YAMAHA MOTOR CO., LTD.

Yamaha News

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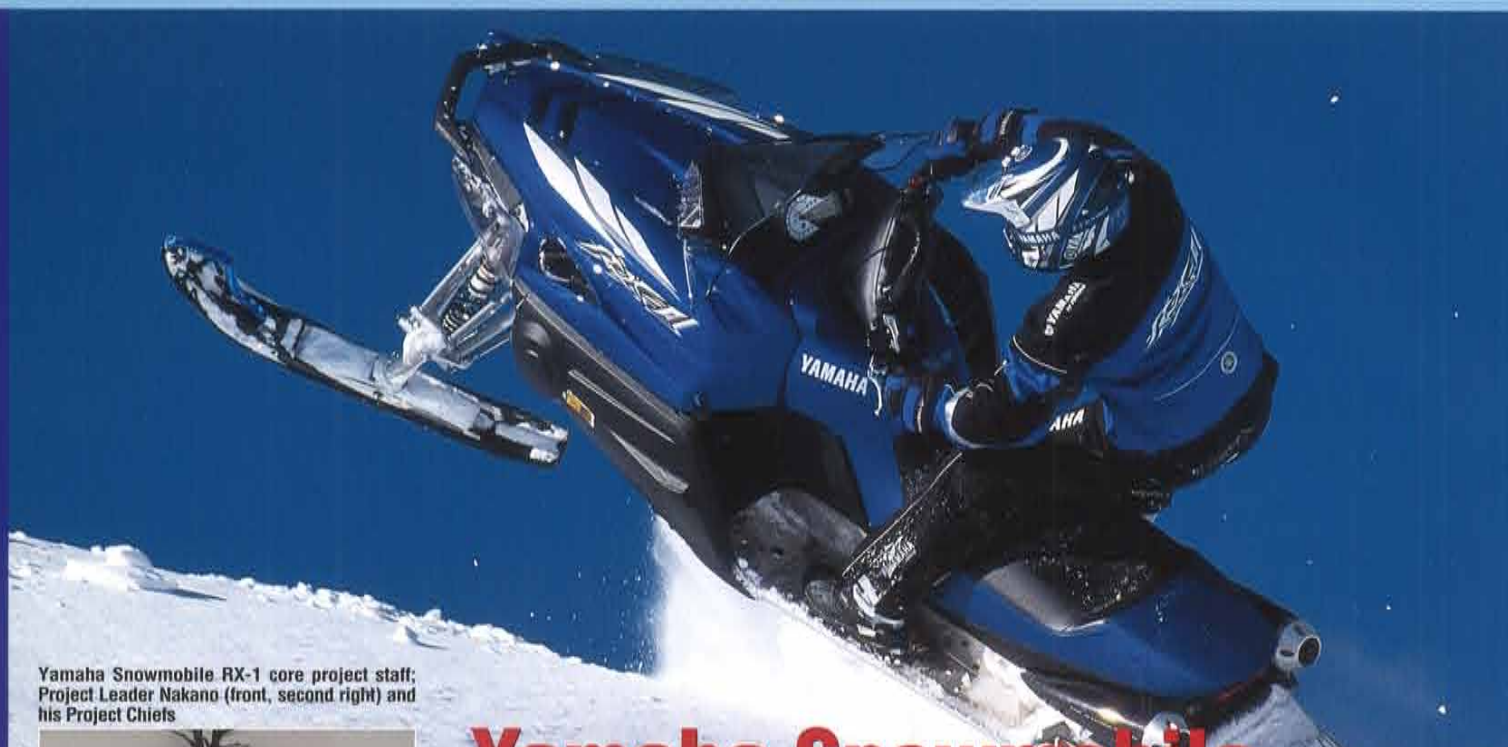
BIMONTHLY

Meet the New Snowman

Packing a sled-specific version of Yamaha's ultimate engine from the flagship YZF-R1 motorcycle, and a boldly designed all-new chassis, Yamaha's first four-stroke snowmobile redefines performance and "cool" on the snow. Winter will never be the same!



Yamaha Snowmobile RX-1 core project staff; Project Leader Nakano (front, second right) and his Project Chiefs

Yamaha Snowmobile 2003 Model "RX-1"

Creating new excitement and quality

Booting up his computer and checking his e-mail for the first time after a week of vacation, snowmobile development Project Leader Takuji Nakano couldn't believe what he was reading. "Let's develop our next snowmobile production model around the YZF-R1 engine!" Is this for real? he asked himself.

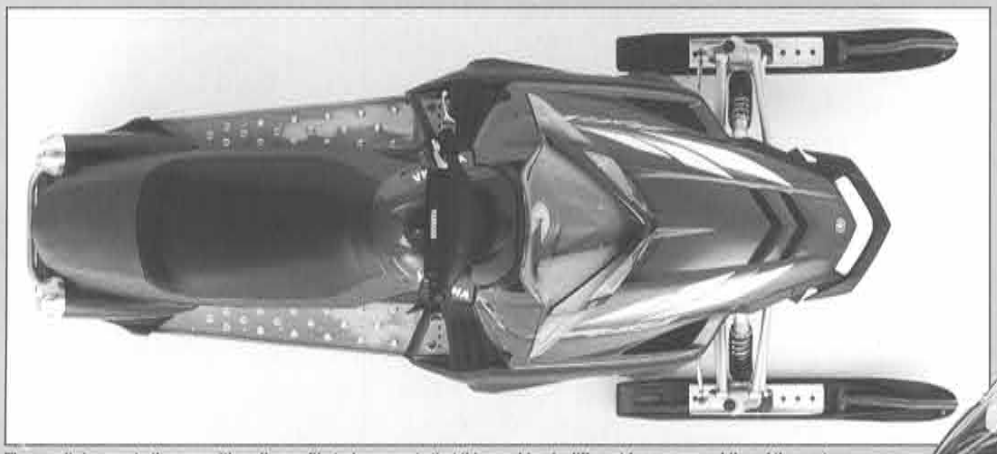
As of the week before it had been decided to go ahead with the development of a 4-stroke engine snowmobile and the initial design drawings were nearing completion, but they were not for an in-line four-cylinder engine like the R1's. This meant a complete turnaround in the product concept, but top management had given it the final "Go" sign and the project was on.

New 4-stroke quality based on 20 years of research experience

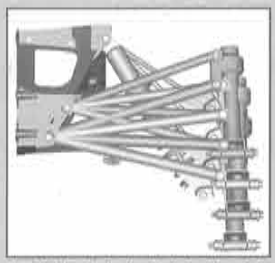
After listening to the voices from the marketplace, Yamaha had decided to go with a plan of developing a 4-stroke model that would bring new excitement and quality to the snowmobiling experience. That meant not just fitting a 4-stroke engine into a conventional snowmobile body but developing a completely new kind of machine to define a new category, the "4-stroke snowmobile." This would be more than simply powering an existing snowmobile with the R1 engine; it would be the fruition of a dream that had actually begun some 20 years before.

