

Power *news* MAGAZINE



Executing the John Deere Power Systems Distributor Agreement.

Luke Foster, General Manager, Power Equipment (Left) and Mathieu Turbé-Bion, JDPS (Right).



JOHN DEERE

Joins Engine Power House Line-Up

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John Deere Power Systems appoints Power Equipment as their new distributor



The Power Equipment team and John Deere Power Systems representatives witnessing the signing of the Distributor Agreement at Power Equipment Head Office in Lynbrook, Australia.

Following an extensive review of the Power Systems business in Australia and New Zealand, John Deere Power Systems (Saran) are very pleased to announce the appointment of Power Equipment as the new distributor for John Deere Industrial and Marine engines in both Australia and New Zealand. This appointment was effective 1st July 2017.



John Deere Power Systems is a major manufacturing division for John Deere Company with an outstanding reputation for reliable and fuel efficient engines designed to meet the needs of the agricultural, marine, forestry, construction and many OEM customers around the world. One of the key strengths of the John Deere brand is the global support offered to customers and the pre-eminent network of over 4000 customer focused Dealerships ready to support their customers with quality sales advice, aftermarket support and parts backup.

Power Equipment's inclusion in the global John Deere Power Systems 'family' represents an exciting chapter in the

history of Power Systems in Australia and New Zealand through an expanded dealer network and their dedicated commitment and focus on the engine power sector.

Power Equipment is a family-owned business which was established on October 1st 1990 for the specific purpose, at that time, to act as the exclusive authorised Australian distributor of Yanmar Marine and Industrial diesel engines and finished product. Subsequently, Power Equipment's "Yanmar" Territory has been increased to include New Zealand, PNG and the South Pacific. Additional products distributed exclusively by Power Equipment include PSS Shaft Seals, Mase and Northern Lights Marine Generators, Gori Propellers,



*The Power Equipment Head Office
in Melbourne, Australia*

Torqeedo Electric Outboard Motors, OXE, Dtorque and COX Diesel Outboard Motors.

Power Equipment typically sells around 6000 marine and industrial diesel engines per year throughout Australia, New Zealand and the broader Oceania region, ranging from 5 to 1800Hp. It enjoys a very stable workforce of approximately 85 across the group, with many staff being lifelong career "engine people". Power Equipment's growth has led to the formation and development of branches throughout Australia and New Zealand. Its Head Office is housed in a very modern purpose-built facility in Melbourne, Victoria, with branch offices located in New South Wales, Queensland and Western

Australia. In New Zealand its head office is located in Auckland, with a branch office in Christchurch.

Over a period now spanning 28 years, Power Equipment has achieved an excellent reputation as a high quality supplier of engines and associated products, through an extensive Dealer and branch network, and it has a very mature state-of-the-art infrastructure which has been created by continuous reinvestment by the founders.

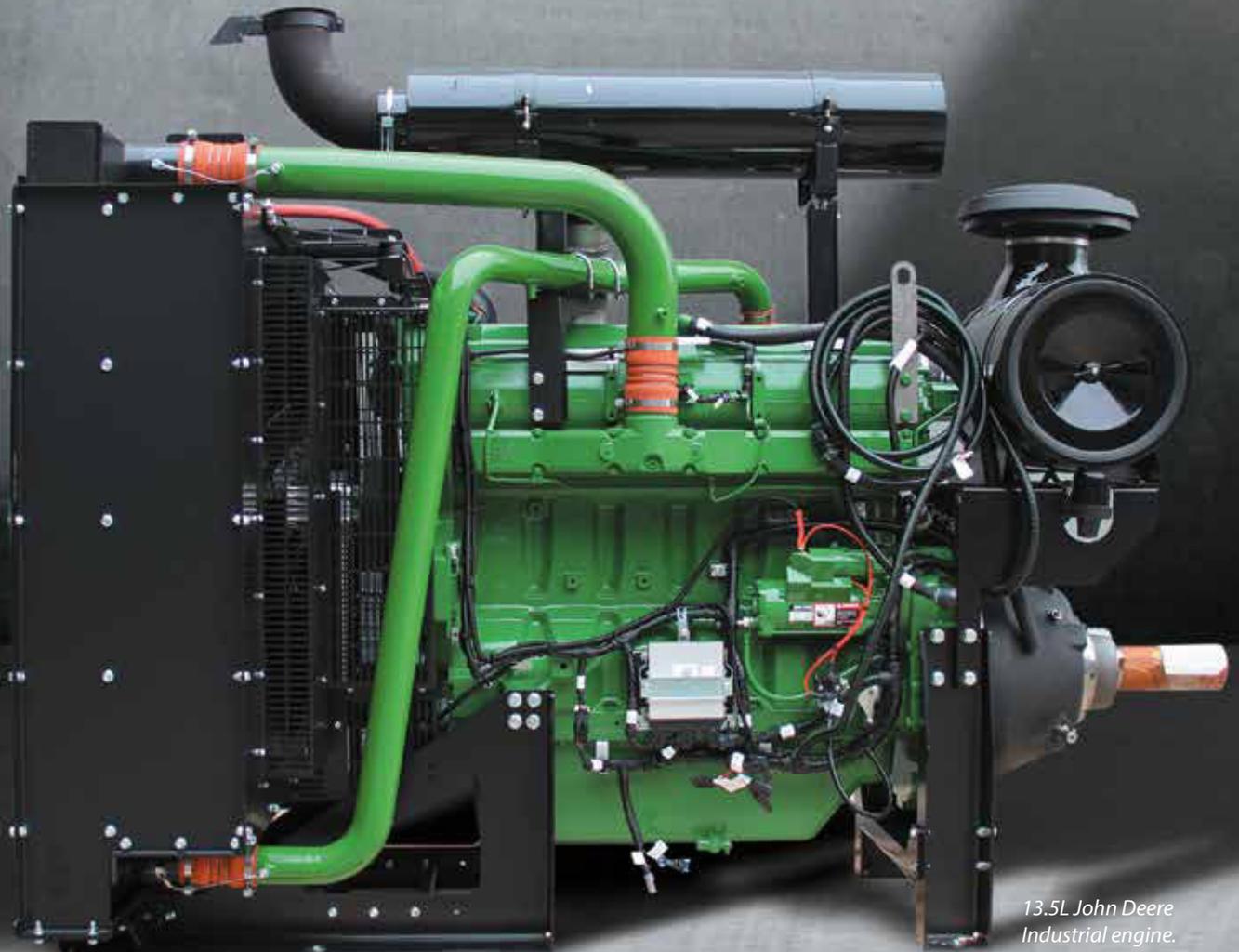
Power Equipment contributes much of its success to acquiring the distribution rights to quality products, and backing this up with a total commitment to customer

satisfaction both within its Dealer Networks and end users. To support this it also carries substantial stock holdings of products and parts.

John Deere Ag Dealers will continue to support John Deere Power Systems with the added expertise, knowledge and support that Power Equipment brings to the Australian and New Zealand marketplace.



JOHN DEERE



13.5L John Deere Industrial engine.

ENGINE POWER HOUSE ADDS

Power Equipment says its appointment to distribute the John Deere Power System's range of Industrial and Marine engines in Australia, New Zealand and the wider South Pacific is a game changer.

The move will shake up the engine market in the Pacific region and it provides John Deere a well-established network through which to sell and support its stand-alone engines.

The change became effective on 1st July 2017, and since then Power Equipment has shifted all existing stock from John Deere's headquarters in Brisbane to its own headquarters in Melbourne.

Power Equipment is a family-owned company which sells around 6000 marine and industrial engines per year, and has an extensive network of branches, service centres and more than 500 independent retailers in Australia, New Zealand and the South Pacific.

Power Equipment General Manager, Luke Foster, says the company was established to distribute Yanmar engines in Australia, and the addition of John Deere engines gives it two very strong brands.

"We are extremely pleased to add John Deere engines to our line-up because it gives us two very formidable brands which together will make Power Equipment a force to be reckoned with in the diesel engine market. We now provide our industrial customers with a complete range from 4-600HP, and likewise our marine customers with options from 10-1800mph," Luke says.



The Power Equipment team proud to showcase our first 13.5L John Deere industrial engine.



The Power Equipment work shop area.

JOHN DEERE TO LINE-UP

"On the industrial side Deere engines sit above the power range covered by Yanmar, and on the marine side the two compliment each other nicely, filling different application niches to give an uncompromising range for all things marine, from private yachts to fishing trawlers, all the way through to commuter ferries," Luke says.

