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maha outboard motor cumulative production tops the 10 million mark!

In April 2013, Yamaha Motor's outboard motor business achieved a historic milestone when cumulative production reached the 10 million unit mark. It has been 53 years since the company launched its first outboard motor, the "P-7" (7 hp) in July 1960. Since then, Yamaha has gone on to supply its growing line of outboards to markets in over 180 countries and territories worldwide with the aim of becoming the industry's leading company and contributing to a more fulfilling marine life for people around the world.

Today's Yamaha outboard motor lineup is comprised of models ranging from 2 hp up to 350 hp, all designed to share the same basic Yamaha ideals of light weight. compactness, reliability and durability. What's more, the comprehensive lineup features fuel-efficient, environmentally friendly 4-stroke models as well as highly durable commercial-use Enduro models, with both types seeing use in numerous ways in markets around the world.

It goes without saying that Yamaha outboard motors

would never have reached this 10 million mark in

production without the know-how gained from taking on the tough conditions of commercial-use markets in the developing nations and the strength of Yamaha Motor's product development and engineering capabilities. But, we must not forget the equally important part played by the service, spare parts supply and other systems built with the cooperation of our distributors and dealerships and the consistently high levels of customer satisfaction they have won.

	(in millions) Yamaha Motor Outboard Motor History					———Cumulative production
	1960s	1970s	1980s	1990s	2000s	2010s
10		BAAA A	The 1964 Outboard Line-up		Release of the flagship model "F350A" (2007)	10 million units reached (2013)
9					Fukuroi South Factory starts operations (2008)	■Marine business' 50 th anniversary (2010)
8	↓ P-7		▲ Chicago Boat Show	■Development of the corrosion-resistant aluminum alloy "YDC-30" (1993)		
7		▲ Enduro model	Entry into the U.S. market (1983)	■CDI implemented in all models (1996)		SYAMAHA VIII
5			Release of the first 4-stroke Yamaha outboard "F9.9A" (1985)		YANAHA	0
j 1	▲ Emerging markets	Start of servicing activities in developing countries (1971)	Release of the electric motor- powered outboard "M-15" (1988)			E
3	■Release of the 1 st Yamaha outboard "P-7" (1960)	Release of the Enduro model for emerging markets (1974)				▲ The "F200F" boasts the lightest weight in its class
Ĭ					▲ F350A	
2	■Release of the "P-3," known as "Yamaha's yellow hat" (1961)			◆ F9.9A		▲ "Helm Master"
1						outboard control system

Ceremony at the Fukuroi South Factory

On April 4, 2013, Yamaha Motor held a ceremony at the Fukuroi South Factory to celebrate the achievement of 10 million units in cumulative outboard motor production. About 200 people, including factory staff and representatives of affiliated companies and suppliers, were on hand for the ceremony, with the tape cutting done by YMC's Senior Managing Executive Officer Takaaki Kimura and other dignitaries. In his address, Mr. Kimura said, "We are the first maker in the industry to achieve 10 million units in production. However, this is nothing more than another milestone along the way as we continue to pursue the manufacture of more compact and lightweight outboard motors." The ceremony also included commemorative tree planting on the factory grounds.



▲ Fukuroi South Factory



Forward to the next 10 million units

Taking on new challenges with pioneering spirit



Tatsumi 'Terry' Okawa Executive General Manager, Marine Engine Business Unit, Marine Business Operations, YMC

This April, we reached a landmark 10 million units in cumulative outboard motor production. After half a century, and always with the support of countless customers around the world, Yamaha has arrived at this historic milestone. It is an achievement

made possible by generations of Yamaha employees devoted to building ever-better products and pioneering new markets, and by the distributors and dealers around the world who have worked to promote sales as members of the Yamaha family. I wish to express our gratitude for these great efforts. However, this is still only one point along a road that stretches on into the future. In that sense, it represents a new starting point toward further growth in Yamaha Motor's outboard motor business; as we pursue true Yamaha-ness, the development of new products and cost reduction by breaking

away from old methods and thinking outside the box.

Since the first Yamaha outboard was launched in 1960, the people in all of the divisions, from product development and manufacture to marketing and service, have all approached their work with an ambitious pioneering spirit. I want us to carry on this Yamaha DNA and use our strength to build a bigger and better future.

