

# Chantey

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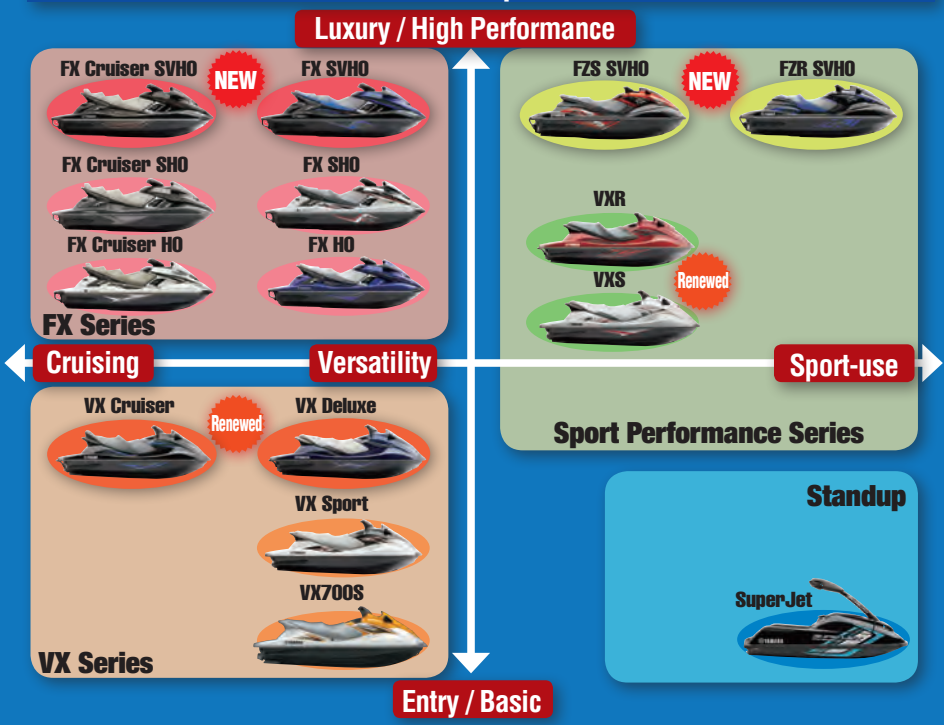
YAMAHA MOTOR CO., LTD., Marine Business Operations, 2500 Shingai, Iwata, Shizuoka 438-8501, Japan

*Chantey Special*  
**2014 WaveRunner Models**

# Launched with the newly developed "SVHO" engine Renewal for the VX Series

The Yamaha WaveRunner lineup is now stronger and more attractive than ever before. Their defining feature is the newly developed "Super Vortex High Output (SVHO)" engine, the latest evolution of Yamaha's SHO engine and generates even more power. Four new models mounting this engine have been added to the WaveRunner lineup. Also, all of the VX Series models popular as entry/basic offerings have been renewed and now feature hulls made with the new lightweight material "NanoXcel" and other model-specific benefits like a larger fuel tank capacity.

### 2014 Lineup Chart



### FX Series

**FX Cruiser SVHO (New), FX SVHO (New), FX Cruiser SHO, FX SHO, FX Cruiser HO, FX HO**

This series has a winning combination of a NanoXcel body that achieves good stability at higher speeds and the industry's largest displacement engine (1.8 L) in an ergonomically designed package to ensure comfortable cruising. For 2014, new models mounting the newly developed SVHO engine are added to the lineup.

### Sport Performance Series

**FZS SVHO (New), FZR SVHO (New), VXS, VXR**

The FZS/FZR models now mount the new 1.8-liter SVHO engine in hulls designed for optimum running performance. This combination brings even more power and enjoyment to sporty riding. The VXR/VXS models take the light and agile NanoXcel hull of the VX Series and pairs it with a naturally aspirated 1.8-liter engine. Other improvements include an increased fuel tank capacity.