Luke says with its world class infrastructure, from automated parts picking and storage to its experienced sales and service team, Power Equipment is well placed to boost sales of John Deere engines.

"We recently assembled our first 13.5 litre John Deere engine, which is the largest engine in the range, and another two will follow directly behind. The build was carried out by our

workshop team in Melbourne and we are very proud of it," Luke says.

Along with shifting the entire John Deere Power Systems stock from Brisbane to Melbourne, Power Equipment has assumed responsibility for all existing forward orders and is now taking new orders.

Power Equipment has sent managers and technicians for training at John Deere Power System's factories in France, and John Deere sale and technical support people from the factory have visited its head office in Australia. Likewise John Deere Power Equipment has a number of experienced John Deere staff helping during the transition as it brings its people and systems up to speed.

Luke says Power Equipment is an independent company with strong industry connections. It has well-equipped workshops that can customise engines to meet its customers' needs.

"We are a family-owned company that has been in the industry for nearly 30 years. We re-invest heavily in the business and have long term stability through an activated succession plan that currently sees the second generation leading these new growth initiatives.

"Taking on the distribution of John Deere engines is an important step for us. We intend to expand sales of the brand throughout the Pacific region. It is a high quality product that speaks for itself. As they say, 'Nothing Runs Like a Deere,' Luke says.



Provides

Power & Confidence for SpoilSport

Mike Ball Dive Expeditions is known the world over as being a pioneer in the liveaboard dive business. While the business once operated a three vessel-strong fleet into the Coral Sea, today there is just their flagship vessel SpoilSport... recently repowered by Yanmar 6HYM-WET engines and performing exceptionally well.

SpoilSport was built by Austal in WA in 1989, purpose designed by Mike Ball as a liveaboard dive boat. The vessel is a substantial catamaran, measuring 30m loa with a 10.5m beam and massive displacement of 328 tonnes.

Operating on a strict seven-day cycle, there is zero margin for downtime with SpoilSport. She berths in Cairns on a Thursday morning. Guests disembark, the boat is cleaned, reprovisioned and a new group of divers are welcomed on board ready for cast-off late Thursday afternoon.

The skipper heads straight out into the Coral Sea and steams 100 Nm overnight to the first dive location. Thereafter, SpoilSport is on the move every night heading as far north as Lizard Island before heading south back to Cairns for Thursday morning berthing. Every week SpoilSport travels around 440 Nm, logs 44 engine hours and burns 4,400 litres of diesel fuel for both the Yanmar engines and on-board generator sets.

According to Craig Stephen, Operations Manager at Mike Ball Expeditions, this is a tight, professional operation with zero opportunity for anything but routine maintenance.

"We are at sea hosting Mike Ball customers for 48 weeks of every year," Craig Stephen said.

"Our dive expeditions are at the top end of the market and our customers rightfully expect a premium service. Understandably, the pressure is on and we do not make any allowance for downtime or unscheduled problems. Reliability is everything in this business."

When SpoilSport was launched she was fitted with a pair of American marinized electronic truck engines which were replaced, 'like-for-like', at the first re-power. "The window to re-power was looming, but we couldn't justify the hefty price ticket to again re-power with the original brand of engines," Craig Stephen said.

"I tend to take notice of what the other charter boat operators and commercial fishermen are doing when they repower their vessels. The Yanmar name is definitely the most common brand being installed. Moreover, there are excellent reports which we hear following the commercial repowers."

Craig Stephen and the management team looked closely at Yanmar and decided to repower with a pair of Yanmar 6HYM-WET marine diesel engines. In addition to the local testimonials, Craig Stephen liked the fact that the Yanmar 6HYM-WET is a mechanical engine. It is capable of logging big hours and is acknowledged as a commercial workhorse with long service intervals and high reliability.

The Yanmar 6HYM-WET is a purpose built commercial marine engine. The engine is a 6 cylinder in-line block which has a displacement of 13.733 litres and an all up weight of 1386 kgs.

The 6HY series is available with 4 power outputs ranging from 500mhp (368kW) to 700mhp (515kW). For the repower of Spoilspport the choice was made to use the conservative and heavy duty continuous rating of 500mhp (368kW) @1950rpm, a decision which will no doubt pay dividends in years to come.

This model includes Yanmar's latest combustion chamber design, named ASSIGN, a system originally pioneered by Yanmar on their large bore, low speed propulsion engines. These engines are IMO Tier 2 compliant, ensuring emissions are exceptionally low, an important consideration when operating on the Great Barrier Reef.

The ASSIGN technology combined with Yanmar's mechanical fuel system provides commercial operators with excellent fuel economy. The cylinder head is a quad valve design. In this configuration, the Yanmar



Trevor Jackson, skipper of the Spoilspport.

6HYM-WET excels in conditions demanding continuous commercial use such as Spoilspport and their unforgiving seven day a week schedule.

Once the Yanmar repower was complete (inside the annual 4 week service break), Spoilspport returned to full service. Skipper Trevor Jackson immediately noticed the improved performance. Importantly, the Yanmar engines provided him with a new level of confidence when at sea.

Underway the Yanmar 6HYM-WET engines tick over at a comfortable 1400 rpm to deliver 9.5 knots. Although the engines selected are rated to deliver maximum power at 1950 rpm, the design of the hull is such that the extra power doesn't push Spoilspport any faster.

While the performance, fuel consumption and noise levels are all readily quantified and provide positive feedback, it's the seat-of-the-pants feeling of safety which has Trevor Jackson most impressed with Yanmar.



Noel Teufel, Maintenance Supervisor of the Spoilspport, with Yanmar 6HYM-WET.

"There was a noticeable difference right away," said Trevor Jackson.

"It was the responsiveness to the throttle that I picked up on instantly. Every day, many times a day, we come up on the reef and Spoilspport is so close that the reef disappears under the overhang of the bow. With current, wind and tide this vessel continually moves around. So when I snap on the throttles, I want the engines to gun me back quickly, and that's exactly what the Yanmar 6HYM-WET engines do."

"When we are at sea, we're out there on our own, hundreds of miles from anywhere. Rarely do we even see another ship on our seven day expedition. Yanmar gives me an uncanny sense of security; a feeling that with Yanmar we're in good hands. I never felt that with our previous electronic engines."

"The crew and I like the mechanical fuel management systems on the Yanmar 6HYM-WET. If there is a problem in the engine room while we're at sea, the only people who can fix it are those of us on board. And that's why we like our new Yanmar engines."

The Yanmar engines are very similar in power, fuel consumption, weight and installation envelope to the previous engines. However, with a significant purchase price advantage and the benefit of peace-of-mind mechanical systems, the Yanmar 6HYM-WET engines have proven themselves to be a wise acquisition to power Spoilspport.



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Cleaning Up With Yanmar



Mining can be a demanding business, and to keep heavy equipment working efficiently it needs to be routinely cleaned with heavy duty, hot water pressure cleaners. Yanmar provides the essential power behind a customised cleaning system developed by Hunter Cleaning Equipment, for use in the mining industry.

A single Yanmar 4TNV88 has been custom matched to a highly specialised drive and pump system, purpose built for the waste management company, Toxfree. Toxfree is contracted to pressure clean heavy mining equipment above ground and on-site, in the Hunter Valley region of NSW.

Beginning with a flatbed dual cab Isuzu truck supplied by Toxfree, David and Joel Schmidtke of Hunter Cleaning Equipment set about designing a system which would deliver a flow of heated water at the rate of 26 litres per minute at 3000 psi. The truck is also rigged with a 3000-litre poly water tank making the complete system independent and mobile.

"For this application, we decided to use a single Yanmar 4TNV88 diesel engine driving twin Comet pumps", said Joel Schmidtke.

"A key to the success of this installation is the transmission supplied by OEM Dynamics." This comprises a single input shaft which is coupled to the Yanmar 4TNV88 and then transfers the power to dual output drives, one for each pump.

"This unique installation delivers the required volume and pressure with amazing efficiency. A conventional system would utilise two engines and two pumps. With our set-up being driven by a single Yanmar engine, we have delivered a complete system which is 250 kgs lighter, more compact and cheaper to operate."