In Mr. Nakano's words, "This new model represents the realization of an entirely new type of snowmobile, born of the know-how gained from four 4-stroke snowmobile R&D projects over the course of 20 years and brought together around a magnificent piece of raw material: the R1 engine. That is what you have in the RX-1."

Mr. Nakano tells us about that two-decade history. "Our first 4-stroke snowmobile R&D project dates back to 1979. That was followed by similar projects in 1990, '98 and '99. In the '79 project we worked around a prototype mounting the 2-cylinder engine from the GX400 motorcycle. From this we realized that we could

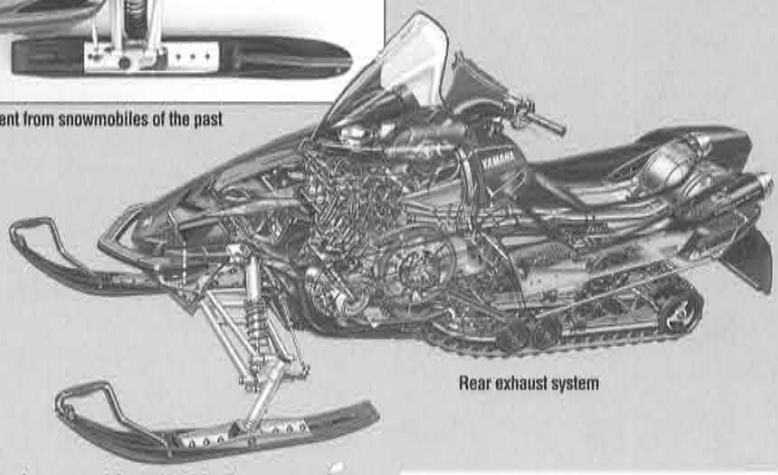


The way it rises up to the rear with a slim profile truly suggests that this machine is different from snowmobiles of the past



The RX-1 adopts the first double wishbone type front suspension ever on a Yamaha snowmobile

A specially designed ventilated type brake was adopted



Rear exhaust system

indeed get a quieter, cleaner-running snowmobile, but it still left a lot to be desired in the area of acceleration. In the '90 project we used the engine from the FZR400 but were unable to clear our target performance goals in the areas of drive feeling and low-temperature starting. Then in '98 we started another R&D project, again using a sports model engine. But the final weight of 380 kg left serious fears that the performance as a sports machine would be spoiled." So, once again plans for a production model were shelved.

The project that finally led to the development of the new RX-1 got its start in 1999. "At the start of the project we were working on the premise that we would be mounting a 2- or 3-cylinder power unit. But, just as we had verified the direction the final product would take and had started to work with an eye on eventual production, we were suddenly told that the decision had been made to go with the 4-cylinder R1 engine. I have to admit I was more than a bit surprised at first," recalls Nakano.

"At the same time the move inspired us; if we are going to develop a new machine, what better starting point than to build it around Yamaha's most advanced engine. I thought, here would be a great chance to use this engine's light weight and high performance to build an entirely new type of snowmobile that broke the mold and offered a completely new type of riding excitement and fun."

Developing a compact, snowmobile-specific engine

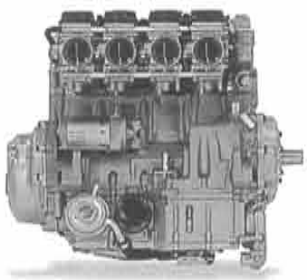
The R1 engine could not be used for a snowmobile just as it was. The places and principles under which it would be run are quite different, not to mention the average temperatures of the use. The R1 has a 6-speed transmission, but on a snowmobile it would be driving the sled's track through an automatic centrifugal V-belt transmission. It would also carry the disadvantage of being heavier than a 2-stroke. "In a straight comparison with a 700cc 2-stroke engine, the 1000cc 4-stroke is about 10 kg heavier. Our job was going to be to find a layout that would be as compact as possible and reduce the front-end weight as much as possible in order to get handling that was nimble and sporty," says Mr. Nakano.

"We went through so much trial and error just to determine the best positioning for each axis; not only where the crank shaft and the drive shaft should be but also the cam shaft and the water pump, etc. There was even one proposal to put all three of the main axes, the crank, drive and clutch, on the same axis. Eventually we were able to reduce the engine height by 50 mm by giving it a dry sump lubrication system that requires no oil pan. And, we mounted it the reverse of how it sits on the R1 to bring the exhaust system to the rear. When we tried the idea of mounting the engine with a low center of gravity and as close to the center of the sled as possible, we realized we had found the ideal position," he adds.

In this way, the R1 engine was completely reborn with all new designs for the crankshaft, crankcase, the head, the lubrication and cooling systems, as well as the intake and exhaust systems and reduction gear assembly. On the other hand, the important

Yamaha began mass-producing snowmobiles in 1968. In the 33 years since, we have shipped some 1.14 million units to North America and other markets. In recent years Yamaha has set the trend with sporty models featuring long-stroke suspensions and big-output 2-stroke power units. Now we are answering the call for more environment-friendly models as well.

The compact design of the engine was not without its own problems. The nature of the gas flow through the extremely compact crankcase of the RX-1 had an effect on lubrication, performance and fuel economy. But it was too small a case to enable normal flow analysis. So, while employing special see-through technology, repeated changes had to be made in its shape, a millimeter at a time until the problem was solved.



Takuji Nakano (41 years old)
Manager, 5th Product Management Div., Motorcycle Operations
Career: Entered YMC in 1983 and assigned to Snowmobile div. the same year. Worked on suspension development testing for Vmax-4, later served as Project Leader for MM700. RX-1 is the second for which he served as PL.
"The biggest appeal of this model is its Power & Styling & Package."

Takashi Ashida (39)
Project Chief for engine design
Career: Entered YMC in 1986 and assigned to Snowmobile div. in 1990. In charge of engine development for the ET410II in 1992. Served as engine design Project Chief for the VK540III in '93 and VX600 in '94. In charge of engine development overall for VX600/700 in '97 and SRX600/700 in '98. PC for SRX700 in '99/00.
"I believe that the sheer compactness of the 1000cc 4-stroke engine on this sled is a big feature in itself."

