

# 1983 EUROPEAN MODEL RANGE

The range was exhibited during IFMA (Cologne Motor Show, Sept. 16 to Sept. 20, 1982)

# EVOLUTION, NOT REVOLUTION!

Yamaha sees 1983 as a year of evolution rather than revolution — a year in which the further development of already successful model concepts is much more important than the introduction of more purchase options than are really necessary.

New machines for 1983 are undoubtedly destined to lead the respective segments of the market at which they are aimed. These models, however, have evolved as logical development achievements of accepted and totally-proven designs. They will consolidate and improve still further the solid engineering values synonymous with the brandname of Yamaha.

Motorcycling is diverging into two distinct categories, pursuing parallel courses but still linked by some common bonds. There are enthusiastic motorcyclists who are drawn to the freedom and excitement of two-wheeled sports. There are the others who turn to 2-wheelers purely and simply because of their utilitarian aspect. Somewhere along the way, however, the enthusiast will appreciate the economic benefits of his favorite sports bike, while the commuter will come to realize that motorcycling is more than just a way of getting to work. There is an element of pure enjoyment that provides a way of easing the pressures of everyday living.

With the above fact in mind, Yamaha has brought in more new technology than any other manufacturer, to offer the motorcycles of unmatched efficiency and total performance values.

(see pages 3 to 6 for more details)



## YAMAHA, THE WINNER!

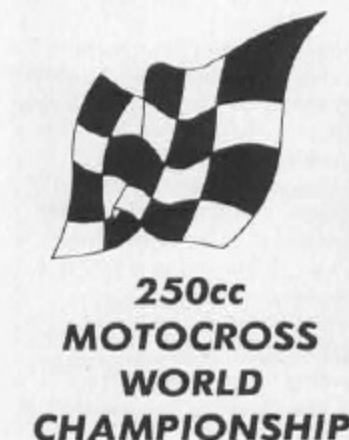
'82  
250cc  
**MOTOCROSS  
WORLD  
CHAMPIONSHIP**

Danny La Porte and the YZM250 won the riders and manufacturers titles. La Porte became the first American rider to clinch the 250cc Motocross World Championship.  
(see page 2 for more details)



Danny La Porte and his YZM250

# La Porte and the YZM clinch the riders and manufacturers titles



**250cc  
MOTOCROSS  
WORLD  
CHAMPIONSHIP**



Danny La Porte

Danny La Porte (Yamaha) who snatched a 6-point lead over his strongest opponent Georges Jobe (Suzuki) in the Dutch GP (July 4, round 8), placed 1st and 2nd in the two races of the Soviet GP (July 18, round 9), thus sharing the top position with Jobe who finished 2nd and 1st respectively in the same races. In the US GP (August 1, round 10) La Porte widened the lead by finishing 4th and 2nd, while the Suzuki ace placed not higher than 5th in both races. A fierce 250cc manufacturers title battle between Yamaha and Suzuki was concluded when La Porte finished 1st and 3rd in the two races of the Finnish GP

(August 22, round 11) against Jobe's two second spots. La Porte's results increased Yamaha's total championship points to unsurpassable 277 with one more round yet to contest, while Suzuki totaled 235. La Porte put a dramatic end to the season-long riders title battle in the Swedish GP, the final round of the series (August 29). He placed 4th and 2nd, and Jobe 2nd and 3rd. La Porte's total points were 238, 13 points ahead of Jobe. He became the first American rider to win the 250cc Motocross World Championship.



## A 160mph crash at Silverstone



Barry Sheene

Yamaha's 500cc title contender Barry Sheene was involved in a horrible crash during an unofficial practice session of the British GP at Silverstone on July 28.

First, French rider P. Igoa crashed on the long straight and his machine broke up as it went down, and the engine and parts of the frame were catapulted down the track. Sheene on a V-4 Yamaha arriving seconds later and ploughed at about 160mph into the debris which was hidden by a slight rise. Sheene and his machine skidded more than 200 yards down the track. Sheene lay unconscious. J. Middelburg (Suzuki) was also involved in the accident. His Suzuki ran into Sheene's machine and both then caught fire.

Kenny Roberts was among several riders to rush to Sheene and Middelburg's aid and it was Roberts who took off Sheene's helmet.

### "I'll be back" says Sheene

The seven hour operation on July 29 was successful but left Sheene with 23 steel pins and 4 metal plates in his broken legs and he needed a 6 pint blood transfusion! According to doctors, it will be at least two months before he can walk again, and his hand injuries are still causing some concern. But he is progressing very favorably after this successful operation. "I am looking forward to being back next season and giving them something to cheer about", says the 32-year old former world champion who is staggered by the tremendous amount of well wishes from motorcycle sports enthusiasts.

# '83 NEW EUROPEAN MODELS' TECHNICAL FEATURES

## XJ900 Brand-new four-cylinder super sports

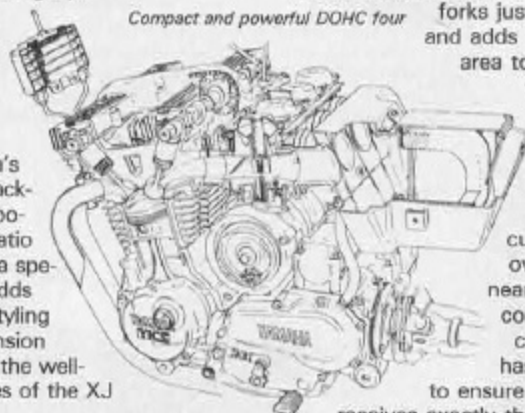
The XJ series from Yamaha completely changed the normal concept of multi-cylinder sports machines when they first appeared four years ago. For 1983, Yamaha has brought the XJ concept right into the big league, with the new XJ900 ready to go head to head with the competition in the large-capacity super sports/touring category.