The Yanmar 4TNV88 was specifically selected for this application as it has the optimum performance criteria to drive the two pumps at the correct speed and load. With the engine and pumps running at a fixed speed of 1750 rpm, the Yanmar 4TNV88 is operating well within maximum capacity and easily manages the load exerted by the transmission and two high pressure water pumps.

The Yanmar 4TNV88 diesel engine is a 4 cylinder, naturally aspirated engine with a 2.190 litre displacement. Dry weight is 155 kgs. This is a robust, water cooled engine which is rated to 46.9 MHP at 3000 rpm in industrial applications.

Power Equipment supplies the Yanmar 4TNV88 in Engine Power Pack configuration. Hunter Cleaning Equipment receives the engine complete with engine feet, radiator and mounting, air cleaner, muffler and speed control device.

In this specific application, the Yanmar 4TNV88 has been "over specified" to ensure that there are never any load issues when operating in the field.

Delivering 3000 psi to two hose reels and lances means

that customers can clean equipment up to three times faster than before. That's a big cost saving in labour and fuel. With the latest pressure cleaning rig now in the field and operating trouble free and as designed, Hunter Cleaning Equipment is currently looking to reach new markets such as councils and earth moving contractors.

Hunter Cleaning Equipment specialises in the manufacture of a wide range of industrial grade pressure cleaners, sweepers and vacuum cleaners. Since establishing in 2009, the family business has been using Yanmar diesel engines in a wide range of commercial grade products.

The success of the Yanmar LN Series, Yanmar 3TNV and Yanmar 4TNV engines across the Hunter Cleaning Equipment product range, has resulted in Yanmar being their diesel engine power of choice.

"Yanmar is our preferred brand," Joel Schmidtke said. "These engines are tough and durable. They have proven themselves over and over."



Yanmar 4TNV88 Diesel engine.

Classics



There is a strong movement for fastidious boaters to own a custom-built timber hull in preference to the mass-produced fibreglass bluewater cruisers. While the traditional hull designs are timeless, thankfully the contemporary built timber vessels are benefitting from modern diesel marine engine technology such as the latest generation of Yanmar marine diesel engines.

The timber cruisers Aranui and Menindee are two exceptional examples where traditional designs are being powered by the latest Yanmar. Both boats were built alongside one another at Corsair Boats in Melbourne and launched just one month apart. The owners of both boats use their vessels for extended bluewater cruising, crossing Bass Strait and making voyages along the eastern seaboard of Australia.



Yanmar 6CX-530 tucked away under the deck.



The helm of the Aranui.

Aranui is currently moored in Sydney at Rushcutters Bay as a part of the EastSail charter fleet and has been displayed at the Australian Wooden Boat Festival in Hobart.

The sister vessel Menindee is a scaled down design measuring 11.43m loa, beam of 3.66m and a displacement of 6.7 tonnes.

Because Menindee is a smaller version of Aranui, the power requirement is also reduced. A

Mark Abbott of Corsair Boats was fortunate to find two customers just as enthusiastic about the classic Maine Lobster boat genre as himself. A Maine Lobster boat design was purchased from the Lowell Brothers in the US and this gave rise to the Bass Strait 40' (Aranui) and Bass Strait 35' model (Menindee), both being Yanmar powered.

Both hulls were constructed to the same specification. The hull has a laminated hardwood keel with the strip plank construction made from Western Red Cedar, a species readily available from the US but expensive. This was covered externally with three layers of bi-axial cloth and vacuum bagged with Ampreg epoxy resins. The inside of the hull received similar treatment. The hull is effectively an epoxy-sandwich construction with a Western Red Cedar core material.

Aranui is the larger of the two vessels with a loa of 13.0m, beam of 4.2m and displacement

of 10.7 tonnes. A single Yanmar 6CX-530CR engine is matched to a Twin Disc transmission is installed under the saloon floor, midships.

The Yanmar 6CX-530 power plant exhibits superb fuel efficiency and a power-to-weight ratio that makes it possible to attain a higher top speed and a longer cruising range.

The Yanmar 6CX530 is an electronically governed, common rail, freshwater cooled, six-in-line marine diesel engine displacing 7.4 litres and providing 390kW (530mhp) at 2,900rpm. At 0.63 hp per kilo this engine is easily the lightest diesel available in its power range - well over 200 kilos less than some comparable size engines.

With 2000 litres of fuel on board and the Yanmar 6CX-530CR pushing Aranui along at a very comfortable 8 knots, the cruising range is a massive 1200 Nm with fuel consumption of 14 litres per hour. Open up the throttle and a top speed of 22 knots can be achieved.

single Yanmar 8LV-370A driving through a Yanmar hydraulic marine transmission and a conventional propeller shaft has been matched to the hull. The Yanmar 8LV is a 90°, V8 cylinder block which has a power rating of 272kw (370mhp) @3800rpm. It features twin turbo chargers and direct injection with a full electronically controlled common rail fuel system. There are four valves per cylinder. Weighing in at just 476kg's (dry weight including gear), this impressive marine engine package continues the Yanmar tradition of delivering high power from a low weight package.

In spite of the difference in physical bulk of the two hulls, their performance and fuel consumption data is virtually identical.

The owners of both Aranui and Menindee are delighted with their bespoke cruisers. The design, the craftsmanship and the Yanmar power are common bonds which define both of these fine vessels.



Power Equipment
appoints
Paul Gwynne *Product Manager*
John Deere – Power Systems

Power Equipment has announced the appointment of Paul Gwynne to the position of Product Manager John Deere – Power Systems.

Based in Sydney, Paul has national responsibility for John Deere industrial engine products for Australia and New Zealand.

As Product Manager John Deere – Power Systems, Paul is at the centre of sales, parts and customer support for the range of industrial engines with outputs from 32 to 600hp. Paul will complement the teams in those key areas of Power Equipment's operations. Power Equipment was appointed as Australia and New Zealand Distributor of John Deere Power Systems on July 1 2017.

Originally from Gloucestershire in the UK, Paul brings a working lifetime of diesel engine and power generation experience to this new role at Power Equipment. Initially starting out as an apprentice with R.A. Lister in the UK, Paul worked in various departments in the company, culminating in a position with their sales and applications team. Paul arrived 'downunder' on secondment to the R.A Lister New Zealand subsidiary distributor in 1987. A scheduled six month secondment became a 10 year stay culminating in a move to Australia in 1997 to work for the Australian Lister Petter engine distributor.

In 1999, Paul joined John Deere Ltd which has given him a wealth of experience with the John Deere engine product. Some people even dubbed him the 'John Deere guru' as the knowledgeable go-to John Deere engine specialist.

Paul's knowledge and expertise has now arrived at Power Equipment, a valuable addition to the company's catalogue of quality products and track record of reliable product and customer support.

His primary roles will revolve around sales, customer support, and parts interpretation for engines that are sold domestically and also engines that are fitted into imported John Deere powered equipment. Paul will be working in conjunction with Power Equipment's Australian and New Zealand Area Managers.

New and unusual OEM applications, such as the recent adoption of John Deere engines by Victorian hydro excavator OEM VacDig, are also of great interest to Paul. "Our primary markets have traditionally been agricultural irrigation but we are always looking for new applications and markets that will increase

the John Deere engine profile and presence in the marketplace"

"The John Deere engines are heavy duty, long stroke, high torque, long life, premium products that have been developed over the years as a result of the continuous John Deere Agricultural and Construction and Forestry product development. Our engines are an industry benchmark for performance and reliability and we have one of the best customer support networks in the business."

"For me, there will be a lot of continuity of business relationships, as many existing Yanmar customers are already John Deere customers.

Paul really enjoys face-to-face contact with customers at regional field days and product conferences across Australia. "It's a great opportunity to learn firsthand about their businesses and gives us an opportunity to provide them with solutions that will improve their productivity and profitability."

Outside of work Paul likes the outdoors including gardening. He describes himself as "an enthusiastic but under-achieving fisherman."



Yanmar Powers Up The Reef Rocket

Operating a commercial ferry out of Cairns demands the highest standards of performance. Yanmar has played a significant role in the success of Reef Rocket, following a repower with a pair of Yanmar 6HYM-WET engines.

Reef Rocket has more than a passing resemblance to the Sydney Rivercat ferries. Built in 1999 at the Norman Wright Shipyard, Reef Rocket was designed along the same lines. The fibreglass hull is 24m loa, has a beam of 6.9m, a draft of 2.1m and displacement of 36 tonnes without passengers.