Manabu Kai (40)
Project Chief for engine tests
Career: Entered YMC in 1986 and assigned to snowmobile engine design soon after. Has worked on the EX570, SV80, CS340, PZ480 and EX570II. From 1991 has been involved in 2-stroke fuel injection, race engines and 4-stroke snowmobile R&D. Worked on engine testing for VX800 in '94 and running tests for PZ480 in '95. Since then has worked on running tests and chassis design for sports models. For the RX-1 was in charge of engine tests.
"I hope you will enjoy the performance of this R1-based 1000cc 4-stroke engine."

Shinichi Nishijima (36)
Project Chief for chassis design
Career: Entered YMC in 1988 and assigned to snowmobile chassis design since 1991. Has worked on the VT480, ET410II, VX500/600 and VX600/700. Served as PC of chassis design for VT600/700 in '98.
"Yamaha is going to keep pushing back the limits!"

Toru Izumi (33)
Project Chief for chassis tests
Career: Entered YMC in 1991 and assigned to snowmobile div. soon after. Worked on chassis design for VK540 in '92 and was involved in various successive models. In charge of chassis tests for VX600 in '95, VX600/700 in '96 and SRX700 in '97 (drive system settings). In charge of chassis tests, drive system settings and function for SRX, SX-R and SXViper in '99.
"The first big appeal of the RX-1 is that it is the industry's first performance 4-stroke model."

Takahiko Kubota (38)
Project Chief for suspensions design
Career: Entered YMC in 1986 and assigned to Golf Car chassis design, lawnmower body/drive system design before coming to Snowmobile div. in 1990. Has worked on testing for suspension settings, functions and clutch settings. Worked for one year in R&D on snowmobile chassis development and new suspensions for race machines.
"The main strong points of this model are the revolutionary design, the awesome power and acceleration and the handling driving from Yamaha's first double wishbone suspension."

Masanao Miyazaki (38)
Project Chief for drive system design
Career: Entered YMC in 1986 and assigned to snowmobile development from 1990. Worked on running tests for VT480TF in '90 and overall bench tests from '91. Later worked on running tests for VK540, VX800 and VX600 and drive system design for SRX600/700. Served as PC for chassis design for SRX700.
"The big point of appeal is its revolutionary styling."

performance parts like the cam shafts, intake/exhaust valves, valve springs, shims and cam covers were all kept the same as the parts on the original YZF-R1. The forged pistons and plated cylinders were also kept the same.

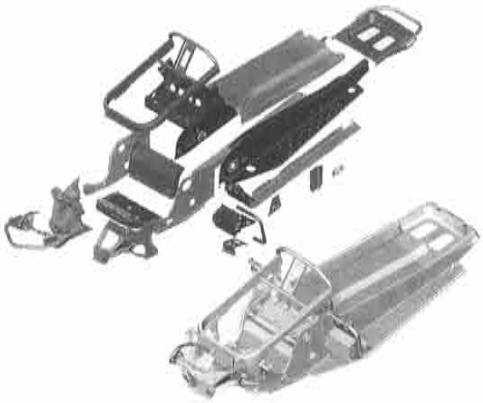
Exclusive rigidity analysis parameters and cast aluminum frame

In recent years the trails snowmobiles are used on in North America are well maintained and market demand is for machines with excellent handling qualities to make the most of these trails. As soon as the first test model was built, the job of getting the right rigidity quotients for the frame began.
"The snowmobile is a unique vehicle that runs on a combination of two skis and one track belt, so it requires, a unique system of rigidity analysis in its design. At Yamaha we have adopted a unique analysis method for snowmobiles in which we set the front right and left suspensions in a fixed position and then apply weight to the rear portion of the rear suspension in order to measure basic torsional rigidity of the chassis. Taking this as the base, we conduct tests to see what kind of lateral sliding of the track occurs in actual running conditions and then work through trial and error to develop ideal performance," says Mr. Nakano.
One of Mr. Nakano's Project Chiefs, Mr. Shinichi Nishijima, talks about how the RX-1 came to have handling performance that is different from snowmobiles of the past. "The development of the frame was not conducted from the standpoint of what a 4-stroke frame should be as opposed to a 2-stroke. Rather, it was undertaken as a separate step aimed at advancing to a whole new level of snowmobile handling," he says. What his team built was not just a frame to carry a 4-stroke engine but one that takes handling itself to a new dimension. Their achievement can be seen in the fact that the RX-1 boasts twice the torsional rigidity of the existing SXV model.

Yamaha's first double wishbone front end and new seat shape

Because a 4-stroke engine means more sprung weight than a 2-stroke, greater efforts must be made to optimize the balance of the handling. This fact became the key in achieving a completely new snowmobile experience.
"With the RX-1 we created a separate test sled specifically for proceeding with the development of a double wishbone front suspension. That is one more proof of how much we concentrated on handling performance on this model. By adopting rear exhaust and also having the muffler face the rear, we were able to gain the space necessary for a double wishbone design. Also, by optimizing the layout of the suspension links we were able to minimize the fluctuation in the angle of the skis with regard to the snow surface and thus achieve sharper handling," adds another Project Chief, Mr. Takahiko Kubota.
In addition to these measures, the shock absorbers were increased in size from the SRX's 36 mm to 40 mm, and the stabilizers were given a simpler, more efficient structure that also reduced their weight dramatically to just 40% of those on the SRX.
One look at the new RX-1 reveals that the shape of the seat is one of the most distinctive of its exterior features. The way it rises up to the rear with a slim profile truly suggests that this machine is different from

The aluminum frame of the RX-1 registered a torsional rigidity value nearly twice that of the SRX's, even though the total weight of its frame is less than the SRX's. This was achieved by using different types of aluminum alloys to their best effect in different parts of the frame. Another key factor was the use of Yamaha-exclusive casting technology, which is also being used today in places like the suspension of the Porsche 911, the chasses of Ferrari and Audi cars and the frames of flat-screen TVs. Jointly developed by Yamaha Motor and HITACHI METALS, this method known as HV die-casting maintains very fine granulation in the aluminum structure and reduces impurities to produce an ideal cast, especially in thinner parts.



The RX-1 is a next-generation of snowmobile that offers a completely new type of "excitement" and "quality"

snowmobiles of the past.

"To keep overall weight down, we never considered adopting EXUP. But a simple 4-into-1 exhaust configuration would leave the engine weak in the low- to mid-speed range, with an inevitable torque valley. In order to get the kind of torque we wanted as well as high-speed performance, we adopted a 4-2-1-2 muffler configuration. What's more, it's a rear exhaust system that helps keep the front-end weight to a minimum.

On a 2-stroke model the muffler is in the engine compartment, but in order to give the RX-1 its rear exhaust layout, innovative changes were made in the shape of the seat and its length increased. The result was this new seat shape. In conjunction with revisions made to the shape of the fuel tank, the new shape provides greater freedom of hip position for the rider.

