, The Lister Specialists business has matured and now offers a big range of diesel brands to the pumping and power generation markets.

This business relationship with Yanmar started when Peter serviced and repaired Yanmar engines in his workshop. From repairs, the demand for replacement engines inevitably evolved and it wasn't long before Peter was selling Yanmar industrial engines to customers.

Yanmar engine models sold by The Lister Specialists included the Yanmar L Series, TF Series and TNV Series.

Over the past two years, demand had slowed in the WA market as many miners have scaled back their operations. A surge in off-grid power generation has however taken up the slack in the market, together with a slight growth in demand from farmers for pumping equipment. Today, Peter Boam has seen his

turnover return to where it was a little over two years ago.

"So far this year we have seen a welcome turnaround," said Peter Boam.

"We are currently building a replacement pump for the Water and Rivers Commission operating at the Cane River near Onslow. For a business of our size, this is a good contract to have won."

The new pump is one of three pumps used to supply town water to Onslow. Each pump switches in and out of service in response to demand for water. Peter Boam is using a Yanmar 4TNV98 engine to drive the pump. When commissioned, the new Yanmar driven pump will deliver water at the rate of 18 litres per second at 70 psi.

"We are very comfortable with the Yanmar brand," Peter Boam said. "The engines are very well finished and they're reliable. On the very rare occasion that there is a warranty issue,

it's dealt with quickly and professionally by Power Equipment so that we can all move along."

In the power generation area, Peter Boam has also supplied and installed quite a variety of Yanmar products. The Yanmar eG-i inverter generator series has also proven popular amongst mobile food traders including ice cream vendors and coffee trucks.

Yanmar YEG and YH series industrial generators have proven popular and been in high demand amongst the miners and also with station owners.

"There is definitely a growing market with customers who are off the grid and those who want to operate a dual solar/electric system," Peter Boam said.

"We continue to promote and sell Yanmar powered systems on the basis of product quality. Customers who appreciate quality are customers worth having."

YANMAR RE-POWER SAVES FERRY OPERATOR TIME & FUEL

A Yanmar re-power has provided a welcome boost to the Maria Island Ferry business operated by John Cole-Cook. Thanks to the pair of new Yanmar 6LY2A-STP engines, the trip to Maria Island is now quicker and the fuel savings are massive.

As a direct result of the Yanmar re-power, the steaming time from Triabunna to Maria Island has been reduced by 8 minutes, each way. Fuel consumption has also been reduced by 30%.

Over the course of a full year this translates to a huge reduction of 546 engine hours plus a considerable sum saved in fuel costs. The Yanmar re-power has delivered huge and measureable benefits to John Cole-Cook.

Maria Island is a hidden treasure off the coast of Tasmania, accessed from the small coastal town of Triabunna some 70 km northeast of Hobart.

The island was first occupied by indigenous people for 30,000 years. The first European contact was Abel Tasman in 1642, then the seal hunters arrived in the late 1700 hundreds followed by the whalers. Convicts were transported to Maria Island between 1825 to 1830, before Port Arthur was established. Today the settlement of Darlington is a World Heritage listed site. The history of Maria Island spans periods of convict settlement, mining, farming and early nature conservation efforts.

Currently, Maria Island attracts tourists by the boat-load, all year round. Access is only available by sea with the Maria Island Ferry service established in 1997. John Cole-Cook purchased the business in 2008.

As skipper of the Maria Island Ferry, John Cole-Cook makes the 17 km crossing from Triabunna to Maria Island 364 days a year. In peak season the ferry makes a total of 12 crossings a day, but in the quieter months the average is 4 crossings a day.

The vessel used for ferrying passengers to Maria Island was purpose designed and built

for this specific run. The aluminium catamaran measures 11.6m LOA and has a beam of 5.0m. Built by Image Boats in Western Australia, the Maria Island Ferry displaces 7 tonnes lightship but can be loaded up with a further 5 tonnes when the maximum payload of 50 passengers and their luggage come aboard.