Operating from the Cairns Marina, Reef Rocket makes three return trips every day to nearby Green Island, around 15 Nm distant. It is a 45-minute run each way and the passenger load is a maximum of 120 passengers.

In the port engine room, the original engine was removed and replaced with a Yanmar 6HYM-WET some time ago. A unique set of circumstances prevented both engines being replaced at the same time.

That was until 2016, when Reef Rocket underwent a major refit. The vessel was reglazed, repainted with a 2-pack product and generally brought back to pristine condition inside and out.

During the 2016 re-fit, the second Yanmar 6HYM-WET engine was installed into the starboard engine room. Today, the port Yanmar engine has more than 5,000 hours logged while the starboard engine has 800 hours.

“For our business, reliability is the single most essential thing that we require with our vessels,” said Andrew Rokstad, Maintenance Manager at Big Cat Green Island Reef Cruises.

“We rate our performance in terms of travel time and fuel consumption. The new Yanmar 6HYM-WET engines are giving us great reliability and excellent fuel consumption, just what we are after.”

The Yanmar 6HYM-WET is a purpose-built commercially-rated marine engine. The engine is a 6 cylinder in-line block which has a displacement of 13.733 litres and an all up weight of 1386 kgs.

The 6HY series is available with 4 power outputs ranging from 500mhp (368kW) to 700mhp (515kW). For the repower of the Reef Rocket



et



John Thackeray at the helm of the Reef Rocket.



The Yanmar 6HYM-WET powers the Reef Rocket.

the choice was made to use the conservative and heavy duty continuous rating of 500mhp (368kW) @1950rpm, a decision which will no doubt pay dividends in years to come.

This model includes Yanmar's latest combustion chamber design, named ASSIGN, a system originally pioneered by Yanmar on their large bore, low speed propulsion engines. These engines are IMO Tier 2 compliant, ensuring emissions are exceptionally low, an important consideration when operating on the Great Barrier Reef.

The ASSIGN technology combined with Yanmar's mechanical fuel system provides commercial operators with excellent fuel economy. The cylinder head is a quad valve design. The Yanmar 6HYM-WET has a long

history already in many passenger ferries in both Australia and New Zealand and a well proven reputation of excellent availability in applications like the Reef Rocket that have a demanding seven days per week schedule.

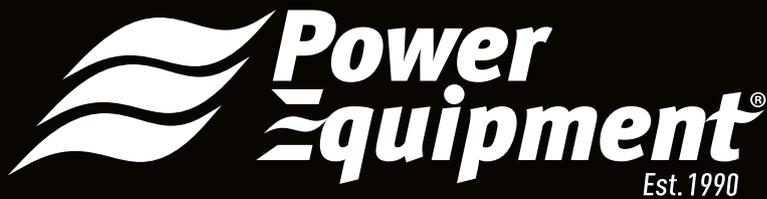
With a pair of Yanmar 6HYM-WET engines now installed in both sponsons of Reef Rocket, skipper John Thackeray delivered a glowing endorsement of the performance.

"The new Yanmar 6HYM-WET engines have proven to be quieter, smoother in operation, more compact and easier to service," John Thackeray said.

"Typically, our run to Green Island is at 23 knots with the Yanmar engines ticking over at just 1800 rpm. Fuel consumption is a very impressive 70 litres per engine per hour."

A top speed of 24.5 knots is achieved at wide open throttle. Both engines drive through ZF 360A model transmissions coupled to shafts and fixed pitch propellers. In addition a Yanmar 4TNV84T Diesel Powered Mase Three Phase 25kVa generator set supplied by Power Equipment Pty Ltd is installed in the engine room, generating enough power to drive the entire on-board electrical system.

"Our Yanmar engines have definitely delivered better fuel economy through their superior technology. In addition we like their long service intervals & the mechanical fuel management system as we simply cannot afford to have any unscheduled downtime."



Hosts



President



During 2017 Power Equipment was honoured to host Yanmar President Takehito Yamaoka, and a team of executive managers from Japan and Singapore.

Power Equipment Managing Director Allan Foster and General Manager Luke Foster welcomed Mr Yamaoka and the members of his party to Power Equipment premises, wherein they enjoyed a formal presentation followed by a comprehensive tour of facilities meeting staff, before enjoying a traditional Australian dinner at Allan's home that evening.

The following day the Yanmar executives visited two boat builders on the Mornington Peninsula that are regular users of Yanmar engines in their boats.

In the morning they visited Hart Marine, based in the town of Mornington. Hart Marine builds pilot boats that are powered by dual 13.7 litre Yanmar 6HY marine diesel engines rated at 700HP at 2200 rpm. Power Equipment extensively customises these engines with many bespoke locally added options to suit Hart Marine's requirements.

Luke Foster explained that this value adding by PE has evolved over time, but is now to the stage where assembly time by the boatbuilder has been significantly reduced, and by using an "engine jig" during the vessel assembly, the actual engines can now be called-up much later in the vessel build cycle which also improves their cashflow. As a result of this collaboration, engines are now completely installed within hours of receipt which is a Win, Win for all involved. Yanmar featured Hart Marine's pilot boats on its 2017 Desk Calendar.

The second half of the day allowed for a small amount of site seeing enroute along the beautiful Mornington Peninsula including a special lunch hosted by Tim Phillips from the Wooden Boat Shop at the Baths Restaurant which is on the shores of Port Philip Bay at Sorrento. The seafood delights served were personally caught by Tim. The Wooden Boat

Shop founder and director Tim Phillips says he has Yanmar blood running through his veins, and general manager Wayne Parr said he was very honoured that Mr Yamaoka was able to visit their company and soak up the atmosphere associated with building timber boats. The Wooden Shop builds new vessels and restores old wooden boats, and has been a dedicated Yanmar customer for over 30 years using many different engines from Yanmar's extensive range. The masthead at the top of the Sorrento main street was also adorned with Yanmar and Wooden Boat Shop flags.

The other members of the party accompanying Mr Yamaoka on his flying visit to Australia was Toshikazu Imai, Kazumichi Saito, and Go Matsumoto from Japan, and Jackson Tan and Mashiro Yoda from Yanmar Singapore.



Yanmar President Takehito Yamaoka (centre) with Allan (left) and Luke Foster (right).



Dinner at the Fosters.



Takehito Yamaoka (Left), Luke Foster (Right).



The Wooden Boat Shop.



*Hart Marine - Left Front: Mal Hart
Right Front: Takehito Yamaoka.*

*Hart Marine's pilot boats on Yanmar Desk Calendar 2017.
Client: Flinders Ports, South Australia.*

POWER BENEFITS VAC DIG'S HYDRO VACUUMS



Inside the 'heart' of the unit where the John Deere 4045T diesel engine is located.

In the field of major infrastructure construction and maintenance, timeliness is critical, especially with tight scheduling of operations and shortened project timelines. Hence, the use of hydro excavation (or non-destructive digging – NDD) is expanding rapidly. Fast-rising hydro vacuum manufacturer Vac Dig is now offering John Deere diesel power in its machines which has met with great approval from its customers.

Vac Dig recently delivered its first John Deere-powered 3000 litre hydro vacuum and its benefits are already being noted.

"This machine is fitted with the John Deere PowerTech™ 4045T diesel engine rated at 93kW (125hp). It's a 4 cylinder 4.5 litre turbocharged engine rated for heavy duty," Vac Dig's Luke Farrell said, while signalling that other John Deere engines could feature in other future models from the company.

"The John Deere engines have a good reputation and our new hydro vac customer already runs other John Deere-powered equipment so he knows their true value and he's already familiar with the engine systems, parts and support."

"We've already noticed the JD 4045T runs quieter and smoother than other engines, and its compact dimensions are ideal for our truck-mounted machines, Luke said.

"We've also noted some extra features in the 4045T like a dynamically balanced crankshaft, the option of engine balancer shafts, forged steel connecting rods with bigger bearings, replaceable wet cylinder liners and poly-vee fan drive belts. Front and side mounting points really help our installation flexibility and even the dipstick and oil filter can be optionally located for service from either side of the engine," he enthused.

"However, ultimately it's about reliability and customer support. Over the years we've built a strong relationship with our engine supplier Power Equipment Pty Ltd, even before their recent appointment as John Deere industrial engine distributor

for Australia and New Zealand. They have delivered excellent support to us and our customers."

