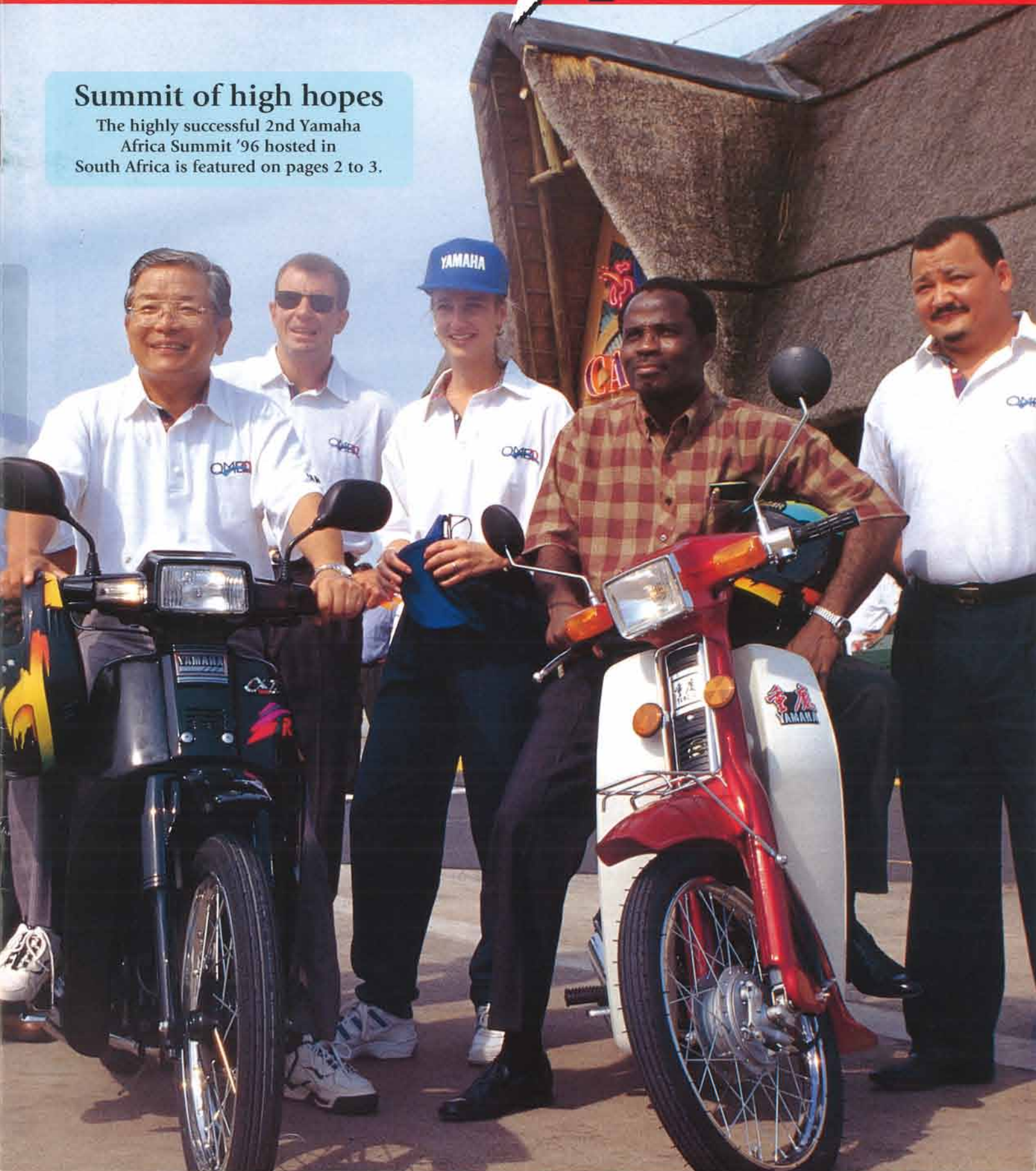


Yamaha News

No. 1
BIMONTHLY

Summit of high hopes

The highly successful 2nd Yamaha Africa Summit '96 hosted in South Africa is featured on pages 2 to 3.



A CCS tree takes root in Africa



A total of 85 representatives assembled in South Africa to attend the 2nd Yamaha Africa Summit, an enthusiastic gathering which began another page in Yamaha's history in Africa



In addition to wider ranges of motorcycles and outboards, the tremendous business potential of power products like multi-purpose engines was highlighted at the Summit

Yamaha products have been used and loved by people in Africa for more than thirty years. Working with the widespread distributors network, five years of effort by Yamaha's Overseas Market Development Operations are beginning to bear fruit in all corners of the African continent.

For a changing Africa

Occupying 20% of the world's land mass, Africa is a continent of diversity, in

peoples and natural environment. Africa is also a land of dramatic change and progress, as 53 new and old independent countries boasting a total population of 682 million people move forward toward the 21st century.

Mr. Hugh Onozawa, leader of OMDO's African Group explains Yamaha's activities in this fast growing market. "Today, we work hand in hand with 54 official distributors throughout Africa. Thanks to their diligent efforts combined with our thorough regional marketing, total sales increased a striking 20.3% in 1996 compared to the previous year."

One of the fruits born of CCS activities is

seen in Ethiopia, where recently OMDO and local distributor Hagbes Pvt. Ltd. supported UNICEF activities by organizing service seminars for the Yamaha DT175.