Yamaha is confident that the new XJ900 will have a terrific impact on this segment of the market. Yamaha's confidence is backed by the best power to weight ratio in its class and a specification that adds superb sports styling and new suspension components to the well-proven attributes of the XJ power unit.

Actual power output is 97ps (DIN), a strong 113.7ps/litre! A lightweight shaft drive takes this power to the rear wheel in perfect reliability and with minimal torque effect. The clutch is strengthened to meet the demands of transmitting the power and rubber damper inserts are incorporated in the rear wheel to further smooth out the delivery. The chassis itself is a double cradle design constructed in newly developed lightweight, high tensile steel tubing. The rear shock absorbers have a new and unique adjustment capability with both damping and spring tension being set together on the bottom of the unit. The gas/oil shocks also feature a remote reservoir which has the double advantage of allowing extra gas/oil capacity and better cooling. Even over long journeys on the roughest roads,

the XJ900 suspension will not deteriorate. Most significant feature of the front suspension is the anti-dive mechanism on the telescopic front forks which allows the machine to maintain a level attitude even under heavy braking...a positive advantage in terms of handling. A die-cast aluminum fork brace links the legs of the short front forks just above the fender and adds rigidity in a crucial area to prevent the forks from flexing under the stresses of high speed cornering. The front fork springs are assisted by an air cushion which takes over when the forks near the limits of their compression. The air cushion mechanism has an equalizer pipe to ensure that each fork leg receives exactly the same cushioning effect. The use of air-assisted springs guarantees that the forks will not "bottom" under severe pressure. This guarantee, combined with the anti-dive mechanism, means that the XJ900 is very controllable even in heavy braking situations. The XJ900 has powerful triple disc brakes utilizing technology from the world of Formula One Grand Prix car racing.

These discs are of "sandwich" construction with twin outer plates bonded to a central structure which allows cooling air into the unit. Final touch to place the Yamaha XJ900 firmly in the superbike race is the high speed styling based very obviously on the World GP road race machines. Sleek integrated bodywork links the 22 liter fuel tank with the long seat and takes the eye down through the bike to the high-tech area of the engine. A neat little handlebar fairing shrouds the steering head area and contains a high visibility instrument panel with a central tachometer plus a fuel gauge and digital clock in addition to the usual equipment.

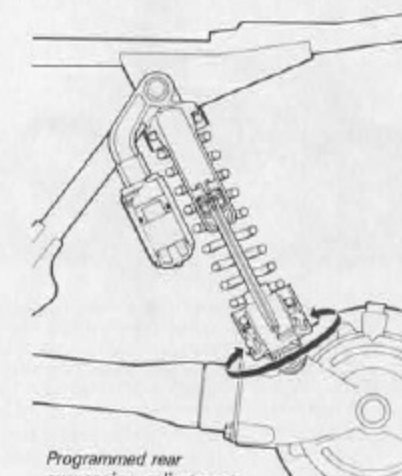


Compact and powerful DOHC four

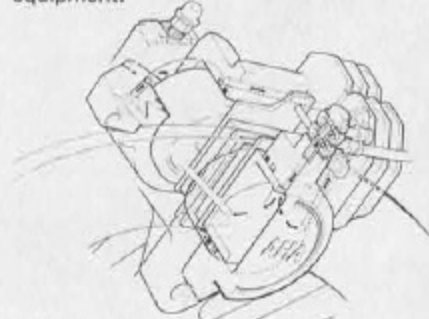


Triple-meter console with digital clock.

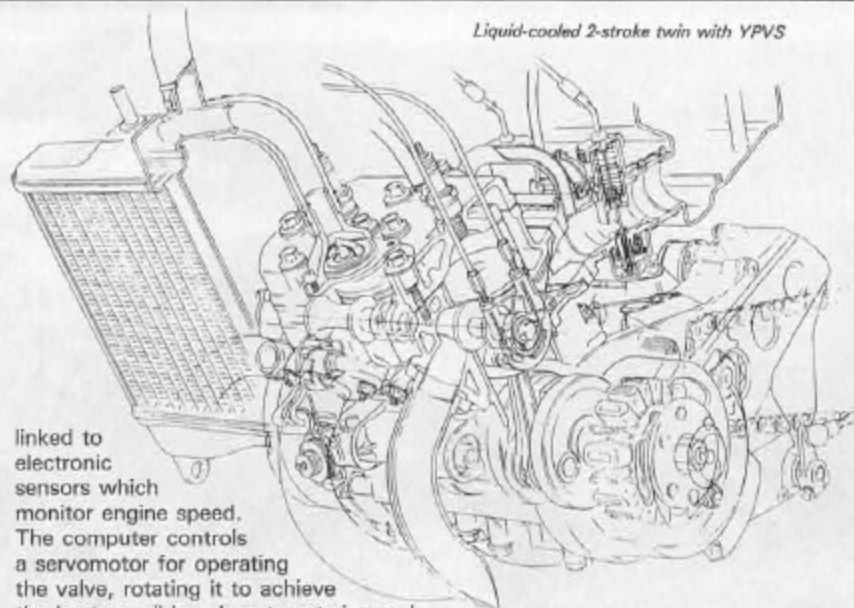
place the Yamaha XJ900 firmly in the superbike race is the high speed styling based very obviously on the World GP road race machines. Sleek integrated bodywork links the 22 liter fuel tank with the long seat and takes the eye down through the bike to the high-tech area of the engine. A neat little handlebar fairing shrouds the steering head area and contains a high visibility instrument panel with a central tachometer plus a fuel gauge and digital clock in addition to the usual equipment.