When the scheduling of operations is tight and project timelines shortened, any downtime at all can disrupt major projects and maintenance, inconveniencing business and community, Luke explained.

"That's why we build our machines to the strength and durability benchmarks our customers expect."

"At Vac Dig we utilise the latest technologies, engineering, methods, materials and components. We're proud of every job we see go out the door. John Deere engines from Power Equipment are a perfect fit for us. After all, 'Nothing Runs Like A Deere.'"

Over more than 28 years, Power Equipment has achieved an excellent reputation as a high quality supplier of engines and associated products. It has a very mature state-of-the-art infrastructure which has been created by continuous reinvestment. Power Equipment attributes much of its success to offering quality products and backing this up with a total commitment to customer satisfaction.



YANMAR

COMMERCIAL MARINE



The new 6AYEM COMMON-RAIL
High power in a compact package

Designed for marine professionals

The 6AYEM COMMON-RAIL engine from Yanmar uses the latest common-rail technology to offer greater power while retaining fuel economy and low emissions. The 6AYEM COMMON-RAIL engine is available in ratings up to 749kW at 2000 rpm. Developed specifically for marine applications, the most outstanding feature is its high torque, offering instant response, and the capability to meet all future emissions regulations.



For more information contact
Power Equipment Pty Ltd:

email: info@powerequipment.com.au
web: www.powerequipment.com.au
phone: 1800 069 469



Delivers TOUGH Port Power

Why order one new commercial “line-boat” when you really need two, with possibly a third? To keep pace with unrelenting demand, Hedland Launch Service has launched two new Yanmar 6LYA-STP powered line boats, named “Jayel” and “Septu”, just one month apart.

Ken McCorry at Hedland Launch Service runs an intensive 24/7 operation, supporting virtually every ship which enters Port Hedland. This is one of the largest iron ore loading ports in the world with more than 450 million tonnes of iron ore shipped annually and shipping movements averaging almost eight per day.

Hedland Launch Service provides a range of maritime services, principally running mooring lines between ships and wharf dolphins, as they arrive at any one of the 19 ore loading docks. The fleet of 10 boats operated by the Hedland Launch Services also ferry crews from their ships to shore, undertake various harbour operations and perform survey work.

With new contracts secured and a commitment to meet ever more stringent

performance standards, Ken McCorry commissioned two new alloy line-boats from the Perth based Cordina Marine. The design specification called for a robust hull, with low cabin profile so as to not foul mooring lines, jet drive for safety around mooring lines and a vessel which would spend most of its working life operating at displacement speeds.

When it came to the engines, Ken McCorry had a positive experience with other Yanmar powered vessels in his fleet and boat builder Joe Cordina felt that the Yanmar 6LYA-STP was the ideal match.

“I strongly believe in matching the right engine to the hull and work situation,” Joe Cordina said. “For Hedland Launch Service, the Yanmar 6LYA-STP was the ideal match of weight, power, fuel efficiency and performance.”

The purpose built Yanmar 6LYA-STP marine engine is a proven, light duty commercial engine. Low fuel consumption and inexpensive servicing costs, along with high reliability, are critical factors which are highly valued by commercial operators the world over.

Yanmar’s 6LYA-STP engine is a turbocharged, direct injected, intercooled, 24 valve, in-line 6 cylinder displacing 5184cm³ to produce 370mhp (272 kW) at 3300rpm. Weighing in at only 530 kgs (without gearbox) the 6LYA-STP delivers industry leading power-to-weight Yanmar diesel performance. It is compact and offers long service life.

The drive train on both boats matches the Yanmar 6LYA-STP to a Hamilton HJ322 jet drive. The Yanmar engine is also fitted with a conventional F-N-R transmission which

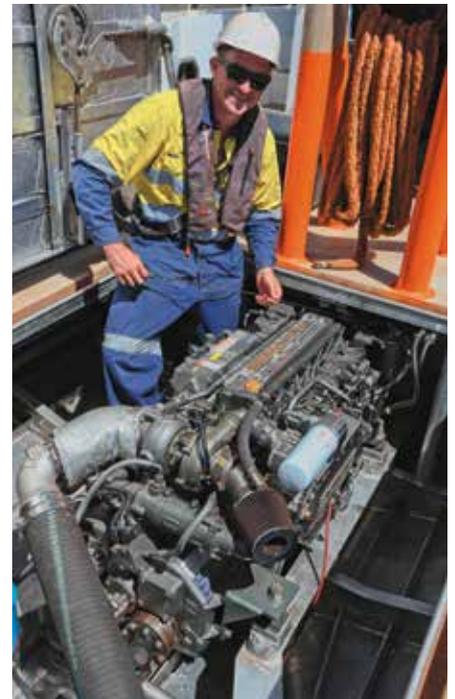


when they are dragging lines through the water. Pulling power for us is essential!"

While most of the work is undertaken inside the port at displacement speeds, there are times when tight schedules demand quick movement from one berth to another. That's when the top end speed comes into play.

At wide open throttle, the Cordina Marine boats are good for 26 knots with the Yanmar 6LYA-STP spinning over at 3300 rpm.

The operating environment at Port Hedland is as tough as it gets. The heat in summer is intense; the cyclone season brings obvious challenges while the warm salt water is harsh on equipment. Yet, despite the climatic difficulties, the boats are on duty 24/7 often logging 12 hours engine operating time in a single 24 hour shift. The first Cordina boat logged 1221 hours in the first three months of operation, an average of 13 hours operation a day.



Ken McCorry and the Yanmar 6LYA-STP.

allows the skipper to reverse flush the jet drive when needed.

Designer Adam Schwetz created a heavy duty, robust hull shape. The hull measures 9.4 loa, with a beam of 3.4m and a displacement of 5.6 tonnes when fully loaded with fuel. The bottom is constructed from 8mm plate alloy.

Following a build time of 8 months, the two line-boats were delivered just one month apart and pressed into service right away. The Yanmar powered boats proved to be an instant hit with the crews at Hedland Launch Services.

"My skippers like the power punched out by the Yanmar 6LYA-STP," Ken McCorry said.

"The new Cordina Marine boats are very manoeuvrable and the guys like the power which is readily on tap. This is really important



The Yanmar powered Hedland Launch Service.



YANMAR

6CX Series

Powers Entire Torres Pilots Fleet

After repowering one of their pilot vessels in 2013 with a Yanmar 6CX GTYE, Torres Pilots now has their entire fleet powered by the exceptional Yanmar 6CX series of commercial marine diesel engines.

The Torres Pilots fleet is based on a common, purpose built hull design; a heavy duty 13.21M alloy hull which displaces a solid 14.5 tonnes. Each of the five vessels in their fleet are powered by dual Yanmar 6CX engines running shaft drive propellers.

The first two boats in the Torres Pilots fleet were powered by a US brand engine. However, when these reached the end of their life, Torres Pilots management decided to re-power with a pair of Yanmar 6CX GTYE engines.

Impressed by the performance of the new Yanmar engines, the decision was taken to progressively power the fleet with the Yanmar 6CX series engines. The PV Alpha was the next to be repowered. Thereafter, the Arden, Adolphus and Albany, all new builds, rolled

out of the shipyard with Yanmar as original equipment engines on board.

With a common engine used across the fleet, Torres Pilots is enjoying the very significant benefits of commonality. Servicing is easier with a store room stocking the fast-moving parts for just the one make and model of Yanmar engine.

While the original Yanmar engines installed were the Yanmar 6CX GTYE model, this was upgraded with the release of the Yanmar 6CXB-GT. This model engine was installed in the new builds of Arden, Adolphus and Albany.

According to Glen Allitt, Cairns Manager at Torres Pilots, Yanmar took the original 6CX model and made it even better with the 6CXBM-GT.

"The new Yanmar 6CXBM-GT is a tougher, more robust engine than its predecessor," Glen Allitt said.

"It has better torque at lower RPMs where we do a lot of our work. These engines are easier to work on and maintain. The filters are easy to access as is the fresh water pump.

"Because we operate principally in a very hot and humid salt water climate, the Yanmar engines have to work tirelessly in a very harsh environment. They really cop a pounding, but they've never let us down."

Yanmar's 6CXB engine is commercially rated, IMO Tier 2 emission compliant and weighs in at only 856kgs. The new generation 6CXB series, with 4 power outputs available from 360 mhp (265kW) to 509 mhp (370 kW), comes from a proven pedigree with the earlier 6CX series already establishing an excellent reputation with many Australian boat owners, both in Pleasure Craft and Commercial applications.