This model is being used as a dependable means of vaccine transport from the central office of Ethiopia's Ministry of Health to local clinics. As a result, the seminar contributed to remedying the lack of mobile services while fostering local instructors.

In response to the high demand for reliable police bikes, OMDO also held riding seminars for police bikes and off-road bikes in Egypt, Mauritius and Uganda last year. YMC's instructor, Mr. Hidenobu Toh, visited Africa for a month to promote correct riding and better product knowledge. Gathering unexpected numbers of participants at each venue, the seminars won high acclaim for their

Yamaha's Overseas Market Development Operations (OMDO), established in October 1992, coordinates overall marketing of Yamaha products for Africa, West Asia, the Caribbean and the South Pacific countries.

Seeing itself as a fast growing young tree, OMDO operates under the concept of Customer and Community Satisfaction (CCS) and its 60 enthusiastic staff are working hard to see their tree bears as much fruit from these CCS efforts as possible. Here we focus on new Yamaha horizons opening up across the African market.



In Katosi, the largest fishery base on Lake Victoria, well-trained mechanics are hard at work during a Yamaha Service Campaign conducted by Nile Fishing Co., Ltd.

advanced and detailed instruction covering everything from proper gripping of brake and clutch levers to slalom riding technique.

Elsewhere, an outstanding overall marketing program for marine business was conducted by Nile Fishing Co., Ltd., a distributor of Yamaha outboard motors in Uganda. The company quadrupled their outboard sales over the past five years by introducing a special savings plan for financing outboard purchases, adopting a powered-up service policy and helping stimulate the entire fishing industry by lobbying for lower trade tariffs to help increase export sales of their catch. They have also built close relationships with fishermen through unique sales activities in the field which combine sales of related fishing equipment.

The 2nd Africa Summit

Three years after the 1st Yamaha Africa Summit was held in the North African country of Morocco in 1993, South Africa was chosen for last year's 2nd Summit venue. Blessed with the Southern Hemisphere's warm summer sun, the five-day meeting held from November 11 to 15 in a resort complex near Durban was a sizzling success, attracting a total of 85 people.

Participants from forty distributors throughout Africa joined with YMC staff including Managing Director Satoshi Watanabe and OMDO's Senior General Manager Hideki Sawada. Representatives from four manufacturing bases outside Africa also attended, namely Escorts

Yamaha Motor Ltd., of India, Chongqing Jianshe-Yamaha Motor Company Ltd., of China, MBK Industrie S.A., of France and Al Yousuf Industrial Est. of the UAE. Managing Director John Robertson of Yamaha Distributors Power & Sport in South Africa expressed his impression after the Summit. "As a representative of the host country, I am glad that the Summit was so successful and fruitful. We were all proud of the achievements in the past three years since Morocco and selected distributors shared some valuable techniques and stories that really stimulated other participants to open up new business opportunities of their own."

Management plans for the 21st century

Prior to the opening of the 2nd Africa Summit, OMDO launched a three-year management plan aimed at expanding Yamaha business strategically and powerfully towards the 21st century. One of the central concepts in this plan is "cross trading."

As Yamaha's globalization program progresses, OMDO has sold Indian-made Yamaha RX100 motorcycles in the African market since 1994. "The model is extremely popular with its competitive price and prompt delivery," said Mr. Onozawa. "Our cross trading policy also enables us to stabilize our retail prices without any ill effects from rapid exchange rate fluctuations."

Today, OMDO is expanding its cross trade program with products ranging from Chinese-made CY80 and Tai-



More than 50 people attended this police bike seminar held in Cairo, Egypt and listened earnestly to the instruction given by YMC's Mr. Toh (on the FZ750P)

wanese-made YA90 motorcycles to Indian-made ETS650/950 generators.

Development of business for new product lines is also underway. Yamaha recently introduced the medium sized police bikes XV250P, SR250 and XC125 on the African market. Wide use is also anticipated for Yamaha ATVs with their superb mobility and versatility, while compact Yamaha multi-purpose engines are being highlighted as ideal products for OEM business.

Yamaha Distributors Power & Sport is actively involved in the multi-purpose engine business and Mr. Kelvin Thomas, Director of Power Products says, "we are expanding our MZ series sales by coupling them with locally manufactured machinery to create a new line of products geared specifically for local use and price-effectiveness. We displayed 40 different products at the Summit such as welder drive units, high pressure washers and maize grinders."

Yamaha also continues to contribute to United Nations and NGO operations by offering a wider range of Yamaha products that will help raise the quality of life for people all across Africa.

"Our CCS tree in Africa is still young and small. But we can see already that it is strongly rooted in the ground. All of us at OMDO are looking forward to seeing its branches full of fruit by the time of the 3rd Summit and on into the 21 century," Mr. Onozawa concluded.

ON THE COVER

During the 2nd Africa Summit, participants enjoyed an opportunity to test ride new motorcycles and Water Vehicles and discuss effective market introduction methods.

No one offers more

■ Yamaha Motor (UK) Limited ■ Location: Surrey, U.K. ■ Founded: 1971
 ■ Employees: 81

A look at total sales and Yamaha share for the U.K. market in 1996, after a long market decline that started in the early 1990s, gives a clear picture of the success of a series of well-conceived marketing programmes launched in 1994 by Yamaha Motor (UK) Limited (YMUK) under the theme "Yamaha Spirit." In this issue we introduce four unique programmes YMUK developed in a bold attempt to turn around what at one point had been quite a bleak market environment.