Programmed rear suspension adjustment (damping/preload)



Opposed piston type disc brake



Liquid-cooled 2-stroke twin with YPVS

linked to electronic sensors which monitor engine speed. The computer controls a servomotor for operating the valve, rotating it to achieve the best possible exhaust port size and timing for any given rpm. In addition, the valve rotates to clean itself of any carbon deposits as soon as the ignition is switched on, and before the engine is started. The new model also features an electronic governor in the CDI system for improved carburetion and liquid cooling system. The chassis and styling is also completely renewed, and nothing is retained from the 1982 version! The chassis itself is directly copied from the GP works machines with wide-spaced frame tubes and is rigidly triangulated. Rear suspension is also taken from the GP machines: a rising rate monocross suspension unit mounted behind the engine unit to achieve the lowest possible center of gravity. Short air-assisted front forks have increased stanchion diameters for greater resistance to flex and the new lighter cast alloy Italic wheels are of a new triple-spoke design. The twin disc brake at the front and single rear unit are slotted to allow for the heat expansion of prolonged hard use and high efficiency.

Wider rims allow a flatter profile for the H-rated, high speed tyres, and also permit larger tyres than standard to be fitted. The instrument panel is laid out in high-visibility, aircraft style, with a central tachometer flanked by speedometer and coolant temperature gauge.

Other improvements include: the narrow sculpted seat, racy steering head fairing and engine cowling.



Fuel is switched on by a rotary tap. Footrests are mounted on drilled alloy plates swept up at the rear to protect the passenger's foot from inadvertent contact with the rear wheel.

## XV1000SE A new Yamaha V-twin leader

The XV1000SE comes up as a new leader for the 1983 Yamaha V-twin range. The vee-twin configuration lends itself perfectly to the US Custom style of machine but European riding techniques demand something different. With the XV1000SE, this gap is completely bridged. The bike has the lean, low and relaxed look of the Custom models but without the exaggerated features which make them somewhat impractical for fast, long distance work. Borrowing features from the "Midnight Special" range so popular in the USA, the European XV1000SE is finished in gleaming black and gold livery and is as eye-catching as any multi-cylinder super sports bike.

The 980cc vee-twin engine features the SOHC system and synchronized twin carb system compactly located with the 75-degree angle of the cylinder block. Instead of the previous chain drive of Yamaha's biggest vee-twin, however, the XV1000SE has switched to the maintenance-free shaft already proven on

the smaller XV750SE. The chassis is the same monocoque, pressed-steel beam, utilizing the engine unit to form a rigid central block on to which front and rear suspension is mounted.

The telescopic front forks are of the leading axle type to lengthen the wheelbase for smoother handling at speed and at the rear it's Yamaha's trail blazing adjustable Mono-cross suspension. It is still the most completely-adjustable suspension system on the market, with both damping and air-spring pressure adjustable from the outside of the machine. The forks also use an adjustable air-spring with an equalizing tube linking the fork legs so that there is no chance of uneven pressures. The slotted front brake discs allow expansion under the heat of hard use. The rear brake unit is a drum integral with the cast wheel. Tubeless tyres reduce unsprung weight for better handling and are low-profile, H-rated rubber for safe high-speed cruising.

## RD350LC More racer technology

The Yamaha RD350LC is already established as one of the most sporting, high performance machines on the roads, regardless of capacity. For 1983, this high performance aspect is carried even further. The new Yamaha RD350LC employs more racing technology than any street machine ever produced to date. The new engine uses the Yamaha Power Valve System (Y.P.V.S.) straight from the factory road racers. Basically, advancing the exhaust port timing gives more power to a 2-stroke at high rpm and retarding it will spread the power across the low and mid-ranges to obtain good torque.

Exhaust port timing is controlled by the height of the port and YPVS is the only system that can vary this height to suit the power demands. Normal two-strokes are bound by the actual port height as cast into the cylinder barrel. The Power Valve is a cylindrical block placed horizontally across the exhaust port, with a cutaway to match port dimensions. At high rpm, the cutaway and port blend together to form the largest possible exhaust opening. At lower rpm, the Power Valve revolves so that it blocks off part of the exhaust port, thus delaying the timing of exhaust operation. A microcomputer is

500cc class  
Round 11 - Belgian GP - August 1  
1st race  
1. A. Vromans Suzuki  
2. B. Lackey Suzuki  
3. G. Noyce Yamaha  
4. N. Hudson Yamaha  
5. D. Thorpe Kawasaki  
2nd race  
1. G. Noyce Honda  
2. A. Vromans Suzuki  
3. D. Thrope Kawasaki  
4. B. Lackey Suzuki  
5. J. Sintonen Yamaha

500cc class  
Round 12 - Luxembourg GP (Final) - August 8  
1st race  
1. H. Carlqvist Yamaha  
2. B. Lackey Suzuki  
3. A. Vromans Suzuki  
4. N. Hudson Yamaha

## ROAD RACING RESULTS

500cc class  
Round 8 - Yugoslavian GP - July 18  
1st race  
1. F. Uncini Suzuki  
2. G. Crosby Yamaha  
3. B. Sheene Yamaha  
4. F. Spencer Honda  
5. T. Katayama Honda  
Round 9 - British GP - August 1  
1st race  
1. F. Uncini Suzuki  
2. F. Spencer Honda  
3. G. Crosby Yamaha  
4. L. Reggiani Suzuki  
5. R. Marnola Suzuki  
Round 10 - Swedish GP - August 8  
1st race  
1. T. Katayama Honda  
2. R. Marnola Suzuki  
3. G. Crosby Yamaha  
4. M. Fontan Yamaha  
5. M. Lucchinelli Honda