One of the issues for us to tackle now is finding ways to stimulate the markets in the emerging nations. In the commercial-use market centered primarily in fishery, we have a dominant market share, but I believe that we shouldn't be satisfied with that. I want to see us push ahead with new initiatives. In the pleasure-use category, I want all of us to join together in the search for new ways of doing business that create a culture of recreational boating in each region.

Doing this depends not only on our actions at Yamaha but also the activities of the distributors and dealers that have a solid presence for their outboard motor business in their respective markets. I hope you will take every opportunity to make suggestions to Yamaha that will stimulate us and our entire business.

I would like to ask all of you to work together with us as we strive forward to 10 million more Yamaha outboard motors.

The passion and innovation that comes from the factory



Yasuyuki Matsushita

General Manager, Marine Engine Manufacturing Division, Marine Business Operations, YMC

On this occasion, we celebrate the manufacture of the 10-millionth Yamaha outboard motor. As a member of the Manufacturing Division, where we take the new models planned and developed in the other divisions and turn them into products, I strongly believe this achievement is due to not only the generations of people in our division who have laid down the rules that guide our work based on their experience, but also the

support of the many distributors and dealers who sell our products and the customers that buy them.

Since the marketing of the first Yamaha outboard motor in 1960, Yamaha outboards have continued to evolve and improve thanks to a great variety of technological innovations. Although there has not been any truly dramatic change in the basic structure of the outboard with its engine driving a shaft to turn the propeller, we have continued to work with a constant awareness of the need for innovation and to keep advancing the functions we perform in manufacturing. In the past, we were the newcomers working to catch up to the top outboard makers that preceded us with our *Monozukuri* (engineering, manufacturing and marketing). But now, we are the top

maker. I believe that the role of a top maker is to respond with an open mind with regard to tasks like pursuing the highest levels of quality as well as cost reduction in every part of the manufacturing process.

Furthermore, those of us involved in the workplaces where products are created, are constantly thinking about and taking action based on what the position and role of the factory is in Yamaha's outboard motor business and in what way we all should approach our jobs. Our position is one where we take pride in the products we manufacture and work to win recognition for their quality. We will continue working under our motto of "Yamaha *Monozukuri* for No. 1 in Reliability" and strive to first be people who love and want to grow together with

Yamaha, and then share this pride and love with the distributors, dealers and customers through our products.

In recent years, there has been an increasing number of opportunities for people visiting Japan on dealer trips and such to tour our factory. We want this to be a place that will make these visitors feel that they want to handle the products made in this factory and feel confident that their customers will surely be pleased with the products made here. In that sense, our factory is a showroom in itself. At the same time, we want these people to communicate to us the things users tell them about what they expect from the factory and our *Monozukuri*. Hearing those honest, direct comments becomes a source of new stimulation for our "Spirit of Challenge."

As we begin working toward the next 10 million Yamaha outboard motors, we will push forward with evolving our *Monozukuri*.



10 million units built on solid reliability Views from the factory

In the five decades that have seen them produce 10 million outboard motors, the history of the Yamaha Motor factories has been one of continuous efforts to spur integration, to improve facilities and equipment and to increase efficiency. Today, Yamaha outboards are manufactured in four factories in the three countries of France, Brazil and Japan. In Japan, where about 86% of total production takes place, the factory at Yamaha Kumamoto Products Co., Ltd. in Kumamoto Prefecture handles production of 2-stroke outboards of 70 hp and under, and 4-stroke, High Thrust spec models from 9.9 hp to 25 hp. The newest, the Fukuroi South Factory, handles production of 2-stroke models of 75 hp and over and the 4-stroke lineup of 30 hp and over.



The Fukuroi South Factory (Shizuoka Prefecture, Japan)

The concept of the Fukuroi South Factory is "SEA"

The Fukuroi South Factory began operation in May 2008 as a new production base for mid- and large-class models. The factory has a concept named "SEA." The three letters stand for a "Simple" production system, which can be considered the starting point for all *Monozukuri*, a focus on "Ecology" that makes the factory people-friendly and environment-friendly and "A-class" reliability that creates new brand value for Yamaha outboard motors.