Our reporter, Mr. Ray Ross, Director of YMUK's Sales & Marketing Division

The combination of an extremely high rate of motorcycle theft, the strong Japanese yen and high domestic interest rates had a devastating effect on YMUK's motorcycle sales in recent years. The problems, which came to a head in the early 1990s, naturally led to high insurance premiums, higher loan interest rates and a rise in the price of Japanese-made motorcycles. Determined to confront these problems with creative answers that would stimulate the UK motorcycle industry as well as our own bottom line, we at YMUK developed a long-term strategic programme which was given the name "Yamaha Spirit."

Yamaha Link Insurance

Our country's motorcycle market suffered from an exceptionally high theft rate that reached a startling 10% on newly purchased machines in 1990. These conditions prompted UK's largest motorcycle insurance company to announce overnight the suspension of all insurance for riders under 28 years of age, a move that had a devastating effect on the motorcycle industry. YMUK responded by developing the Datatag anti theft device, consisting of electronic transponders hidden on different parts of the bike which enabled police to trace the stolen machine or parts. The launch of Datatag succeeded in reducing the theft rate of machines protected by the device to 0.2%. As

a result, most major motorcycle manufacturers in the country recommended use of the Datatag for their machines as well. This success enabled us to find a way of offering lower cost insurance for Yamaha owners in a tie-up with the Bain Hogg insurance company. Called the Yamaha link insurance scheme, this plan provides a replacement machine whenever a customer's bike is stolen or damaged beyond repaired, for both new and second-hand Yamaha motorcycles. This greatly reduced the cost of stolen or written-off machines while at the same time kept the customers on Yamaha bikes.

Yamaha Select Finance

Having licked the theft/insurance problem, we set out to tackle the next obstacle: helping customers finance the purchase of that motorcycle, outboard motor or Water Vehicle they wanted but were having a difficult time buying due to the

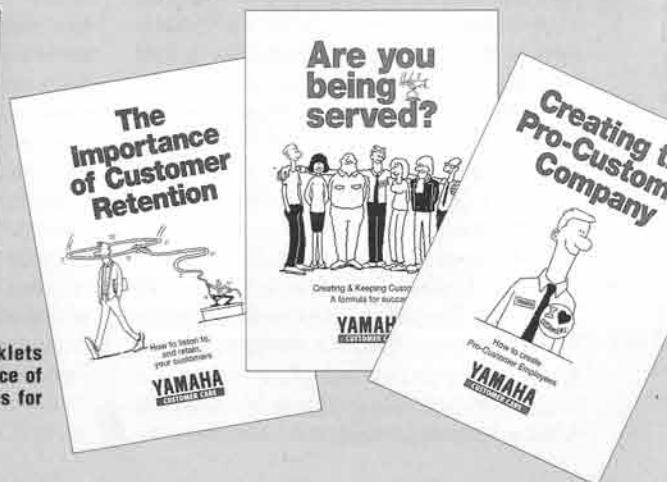
present high interest rates that made loans unattractive and the strong yen, which had raised the price of Japanese imports.

The plan YMUK came up with in cooperation with the HFC finance company is called "Yamaha Select Finance" and includes a "Yamaha Credit Card" for the purchase of various Yamaha products. Although finance plans have long been a common sales tool in the motorcycle industry, they had not been used until now in the marine industry. As a result, some Yamaha marine dealers began reporting sales gains almost immediately. Furthermore, this plan made YMUK the first distributor of motorcycles, outboards and Water Vehicles ever to offer a credit card. The Yamaha Credit Card, introduced in April 1996, consists of both fixed-term credit and a revolving credit function similar to that of other major credit cards. With the fixed-term credit a customer can spread the payment of a high-priced



YMUK's original high-tech theft deterrent, the "Datatag"

Yamaha Customer Care Booklets inform dealers of the importance of caring for customers with tips for expanding future business





Yamaha Ridearounds give customers an opportunity to ride on famous circuits at almost every British Superbike Championship meeting



Former Motocross GP rider Barry Johnson runs schools in three locations to coach anyone from beginners to experienced off-riders



Yamaha fans gathered at Donington Park for the Yamaha Owners Festival

product out over a period of up to 60 months. Meanwhile, the revolving credit can be used to purchase items like accessories, insurance and service. In this way, the card has tremendous potential for encouraging Yamaha brand loyalty, and the monthly credit statement mailing can be used to get out information about new products and special Yamaha events.

Customer Care Programme

Turning to the task of maintaining and expanding sales over the long term, we first asked ourselves who were the most important people we had to reach. The answer was obvious: the customers. That was the starting point for the development of YMUK's "Customer Care Programme" known as YCare. Taking care of customers and making sure they are satisfied with our products and service is the best insurance that they will keep coming back to Yamaha and become the life customers. These customers who are loyal to the brand and recommend Yamaha to their friends are the most effective salespeople a company can have.

The programme started by educating the dealers through a series of Customer Care Booklets which detail the importance of taking care of the customer and the effect of word of mouth recommen-

dations. Next, a YCare questionnaire was sent out to every single customer, bringing back a huge volume of invaluable feedback that was analyzed to determine levels of dealer service and measures they can take to improve customer satisfaction. Our aim is to achieve a 100% "yes" response on the question, "Would you recommend this dealer to your friends?" and as of 1996 we stand at an impressive 89%.