125cc class  
Round 9 - West German GP - July 11  
1st race  
1. M. Rinaldi Gilera  
2. E. Geboers Suzuki  
3. C. Maddii Gilera  
4. Y. Khudjakov Gilera  
5. A. Watanabe Suzuki  
2nd race  
1. E. Geboers Suzuki  
2. C. Maddii Gilera  
3. H. Everts Suzuki  
4. A. Watanabe Suzuki  
5. J. Vimond Yamaha  
Round 10 - Finnish GP - July 25  
1st race  
1. M. Rinaldi Gilera  
2. C. Maddii Yamaha  
3. M. Verkenoers Yamaha  
4. J. Vimond Yamaha  
5. E. Geboers Suzuki  
2nd race  
1. E. Geboers Suzuki  
2. M. Rinaldi Gilera  
3. C. Maddii Gilera  
4. Y. Khudjakov Suzuki  
5. H. Everts Suzuki

250cc class  
Round 9 - Spanish GP (Final) - August 15  
1st race  
1. H. Everts Suzuki  
2. E. Geboers Suzuki  
3. C. Maddii Gilera  
4. J. Vimond Yamaha  
5. M. Rinaldi Gilera  
2nd race  
1. E. Geboers Suzuki  
2. H. Everts Suzuki  
3. Y. Khudjakov Cagiva  
4. J. Vimond Yamaha  
5. A. Lojeune Honda

250cc class  
Round 11 - Finnish GP - August 22  
1st race  
1. D. La Porte Yamaha  
2. G. Jobe Suzuki  
3. K. Van Der Ven KTM  
4. H. Van Mierlo Suzuki  
5. T. Hansen Yamaha  
2nd race  
1. K. Van Der Ven KTM  
2. G. Jobe Suzuki  
3. D. La Porte Yamaha  
4. J.-C. Laguerre Honda  
5. H. Van Mierlo Suzuki

250cc class  
Round 11 - Belgian GP - August 1  
1st race  
1. A. Vromans Suzuki  
2. B. Lackey Suzuki  
3. G. Noyce Yamaha  
4. N. Hudson Yamaha  
5. D. Thorpe Kawasaki  
2nd race  
1. G. Noyce Honda  
2. A. Vromans Suzuki  
3. D. Thrope Kawasaki  
4. B. Lackey Suzuki  
5. J. Sintonen Yamaha

250cc class  
Round 9 - Soviet GP - July 18  
1st race  
1. D. La Porte Yamaha  
2. G. Jobe Suzuki  
3. H. Kinigardner Yamaha  
4. D. Watson Yamaha  
5. K. Van Der Ven KTM  
2nd race  
1. G. Jobe Suzuki  
2. D. La Porte Yamaha  
3. D. Watson Yamaha  
4. R. Dieffenbach Honda  
5. J.-C. Laquaye Honda  
Round 10 - US GP - August 1  
1st race  
1. D. Bailey Honda  
2. R. Johnson Yamaha  
3. K. Van Der Ven KTM

250cc class  
Round 11 - Swedish GP - August 1  
1st race  
1. C. Maddii Gilera  
2. E. Geboers Suzuki  
3. M. Rinaldi Gilera

250cc class  
Round 11 - Swedish GP - August 1  
1st race  
1. C. Maddii Gilera  
2. E. Geboers Suzuki  
3. M. Rinaldi Gilera

## NEWS FLASH Both road racing and motocross sidocar championships are won by Yamaha

Werner Schwarzel and Andreas Huber on the Yamaha sidocar outfit clinched the world road racing sidocar crown when they finished second to Alain Michel and Michael Burkhard on another Yamaha sidocar outfit in the San Marino GP at Mugello, Italy on Sept. 5. The world sidocar cross championship was also won by Emil Bollhalder and Karl Buesser on the Yamaha sidocar outfit with their success in the Danish round on Aug. 29.

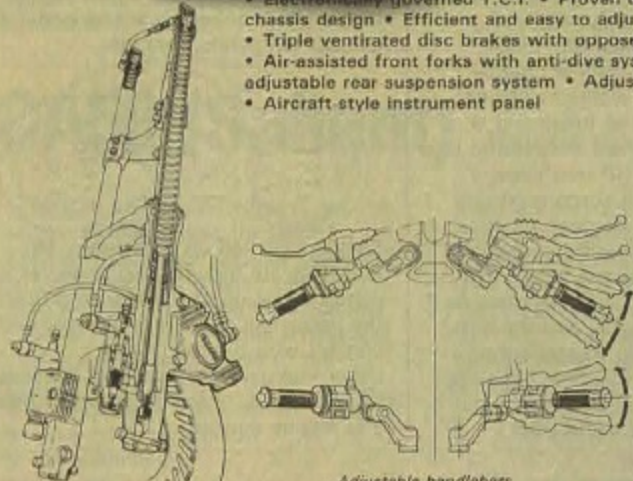
# The Yamaha 1983 European Model Range

## XJ900

• Type: 4-stroke, DOHC four • Displacement: 850cc  
 • Bore x stroke: 67.0 x 60.5 mm • Maximum horsepower (DIN): 97.0 ps (71.3 kW)/6,000 rpm • Ignition system: T.C.I. • L x W x H: 2,215 x 730 x 1,240 mm • Wheelbase: 1,480 mm



• Proven liquid-cooled DOHC 4-cylinder engine with Y.I.C.S. • Electronically governed T.C.I. • Proven double cradle chassis design • Efficient and easy to adjust shock absorbers • Triple ventilated disc brakes with opposed piston calipers • Air-assisted front forks with anti-dive system • Fully adjustable rear suspension system • Adjustable handlebars • Aircraft-style instrument panel