### VX Series

**(VX Cruiser, VX Deluxe, VX Sport, VX700S)**

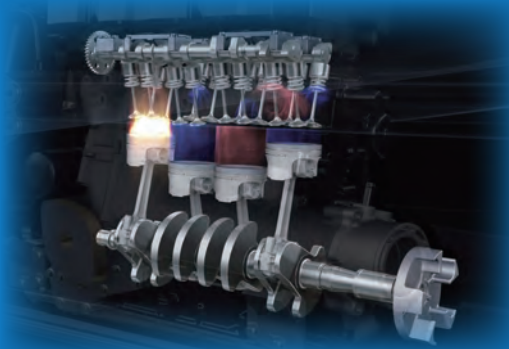
The VX Cruiser, VX Deluxe and VX Sport have a 1,052cc 4-stroke engine and a light and agile body that provide exhilarating cornering performance and a spirited, enjoyable ride. The 2014 VX Cruiser and VX Deluxe models feature new hulls made of the lightweight material NanoXcel. The VX700S is the industry's only available 2-stroke runabout model. Use of the VAR-MAX construction method enables hull designs that further hone the excellent agility, cornering performance and acceleration characteristics of these models.

### SuperJet

This is the industry's only stand-up personal watercraft powered by a 701cc 2-stroke engine. The unique hull shape brings the rider a pure sporty riding experience. The 2014 model features the first new graphics in several years.

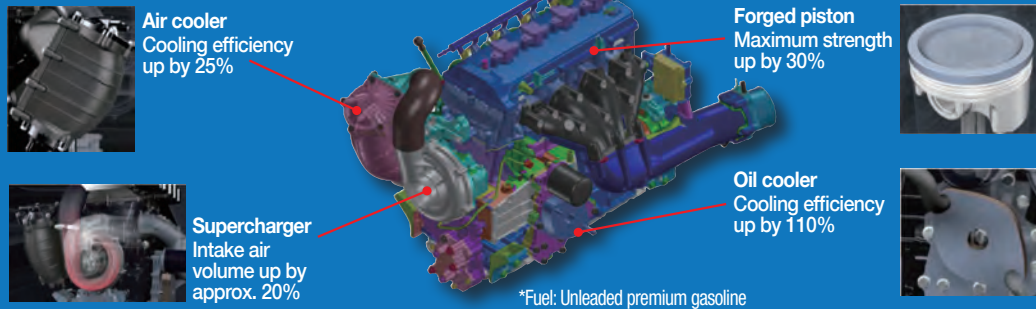
# The new Super Vortex High Output engine takes watercraft to a higher level

Yamaha's newly developed Super Vortex High Output (SVHO) engine achieves an approximately 20% increase in output compared to the current SHO engine by upgrading the efficiency of the supercharger, adopting a new compact, high-performance air cooler (intercooler), adding a high-performance oil cooler with a new structure that increases cooling efficiency and more. The newly developed engine is adopted on Yamaha's FX Cruiser and FX flagship models and some sport-performance models such as the FZS and FZR, and boosts the performance of each model dramatically. The jet pump also adopts a new impeller,

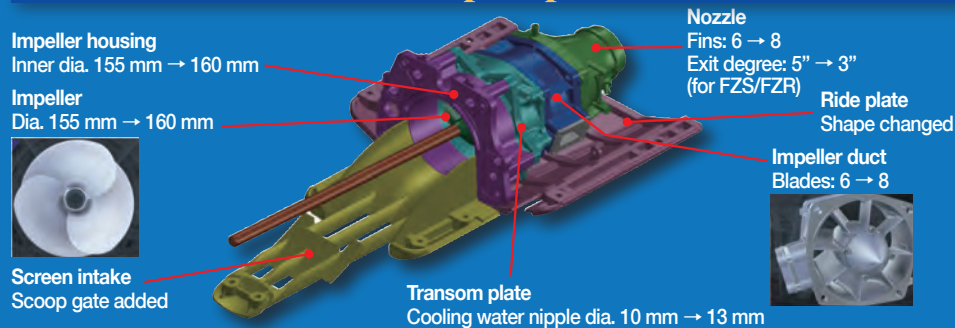


a revised nozzle design and other detail improvements that all combine to provide more enjoyable cruising performance and a higher level of handling performance for an overall sportier ride.