Rider Programme

YMUK believes firmly that another important part of keeping customers and building brand loyalty is providing exciting and enjoyable events for Yamaha customers to take part in. One of our biggest such events is the "Yamaha Owners Festival" which offers customers a free ridearound on the famous Donington Park circuit on their own bikes, plus a

free technical check-up. A huge success in 1995, this programme drew 10,000 people.

Besides this, we organize off road and road race schools that give riders a chance to improve their skills in an enjoyable social atmosphere. As part of the rider programme we also offer free or subsidized entry at many UK motorcycle events, complete with a special Yamaha park area for their bikes and the chance to take a ridearound on the circuit between races.

The total effect of YMUK's Yamaha Spirit programme has been a marked growth in both sales and market share in 1996, as well as a boost for the British motorcycle industry as a whole. "No One Offers You More" will continue to be our slogan as we will build on the programme toward the goal of 100% customer satisfaction.

From Ray Ross of YMUK, U.K.

WORLD TOPICS

GENERAL

JAPAN

Strengthening Yamaha's Asian network

Over the two days of October 31 and November 1, "Asian Summit '96," the first meeting of its kind since the last summit in 1992, was held at YMC's home offices and a nearby hotel.

The summit's aim was to stress the importance of strengthening the Yamaha network in the various Asian countries in the age of mega-competition, and also to build closer relations among the top Yamaha management around the region.

Drawing 22 top management from the nine markets of Hong Kong, Malaysia, India, Indonesia, Pakistan, the Philippines, Singapore, Taiwan and Thailand, the summit was full of the kind of vitality that is making the Asian market the focus of so much attention today.

The first day of the summit had a full agenda that began with an introductory speech by YMC President Takehiko Hasegawa, followed by a lecture on "Asia From Here On" prepared by the Mitsubishi Research Institute, presentations on new technologies and products from YMC and more. On the second



Some 22 top management attended from various Asian markets

day the participants chose either to join a friendship golf tournament or a sight-seeing tour to enjoy the autumn beauty of Japan.

Throughout the two days, the participants showed a consensus of agreement for the aims of the summit and agreed to meet again.

CANADA

Making a big impression



Outboard ten meters high



A 7-meter-high ATV

Yamaha Motor Canada Ltd. (YMCA) is making a BIG impression on the Canadian public with their huge stand-out inflatable ads.

These are three different balloons, made in the shape of an outboard 10m (32.8ft.) high, a 7m (23ft.) ATV and a snowmobile 3.5m (11.5ft.) high, which make eye-catching marketing tools for YMCA and its dealers.

Used at many of the trade and consumer



Snowmobile 3.5 meters high

shows, racing and recreational events and at dealerships, these balloons create a lasting impression on anyone who attends the events and also instantly draws children to see the products towering over them.

From Andrew Gray of YMCA, Canada

MOTORCYCLES

ROMANIA

Successful racing activity

Yamaha Motor Hellas S.A. has expanded its business from Greece to Romania and Bulgaria, founding Eliopoulos Brothers International Trading SRL (EBIT) in Romania in 1994 to supply the market with a wide range of Yamaha products.

Although the market is still comparably small, EBIT engages in many types of promotional activities. One of the most notable is its participation in the national road racing championships.

Under the direction of team manager and chief engineer Alan Palmer, the Yamaha Romanian Road Racing Team won the Superbike Championship in



(From left) Tanase Draghici, two engineers Dragos Panaitescu and Cristian Bratovici, Vlad Charalambie, Alan Palmer and Tiberiu Troia

1995 and continued its big success again in 1996 with three experienced employee/riders. Tanase Draghici won the 125 cc Championship, Vlad Charalambie was third in the 250 cc class and Tiberiu Troia, the man who won the Superbike Championship in 1995 placed third last year.

For the 1997 season Yamaha Motor Hellas, in cooperation with its local co-sponsor Castrol-Romania will continue supporting the team to promote and stimulate market demand and encourage the growth of motor sports.

From E. Koufetzis of Yamaha Motor Hellas S.A., Greece

VIETNAM

Touring coastline on the DT175



Japanese motorcycle fans expanded their riding experience on the roads of Vietnam

Over seven days from October 23 to 29, seventeen Japanese riders aged 23 to 70 took part in the 8th Yamaha-Mainichi Motorcycle Touring in Southern Vietnam which covered a total of 961 km (600 mi.) of riding on the Yamaha DT175.

This tour was organized by one of Japan's nationwide newspaper companies, Mainichi Newspapers, the Malaysian motorcycle magazine Roda Roda and the Ho Chi Minh Bike Club together with the Yamaha Ho Chi Minh office. Starting from Ho Chi Minh City, the biggest commercial center in Vietnam, and after passing through Da Lat, the tour took the coast road north to Nha Trang, Qui Nhon and the final destination Da Nang. The participants were divided into five groups and rode for four days at approximately 250 km (156 mi.) a day.

They enjoyed riding through jungles of

banana and coconut trees, a stop at Vietnam's most famous beach resort and small fishing villages. Throughout the four-day tour, the Yamaha DT175 ran well on the narrow and quite rough surfaced roads.

It was a valuable opportunity for all the participants to get a glimpse of this rapidly growing country full of energy and change.