Air-assisted fork with anti-dive system and fork brace

Adjustable handlebars

## XZ550S

• Type: Liquid-cooled, 4-stroke, DOHC V-twin • Displacement: 552cc • Bore x stroke: 55.0 mm • Maximum horsepower (DIN): 64.4 ps (47.0 kW)/6,500 rpm • Ignition system: T.C.I. • L x W x H: 2,135 x 750 x 1,230 mm • Wheelbase: 1,450 mm



• Proven liquid-cooled 70-degree V-twin DOHC 4-valve engine with Y.I.C.S. • Newly developed aerodynamic fairing with moulded-in spoiler • Proven shaft drive • Adjustable Mono-cross suspension system and unique trailing axle front forks • Efficient downdraft carburetors



• Proven 75-degree V-twin SOHC engine • Maintenance-free shaft drive • 5-speed transmission with short-throw shift lever • Leading axle type air-assisted front forks with equalizing tube and damping adjuster • Completely adjustable Monocross suspension system • New American styling with black and gold livery • Slotted front double disc brake



## XV1000SE

• Type: 4-stroke, SOHC, V-twin • Displacement: 981cc • Bore x stroke: 95.0 x 69.2 mm • Maximum horsepower (DIN): 68 ps (50 kW)/6,500 rpm • Ignition system: T.C.I. • L x W x H: 2,200 x 840 x 1,235 mm • Wheelbase: 1,520 mm

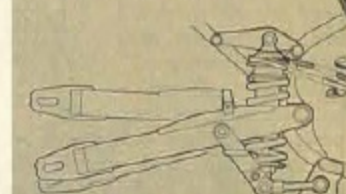


## RD350LC

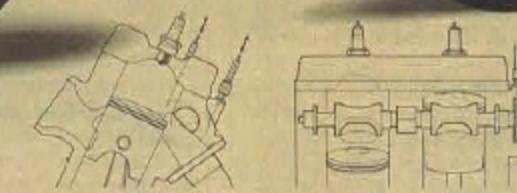
• Type: Liquid-cooled 2-stroke Torque Induction twin • Displacement: 347cc • Bore x stroke: 64.0 x 54.0 mm • Ignition system: C.D.I. • L x W x H: 2,120 x 740 x 1,165 mm • Wheelbase: 1,385 mm



• Newly designed liquid-cooled 2-stroke "Torque Induction" twin engine with Y.P.V.S. • C.D.I. system with electronic governor • 6-speed transmission • "Sealed" automotive-style cooling system • Yamaha-original orthogonal engine mounting • Racer-based triangulated chassis • Rising-rate Mono-cross suspension • Air-assisted front forks • Powerful and dependable disc brakes



New rising-rate Mono-cross suspension with easy preload adjustment



The RD350LC is the first street model to feature the YPVS

## RD80LC-II

• Type: Liquid-cooled 2-stroke Torque Induction single • Displacement: 79cc • Bore x stroke: 49.0 x 42.0 mm • Ignition system: C.D.I. • L x W x H: 2,035 x 735 x 1,190 mm • Wheelbase: 1,295 mm

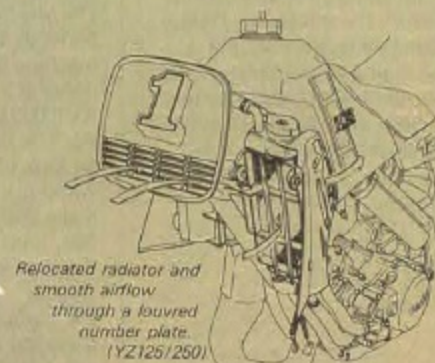


• High performance liquid-cooled 2-stroke "Torque Induction" single engine with Y.E.I.S. • "Sealed" automotive-style cooling system • Dependable C.D.I. system • Proven 6-speed transmission • Teflon-bushed front forks with increased travel • Efficient Mono-cross suspension system



## YZ490

• Type: 2-stroke Torque Induction single • Displacement: 487cc • Bore x stroke: 57.0 x 62.0 mm • Maximum horsepower (DIN): 60.0 ps (44.3 kW)/7,000 rpm • Ignition system: C.D.I. • L x W x H: 2,200 x 850 x 1,220 mm • Wheelbase: 1,500 mm



Relocated radiator and smooth airflow through a louvred number plate (YZ125/250)

• Improved 2-stroke "Torque Induction" engine with Y.E.I.S. • Higher compression ratio due to increased fin area • Redesigned rear Mono-cross suspension system • Improved front fork damping system • Total weight reduction (FIM limit)



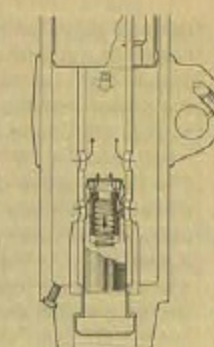
• Improved liquid-cooled 2-stroke "Torque Induction" single engine with Y.P.V.S. • Altered port timing with increased exhaust effect • Newly designed radiator with larger surface area and lower center of gravity • New link-type Mono-cross suspension • Total weight reduction (FIM limit) • New hollow wheel rims

## YZ250

• Type: Liquid-cooled 2-stroke Torque Induction single • Displacement: 246cc • Bore x stroke: 68.0 x 68.0 mm • Maximum horsepower (DIN): 47.0 ps (34.6 kW)/8,250 rpm • Ignition system: C.D.I. • L x W x H: 2,170 x 850 x 1,230 mm • Wheelbase: 1,470 mm



Rising rate Mono-cross suspension with new link system



Improved front fork damping system on the '83 YZ series (125/250/490)



Newly designed hollow wheel rims and aluminum nipples



## YZ125

• Type: Liquid-cooled 2-stroke Torque Induction single • Displacement: 123cc • Bore x stroke: 56.0 x 50.0 mm • Maximum horsepower (DIN): 34.0 ps (25.0 kW)/11,250 rpm • Ignition system: C.D.I. • L x W x H: 2,135 x 850 x 1,240 mm • Wheelbase: 1,450 mm