Developing performance to fit the market environment

The RX-1's running performance was developed through tests that employed such devices as 3-axis gyro sensors. At the same time, joint tests were run repeatedly with the local staff in North America to hone the performance even more closely to the actual needs of that market environment.

"Still, there were things like the lateral "yaw" movement that couldn't be analyzed by the existing software, so we had to improvise, doing things like mounting the sled with a 20 kg weight, in order to get readings. Also, in the case of a 2-stroke model the engine breaking effect during deceleration works almost until the sled comes to a complete stop. With a 4-stroke using the same continuously variable transmission (CVT), however, the sheer strength of the pumping loss would cause the V-belt to loosen and the engine breaking effect would then cut out in the middle of deceleration. To handle this we had to make special adjustments in the CVT settings. But, with a series of exacting measures like adjustments to the weight whose centrifugal force activates the pulley, we were able to get both a stable continuous engine breaking effect and sharp acceleration feeling," says Mr. Toru Izumi.

Even though it was a project to build a 4-stroke snowmobile virtually from scratch, the work proceeded in this way at a relatively fast clip. "We owe the speed with which we were able to work to the vast store of simulation and test data that had been gathered in repeated tests over the years in Yamaha's previous 4-stroke snowmobile R&D efforts. Another big factor was that we did all the design work on 3D CAD from the beginning", says Project Leader Nakano.

The new RX-1 that was developed in this way will be released for sale in the autumn of 2002. But what is this innovative new personal vehicle actually like to ride?

"I'm sure that most people will really be surprised to see how small the engine is for a 4-cylinder and how compact we have been able to make the sled. One of the first things people will discover when they start up the engine is its appealing 4-stroke sound that comes from our unique exhaust system design. Then, when you accelerate you'll discover its awesome power. The aggressive response you get when you accelerate from the mid-speed range is out of this world. And, the overall riding comfort is quite good.

"You will find new enjoyment in riding this model with its exciting power more than ever before. There is also its light, nimble handling. Anyone who comes to our RX-1 with the preconception that a 4-stroke is heavy and has poor response are in for a big surprise," says Project Leader Nakano, echoing the words of his Project Chiefs.

What the RX-1 promises is a snowmobiling experience that could not have been achieved by any sled built around a multi-purpose engine or an adapted automobile engine. Mr. Nakano and Project Chief Nishijima sum it up this way: "This development project has produced a machine that we feel is a big step into the exciting world of next-generation snowmobiling." It looks as if the personal vehicle company, Yamaha, has raised the bar once again.

Snowmobiles have become a necessity of life and a leisure sports vehicle for people living in the Snow Belt

PUERTO RICO — Motor Sport Inc. Inaugurates New Facility

General

The Puerto Rican distributor Motor Sport Inc. (MSI) held a ceremony to celebrate the opening of a new facility on November 8, 2001.

The new facility is praised as the largest and most functional in Puerto Rico

The 6,200-square-meter facility is located on one of the principal avenues in San Juan.

MSI celebrated the thirtieth anniversary of their founding last year and offer a full range of Yamaha products—outboard motors, ATVs, motorcycles, generators—registering a sales volume to make them one of the most prominent dealerships in the Caribbean region.

Mr. Shibata, Senior General Manager of OMDO (Overseas Market Development Operations) and MSI President Jose Arcuto Fossas delivered a speech at the ceremony, which was also attended by Mr. Bill Saunders from the Yamaha Caribbean Liaison Office (Miami, Fla., USA).

From Hiroyuki Nagahisa of Area Marketing Div. of OMDO, YMC

BAHAMAS — Opening Ceremony for Harbourside Marine in Bahamas

General

The new Yamaha distributor for Nassau and the Southern Bahamas, Harbourside Marine Ltd., held an opening ceremony at its newly completed facility in this beautiful Caribbean island nation on November 10, 2001.

Invited to the ceremony were a host of VIPs, including the country's Minister of Agriculture & Fisheries, the Minister of Works and the Permanent Secretary of the Ministry of Tourism. Representing YMC was Senior General Manager Mr. Nick Shibata of the company's Overseas Market Development Operations (OMDO) and Mr. Bill Saunders of the Yamaha Caribbean Liaison Office.

Harbourside Marine's President Ian Rademaker addressed the guests, outlining his plans and resolution for growing Yamaha business in the Bahamas. He also spoke about the positive effects Yamaha outboard technology has had in the local market and made a vow to keep the market supplied with excellent service, product and parts.

Next Mr. Shibata got up to speak and express YMC's high expectations for the development of Yamaha business in cooperation with Harbourside Marine. Indeed, everyone involved expects to see further expansion of sales of quality Yamaha outboards, personal watercraft and jetboats, as well as motorcycles and power products in this tourism-driven market.

From Ian Rademaker, President of Harbourside Marine Ltd., Bahamas

Staff of Harbourside Marine, the new Yamaha distributor for Nassau and the Southern Bahamas

AUSTRALIA — Another GP for Motorcycle Technicians

Motorcycle

In October 2001, some of the best Yamaha motorcycle technicians from the Oceania region gathered at Yamaha Motor Australia's technical headquarters in Sydney for the inaugural "Yamaha Oceania Technician's GP." This contest is part of a worldwide technician's GP program promoted by YMC with a "World Final" competition to be held every two years. The contests are open to all qualified technicians working for franchised Yamaha dealerships who have passed the test to become members of Yamaha's Technical Academy, which offers ongoing on-the-job training relevant to all Yamaha models.

The Technician's GP is a mixture of theory and practice with an accent on problem solving and it puts participants through a two-day schedule of written examinations, hands-on trouble shooting and customer liaison exercises.

Participant Mr. Geoff Irving from the Red Baron dealership in Auckland, New Zealand, described the GP as "two full-on days of hard, hard work," but he recommends the experience to all Yamaha technicians: "It certainly made you think, particularly about the way you go about things."

Although the World Final scheduled to have been held in Japan in November 2001 was canceled in the wake of the terrorist attacks in the U.S., YMC is committed to making the 2002 competition even bigger and better.

From Phillip Winter of YMNZ, New Zealand

Auckland motorcycle mechanic Geoff Irving – Yamaha Motor NZ Ltd's representative at the inaugural Yamaha Technician's GP in Australia

MOROCCO — YMF's J. C. Olivier Attacks the Desert Sands on the 2WD Model WR426

Motorcycle

A top rider in his day, YMF's president J. C. Olivier shows he is still in form

The Raid Shamrock race in Morocco from November 2 to 9, 2001 saw the Yamaha name take its place among the top ten. 5th place was taken by none other than Mr. Jean-Claude Olivier, President of Yamaha Motor France (YMF) on a prototype Yamaha WR426 2 WD. This is no surprise, as the YMF president has an illustrious career as a Yamaha rider in his own right. He was joined by Philippe Alliot, former GP Formula 1 pilot, and Yamaha's Christian Sarron, previously World Champion.