The production lines adopt what is called the "component manufacturing method." It is a method in which each major part, including the engine, drive unit and lower unit, is separately assembled and painted to coincide with their final assembly into the finished product. This helps increase work efficiency and enables quicker supply to the market.

The outboard motors produced at the Fukuroi South Factory are, in a word,

mid- and large-class models, but in fact the specs of the same horsepower models differ depending on their region of destination and expected usage. Although the ideal is one of a "Simple" production system, this includes numerous processes aimed at thorough improvement of reliability, such as steps to prevent faulty parts from entering the assembly process,



All Yamaha outboard motors undergo an inspection after completion

inspections of each assembled major component and culminating in a final running test of the finished product.

Furthermore, personnel training programs are a focal point and up to 29 training sessions are held a year (in 2012) as another means to ensure improved reliability in the products that leave the factory.



The final assembly process. Here components put together in the sub-assembly stages are assembled together precisely into the numerous model specifications



Members of the Manufacturing Department at Fukuroi South Factory involved in the daily work of ensuring the reliability of Yamaha outboard motors gave comments about the future they aim to realize.



Toshiyuki Yamashita (left)

Manufacturing Technology Department Duties: Quality control in assembly processes

As someone involved in preparations for manufacturing, my job is mainly to work out and implement the most efficient production processes from the standpoint of QCD as the specifications for a new model are decided. I want to continue finding means to create greater added value so that Yamaha *Monozukuri* continues delivering products that customers love.

Shingo Kimura (center)

Manufacturing Department 11, B2 Section Duties: Assembly on a rigging line

I just returned the other day from a business trip overseas to study actual market conditions. The trip renewed my awareness that the reliability of even high quality products depends on the people involved in local after-sales service, and it made me grateful for their work more than ever. At our factory we are going to be working on cost reduction and more, but I am determined to never compromise on quality and to continue working to win more people's trust in Yamaha.

Koichiro Nakayama (right)

Production Planning Department Duties: Manufacturing-related planning of SCM, etc.

There was a period when outboard manufacturing was done by a separate company, Sanshin Industries Co., Ltd. Some of the unique corporate culture from that period remains, and it is culture that links to Yamaha Motor's "Spirit of Challenge" and the firm dedication to reliability in Yamaha outboard motors. Moving forward, I want to make sure we continue to work with the users and that our dedication to the ideals behind each Yamaha outboard motor never wavers.

One-point Service Advice

SSTs for safer work practices – Flywheel stopper

In this edition of our "Advice from a veteran mechanic" series, I want to talk about "SSTs for safer work practices."

In the past, the term SST (Special Service Tool) was used to refer to tools designed to perform specialized work that can't be done with regular tools. But lately, Yamaha also uses the SST designation for tools that are designed to perform tasks with greater safety and work efficiency. In product maintenance today, we are expected to perform our tasks "properly and with precision," with "speed and low cost," with "safety and ease," while being "environmentally friendly." Conventional SSTs met the first requirement of performing tasks properly and with precision, but they didn't meet the others for speed and safety. However, new types of SSTs that also satisfy these two other needs are being developed and offered today, so I want to talk about them as well as the background that led to their development.

This time I will talk about "SSTs for safe work practices" using a flywheel stopper as an example.

Analyzing our working methods from a "safety" point of view

The flywheel stoppers that we discuss this time are tools used to hold the flywheel firmly in place when tightening or loosening the flywheel nut and bolts. These are tools that are used to mesh the flywheel's ring gear to a portion of

the starter motor so the ring gear (hence the flywheel) is firmly fixed in place like in pictures A and B.

The tool for doing this before was a flywheel holder. As shown in pictures C and D, when using a conventional flywheel holder, the left hand held the flywheel holder (SST) while strength was applied to the wrench with the right hand. This meant that the left hand couldn't be used to hold the wrench firmly on the nut. On a smaller model with a smaller tightening torque requirement, this method is sufficient, but with a mid- to large-size engine with tightening torque requirements of more than 200 N·m, there is greater danger of the tool coming off the nut, resulting in a possible fall or other injury to the mechanic.