• Improved liquid-cooled 2-stroke "Torque Induction" single engine with Y.P.V.S. • Altered gear ratios to complement engine performance • Newly designed radiator with larger surface area and lower center of gravity • Total weight reduction (FIM limit) • New link-type Mono-cross suspension • New styling incorporating red fork boots and red rear suspension spring



## YZ80

• Type: Liquid-cooled 2-stroke Torque Induction single • Displacement: 79.1cc • Bore x stroke: 47.0 x 43.8 mm • Maximum horsepower (DIN): 21.5 ps (16.1 kW)/12,250 rpm • Ignition system: C.D.I. • L x W x H: 1,790 x 765 x 1,060 mm • Wheelbase: 1,230 mm



• Improved liquid-cooled 2-stroke "Torque Induction" single engine with Y.E.I.S. • Compacter cylinder and cylinder head • Spring-loaded type change pedal • New link-type Mono-cross suspension system • New front forks with increased travel • Relocated radiator

## PW80

• Type: 2-stroke Torque Induction single • Displacement: 79cc • Bore x stroke: 47.0 x 45.5 mm • Maximum horsepower (DIN): 5.2 ps (3.8 kW)/5,500 rpm • Ignition system: C.D.I. • L x W x H: 1,540 x 640 x 880 mm • Wheelbase: 1,055 mm



## CA50 (Salient)

• Type: 2-stroke Torque Induction single • Displacement: 49cc • Bore x stroke: 40.0 x 30.2 mm • Ignition system: C.D.I. • L x W x H: 1,570 x 620 x 1,005 mm • Wheelbase: 1,130 mm



• Forced air-cooled "Torque Induction" single Autolube engine • Automatic variable ratio transmission • Dual anti-vibration engine mounting system • Precise C.D.I. system • Two-stage starting switch • Vacuum-controlled fuel tap • Attractive streamlined cowling • Transmitted-light type panel illumination • Large-sized smokeless muffler



# '83 NEW EUROPEAN MODELS' TECHNICAL FEATURES

## RD80LC-II Outstanding 80cc performer

The RD80LC which is constructed as a genuine, full-sized motorcycle, is sure to become the outstanding performer in the 80cc class for 1983. It utilizes all of Yamaha's racing expertise in both chassis and engine design.

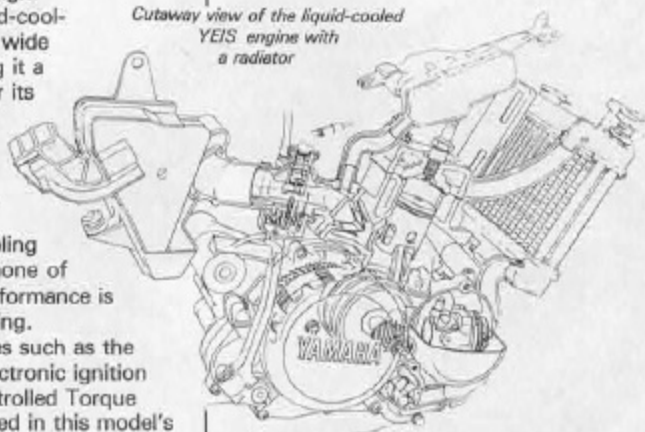
The 2-stroke 79cc liquid-cooled engine features the wide spread of torque giving it a definite advantage over its class rivals. This torque spread is aided by the use of the Yamaha Energy Induction System (YEIS).

The "sealed" liquid-cooling system ensures that none of the small engine's performance is lost through overheating. Proven Yamaha features such as the "Autolube" system, electronic ignition and the reed valve-controlled Torque Induction are all included in this model's specifications.

In addition, the 6-speed transmission enables the rider to keep the engine revving firmly in the power band. Hydraulic front forks are used in conjunction with Yamaha's famous Mono-

cross unit at the rear. Braking is also well up to genuine motorcycle standards with a large diameter hydraulic disc brake at the front

Cutaway view of the liquid-cooled YEIS engine with a radiator



and a labyrinth seal type drum at the rear.

## CA50 (Salient) Unique sporty type scooter

For 1983, a new machine has joined the Yamaha scooter range; the CA50 (Salient). It is a 50cc scooter machine combining the best assets of its predecessors. The incredible economy of the 50cc Passola plus the styling and weather protective qualities of the Beluga model.

Technically, the CA50 is an interesting machine, employing the automatic variable ratio transmission in conjunction with its forced air-cooled, 2-stroke engine.

This uses vee-belts and variable diameter pulleys and, unlike similar systems, also employs a torque cam on the drive pulley which senses changes in power loads at the rear wheel. The result is much smoother automatic gear changes.

The newly designed single-cylinder 2-stroke engine employs a dual anti-vibration mounting system consisting of a coil spring and rubber dampers which effectively cuts out vibration before it reaches the rider.

Everything about the engine has been designed with ease of operation in mind. Automatic oiling, for example, to avoid that messy pre-mixing of oil and fuel. Electronic ignition gives precise timing and, coupled with the automatic choke and electric starter, results in the engine firing up at the first touch on the starter button.

As an important safety device, however,

there is a two-stage switch which will allow the engine to start up but which will not allow the machine to go forward until the switch is put into the separate "drive" position. All of the mechanical components are enclosed

in smooth bodywork which is good to look at and easy to clean. Even the handlebars are enclosed by a streamlined cowling that also incorporates the headlight and instrument panel.

All of the controls are concentrated into two-multi-function switches on the handlebars within reach of the rider's thumbs.

Comfort has a high priority in this model's design. Cantilever suspension is softly sprung by a large oil damper and leading link front forks increase the cushion effect to a maximum.