Mr. Olivier rode the Yamaha WR 426 2 WD beautifully to its 5th place finish in the general classification in what was the motorcycle's competition debut. Philippe Alliot finished 6th on his Yamaha WR426 and Christian Sarron came in 9th.

From Communication and Events Department, YMF, France

TAIWAN — SV Max Publicity Wins Award in Taiwan

Motorcycle

The SV Max 125cc scooter released by Yamaha Motor Taiwan (YMT) in May 2001 has had some of the best publicity in Taiwan. The SV Max television commercial and newspaper advertising has won the annual advertising contest sponsored by the Zhong Guo Shi Bao (China Times) receiving the 2001 "Shibao Gold Award" in the Transport Machinery category.

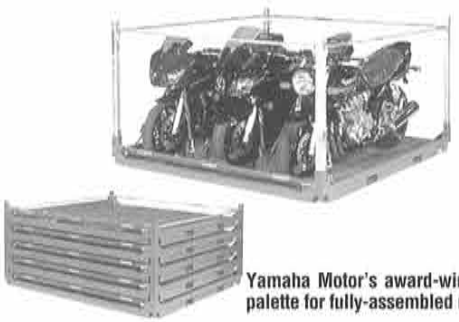
YMT has promoted the high performance and fresh image of the SV Max scooter by appointing popular Taiwanese movie star Zhang Zhen (who starred in the recent world hit movie *Crouching Tiger, Hidden Dragon*) for a variety of advertisements on television and in newspapers and magazines, as well as on posters on subway walls, and in ads on the side of buses. This award confirms that the far-reaching publicity was a job well done.

From Shoji Kondo of YMT, Taiwan

The trophy presented to YMT for the award-winning publicity campaign in Taiwan for the Yamaha SV Max scooter

JAPAN — Environment-friendly Crating Method Wins Good Packaging Award

Motorcycle



Yamaha Motor's award-winning Non-Package Transport palette for fully-assembled motorcycle is reusable

Yamaha Motor's Non-Package Transport palette has been recognized for its high level packaging technology in the influential Japan Packaging Contest 2001, sponsored by the Japan Packaging Institute. The palette won the Good Packaging Prize in the Large-sized Equipment Packaging Category.

This is the industry-first collapsible motorcycle palette introduced by Yamaha Motor about three years ago for transporting motorcycles in their completely assembled state, rather than in the conventional way whereby motorcycles are disassembled and packed. Another notable feature of the palette is that it is reusable.

This method of transporting motorcycles not only substantially reduces time and cost, but also produces absolutely no scrap wood, making it an environment-friendly way to move goods.

NEW ZEALAND — Professional Yamaha Motocross Team for N.Z.

Motorcycle

Yamaha Motor New Zealand has teamed up with CDR, the company headed by Craig Dack that manages Yamaha's national motocross team in Australia, to establish New Zealand's first professional motocross team. To be named CDR/Boost/Yamaha Team New Zealand, this new team is sure to add fuel to the sport of motocross in New Zealand. In fact, numerous Kiwi riders have competed for Dack's highly successful team in Australia over the years, including Darryll King who returned from ten competitive years on the European World GP scene to win the 2001 Australian Open Motocross Championship and the Thumper Nationals title in his first year with Dack's team.

King will be one of three riders fielded by the new N. Z. team, with the other two being Michael Cotter, who presently competes in Australia, and 17-year-old hope Luke Burkhart. King will ride the YZ426F in the 500cc class while also seeking to defend his 250cc national title. Cotter and Burkhart will ride the 125cc class on the YZ250F and YZ125 respectively.

The new team's first competition was the New Zealand Motocross Championships in early November and they got off to a promising start with Darryll King winning both the National 250cc and 500cc classes with Michael Cotter finishing second in the National 125 class riding the awesome Yamaha YZ250F.

From Perry Francis of YMNZ, New Zealand

Darryll King (foreground) at the New Zealand Motocross championships

FRANCE — YMF Scores a Double Win in Beach Racing

Motorcycle

A powerhouse in European motocross, the YMF team recently triumphed in two beach races

Yamaha has hit the beach. Official Yamaha Motor France (YMF) Mobil 1 rider Arnaud Demeester has won two famous beach races aboard a Yamaha YZ 250. The races, both run over three hours, were the Ronde des Sables de Fort Mahon on October 29, 2001, which Demeester won for the third time, and the Ronde des Sables de Loon Plage in the North of France.

The double win is certainly a good sign for Demeester, as he next plans to participate in the most famous beach race in the world, the Enduro du Touquet which will take place on February 24, 2002.

Seeing a Yamaha motorcycle taken to victory on a different kind of track is something for us all to look forward to in the new year.

From Communication and Events Department, YMF, France

CHINA **Two Stylish Chinese Tigers for Local and Overseas Markets** *Motorcycle*

Ceremony introduces export model SR150 for the Philippines

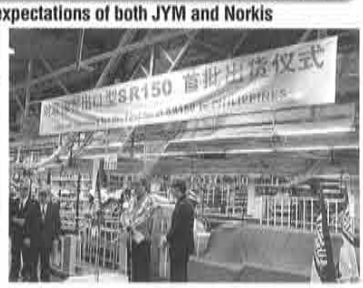
On December 19, 2001 in Chongqing, Yamaha's Chinese joint venture JYM (Chongqing Jianshe-Yamaha Motor Co., Ltd.) held a grand ceremony to celebrate the line-off of the first unit of the new export model SR150 motorcycle for the Philippine market. Attending the ceremony were representatives of Yamaha's Philippine distributor NORKIS.

The JYM's SR150 is popular for the extra power plus the silence and low vibration of its balancer-fitted 150cc engine and the high level of handling stability and load-carrying capacity of its double cradle frame. And, since 1999 it has also been exported to Peru.

Attending the line-off ceremony at the JYM factory from Norkis were Mr. Albos, Senior Vice president and Mr. Uy, Deputy Managing Head who commented that the new model is sure to attract new solo-use customers in the Philippines.

From Katsuhiko Honmaru of JYM, China

The ceremony reflected the high expectations of both JYM and Norkis



Corrections and apologies

The editors of Yamaha News sincerely apologize for the fact that on page 7 of Yamaha News No.6, 2001 (the last issue), Norkis Trading Co., Inc. Chairman Mr. Norberto Quisumbing Jr. and Vice Chairperson Mrs. Quisumbing's names were mentioned incorrectly. We apologize for these mistakes and any inconvenience they caused the people involved.