From O. Kobayashi of YMC, Japan

COSTA RICA

New importer headquarters

The Costa Rican importer of Yamaha motorcycles, Lutz Hnos. Y Cia., Ltda., has opened brand new office. The long awaited move from its old premises in the congested central business district to an outlying boulevard of San Jose where automobile dealerships are concentrated, is meant to accommodate an increase in business while also boosting the company's image.

The grand opening ceremony on October 4 was attended by YMC's Central and South American group leader, Mr. Takashi Odakura, President Watanabe of Yamaha Motor Mexico, representatives from 37 domestic dealerships and a large number of invited guests. The ceremony opened with a blessing for the new building by the local priest, followed by a tape cutting by the company's General Manager, Mr. Marco Johanning and Mr. Odakura.

Lutz Hnos., which has been a Yamaha importer since 1961, began to outgrow its old offices as the upturn in the Costa Rican economy beginning in 1990 brought an increase in business. The company, which already boasts a 70% market share, hopes the well-appointed new headquarters and showroom decorated in



Mr. Marco Johanning (right) receives a commemorative gift from Mr. Odakura

the YSP image and colors will attract even more customers and business.

From Ted Tanaka of YMC., Japan

ITALY

Ex-champ Russell joins Yamaha



Scott Russell getting the feel of the YZF750 at the Misano circuit

Former World Superbike champion Scott Russell began his World Superbike comeback at Misano, Italy, on November 21 when he tested the Yamaha YZF750 for the first time. After the announcement that he will be joining the Yamaha World Superbike Team for 1997, Russell could hardly wait to try out the Yamaha bike he will ride next season.

The 32-year-old American immediately posted good lap times despite the cold weather and adverse circuit conditions.

"I am very pleased with what we achieved. The atmosphere was wonderful. The team worked really hard and they were all really interested and gave me a lot of support," said Russell. "I am amazed how quick the bike handles and the top speed is pretty good as well. I know I could have improved my lap times if it had been dry."

Both the team's experienced crew chief, Italian Fiorenzo Fanali and team manager Davide Brivio were also satisfied with Russell's performance and his accurate feedback.

Scott and team-mate Colin Edwards II also attended the recent motor show in Bologna, Italy. On December 4, they dined with 18 journalists from all over Europe, and the next day they helped unveil Yamaha's new Aerox scooter.

From Rupert Williamson of Jardine PR Ltd., U.K.

WORLD TOPICS

GERMANY

American cruising for dealers



The participants enjoyed a rare opportunity to cruise in the American West

Over ten days from October 11 to 20, a total of 100 people, two persons each from fifty dealerships throughout Germany visited the U.S.A. as members of the Yamaha Motor Deutschland GmbH (YMG) dealer incentive trip.

Their destination was the beautiful city of San Francisco on the west coast of the U.S.A. Besides visiting typical tourist spots like Fisherman's Wharf, Union Square, Golden Gate Bridge and Sausalito, the participants made sight-seeing trips to Carmel, Monterey, Grand Canyon and Tuscon by bus.

The highlight of the trip was the motorcycle touring on the Royal Star and Drag Star in the area of Tuscon, Arizona. Separated into two groups, the participants enjoyed real American style cruising under the beautiful blue Western skies.

After fully enjoying the Californian sun and the relaxed time the dealers left for Frankfurt from Phoenix on the next day. The attendants from YMG were President Mr. Masaaki Kimura, Managing Director Mr. Manfred Weihe, Sales Manager Mr. Klaus Dieter Breitenstein and Secretary Mrs. Rita Zahnhausen.

From Karlheinz Vetter of YMG, Germany

ARGENTINA

Police chose the XT600

At the request of the police of San Luis (Argentina), Yamaha Motor Argentina S.A. (YMARG) supplied a variation of the Yamaha XT600 specially equipped for the police-bike market. This model features a siren and a rear lamp on a standing beacon pole.

The official introduction and the bike's delivery took place in time for the Mercosur president's summit in June 1996, where the police-equipped Yamaha XT600 bikes escorted the presidents of Argentina, Brazil, Paraguay, Peru, Bolivia and Chile, and were praised for their performance.

From María Alejandra Mozzarelli of YMARG, Argentina



The police version of the XT600 stood out at the Summit

SPAIN

250,000th unit celebrated

The commemorative 250,000th motorcycle was brought off the line in an in-house ceremony at Yamaha Motor España S.A. (YMES) on September 30. The ceremony started with a formal tape cutting before the motorcycle was rolled off the assembly line and YMG's President Takehiko Hasegawa made a speech congratulating everyone for attaining this landmark, which comes in YMES's 15th year of operations, and praised the



(From left) Mr. Lasheras and Mr. Hasegawa at the roll-off ceremony in the YMES factory

factory's significant contribution to Yamaha's globalization. He also briefly reviewed the history of Yamaha in Spain, making mention of the fire and the rebuilding of facilities in 1991.

Mr. Jorge Lasheras, Executive Vice-President and Chief Executive of YMES, expressed his ongoing commitment to the production of quality motorcycles with enthusiasm and professionalism. The ceremony concluded with a toast in hopes that the 500,000th unit would be achieved in the near future.