Ten-inch wheels are shod with 3.00-inch tyres, again to achieve maximum cushioning effect along with totally improved stability. Legshields and footboards are an integral part of this model's bodywork and adequately protect the rider against the worst of the weather. Incorporated in the rear of the legshields is a box for small packages.

The instrument panel of this model includes speedometer, fuel gauge and warning lamps for oil level, high beam and turn signal operations. An audio signal goes on when the flashers are operated so that the rider is reminded to switch them off once the turn is completed.

## YZ490, YZ250, YZ125

### Increased race performance

The '83 YZ series developed from the successful '82 series comes with a number of technical improvements and refinements for even higher race performance.

Design points have been placed on the improvement of off-road steering characteristics and competition reliability by fully utilizing a great store of race-riding technology.

One of the most important alterations made to chassis design is that a radiator is fitted to the frame, while it is position-

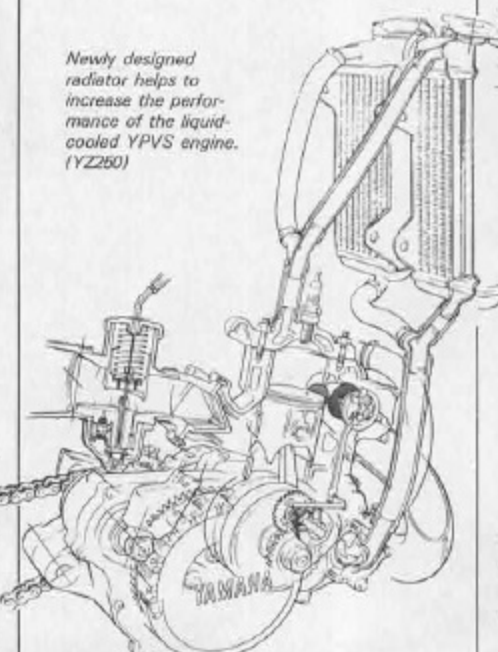
ed in front of the front fork assembly on '82 series.

Relocation of radiator, altered caster and trail, and adoption of new link-type Mono-cross suspension have also improved off-road handling characteristics. The new link-type Mono-cross suspension employs a con. rod by utilizing leverage action, to obtain the same progressive effect as a rising rate type system. Suspension effect is increased specifically in the mid-range stroke, thus making off-road riding as soft and com-

fortable as possible, while spring effect and damping force are greatly increased to prevent "bottoming". Simplified moving parts are all grouped under the swingarm assembly and lightweight cushion unit is installed as low as possible in the chassis construction. These improvements have helped to lower the center of gravity so that off-road steering characteristics are substantially improved.

The new series consists of the 125, 250 and 490 models, all of which meet the respective minimum weight limits as provided by the F.I.M.

Newly designed radiator helps to increase the performance of the liquid-cooled YPVS engine. (YZ250)



**YZ490**  
• Higher cooling effect due to increased fin area on the cylinder.

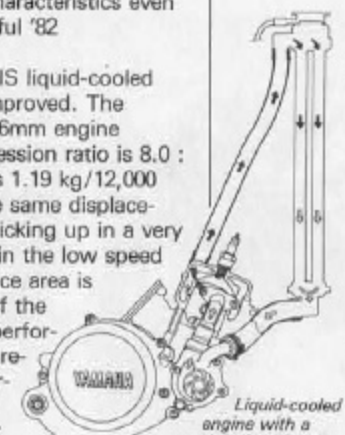
## YZ80 King of mini-motocross

The 1983 YZ80 is born to be a winner in the highly competitive mini-motocross world, with its impressive engine performance and handling characteristics even better than its successful '82 predecessor.

The already-proven YEIS liquid-cooled engine is even more improved. The 2-stroke single 47 x 45.6mm engine displaces 79cc. Compression ratio is 8.0 : 1. Max. torque reaches 1.19 kg/12,000 rpm, the highest in the same displacement class. Power is picking up in a very dynamic manner even in the low speed range. Radiator's surface area is 35% larger than that of the '82 model. This high performance radiator helps greatly to increase the durability of the powerful engine under whatever

hard-riding condition. The YZ80 now features a new link-type rear Mono-cross system and a newly designed swingarm made of elliptical tubing.

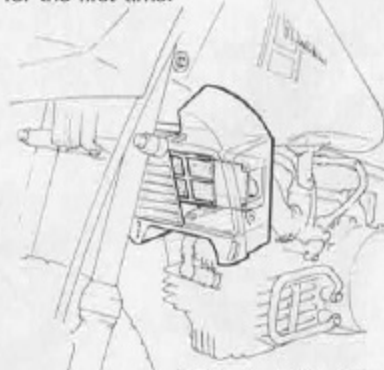
This combines increased strength and reduced weight. The new Mono-cross system allows a wheel travel of 250mm (plus 20mm over the 1982 model). The shock absorber has been redesigned into a lighter and more efficient unit with the stroke reduced from 112mm to 90mm. Front suspension has also been improved with wheel travel increased by 15mm (now 240mm). Rigidity is increased, too, and inner tube size is changed from 30mm to 33mm.



## PW80 A real beginner bike for YZ oriented children

The PW80 is intended to bridge the gap between the PW50 and the YZ50. This model has been designed with 7 to 10-year old YZ oriented children in mind. A well-proven 79cc 2-stroke single-cylinder engine powers this model. Standard safety features include a muffler protector, engine guard, handlebar padding, YZ seat, chain case and chain guard, and a special power reduction washer, placed between exhaust port and exhaust pipe, to limit speed and acceleration capabilities. The front fork assembly, which incorporates oil damping, is of the leading axle type and has 110mm of travel. The famous Yamaha Mono-cross gas/oil damper suspension unit has been adopted in this model. This gives 95mm of travel. With its 3-speed automatic clutch transmission, hand and foot brakes,

Mono-cross suspension, etc., the PW80 will greatly improve the motocross skills of YZ oriented children who began off-road riding with the PW50 or children experiencing the joy of off-road riding for the first time.