The Yanmar 6CXB is a mechanically governed, freshwater cooled, in-line purpose built six-cylinder marine diesel engine displacing 7.4 litres. It has a shrouded dry turbocharger, cylinder block inspection hatches, and is equipped with Yanmar's own proprietary fuel injection equipment. A dual cylinder head design combined with front mounted filter positions makes for easy servicing.

In an operational sense, all the Torres Pilots vessels operate on a 24/7 basis. At any time of the day or night, and sometimes severe weather and sea conditions in this cyclone affected tropical zone, Torres Pilots is required to drop off and pick up a pilot from sea-going ships.

The PV Albany stationed at Cairns typically logs 110 engine hours per month, while the Adolphus in the Torres Straits logs 140 hours per month. Down time and failures at sea are not



Mike Cox - Cairns Senior Launch Master at Torres Pilots.



Glen Allitt, Nth Qld manager.



2 x Yanmar 6CXB engines provide all the power needed in each vessel.

tolerated. Nothing short of 100% reliability is the norm, and Yanmar has performed without fault.

Operating from their base at Cairns Marina, the PV Albany makes a round trip of 1 hour and 30 minutes to drop or collect a pilot. Such a trip uses about 110 litres of fuel. Under normal operational conditions, the Yanmar 6CXB engines tick over at a comfortable 2100 rpm for a speed of 19 knots. During sea trials the maximum performance was achieved at 2700 rpm for 27 knots.

"We're really comfortable operating at 2100 rpm," said Michael Cox, skipper of the PV Albany. "But it is also comforting to know that there is a lot more Yanmar power there for when it is needed."

Operating in Far North Queensland from bases in Cairns, Thursday Island and Coconut Island (Torres Strait), the Torres Pilots vessels frequently operate in very remote and environmentally sensitive areas.

"Reliability is everything for us, especially in the harsh tropical conditions in the Torres Straits," said Michael Cox.

"That is one of the reasons we are using Yanmar engines in general and the 6CXB specifically. If ever we have a problem at sea, the crew have to be resourceful and manage the situation themselves. The Yanmar 6CXB engines depend less on advanced electronics for the fuel management system and that allows us to better manage problems at sea. Operating electronic engines in the remote regions has proven to be more difficult."

The key, of course, to dependability is a good preventative maintenance program and Glen Allitt at Torres Pilots has an exceptional schedule in place. The Yanmar specified 500-hour service schedule is rigorously maintained. Oil samples are taken and sent away to the lab for analysis.

Then every 7000 hours, the Yanmar engines are physically removed from the vessel and given

a major service by the Cairns Yanmar Dealer, K & G Mechanical. The injectors, heat exchanger, intercooler and transmission oil coolers get special attention. All of the boats in the Torres Pilots fleet are designed and set up to make engine removal and replacement a simple task.

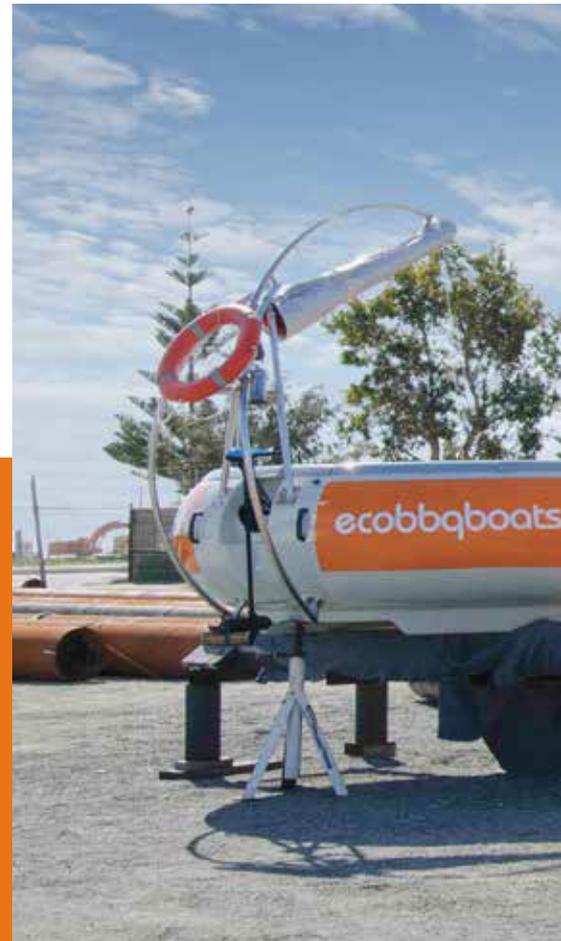
"We are obviously a very happy Yanmar customer," said Glen Allitt.

"Our entire fleet is now powered by the Yanmar CX series engines and we find them ideal for our application. Fuel consumption at 74 litres per operational hour is very good for twin installations. The support which we get from both Power Equipment and our local Dealer is excellent."

"Parts supply is first rate, even here in distant Cairns, and that is very important for us. To achieve the excellent performance results which we record is in part dependent on having genuine factory back up and support."

TORQUEEDO

Electric Outboards Floating ecobbqboats



Eco-friendly Torqueedo electric outboard motors are the power behind a unique boating experience in Western Australia – floating barbecues.

ecobbqboats is an innovative boat hire business in Mandurah, WA's second-largest city. It hires out self-drive circular boats specially designed to serve as a waterborne barbecue for up to 10 people. Mandurah is a coastal city with a canal system that has developed a large recreational boating scene.

The BBQ boat concept was invented in Germany 13 years ago. Gerd Heinen brought it to WA as first of its kind in 2016.

"Mandurah is a dream location and is often said to be a modern Venice due to its spectacular waterways. It was the ideal location for our new business venture," Gerd says.

The fiberglass BBQ boats seat six or 10 people. The boat wraps around a gas barbecue mounted on a round table.



Gerd Heinen, of ecobbqboats.



The fiberglass bbq boats before they were equipped with Torqeedo Travel 1003S motors.

The Torqeedo Travel 1003S battery-powered engine is used on the six seater BBQ boat while a Torqeedo Cruise 2.0TL engine powers the larger 10 seater BBQ boat. Both can be operated without a skipper's ticket.

Mandurah's weather and water conditions posed some challenges to Gerd, and he worked with Power Equipment WA to finalise the boats.

He says the original BBQ boats were designed for freshwater lakes and slow flowing rivers, and they were powered by small electric outboard motors.

Test runs showed that the 'Fremantle Doctor' (a south-easterly breeze that develops in the afternoon and blows 15-20 knots) had an impact on the directional stability of the boats.

Also, the original outboard motors could not power the boats through Mandurah's tidal water currents, which could be 3-4 knots.

So ecobbqboats modified the boat hulls, and Gerd visited Power Equipment at the 2016 Mandurah Boat Show to discuss Torqeedo electric outboards.

Power Equipment WA technicians Nick Marsden and Rodney Hearfield came down from Fremantle to Mandurah to install Torqeedo engines on two boats and test them under real-life conditions.

"We were really impressed by the performance of the Torqeedo motors so we equipped our whole fleet with them," Gerd says.



The highly efficient Torqeedo Travel 1003S motor.

The highly efficient Torqeedo Travel 1003S motor is comparable to a 3-4hp petrol outboard but weighs only 13.4kg including the lithium-ion battery. With the new 915Wh high capacity lithium-ion battery it will run for 18 nm (33km) at a speed of 3 knots.

The Torqeedo Cruise 2.0TL engine is equivalent to a 5-6hp petrol outboard and weighs 16.2kg. It can be used in combination with a 25kg Torqeedo lithium-ion battery, or a much heavier Gel, AGM or lead acid battery.

The Torqeedo motors also provide GPS in real time and a USB connection to power a lamp or charge a mobile phone.

After ecobbqboats' first four months of full-on commercial operation there was not a single issue or failure with the engines.

"We have had more than 2,000 people on our boats and the Torqeedo Travel and Cruise motors have always run reliably and powerful. Our customers appreciate the easy handling of the motors and enjoy the absence of exhaust fumes, noise and fuel," Gerd says.

"We are so happy that we decided to go for the Torqeedo outboard motors; we cannot thank the team at Power Equipment WA enough for their outstanding support, expertise, and customer service."



ecobbqboats - powered by Torqeedo Travel 1003S.