New JYM150-2 comes off the line in China

JYM has proudly unveiled its new model JYM150-2 motorcycle billed as its "Light & Spirited Strong Tiger." This model has been developed by JYM specifically for the new Chinese market conditions now that the country has achieved WTO membership. Both the look and the ride of this "Light & Spirited Strong Tiger" say that this new bike is the real thing, backed by Yamaha's world-renowned quality. JYM's customers are sure to appreciate the big horsepower from this model's 150cc engine, its wide front and rear wheels, sturdy rear carrier along with its full array of other thoughtful design details and quality finish.

The distinctive and original JYM150-2 catalog

This is the first time that the reputed Yamaha brand will launch a 4-stroke motorcycle on the Chinese market at a retail price of under RMB10,000 (US$1,200 including tax).

As part of the launch, a grand-scale press conference was held in Chongqing with large coverage by the press, with over ten media companies including the Chongqing Daily and Chongqing Television. Representing JYM at the conference to respond to journalist questions were Messrs. Takada, Ge, Atumi and Zhou.

From Wu Ya Lin of JYM, China

YEMEN / JAPAN **Yemen Minister of Fish Wealth Visits Yamaha Motor Head Office** *Marine*

The Republic of Yemen's Minister of Fish Wealth shakes hands with YMC President

The Republic of Yemen has considerable and valuable fish resources, and over the years Yamaha outboard engines and FRP boats have played a part in the development of the fishing industry in Yemen. So when officials from the government of the Republic of Yemen came to Japan, they took the opportunity to pay a visit to Yamaha Motor's (YMC) head office, and meet with YMC president Mr. Hasegawa.

In the interests of building good fishing industry ties with Japan, the party of three from the Republic of Yemen, including the Minister of Fish Wealth, Dr. Ali Hassan Al-Ahmadi visited the Japanese Senior Vice-Minister of Agriculture, Forestry and Fisheries, the Director-General of the Fisheries Agency of Japan, and major fishing industry bodies. They also visited YMC head office on November 9, 2001 along with the Yamaha distributor in Yemen.

After speaking with Mr. Hasegawa, the group toured the Communication Plaza, and left with a better understanding of Yamaha Motor.

JAPAN **The Yamaha Prize in 2001 Painting Contest was Awarded to a Six-year-old Boy** *Marine*

Representatives and judges of the Japan Marine Sports Promotion Foundation gathered at the International Forum facility in Tokyo on November 27 to decide the winners in the 13th Yamaha Children's Waterside Painting Contest. 2001 marked the thirteenth holding of the contest, and the 7,433 works submitted this year brought total entries for these 13 years to 71,568! With the listing on the Yamaha Motor Internet home page since 1997, children overseas have also learned about the contest. This year there were about 200 overseas entries from countries including Azerbaijan, Colombia, Holland, Indonesia and Turkey.

A panel of eight judges chaired by Mr. Kazuo Kudo, chairman of the artist group Sogenkai and a member of Nitten, and four special judges including Sydney Olympic Silver medallist swimmer Yasuko Tajima, evaluated the works and selected the winners of the various prizes, including the Minister of Education, Culture, Sports, Science and Technology Prize, Minister of Land, Infrastructure and Transport Prize, Minister of Environment Prize, Director-General of the Fisheries Agency Prize. There was also a Yamaha Prize awarded to a six-year-old kindergartener named Masaru Ito.

The Yamaha Prize went to a Japanese boy for his painting "Joyful Sea"

JAPAN New Fishing Boats Feature Fishing-friendly Center Console

Marine

In November 2001,Yamaha Motor released two new fishing boats with center consoles and numerous features to make any kind of fishing all the more comfortable and enjoyable. The UF-26CC and UF-21CC both feature fishing-friendly center consoles, hence the CC in their name.

The UF-26CC is a full-fledged sport fishing boat, with the standard equipment of a large center console, a leaning post and an aluminum frame T-top. It also boasts a wide range of functional and smartly designed optional features, including a trawling post and a rocket launcher for holding a number of fishing rods at the same time. The style of this "fishing machine" is reminiscent of American boats, and the design conjures up images of the sea off the Florida coast in the United States.


The UF-26CC has American-type styling

The target market for the other new fishing boat, the UF-21CC, is the first-time buyer, and the pitch "this is the boat you'd want as your first boat" rings true considering the boat's stability and easy handling.

With a stylish exterior design and center console, the UF-21CC has a fore deck design that is one step higher than the rear deck, and a spacious rear deck layout providing plenty of room for any type of fishing.

A new hull design achieves an excellent balance of wave-cutting, comfort, safety, and handling. At 2.27m, it is the widest in its class, providing exceptionally good stability when at rest, and limiting rocking of the boat when moving around on the deck, which all adds up to more security when using the boat for both fishing and family use.


The UF-21CC is ideal for both family cruising and fishing

NEW ZEALAND Kiwi Cahill Zeros in on World's Best

Marine

Kiwi determination, a no-fear attitude and Yamaha technology have propelled 22-year-old New Zealander Kane Cahill to within reach of the top titles in the world of personal watercraft racing. When Kane recently returned to his home in Auckland from a season of racing in the U.S., he brought with him the 5th-place ranking in the world's two most prestigious watercraft competitions, the Pro Watercross National Tour and the World Jetski Championships. A self-paying amateur until now, Cahill hopes these results will win him a pro contract.


Kane chooses the Yamaha WaveRunner GP1200R

Part of the reason for his success this year was the Yamaha WaveRunner GP1200R. Kane says he wouldn't use anything else.

"Yamaha is the ultimate overall package. The ski handles well in rough water and has excellent horsepower. It gives me confidence to go into turns at high speeds and choose the lines I want to ride." says Kane.

Perhaps the highlight of Kane's 2001 tour was winning the second race in the World Jetski Championships against some of the world's best riders. His 5th place ranking in the Pro Watercross US National Tour is also a big milestone, as this is the biggest watercraft competition in the world, spanning 3 1/2 months with eight rounds, three in surf and five on lakes.

From Greg Fenwick of YMNZ, New Zealand

U.S.A. Letter from a Long-time Fan of Yamaha Snowmobiles

Power products

Recently, the office of the President of YMC was very happy to receive a letter from a long time fan of Yamaha snowmobiles in the heart of the U.S. snow country, International Falls, Minnesota.

The person's name is Mr. Jerry B. Darvell. He has been a loyal Yamaha snowmobile customer and collecting Yamaha snowmobile caps since Yamaha first began selling snowmobiles in the U.S. back in 1969. He now has a hat collection that goes all the way from that time up to the present and sent to YMC a photo of the collection though it is not quite up to date.

Yamaha News wishes the readers enjoy it.