"When I purchased the Maria Island Ferry business, the boat was operating with the original 320hp diesel engines," said John Cole-Cook.

"They were obviously a bit old but we never pushed them too hard. That was until recently when one blew a piston."

A re-power had previously been discussed but the idea was shelved. The engine failure brought the issue to a head and a quick resolution was needed. For every day that the vessel was laid up and off the water, the business would suffer financially, so a quick turnaround was the priority.

Based on the referral of a trusted local, John Cole-Cook got in touch with the authorised Yanmar Dealer in Hobart, Unitech Marine Sales / Spectrum Engineering. Dealer Principal, Peter Shedden recommended a pair of Yanmar 6LY2A-STP engines, quoted a price to supply and fit them and the deal was done. The Maria Island Ferry was packed off to Hobart and the re-power commenced.

Yanmar's 6LY2A-STP engine is a turbocharged, direct injected, intercooled, in-line 6 cylinder displacing 5.813 litres to produce 440mhp (324 kW) at 3300rpm. With a dry engine weight of only 535kg (less gearbox) the 6LY2A-STP delivers industry leading power-to-weight Yanmar diesel performance.

In an amazing feat of engineering efficiency, the Maria Island Ferry was back at work with the Yanmar 6LY2A-STP engines fully operational inside of 21 days. The ferry was with Spectrum Engineering for just 19 days in which time the new Yanmar engines were shipped from Melbourne to Hobart, the old engines were removed, engine mounts were replaced and the new Yanmar engines were installed.

"My previous exposure to the Yanmar brand was very limited," John Cole-Cook said.

"I did notice however that Yanmar is very popular amongst professional fishermen.



John Cole-Cook at the helm of his Yanmar Powered vessel.

Anyone that I spoke to who owned a Yanmar, was glowing in their praise."

Since installing the new Yanmar 6LY2A-STP engines, the ferry has been totally transformed. The Yanmar engines combined, deliver an additional 240 mhp over the old engines. The extra output delivers a massive amount of power to push this cat through open water and often big seas.

"The biggest gains have been lower noise, greater speed and an amazing reduction in fuel consumed." Claims John.

With the old engines thumping away, conversation on board could only be had with people directly alongside each other. Now John Cole-Cook says that the low engine noise from the Yanmar engines makes conversation easy.

When the Maria Island Ferry is fully loaded the Yanmar 6LY2A-STP engines punch the alloy catamaran hull along at 25 knots at 3300 rpm. However, the most impressive gains for John Cole-Cook is at the operational cruise speed.

"Whereas we used to run over to Maria Island at 13 to 14 knots, we're now travelling at 18 knots and experiencing a 30% fuel saving. The Yanmar engines tick over at 2600 rpm with the fuel burn 28 litres per engine per hour."

With fewer engine hours and a 30% fuel saving, it's clear that the Yanmar re-power has delivered overwhelming benefits to John Cole-Cook.



The Maria Island Ferry operates 364 days per year.



SPECTRUM Engineering BLITZES TASSIE

After just four short years of being an authorized Yanmar Dealer, Spectrum Engineering in Hobart has attained an enviable record of achievement. Like so many successful Yanmar Dealers, Spectrum Engineering is a prominent entity in their local commercial marine industry.

Current day MD, Peter Shedden heads a family business which was established in 1987. From the outset Spectrum Engineering specialized as a marine engineering company focusing on propellers, propeller shafts and underwater gear for commercial operators.

From 1990 to 2003, Spectrum Engineering cast and machined their own propellers, ranging in size from 12" to 56" in diameter.

When Peter Shedden joined his father Alex as co-owners of the business in 1992, there was new investment in plant and equipment to expand the company's services and capacity to handle larger jobs. Inevitably, the company outgrew their premises, so a block "across the road" was purchased and in 2004 a purpose designed 650m² factory with office and showroom was built. The original property has

been retained and is now used by Spectrum Engineering as a foundry to cast underwater gear and sacrificial anodes.