## Engine Improvements



## Jet Pump Improvements



## Main Features of the FX Cruiser SVHO and FX SVHO

- The newly developed 1,812cc SVHO engine with a 183.9 kW (250 hp) rating is mounted in a long body made of the super lightweight material NanoXcel. The excellent matching of the hull bottom design with its outside chine and the sponson design provides excellent straight-line stability and cornering performance.
- The FX Cruiser SVHO has a cruiser seat with hip support that seats three persons comfortably, while the FX SVHO adopts a two-tone seat.
- These models have features that increase comfort and make operation easier and more enjoyable, including Cruise Assist that enables steady cruising speed at a set rpm level with no throttle adjustments, No Wake Mode to support stable low-speed running and a neutral gear position that is useful when docking or departing.
- Attention to ergonomic functionality is seen in the deep, easy-to-use flat reboarding step, the operability of the instruments, the easy-access positioning of the glove box and more. Other features like the generous storage space and addition of a convenient tow hook for recreation such as wakeboarding increase the functionality and comfort of these luxury cruiser models.



## Main Features of the FZS SVHO and FZR SVHO

- The super lightweight material NanoXcel is used for the body. The newly developed SVHO engine is mounted in a hull featuring a rounded keel design that provides excellent speed and acceleration performance along with light and agile handling.
- The telescopic steering design adopted on these models makes the handlebar adjustable to three different positions, each at a 50 mm pitch. This enables riders to choose a handlebar height to fit their preferred riding position, from a stand-up position to the forward-inclined riding postures used in low-lean cornering.
- Dual, easy-to-read, analog gauges with a sporty image are adopted. Also, Yamaha Security Mode, a Low-RPM Mode function to enable a lower setting for top rpm limit, a large overall storage capacity, a watertight storage space with screw-on cap, a large glove box with cup holders and other equipment gives these models excellent utility.



# Making holes with a drill

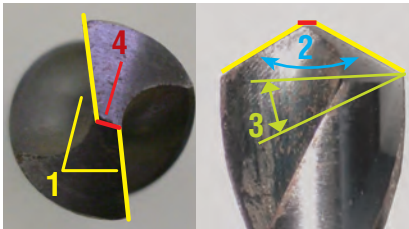
In this edition of our “Advice from a veteran mechanic” series, I will discuss the job of using a drill bit to make a cylindrical hole. In our last edition, we talked about how to use a digital circuit tester as a basic service tool. This time, I want to talk about another basic tool, the drill and some things that are useful to know about it. Drills are commonly used tools, so there are frequent opportunities to use them and you probably have a variety of knowledge about them already. So, I hope you will read this as a form of review of the important points of drill use.

\*The drill we refer to in use here is called a twist drill bit. The image in mind here is for drilling holes in iron or steel materials.

## The drill head and its terminology

A drill bit is a tool for drilling cylindrical holes and it has cutting edges at the tip and helical flutes for sharpening the edges and channeling the shavings (swarf) it cuts out of the hole. There are different types of drill bits for use depending on the various types of work materials to drill, and the objectives of the drilling work.

Above are photos of the tip of a drill bit for steel. Let’s learn the names and qualities of the parts of the head necessary for drilling a hole and for the re-sharpening (regrinding) of the cutting edges.



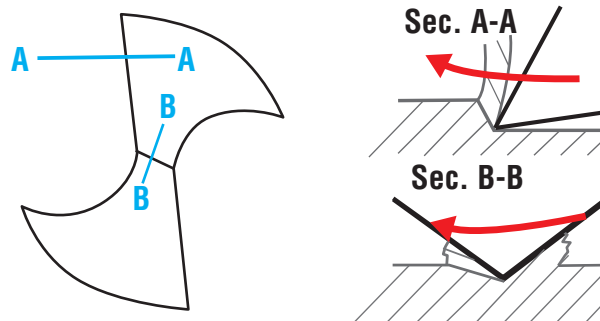
- 1) Cutting edge: The closer to the tip, the slower the revolving speed is.
- 2) Tip angle: The larger the tip angle, the greater the cutting resistance.
- 3) Clearance angle: The smaller the rake angle, the greater the heat accumulation, but larger rake angles decrease the bit’s strength.
- 4) Chisel edge: It has no cutting edge and revolving speed is close to zero.

## What happens at the drill head during drilling

At the right are diagrams showing the edges at the tip of the drill and what happens there during the drilling process. The “A-A” area of the cutting edge shaves away pieces of the work material

being drilled. The “B-B” area at the chisel edge has a shallow (dull) angle that grinds into the work material being drilled.

A drill is able to open a hole because of the capability of the cutting edge “A-A” to shave through the material smoothly. In contrast, the chisel edge “B-B” merely grinds against the surface of the material being drilled, which means that a larger diameter drill bit can’t open a hole in the material. Even if it is able to open a hole, the spinning bit will not stay centered at one point and resulting movement of the center point will produce a larger diameter hole that is not cylindrical.