Precious collection of Yamaha's hats since 1969

NEW ZEALAND 'Kash-Back' Reward for the ATV's Popularity

Power products

Yamaha Motor New Zealand Limited (YMNZ) is showing its gratitude to customers who have made the Yamaha ATVs the top-selling models in New Zealand. In a special limited-time campaign, YMNZ is giving its customers a "Kodiak Kash" offer, which entitles anyone purchasing Kodiak 2WD & 4WD models or the Big Bear Professional from a participating Yamaha dealership an $800 cash-back bonus that they can either pocket or use for the purchase of their ATV.

In New Zealand, where ATVs are used largely for farm work, ATV Magazine has voted the Yamaha Kodiak "ATV of the Year," underscoring the models' reputation the users as the best farm ATVs in their class. Powered by a purpose-built liquid-cooled SOHC 401cc engine and equipped with Yamaha's proven continuously variable "Ultramatic" fully automatic transmission, the Kodiak comes in both 2WD and switchable 2WD & 4WD models. The Big Bear Professional also boasts a hard working 400cc engine and a dual-range, 5-speed semi-automatic transmission. All of these models also offer farmer-friendly features like push-button electric starting, a "plug-in" DC power outlet for accessories and sealed Constant Velocity joints and electric connectors to ensure trouble-free operation in rough working conditions.


Yamaha Kodiak "ATV of the Year"

From Perry Francis of YMNZ, New Zealand

Iwata's Fujita named MVP

2001 was a banner year for Júbilo Iwata, the former Yamaha Motor Football Club and now perennial powerhouse in Japan's professional J. League Division 1 based in YMC's hometown, Iwata. Although the team failed to win the two-match season final, Júbilo had come through the year with the best overall record of 26 wins, 3 loses and one tie while winning the first stage and finishing second in the second stage. And, at the final event of the season, the J. League Awards ceremony, there was one more honor waiting. Júbilo's Toshiya Fujita was named the league's Most Valuable Player for his role in leading the team to its outstanding record as an offensive midfielder who scored 11 goals in 26 games. This award certainly increases Fujita's chances of joining his Júbilo teammates Nakayama (forward), Nanami and Nishi (both midfield) on Japan's national team for the 2002 World Cup, which Japan will be hosting along with South Korea.

Nakayama slams in a goal in the first match of the season championship

Fujita won high acclaim for his play in 2001 as the team's key playmaker

Yamaha's Rugby Team Kansai A League Runner-up

Another team that had a stellar season in 2001 was Yamaha's own corporate rugby club. Competing in one of Japan's top corporate leagues, the Yamaha team upset several powerful rivals to finish out the year ranked second. This was a big improvement over the previous year's seventh place ranking. This season's outstanding performance was due to a number of factors, like the leadership of head coach Kevin Schuler, a former member of the New Zealand All Blacks, and new additions to the team roster of players including Wataru Murata (SH), a national team member with experience in the French professional league, and rookies Hajime Kiso (FL) and Yohei Shinomiya (FB).

The Yamaha team finished off this season with another strong showing in the national corporate team championship tournament, where they just missed making the semi-finals by one point. Needless to say, all this bodes well for next season.

Head coach Kevin Schuler is known for his passionate leadership

Murata passes on an end sweep

Shinomiya shows off his speed

IM's "intelligent" display at 2001 International Robot Exhibition

Yamaha Motor's IM (Intelligent Machinery) Company was one of about 100 companies from around the world to exhibit at one of the largest robotics exhibitions in the world, the 2001 International Robot Exhibition in Japan. Held at Tokyo Big Sight, the Tokyo International Exhibition Center, from November 13 to 16, the exhibition was attended by approximately 100,000 people from the robotics industry and general public.

The IM Company booth attracted more than its share of attention in spite of the economic downturn, displaying the first Scara (selective compliance assembly robot arm) Robot model in the industry to come in under one million yen in a set with the new Yamaha Robot Controller RCX40, as well as the Tiny Series.

The show presented the latest robotic technology, from the trendy "pet" robots and personal service robots, up to industrial robots and applied systems. It is held every other year, and 2001 was its 14th holding.

IM Company's booth displayed industry-first cost competitive Yamaha robotic products, attracting many visitors

Testing, Testing, Testing for the YZR-M1 as Countdown to the Japanese GP Starts

The YZR-M1, Yamaha's 4-stroke racer for the 2002 MotoGP that has been in development for over a year, is in the final stages of testing and on schedule for its big debut. In February and March the machine will be put through final tests on the various race circuits of Europe with the aim of honing its performance over the actual MotoGP race distance. Then it will make its long-awaited race debut at the opening round of the 2002 season at Japan's Suzuka Circuit on April 7th in the hands of Marlboro Yamaha Team riders Max Biaggi and Carlos Checa.

Biaggi excited by new four-stroke test riding

The new YZR-M1 is powered by an all-new under 990cc liquid-cooled 4-stroke DOHC, 5-valve, in-line four-cylinder engine that has been developed by Yamaha engineers for the ultimate in light weight, compactness and high performance. The engine is roughly 10% lighter than the 749cc engine that powers the current Superbike spec YZF-R7. Adopting a carburetor type intake system, the engine pumps out over 200 PS.

The M1 utilizes a new aluminum Deltabox frame that has been developed from the successful 2-stroke YZR500, long acknowledged as one of the best-handling machines in Grand Prix racing. The new frame has been redesigned to accommodate the unique characteristics of the new 4-stroke engine. It features new dimensions and parts as well as optimized positions of their relative layout. The new design achieves the balance of rigidity that is essential to an outstanding GP racer. Also, structural elements like an adjustable head pipe and adjustable pivot axis make for fast and exacting setting adjustments to fit the many different characteristics of each race track. Here is what YZR-M1 Project Leader, Mr Ichiro Yoda, has to say about the progress of the tests and the machine itself.

"Beginning in 1973, Yamaha engineers have worked continuously on developing 2-stroke race machines for the GP500 class and this considerable experience has taught us that the best measure of the overall performance of a race machine is expressed in the concept of "drivability". Naturally this was also the concept we stressed in the development of the YZR-M1.


Adopting a carburetor type intake system, the engine pumps out over 200PS at 15,000 rpm

"In other words, we placed top priority on developing more usable power development character in the engine. If we were only focusing on max power output, we could have raised the output. But that would not necessarily mean better lap times or competitiveness on the racetrack. We sought to develop engine and chassis characteristics that would communicate the drive force of the rear tire to the rider more directly, create better contact between the rear tire and the track surface and produce more efficient tire performance. It was these criteria that made us decide that at this point the carburetor was the best option, and it has given the M1 very good drivability, especially during acceleration and deceleration.