From Jordi Bracons of YMES, Spain

COLOMBIA

DT Cup runs hot

The 3rd Latin American Yamaha ULM DT Cup Championship was held from November 22 to 24 in Girardota, Colombia to decide the champions for 1996. Competed in two categories, 33 qualifiers from Bolivia, Brazil, Colombia, Costa Rica, Ecuador, Panama, Peru and Venezuela gathered to battle for the titles. Colombian Camilo Zapata won strongly in the 125 cc Ascenso class followed by the second finisher Carlos Mercado from Bolivia, while in the 200 cc Diestros class, Brazilian Vatutin



Some 8,000 spectators cheer on the riders from eight Latin American countries

Pereira clinched the victory over Colombian Juan David Posada. Some exciting events like Doug Domokos' wheelie performance and awesome riding overall by the entire field thrilled the 8,000 spectators.

From María E. Mendoza of Incolmos S. A., Colombia

TURKEY

New motorcycle joint venture

Last December, a joint venture agreement was announced between Yamaha Motor Europe N.V. and the Koç Group, one of the Republic of Turkey's leading corporate groups.

Under the agreement, a new company to be named Beldeyama A.S. will be

founded at the beginning of 1997 for the manufacture and sale of Yamaha brand motorcycles in Turkey. The Koç Group affiliate Beldesan, which will invest 80% of the new company's starting capital, has been the distributor of Yamaha motorcycles in Turkey since 1993 and has also manufactured and supplied moped engines and scooter engine parts to Yamaha's European manufacturing bases, MBK Industrie in France and Motori Minarelli in Italy. Under the new management, Beldeyama will continue these business and manufacturing activities at its present facilities as it pursues the development of new Yamaha brand motorcycles designed specifically to the needs of the Turkish and surrounding markets.

MARINE

KUWAIT

Sponsoring reef clean-up

A large scale reef clean-up operation organized by a local diving company has become a big annual event in Kuwait that draws lots of media attention to the cause of environmental protection of the reefs around the country's Persian Gulf islands.

Yamaha marine importer Kuwait Development & Trading Co. (KD&T)

takes a high-profile role as sponsor in this event which last year saw some 100 volunteer licensed divers scour the reefs for debris and refuse.

Besides donating Yamaha T-shirts emblazoned with the slogan "Together we keep our sea safe and clean," KD&T mobilized mechanics on a Yamaha service launch outfitted with equipment and parts to aid any divers in need of assistance or repairs.

This event was part of the worldwide "International Coastal Clean-up" organized by the Center for Marine Conservation.

From M. Afzal of Kuwait Development & Trading Co., Kuwait



Yamaha outboards also worked hard for the clean-up

We are always looking for interesting stories. Write to Chief Editor K. Shimizu of the PR Division. Yamaha Motor Co., Ltd. 2500 Shingai, Iwata, Shizuoka 438 Japan.



Mr. Rahmi M. Koç, Chairman of the Koç Group (left) and YMC's President Takehiko Hasegawa exchange memorial gifts

JAPAN

Achievement in sports

For the first time in their fifteen-year history, Yamaha Rugby Football Club won the championship in the '96 Kansai (Western Japan) B League, sweeping all seven games in the series.

After six matches, Yamaha was followed by the Osaka police team who had won five games and kept up hopes of a come-from-behind series victory. However, Yamaha beat their rival easily with a score of 34-8 with four tries and solid defense. The championship opens up the possibility for long-awaited advancement to A-league. The team will compete with the last-place team in the A-league in an attempt to win a spot in the top league.



Newcomers' power stood out on this year's team



Schillaci went for the goal after 18 minutes in the second half of the game

Meanwhile, Júbilo Iwata, Yamaha's pro soccer club finished fourth out of 16 teams in their third year in J. League. The team had battled for the lead throughout the season with outstanding performances by forwards, Masashi Nakayama and Toto Schillaci and stubborn defense putting the team in third before the last game.

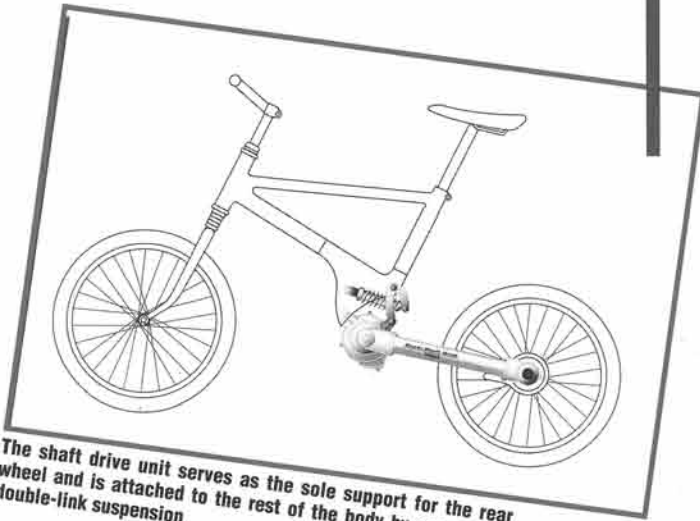
The last game was against Shimizu Espase. Júbilo gave up one point early on and despite a goal by Schillaci 64 minutes later to tie the score, Júbilo allowed Shimizu to counterattack in the closing minutes and grab the victory. Although the team's initial goal of finishing in the top three was not achieved, this season was a fruitful year that saw rapid improvement among the younger players.