## Think about how this problem can be solved

There are two methods for solving the problem that the chisel edge can’t open a hole in the work material.

- (a) Find a way to alter the work material so the chisel edge doesn’t have to grind against it.

→ A small diameter drill bit is used to open a hole slightly larger than the chisel edge in advance of drilling with the

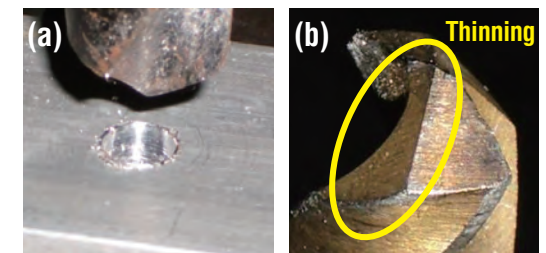
larger bit.

- (b) Use a drill bit without a chisel edge.

→ A drill bit with thinning is used.

The procedure we use to drill a hole of successively larger size is the method (a) shown here. It is a method that will open holes effectively, but in fact the two cutting edges of the drill bit do not shave through the metal in the same way and there will inevitably be some variance in the center axis during the drilling. For these reasons, the drilled hole will always be slightly larger in diameter than the drill bit and it will not be perfectly cylindrical.

In the end, you can’t expect to get a high level of precision from a hole made by a drill. Therefore, in our work it is important to know from the start that when we use a drill, the hole we make will never be in exactly the right position and never of exactly the correct diameter.





When asked what fish you dream of catching most, I'm sure there are many different answers, but for me, the giant trevally (commonly known as the "GT") is



one fish that I really wanted to catch. The GT is the world's largest member of the genus *Caranx* (part of the family including horse mackerel, etc.) and it inhabits the tropical and subtropical waters of the Indo-Pacific oceans. It is a large, carnivorous fish said to grow to a body length of 180 cm and a weight of 80 kg—a target worthy of its title as one of the strongest fighters that is caught by lure casting. The fact that it can be caught with poppers and other types of topwater plugs is undeniably one of its biggest appeals. Large lures that range from a lighter 120 grams to giant ones as heavy as 200 grams are cast and reeled in with a jigging action to attract the GT. Few angling moments can match the excitement of seeing a GT of several tens of kilograms breaking the surface as it attacks the lure. What's more, the GT inhabits shallow coastal waters full of natural obstacles such as rocks or coral reefs, which means that once the fish is hooked, the angler has to keep a strong drag on the line and fight the violent pulls of the giant fish to keep it from cutting the line. The size of the fish and the tackle needed to catch it makes for an exciting angling challenge.

My attempt to catch a GT started with an early morning departure from the marina on a day at the beginning of October. My goal was to land a GT of over 20 kg. That is



## Sport Angler Kurt on Fishing Trips to Distant Waters In search of the yet-unseen big catch

Certainly anyone who loves angling has dreamed of taking trips to distant destinations in quest of a giant "monster" game fish. For this issue, I made just such a trip, traveling to Okinawa at the southern end of the Japanese archipelago to try and catch one of my dream fish.



the average size for GTs caught in the waters of Okinawa, but for me it would be one of the largest fish I had ever targeted. Our boat this time was the Yamaha "YF-23" fishing boat marketed in Japan, and it was powered by an "F115A" outboard motor. Because there was a typhoon approaching at the time, the waters were a bit rough, but that was no problem with the reliable Yamaha boat and engine, so we moved ahead smoothly and the ride was thoroughly enjoyable. As a warm-up, we started



by making our way around fishing points not far from port. At that first spot, there was some response to the bait but no strikes, so we moved on to the next spot. There, we had little response, so we headed farther out to the next fishing point.

By the time we arrived at this third spot, I was finally used to the weight of the heavy-duty fishing tackle. It was a spot with a good tidal flow through a coral reef off the end of a small island and it was the main spot for serious fishing on this day's outing. Our hopes were high at this point. I set up my rod with a 120-gram popper and made a cast at the point. It was the moment of my third jig action on that first cast that the strike came. I caught a glimpse of a giant shadow nearing the water surface and in the next instant my rod was bent to the limit and the air was filled with the whine of the drag on my reel. I held my breath as I held on against the powerful pull and managed to keep the fish from diving for the reef. From there I reeled it in some before having to let it run again. I was nearing the limits of my physical endurance when I was finally able to land this fish, and the only way I could describe its size was indeed, giant. With a length of 132 cm and a weight of 38 kg, it far exceeded the target I was hoping for on this trip!