Marine Training Courses get...



In September and October 2017 Power Equipment held two training courses that were open to all Australian-based Yanmar Marine dealers.

The course included instruction on how to use the Smart Assist Direct diagnostic tool and interpret its diagnostic codes, an introduction to the Yanmar JH Common Rail engine, and an introduction to the Yanmar 6LY400/440 engine. An additional one-day course covered diagnosis and replacement of the Yanmar 6LY3 fuel injection pump.

The course was led by Power Equipment Senior Service Engineer, Jim Kibblewhite.

Chris Bennet from Paynesville Marine Electronics was one of those who attended the course. Chris says it was a good experience because it was a balanced mix of theory and practical problem solving.

"The course began with a PowerPoint presentation in the classroom and then we went to the workshop and worked in teams to practice what we had learned," he says.

"It was a good way to build relationships and share experience with other Yanmar dealers. The course met my expectations and I will participate again next year."

Another dealer who attended the 2017 training course was Nader Soliman from Darwin Ship Stores. Nader is a trained engineer and helps his father run the Darwin-based business. Both of them attended the course. Nader found the training session to be comprehensive and very practical.

"It is a helpful course. The Power Equipment team is very friendly, and the course helped me develop a relationship and share some problems with others in the Yanmar dealer network. I am keen to know more about marine engines and I will be attending the course in 2018," Nader says.

Power Equipment's Marine Engine training courses are a fantastic way for dealers and technicians to learn how to use diagnostic tools, practice making engine repairs and meet others in the industry.

The three day course includes all instructional material, lunches, and a certificate of attendance.

Courses are held at Power Equipment's training room and workshop facility at its head office in Melbourne.

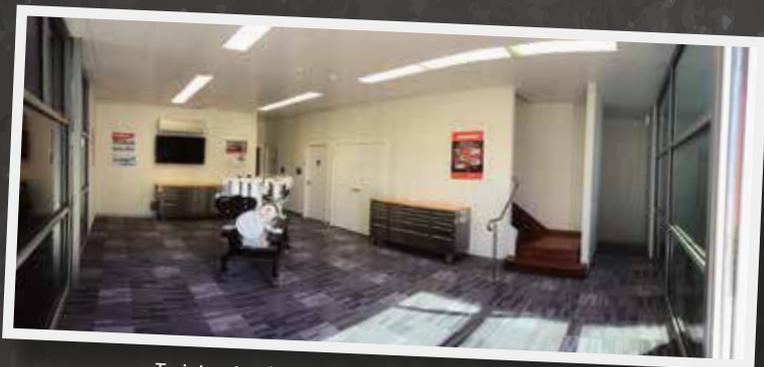
The next courses will be held in April-May 2018 so keep your eye out for Power Equipment's electronic direct email (eDM) for details on topics and precise dates.



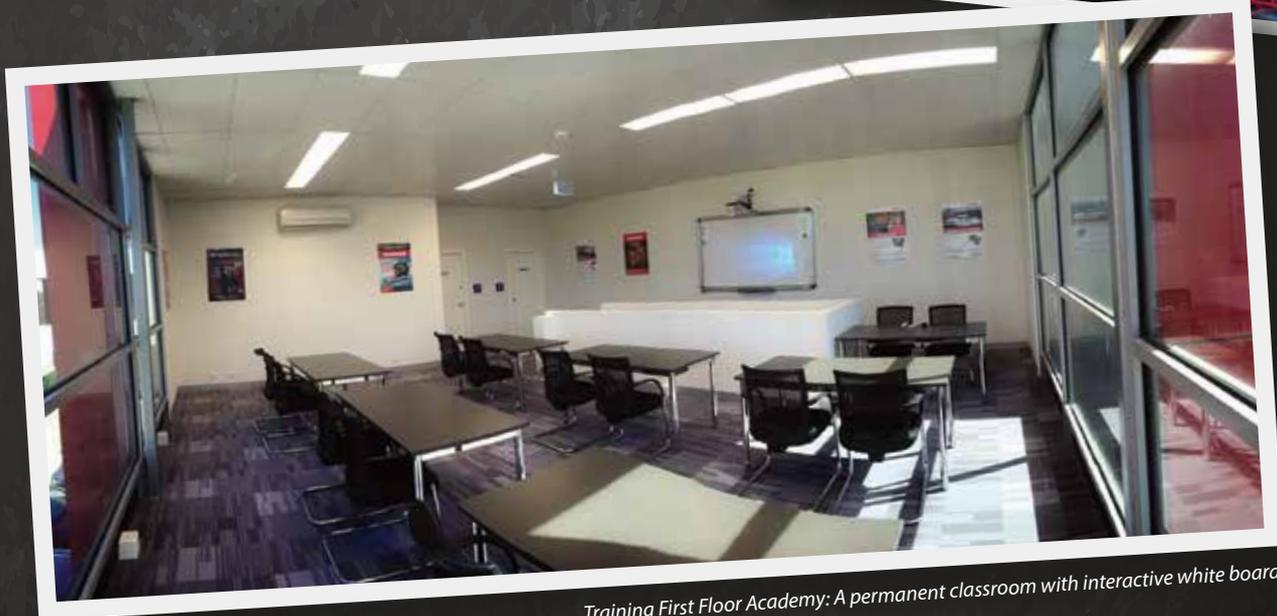
Jim Kibblewhite and Marine Training Course participants.



Practical Training session.



Training Academy Ground Floor: Access for up to 6AY (20t) size engine.



Training First Floor Academy: A permanent classroom with interactive white board.

NEW TIGER V

Powered Up for

Paradise

The first vessel of a fleet upgrade ordered recently by the South Sea Cruises cruise operator in Fiji is expected to provide multiple benefits to both local tourism and village connectivity alike.

The new design 26 metre One2Three fast ferry was built and delivered by Marine Engineering Consultants (MEC). MEC chose to power the craft with twin Yanmar 6AYM-WGT engines from Power Equipment Australia.

MEC's Managing Director Murray Owen is a seasoned boat builder who cut his teeth refitting and building super yachts. He takes the Tiger V build in his stride and is pleased to be delivering another ferry for South Sea Cruises from his Gold Coast factory base in coming months.

"Designing and building a boat from scratch is certainly more difficult (as opposed to a proven design like the One2Three fast catamaran)," Mr Owen said.

With around 30 tonnes of aluminium alone making up the hulls and structure of the Tiger V's three level design, proven plan or otherwise a boat builder needs to know their stuff.

"There is still plenty to take into account (with existing designs) however, you must pay attention to the detail," he explained.

Marine Engineering Consultants delivered South Sea Cruises their new vessel in July 2017.

With a seven day a week timetable and multiple daily departures servicing the Mamanuca Islands west of Nadi on Fiji (the

main island), Tiger V and its new Yanmar's will have their work cut out. The vessel it is superseding (Tiger IV) has been on the job for more than 10 years and is reported by local sources to have carried well in excess of a million passengers.

The twin 6 cylinder 20 litre displacement 911mhp (670kW) Yanmar's have given a 26 knot top speed and a solid 23 knot cruising stride for a ferry with impressive looks at any angle.

MEC's construction and powering of the vessel has allowed South Sea Cruises to add an extra daily departure to their timetable and Yanmar's renowned fuel burn efficiencies are expected to deliver significant economic benefits for its operators. The Tiger V boasts a 226-passenger carrying capacity and displaces over 70 tonnes fully loaded.

Cleaner running in pristine waters

Marine Engineering Consultant's build of the Tiger V is delivering more than just an upgraded ferry and resort transfer workhorse for South Sea Cruises however.

One2Three Naval Architect designers have configured the design as a "robust, low maintenance commuter ferry", its suitability for high speed use in environmentally sensitive areas is the beauty under the coat of this Tiger.

A big part of this suitability comes through the installation of Yanmar's 6AYM-WGT power plants – engines purpose-built for marine applications by a Japanese company that probably knows how to build marine engines

better than any other in the world today.

The 6AYM's do their job with Yanmar's philosophy of "Doing our bit for the World!" and that means providing enough power to push more than 70 tonnes through the water while leaving far less of an emissions or fuel consumption footprint than ever before.

The excellent torque-rise capabilities of the Yanmar's are what deliver the grunt needed for high load, medium distance running in high speed commercial use.