New bicycle technology "Yamaha Super Shaft Drive" for greater riding comfort

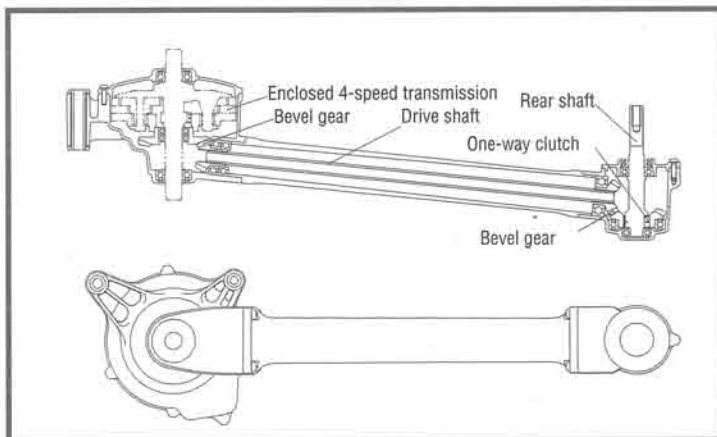
Working in cooperation with Bridgestone Cycle Co., Ltd., YMC has applied its motorcycle technology to the development of the world's first shaft-drive unit for bicycles, the "Yamaha Super Shaft Drive."

In replacing the conventional chain drive with a shaft drive unit, this newly developed system makes possible a revolutionary single-support configuration in which the shaft's outer case acts as a structural member that supports the full load to the rear wheel. The resulting shaft drive is a tightly enclosed unit that eliminates the disadvantages of conventional chain-drive bicycles, such as oil stains or getting clothing entangled in the chain. This system also makes it much easier to detach the rear wheel, making for easier storage and maintenance.

Furthermore, by building an arm type suspension into the single-support shaft drive unit, the new system achieves the double advantages of compactness and a more comfortable ride.



The shaft drive unit serves as the sole support for the rear wheel and is attached to the rest of the body by means of a double-link suspension



A structural diagram of the Yamaha Super Shaft Drive unit

Bonded Valve Seat (BVS) technology boosts 4-stroke engine performance

Yamaha Motor Co., Ltd. has recently developed a new Bonded Valve Seat (BVS) technology that improves performance in 4-stroke engines.

A valve seat is a ring shaped metal lining located on the combustion chamber side of the intake and exhaust ports for the purpose of reducing friction resulting from the opening and closing of the valves and creating the tightest possible seal to prevent escape of combustion force through the ports. Generally, these seats are made of sintered steel alloys with outstanding heat and friction resistance.

Until now, seat rings have been force-injected into aluminum alloy cylinder heads. However, with this type of construction it has been necessary to retain a certain amount of space between the intake and exhaust valve ports and also to give the seat sufficient vertical width and mass to ensure a firm set, thus reducing design freedom with regard to the combustion chamber layout and port diameters. Furthermore, the conventional force injection method has disadvantages from the standpoint of high-load performance and durability due to the air pockets inevitably created by minute deformities in the contact surface which act as an insulating layer and inhibit heat conduction away from valve seat area.

By applying an electrical current flow to the valve seat, this new bonding technology takes advantage of plastic deformation produced at the extremities of the bonding surface on the cylinder head.

Compared to the conventional method, the new technology

Rear tire spin-prevention "Traction Control System" on the new Lanza

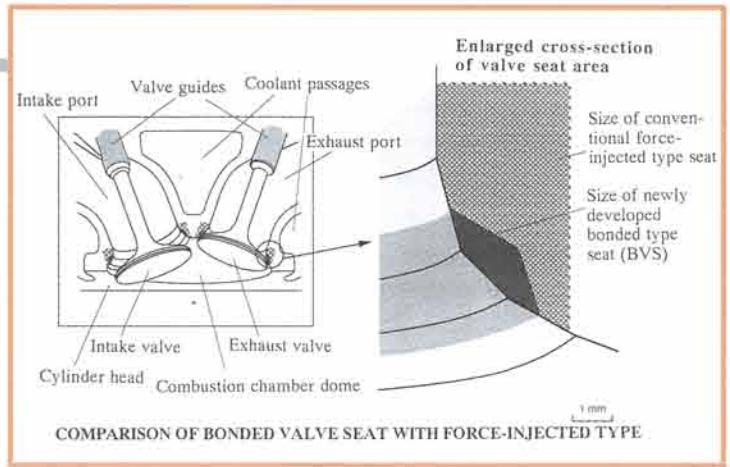
In January 1997, YMC releases on the Japanese market the new off-road model "Lanza" (DT230) sporting an entirely new Yamaha-original "Traction Control System" incorporating an 8-bit microcomputer. This system functions to control the traction conditions of the rear wheel by regulating the ignition timing.

The 8-bit microcomputer on this system constantly calculates the machine's rate of acceleration as a function of changes in engine rpm. When the engine rpm acceleration rate exceeds a certain point that indicates rear wheel spin is occurring, the system automatically retards ignition timing to reduce engine power until the tire regains its grip on the ground surface.