With a flywheel stopper however, there is no need to use one hand to keep the flywheel from moving. As a result, the free hand can be used to hold the wrench head firmly on the nut for a safer operation as shown in pictures E and F.













Learning to sense when a method needs improving

The work environment shown in the photos is in a workshop. Here, the mechanic can take a firm, stable stance when working, but when we actually perform maintenance work, the outboard is most often still mounted on a boat. That means the mechanic has to perform this task while standing in the boat's motor well with a much lower degree of stability.

Once you actually try working with the new method that uses the SST flywheel stopper, you will see how much easier the operation is compared to the previous method. Before noticing any difference in the danger involved, you will surely feel how much more difficult the conventional operation was. A job that feels difficult to perform means the method employed is not a good one, and you should have some feeling that it is lacking in work efficiency or safety.

When you have that feeling, it is a sign that you need to devise changes and improve your working method. My first bit of advice for changing or improving your methods is to watch other mechanics work. If they are using a method different from yours, give it a try. If they are using the same method, I suggest that you ask them if they feel the same uneasiness about it as you do. If they also feel uneasy, that is a good indication that you need to change or improve the method. Changing your current working habits is a route to better methods. The important thing is to have a sense of when a method should be changed. This is a sensitivity that you can acquire through experience so never be hesitant to try and experience new things. It's one more way to becoming a better service technician.

Dr. Sugimoto Chantey Editorial Room

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This time, I want to introduce what we call the *ukifukasetsuri* (float or bobber drift) angling method for targeting largescale blackfish in rocky shore areas. One of the appeals of fishing along rocky shore waters is the variety of fish that can be caught, and in Japan, the most popular fish anglers target is the largescale blackfish. The fishing gear we use is a long, thin pole about five meters in length mounting a specialized spinning reel fitted with a braking lever. It is a unique Japanese angling method that uses krill as bait, both on the hook and as attractant in the water, in a hook and line setup that looks natural as it drifts on the water. It is also a method that requires a good amount of technique and a sensitive touch.

Once hooked, the largescale blackfish instinctively beelines to lodge itself in the crevices in the nearby rocks. In contrast to the sensitive touch needed in this type of angling, one of the things that makes this method of fishing enjoyable is halting the strong pull of the fish and working to keep it out in the open water until you can reel it in.

Fukase-tsuri is a type of angling where the hook and line is allowed to drift with the current. It can be done in a variety of ways; from more casual fishing off breakwaters, jetties, piers, or natural rock outcroppings along the shore that you can walk out to, to more serious ways like getting a hired boat to ferry you out to offshore outcroppings or points that can't be reached easily from land. However, from a safety standpoint, using a hired boat, known as fisherman ferries in Japan, is probably the best way to fish rocky shorelines. In Japan, this type of fishing ferry boat that takes anglers

Sport Angler Kurt on **Shore fishing in Japan**

Anglers around the world agree that Japanese fishing gear is among the best and is known for its high precision and performance. The fishing techniques they are used for are also of a very high level. As for myself, when I was stationed in the United States, I had brought over my own Japanese fishing gear that isn't available there, and found that I could fish very well with them using Japanese angling methods. In my coming articles, I would like to introduce some of those methods little by little, regardless of whether they involve boats or not.



out to shore fishing spots is basically a commercial fishing boat with a diesel engine. Most are outfitted with old tires and the like as boat fenders to protect the bow should it hit the rock outcroppings. You can see boats all over the world using tires for fenders in this way.

Since anglers have a tendency to want to fish from points that can't be reached

easily on foot and where other people can't get to, and considering that fishing from the shore has an entirely different appeal from fishing from a boat, this fisherman ferry system is truly an attractive one for anglers.



Size of largescale blackfish is measured not by weight but by the fish's length. If you are an angler who likes going after "the big one" (a large or trophy-size fish), one of over 40 cm is considered a big catch, while one of 50 cm or more is trophy size, and there are occasionally "monster" fish of over 60 cm. The fishing season for largescale blackfish is year-round, but the biggest ones are usually caught in winter. As such, I've often been fishing for my big one out in the freezing cold every year.