"The mechanics of a carburetor and the way it uses natural pressure difference to suck fuel/air mixture into the engine serves to compensate for what is called the "fuzzy" nature of human sensory functioning in scientific terms. In other words, carburetors render the power delivery more user friendly. Also, the atomizing characteristics of the gasoline produced by a carburetor are at this moment still superior to those of the conventional fuel injection (FI) system. This becomes another factor that contributes to better drivability. We will, of course, continue development work with both FI and carburetors to monitor if FI will provide a significant advantage in the future.

"As of December, we more or less fixed the optimum mounting position for the engine and the front-rear weight balance of the machine, and the test riders have praised its performance. We're still working with Biaggi and Checa to make further specific improvements, and we're confident that we'll be in good shape before the season opener. We think you can look forward to some exciting results at that time."

That long-awaited debut will come when Japan's cherry blossoms are in full bloom in early April at the Suzuka Circuit.

Specifications of the YZR-M1
- Engine: Liquid-cooled 4-stroke DOHC, 5-valve
- Cylinder configuration: In-line four
- Displacement: Under 990cc
- Maximum power output: over 200 PS
- Clutch type: Dry multi-plate
- Transmission: 6-speed
- Frame type: Aluminum Deltabox
- Fuel tank capacity: 24 liters
- Weight: 145 kg (to FIM regulation)

2002 Race Program

Five Yamaha Factory Teams Ready for 2002 Season

The GP racing world is meeting a significant change this year, the biggest since races began being held in 1949. The newly named MotoGP class, a revision of the former 500cc class, now allows the running of 4-stroke machines under 990cc. In light of this, all the factory teams have prepared 4-stroke machines and announced ambitious racing activities.

In addition to the regular teams of MotoGP, several new teams using European-made machines have announced their intention to participate, drawing more interest from motorcycle sports fans around the world than seen in recent years.

Amid all this activity, the Yamaha factory has announced its program for participation in the MotoGP this year.

Five factory teams will be entering a total of ten riders in the 2002 season Road Racing World Championships. Here are the teams and riders.

The Marlboro Yamaha Team, now in its fourth year, will again enter Max Biaggi and Carlos Checa in the premier MotoGP class with its new regulation. From the opening round they will be riding the new 4-stroke GP machine YZR-M1.

The Red Bull Yamaha WCM will be fielding Garry McCoy for the third straight year. He and his new teammate John Hopkins will ride the 2-stroke YZR500.

World Championships

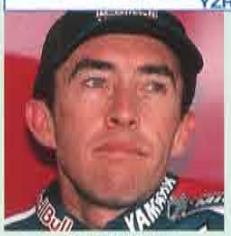
MotoGP

Marlboro Yamaha Team
YZR-M1

Massimiliano Biaggi

Carlos Checa

Red Bull Yamaha WCM
YZR500

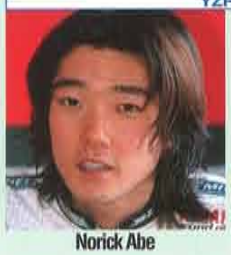


Garry McCoy

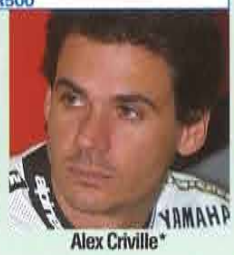
John Hopkins

MotoGP

Repsol YPF Yamaha d'Antin
YZR500



Norick Abe



Alex Criville*

Gauloises Yamaha Tech 3
YZR500

Olivier Jacque

Shinya Nakano

Competing for team Repsol YPF Yamaha d'Antin will be the 1999 GP500 champion Alex Criville and Norick Abe, both riding the YZR500.

Returning in 2002 for the Gauloises Yamaha Tech 3 team riding the YZR500 will be Olivier Jacque and Shinya Nakano.

In the GP250 class, Sebastian Porto and Shahrol Yuzy will ride for Petronas Sprinta Yamaha TVK on the YZR250.

250cc

Petronas Sprinta Yamaha TVK
YZR250

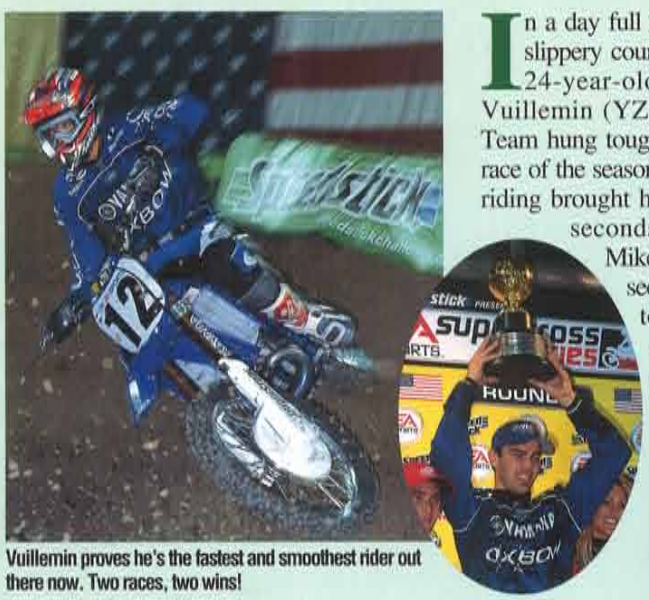
Sebastian Porto

Shahrol Yuzy

*On February 16, Repsol-YPF Yamaha d' Antin rider, Alex Criville announced that he will temporarily withdraw from the 2002 MotoGP to undergo medical tests.

2002 AMA Supercross Series in the USA

Yamaha Wins Third Straight Season Opener



Vuillemin proves he's the fastest and smoothest rider out there now. Two races, two wins!

In a day full of upsets on the tough and slippery course at Anaheim, California, 24-year-old Frenchman David Vuillemin (YZ250) of the Yamaha US Team hung tough and cool to win the first race of the season. David's smooth, faultless riding brought him home more than three seconds ahead of Honda riders Mike Larocco and Ernesto Fonseca. For Vuillemin, this victory was vindication for a disappointing, injury-plagued 2001 season, in spite of having shown so much promise by finishing the 2000 season in second place.

The up-and-coming Chad Reed

Vuillemin had momentum on his side as he earned his second straight AMA EA sports U.S. Supercross Championship victory on Saturday night on Jan. 12, in front of 68,415 enthusiastic fans at San Diego's Qualcomm Stadium. That extends his lead in the series after two of the sixteen rounds.

Chad Reed, a young Australian rider and winner of the 2001 WMX250cc Dutch GP Championship, made his AMA debut this year. He finished both of the first two rounds in good position, and presently stands fifth in the ranking.

Yamaha fans were happy to note that Vuillemin's win at Anaheim gave Yamaha its third straight victory in the season opener, with McGrath victorious in 2000 and 2001.

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