The system adopted on the Lanza is set to perform its traction control function over a wide rpm range from 3500 to 8500 rpm. This means that the rider gets more



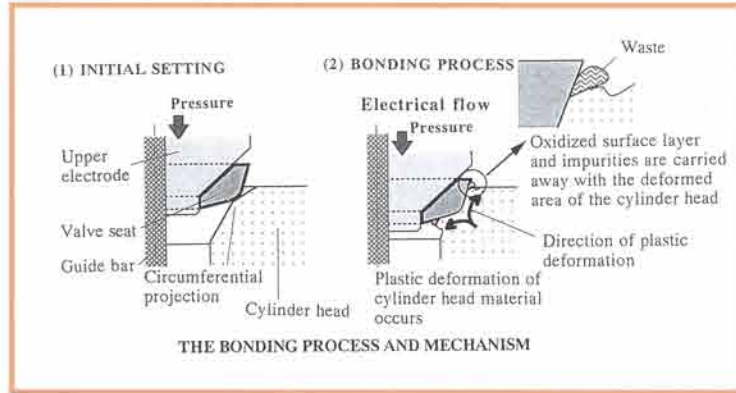
A conventional pressure-injected type valve seat (above) and a valve seat using the new bonded valve seat technology (right). The new method enables the use of a much smaller seat ring than before



enables the use of a valve seat with much smaller surface area and mass, which in turn allows for larger port diameters and more freedom in port layout to achieve greater power output and combustion efficiency. This method also eliminates almost all formation or growth of unstable metallic compounds common in conventional welding methods, thus contributing to greater reliability and durability.

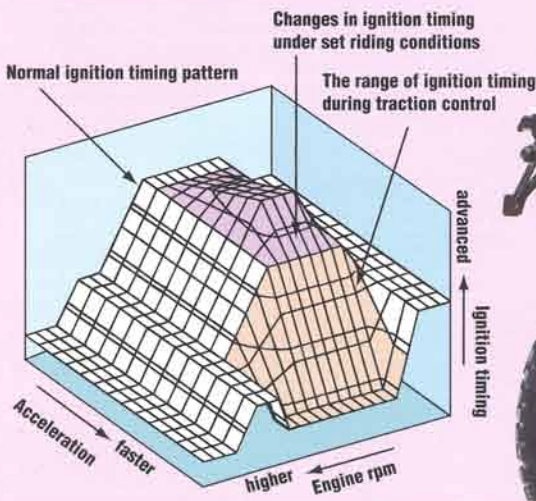
What's more, the use of the new bonding apparatus and electric current eliminates the need for complex cleaning steps that have been necessary until now in the difficult process of bonding steel-based metals to aluminum alloys. As a result, the new bonding process can be completed with high productivity in an on-line process using relatively inexpensive equipment and an electric flow of less than one second.

In the future, Yamaha plans to continue to refine the new



technology and apply it to an increasing range of production products. Also, being a bonding method for the commonly used metals steel and aluminum, we are investigating possibilities for applying this technology to chassis parts as well.

The Traction Control System (with 3-dimensional map)



The Lanza (DT230) with the Traction Control System



reliable forward traction without rear tire spin or slippage in challenging off road riding conditions such as wet surfaces or sharp uphill inclines.

Tough sleds, on and off the snow

Powerful engine for grass drag racing

In the U.S.A., the snowmobile racing season starts long before there is any hint of snow in the air.

The '96 Sno-Baron's Haydays World Championship race, the biggest snowmobile grass drag race event in America, was held at Lino Lakes, Minnesota, on September 7 and 8. Celebrating 30 years of success, last year's Haydays boasted some 800 entries and entertained around 40,000 people.

In this prestigious event, Yamaha's new 1997 Vmax 700SX powersled snatched the Trail SS 700 class victory and swept 2nd to 4th places in the Stock SS700 class. At 600 cc, the Yamaha Vmax 600 SX dominated two Trail Stock categories. Grass drag racing is a popular event with the customers and Yamaha is taking part actively from the local level all the way up to the prominent national races. At 32 events last year, Yamaha's new machines proved their high competitiveness particularly in the Trail Stock SS and Stock SS classes for 700 cc single-pipe machines and the Trail Stock D class for 600 cc single-pipe models.

Mr. Rocky Atarashi of Yamaha Motor Corp., U.S.A. (YMUS) Snowmobile Marketing Division comments: "Grass drag racing is run over 500 to 600 ft. straight courses with the sleds reaching speeds of 100 miles per hour. That means it's a straight-out test of a



Chris Vincent battles strongly on the Vmax 600 SX in the Spirit Mountain race in Minnesota

machine's engine performance. Our new Vmax series with powerful engines on a lighter, but more rigid chassis with improved aerodynamics, have outstanding top speed and acceleration for this kind of race."

Yamaha back in the U.S. snocross battle

Yamaha's powerful sleds are also winners in their native element, the snow trails. YMUS recently put together an official factory team and is blasting the competition this season.

Yamaha's two pilots Chris Vincent and Jesse Strege are rising stars poised to succeed such legendary names as Trapp, Trickle, Bender and Donahue, riders who dominated oval competitions over the years for Yamaha.

In the first round of the M.R.P. National



Chris Vincent

Jesse Strege

Snocross Series, held at Spirit Mountain near Duluth, Minnesota from November 29 to December 1, Chris finished the qualifying heats with three wins while Jesse Strege had two 2nds and one 4th, giving notice that the team was in for an exciting weekend. For the final, Chris ran a fantastic race for all 20 laps on a very demanding track to claim an impressive 2nd place. Jesse, unfortunately, didn't make the final after a collision in his qualifying heat.

Unlike grass drag racing, snocross is a test of handling performance. "Thanks to our talented riders and the all-new lightweight type Proaction System chassis and powerful engines, our team has gotten a good start for a promising season," said Mr. Atarashi.

In the months ahead the newly formed YMUS snowmobile team, is sure to put on a dazzling display for snowmobile fans across America.



Experienced grass drag racer, Pat Hauck has demonstrated his great riding skills on Yamaha machines for many years