Although there are many anglers that like to go after big largescale blackfish rather than participating in tournaments, tournaments sponsored by the fishing gear manufacturers are now being held. I recently started competing in these tournaments. Generally, they are competed on the basis of weight, with the prizes going to the anglers with the highest total weight of their ten biggest fish caught. I was lucky enough to finish 3rd in my first qualifying tournament and I plan

to enter the finalist tournament this autumn! My work keeps me very busy so I won't know until the time comes whether I will be able to compete or not, but if I do, I will let you know the results in a later edition of this column.

News Round Up

Activities from distributors around the world, and more

Winners of YMA (Australia) Marine Technician GP Visit Japan

The winners of Yamaha Motor Australia Pty Limited (YMA)'s Marine Technician GP competition, Mr. Ryan Zell from Yatala Yamaha in Queensland (2011) and Mr. Michael Finlay from In & Outboard Marine in Northern Territory (2012), won a trip to Yamaha Motor in Japan as part of their GP wins. The two were welcomed at the Marine Business Unit's offices where they received commemorative gifts, went on tours of the Communication Plaza and the Fukuroi South Factory as well as visiting famous sites in the city of Kyoto. Being two of Oceania's top outboard service technicians, the two winners showed particular interest in the assembly process behind Yamaha's outboard motors while touring the factory. The trip also gave the two greater inspiration and motivation to further polish their award-winning skills. "The visit to Japan has changed the whole way I look after my service customers," said Finlay. "The way the trains run in Japan to the minute has made me view delivery time as a major goal for my service department customers." "With the GP win under my belt, this has opened the doors to further my customer service and after-sales service care," commented Zell. "From my trip to Japan, I have come to understand that it is very important to have a service department that is not good, but great."



IMEMSA and IMEMSA Dealer Trip



From April I to 5, 2013, representatives from IMEMSA dealerships in Mexico and local distributor Industria Mexicana de Equipo Marino, S.A. de C.V. (IMEMSA) visited Japan on a dealer trip, touring the Global Distribution Center in



Fukuroi, the Communication Plaza in Iwata as well as the Fukuroi South Factory. The thirty representatives reaffirmed Yamaha's dedication to quality, reliability and durability while visiting the various facilities. President Hiroyuki Yanagi and Senior Managing Executive Officer Takaaki Kimura welcomed the party to Japan, and commemorative plaques were presented to the dealers and IMEMSA by Mr. Yanagi. In return, IMEMSA's President Jefferson Fuller presented President Yanagi with a silver Mexican flask. Culminating with a trip to Japan's old capital of Kyoto, the representatives were able to enjoy a taste of Japanese culture as well as see Yamaha Motor's Monozukuri firsthand.

Yamaha Exhibits at 18th China (Shanghai) International Boat Show



From April 11 to 14, 2013, the 18th China (Shanghai) International Boat Show was held at the Shanghai World Exhibition & Convention Center, with exhibits from 450 companies attracting almost 35,000 visitors to the show. The Yamaha Motor booth was again among the largest at the venue and showcased Yamaha as a comprehensive marine product maker, displaying an extensive lineup of products that included cruisers, personal

watercraft and outboard motors. The 242 Limited S Sport Boat garnered much attention for its affordable price and high performance and Yamaha personal watercraft were also a focal point of visitor attention, particularly with many visitors and their children taking the opportunity to try sitting on one. Lastly, Yamaha took home the "Most Innovative Marine Company Award" for its Helm Master outboard motor control system. Yamaha will continue its efforts to expand its boat business scale and brand and market presence in China and other parts of East Asia going forward.





Editor's Note

Having reached the incredible milestone of 10 million outboard motors in cumulative production, all of us here at Yamaha Motor remember that this is thanks to all of our customers around the world that use and love our outboards. We aim to continue moving forward with the pioneering spirit that's in our corporate DNA to grow even further, hand-in-hand with our distributors and dealerships.

YAMAHA OUTBOARDS WEB SITE http://www.yamaha-motor.co.jp/global/consumer/outboards/index.html

WAVERUNNER FAN SITE http://www.waverunner-fan.com/

Yamaha Outboards Channel is online on Youtube

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

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