The real strength of Spectrum Engineering is their capacity to handle big jobs for commercial operators. With a large factory full of engineering equipment, Spectrum Engineering has the capacity, for example, to machine a propeller shaft up to 127mm in diameter and 7m in length.

"Due to our capability to handle these large and heavy duty jobs, we are the industry leaders here in Hobart," Peter Shedden said.

"Tasmania has an extensive commercial maritime fleet which is also very diverse in application. There are work barges, commercial fishermen, any number of ferries and tourist vessels. Somewhere along the way,

they all need the specialist marine engineering support that we have to offer."

A key aspect in the expansion plan post 1992 has been Peter Shedden's desire to secure the rights to sell a quality marine engine brand. This objective was achieved in 2011 when Power Equipment appointed Spectrum Engineering as a Yanmar Dealer.

Ever since the Yanmar engines arrived and went on display in the showroom, the business relationship has thrived.

"Spectrum Engineering has done a fine job for us," said Steve Parsons, Power Equipment's Sales Engineer for Tasmania, Victoria and South Australia.

"Peter and his team have represented the product exceptionally well to the Tasmanian



Matthew Shedden, Justin Shedden and Peter Shedden are the power behind Spectrum Engineering.



Fully Functional on site truck ready to meet customers' needs.



Well Stocked Showroom.

market and achieved excellent sales due to their hard work and technical competence."

From Peter Shedden's perspective there are numerous reasons to choose the Yanmar brand.

"I rate Yanmar highly as they are a true marine engine, designed and built for work in a salt water, marine environment," Peter Shedden said.

"The fact that they are not converted truck engines as most others are, places Yanmar well ahead of their competitors. The Yanmar build-quality is first rate, the back-up support from Power Equipment is excellent and the warranty rate is very low."

Expanding further, Peter Shedden also points to the long engine life, low fuel consumption and the strong Yanmar brand awareness as being strengths when selling Yanmar engines to customers.

"Ultimately, it is the customer who is the judge of the Yanmar engines and our service.

The feedback which we have received from our Yanmar commercial customers has been 100% positive."

"We have a lot of contacts in the industry and we have built strong relationships with our customers. Having Yanmar engines always on the showroom floor speaks volumes for our confidence and commitment to the Yanmar brand."

In addition to Yanmar marine propulsion and generator engines, Spectrum Engineering is also actively promoting, stocking and selling Yanmar genuine spare parts, industrial engines, PSS shaft seals, MASE generator sets, Gori folding propellers and the JCB range of industrial engines.

Also adding to this is the new Torqeedo range of electric motors which Spectrum Engineering are supporting in Tasmania and believe it will have lots of potential to suit the environmental needs of Tasmanian boaters.

Over the four year journey, Spectrum Engineering has sold quite a variety of Yanmar marine propulsion engines from both the pleasure craft and heavy duty commercial engine range. From the Yanmar commercial range Spectrum has sold a number of the Yanmar 6CH, 6CX, 6HA2 right through to the 20 litre 6AY series for both new vessel and repower projects.

In the pleasure craft segment Spectrum has commissioned numerous engines ranging from the legendary single cylinder 1GM to the multi-cylinder YM and JH series for sailboat installations and the LH, LP and LY series for powerboats and light duty commercial applications.

Approximately half of the Yanmar engines sold are also installed by the marine engineers at Spectrum Engineering.

In the industrial division, Spectrum Engineering is strong in the farming and aquaculture sectors supplying a number of Yanmar TNV engines for pumping and power generation.

NOW AVAILABLE ELECTRIC PROPULSION AT ITS BEST



1 HP
equivalent

Ultralight



1.5 HP
equivalent

3 HP
equivalent

Travel




5 HP
equivalent

8 HP
equivalent

20 HP
equivalent

Cruise Pod drives

Cruise



40 HP
equivalent

80 HP
equivalent

Deep Blue

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