What a successful long-distance outing! It was an experience I'm sure I will never forget in my life as an angler. I'm grateful to the fishing guide, the people at the marina and the Yamaha marine products that helped make my dream trip a success.

# News Round-up

Activities from distributors around the world, and more

## Working toward 3S campaigns with creative ideas

Over the four days from October 28 to 31, 2013, the Yamaha distributor in Qatar, Al Badi Trading & Contracting Co., Ltd. held 3S (Sales, Service, Spare parts) campaigns at five locations around the country, aimed primarily at customers in the commercial-use outboard motor market where the current trend is toward larger-horsepower 4-stroke models.

Distributors in the Middle East are currently working to upgrade their “service campaigns” to “3S campaigns,” including new and innovative content through the combined efforts of their Sales, Service and Spare Parts departments to differentiate the Yamaha brand from the competition in a changing and more competitive market environment that is shifting to larger-horsepower 4-stroke models.

Among the new contents are displays and demonstrations of the water separator, displays of before-and-after photographs showing the

effectiveness of chemical washes in removing calcium buildup in the water jacket passages of 4-stroke engines, gathering data from the 4-stroke engine Yamaha Diagnostic System (YDIS), conducting market surveys concerning makers, horsepower ranges, 2-stroke vs. 4-stroke, etc., and selling new engines at special prices during the campaigns.

With the three departments participating together in the 3S campaigns, they were able to offer services such as giving explanations about the importance of using Genuine parts and getting regular maintenance, arrangements for supply and sales of parts and sales of new products, etc., all in one campaign day. Naturally, the customers were very satisfied to have all of these services available.

On the last day of the campaign, the staff from the three departments gathered for a wrap-up meeting and pledged to further raise the quality and contents of their 3S campaigns next year and help boost Yamaha’s market position over a medium-term period.



## Yamaha Powers the Tiwi Bombers AFL Club

Yamaha Motor Australia (YMA) and the Yamaha dealership in Darwin, Australia, In & Outboard Marine, are sponsoring the Tiwi Bombers Football Club. The club represents the communities of the Tiwi Islands, located to the north of Darwin.

The people of the remote islands have faced their share of challenges. Sadly, in 2006 the islands had one of the highest rates of youth suicide in Australia and the world. In their search for a way to address this urgent issue, the community turned to the sport of Australian Rules Football (AFL) to bring the people of the islands together. AFL is hugely popular on the Tiwi Islands, as it is across the whole of Australia. The Tiwi Bombers bring the best players in the community together to represent the islands against teams from Darwin and other parts of Australia. Since the inception of the team in 2006, as well as a range of other initiatives, the social issues that were affecting the islands have dramatically improved.

Many of the Tiwi Bombers players live on different islands, and due to the distance between towns on the islands, the team was not able to train together



during the week. To solve this problem, the team wanted a boat, which they got through a kind donation. YMA and In & Outboard Marine then stepped in with a sponsorship package in the form of a brand new “F60F” outboard to power the team’s new boat. This now enables them to train together twice a week and reduce travel costs on game days.

The Tiwi Bombers have had great success, winning a premiership in the 2012 season, bringing enormous pride and hope for the future throughout the entire community. YMA is proud to sponsor the Tiwi Bombers and support the Tiwi community in their quest to improve the lives of young people on the islands.

*From Grant Binskin, Yamaha Motor Australia Pty Limited (YMA)*

### Editor's Note



Thank you for your cooperation with the Chantey survey. Using your feedback, we will work to make Chantey a marketing support tool that supplies you with even better information.

**YAMAHA OUTBOARDS WEB SITE** <http://global.yamaha-motor.com/business/outboards/index.html>

**WAVERUNNER FAN SITE** <http://global.yamaha-motor.com/business/waverunner/>

**Yamaha Outboards Channel on YouTube**

View waterside scenes and scenes of Yamaha outboards in use around the world

**Yamaha Outboards Channel** <http://www.youtube.com/user/Yamahaoutboardmotors>