But techniques designed into these engines to meet IMO Tier 2 emission standards, including internal exhaust gas recirculation, proprietary fuel injection systems, patented combustion technology and low exhaust smoke generation, is what keeps that power acceptable in a pristine environment like the Mamanuca Islands.

Tiger V to add a great contribution

The Mamanuca and Yasawa Islands west of Nadi in Fiji are home to multiple island communities and resorts.

You will have probably seen pictures of these islands' crystal-clear waters and palm-covered, beachy atolls in a thousand brochures and online day dreams. Among other claims to fame, one of the islands (Monuriki) provided the backdrop for the 2000 film "Cast Away" starring Tom Hanks. Other islands not far away have also been used in the United States produced "Survivor" series.

Hollywood and day dreaming fantasies aside however, one of the great real-life joys on many Fijian islands is the authentic, "Fijian



The Tiger V – 26 metre One2Three design.



Impressive helm system.



Yanmar twin 6 cylinder 20 litre displacement 911 mhp (670kW).

family" experience enjoyed even on the most popular and high-volume resort islands. Locals make up the experience and the workforce on many of these islands.

As such, a ferry system like the one serviced by Tiger V is a vital link between these tourist destinations and local communities alike.

South Sea Cruises does transfers to 14 different resorts across 10 islands in the archipelago. The majority of these round trips are in the 30 to 40 nautical mile range, although runs to the Yasawa group see a more than 120 nautical mile trip for some of the cruise operator's boats.

Tiger V will service most of the shorter ferry transfers and South Sea Cruise's Chief Executive Officer Brad Rutherford was enthusiastic in his praise for the vessel on its arrival in Port Denarau, (the home marina for his operation's vessels).

As reported in Fiji's community newspaper The Jet earlier this year, Mr Rutherford said his team were very excited by the arrival of the Tiger V because it was "more efficient in terms of fuel burn" and had a much more modern design and equipment.

"It's going to add a great contribution to Fiji's tourism industry, particularly in the Mamanuca's where we operate on a daily basis," Mr Rutherford was reported saying.



Yanmar 6AYM-WGT.



Powers Deep Sea Divers Den Into The Future



The dive boat business in Cairns is a volume, quick turnaround operation which relies upon a high throughput of customers every day. With safety paramount, tight schedules and an eye to costs, the decision to power the latest launching, Reef Quest III, with Yanmar 6AY-WGT engines, is well founded.

Reef Quest is an award winning, high speed luxury dive boat operated by Deep Sea Divers Den. Designed by Paul Birgan of Sea Speed Design in Brisbane, this all alloy vessel was built in Thailand. The fit out is exceptionally high, with much of the interior componentry being manufactured in Australia. Cabinets, tables and the galley, for instance, are made from Australian silky oak timber.

This vessel is designed and built solely for divers to undertake a day trip to the reef. Typically, Reef Quest carries a full complement of 80 divers and snorkelers. Overall, the hull measures 26.0m and has a beam of 9.0m. Displacement all up is 60 tonnes.

A notable feature of Reef Quest is the full beam hydraulic dive platform. This lowers down, along the transom of the vessel, allowing divers the easiest access possible to enter the water.

Yanmar 6AY-WGT engines were specifically matched to the Reef Quest design, taking into account the weight of the catamaran hull, performance requirements and fuel consumption. The engines are coupled to Yanmar YXH240 transmissions with a 1.95:1 gear ratio.

The Yanmar engines installed in Reef Quest are identical to those being used to power the Sydney Harbour Supercat ferries. While the hull designs and performance criteria have some technical similarities, the common thread is the demand for 100% reliability and dependability, day after day.



Glen Bailey, skipper of the Reef Quest.



The Yanmar 6AY-WGT in its new home.

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.

A typical day for Reef Quest and skipper Glen Bailey commences with passenger loading

for an 8:30 am departure from Cairns Marina. After clearing Cairns and the defined channel, the run out to the Great Barrier Reef is around 35Nm across protected water.

Through the day Reef Quest mostly rides at anchor, although the vessel does relocate to alternative dive sites which are close by. The day concludes at 4:30 pm berthing at Cairns Marina where divers disembark and the crew clean and reprovision Reef Quest for departure the following morning.

Every day the Yanmar 6AY-WGT engines log between 4 to 5 hours of operating time. On the run out and back, the optimum cruise speed is 22 knots at 1800 rpm. Fuel consumption is just under 100 litres per engine per hour. At wide open throttle, the Yanmar engines power Reef Quest along at 26 knots lightship, at 1850 rpm.

"This is our first experience with Yanmar," said Glen Bailey, skipper of Reef Quest.

"The Yanmar 6AY-WGT engines are a great engine. They are also a reliable engine. They've given us no trouble at all. Their fuel efficiency is quite good and noise wise you can hardly hear them."

With over 2,000 hours logged with the Yanmar 6AY-WGT engines on board Reef Quest, the owners could not be happier. The mechanical fuel management system provides a comfort factor which is highly valued by the skipper and his crew.

Based on the success and very positive experience of the Yanmar marine diesel engines, the same Yanmar engines have been specified in the next boat currently being built for Deep Sea Divers Den. Being powered by Yanmar 6AY-WGT is an unequivocal vote of confidence in both the Yanmar brand and the 6AY-WGT model.



I love the marine diesel business and Power Equipment sells some of the best products in the market.



Marine sales engineer glad to be back at the helm for Power Equipment

Power Equipment's new marine sales engineer for Victoria, South Australia and Tasmania says he is looking forward to helping retail suppliers and boat manufacturers get the best out of their businesses.

Darren Bird is no stranger to Power Equipment. He worked for the company early in the new millennium and has now returned after more than a decade working for other marine diesel suppliers.



I am really pleased to once again be working for the market leader in the marine industry,

...Darren says.



Darren has 30 years of experience in the marine diesel business. He grew up in Melbourne and trained as a diesel mechanic.

His training and practical experience covers commissioning and repairing chassis, engines, drive shafts, hydraulics and industrial compressors.

He started his working life with Cummins Diesel in 1979 as an apprentice diesel mechanic and then in 1987 moved into engine sales. He worked for Power Equipment in a similar role, before leaving in 2003 to work for two other marine engine suppliers.

In the years from 2004-2009 he helped introduce common rail engines, electronic controls and unique propulsions systems to the Australian marine industry.

"I have also helped marine dealers expand the scope of the businesses from a focus on services to sales of engines and other marine equipment. One dealer in Tasmania in particular went from no engine sales to \$200,000 to \$400,000 per year," Darren says.

"The commercial boats – trawlers, cray boats, work boats, etc. – is the part of the marine industry I like best. I have assisted a lot of commercial boat owners in Victoria, Tasmania and South Australia repower their boats over the years.

As Marine Sales Engineer, Darren's role is to support Power Equipment's dealer network in the three states (VIC, SA and TAS) and to work closely with original equipment manufacturers (i.e. boat builders).

"My job is to ensure dealers and OEMs have all the knowledge they need to match Power Equipment products to their customers so that those customers get the best out of their investments.

"I provide dealers with all the information they need to thoroughly understand Power Equipment products. These include the latest

common rail diesel engines and electronic controls.

"I do the same with OEMs, and help them set up boat engine rooms with the right product in the right place."

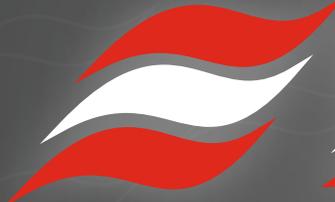
Darren says he is a good relationship builder. He has known most of dealers and customers in the industry for years and he believes they trust his integrity and his knowledge of the industry and leading brands.

"I returned to Power Equipment in October 2017. When the position came up, I snapped it up. I love the marine diesel business and Power Equipment sells some of the best products in the market."

He says Power Equipment's position in the industry is impressive. It sells 6000 marine and industrial engines each year across Australia.

John Deere industrial and marine engines have recently been added to the Power Equipment range, and Darren will oversee the distribution of John Deere marine engines in his territory.

"Power Equipment is the leading diesel engine provider in Australia. It has achieved that position through a lot of good work by great people. I look forward to being part of the team."

**Power
Equipment**[®]
Est. 1990

Power Equipment has been distributing marine and industrial diesel engines in Australia and New Zealand and the South Pacific for nearly 30 years.

Exclusive Distributor for these leading brands



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