Radiator look-alike air cleaner

- YEIS
- New link-type suspension.
- Improved front fork adjustment.
- Front and rear aluminum die-cast hubs.
- New styling incorporating red fork boots and rear suspension spring.

- YZ250**
- New square type engine for increased torque.
  - Sharper engine response with the use of new reed valve system.
  - Altered gear ratios to complement engine performance.
  - New split type radiator with increased surface area.
  - Lower center of gravity due to relocation of radiator.
  - Front and rear aluminum die-cast hubs.
  - New styling incorporating red fork boots and red rear suspension spring.
  - Liquid-cooling system.
  - YPVS
  - New link-type suspension.

- YZ125**
- Lighter and compact engine.
  - Increased torque particularly in the low to mid-range due to YPVS.
  - Altered port timing with increased exhaust effect.
  - Newly designed radiator with larger surface area.
  - Lower center of gravity due to relocation of radiator.
  - New link-type suspension.
  - New front fork assembly with base valve and ring type orifice.
  - New hollow wheel rims for more strength and weight saving.
  - New styling incorporating red fork boots and rear suspension spring.
  - Liquid-cooling system.

# Mrs., It's the Mr.'s Turn

## Mr. & Mrs.



We've spoiled the ladies long enough. The Yamaha Passola has been the No.1 selling ladies' bike for the last year. (And with the introduction of electric start on the 1982 models, we're still pampering to their every whim.) Now, it's the fellas' turn. We've launched the Yamaha Beluga. Make no mistake about it, this is definitely a man's machine. The Beluga has an 80 c.c. 2 stroke engine with electric start. It's fully automatic. Automatic choke. Automatic transmission. And automatic lubrication. It also has a rear rack and a special parcel compartment. And thanks to Sir Geoffrey's latest tax increase on petrol (again) it's reassuring to know that the Beluga is extremely economical in that department. Sorry Mrs.

**From Great Britain:** There is a trend toward a scooter boom all over the world today. A nice scooter poster was made recently in England. It is small, measuring just 30cm by 42cm, and is rather unassuming being black and white. Nevertheless, it is full of humor and introduces the Beluga and Passola in a relaxed manner. The caption reads Mr. & Mrs. and the poster looks like this; We've spoiled the ladies long enough. The Yamaha Passola has been the No. 1 selling ladies' bike for the last year. (And with the introduction of electric start on the 1982 models,

we're still pampering to their every whim.) Now, it's the fellas' turn. We've launched the Yamaha Beluga. Make no mistake about it, this is definitely a man's machine. The Beluga has an 80cc 2 stroke engine with electric start. It's fully automatic. Automatic choke. Automatic transmission. And automatic lubrication. It also has a rear rack and a special parcel compartment. And thanks to Sir Geoffrey's latest tax increase on petrol (again), it's reassuring to know that the Beluga is extremely economical in that department. Sorry Mrs.

## Motor sports get big coverage

—The Daily Mirror—



GP Moto-cross article in The Daily Mirror

**From Great Britain:** The Daily Mirror is a popular daily paper in London which is famous for its long history and it receives tremendous popular support because of its clarity and wide coverage ranging from current events and

political issues to entertainment and sports. As many as 11 million copies are sold every day. Recently The Daily Mirror has begun to feature motorcycle articles in a big way. This could be because motor sports have always been very popular in England and there is a trend towards increasing appreciation for motorcycles.

## Beluga Press Conference



**From France:** It was reported in the No. 5 issue of Yamaha News how the Beluga Show in Paris was a great success. A rather lavish Beluga Press Conference was also held after the show. In this Press Conference sponsored by Sotomoto, about 110 reporters from

specialized and non-specialized publications attended. Many of the press including Lui, Vogue Homme, Marie Claire, Paris Match and television (i.e. TFI, Antenne 2 and FR 3) are well known even in other countries. This is another indication of how much interest has been generated in the Beluga. The conference began with a speech from Mr. Olivier, followed by the showing of a film on the Beluga, and then a question and answer session. It goes without saying that this press conference started out with caviar and drinks. Some of the press in attendance were as follows;

Moto Journal, France Moto, Moto Plus, L'année Moto, Auto Moto, Revue Moto Technique, Le Figaro, France Soir, Le Matin De Paris, Nouveau Journal, Le Parisien, Le Monde, Quotidien De Paris, Liberation, Cosmopolitan, Femme pratique, Femme d'aujourd'hui, Ving' ans, Tennis magazine, Mennis de France, Super tele, Tele journal, Tele star, Tele 7 jours, D.P.P.I., Radio 7, La croix, etc. etc.

## Yamaha promotion reaches 15 million people

**From Holland:** According to the Yamaha Motor NV in Amsterdam, a French TV crew went to Italy to cover the road race GP being held there. This crew interviewed M. Fontan, B. Sheene and G. Agostini, the manager of the Ago racing team. The total airing time of this feature was about two hours and it was reported that approximately 15 million people watched

this program. This is one example of how Yamaha riders all over the world are enthusiastic about promoting the Yamaha brand every way they can.



G. Agostini answers a question in the TV interview

## Parts Sales Campaign in Nigeria

**From Nigeria:** Yamaco, the Motorcycle Division of the local Yamaha importer (a division of John Holt, Ltd.), conducted a 2-month Parts Sales Campaign prior to transferring the said division over to the new company, Yamaha Manufacturing of Nigeria Ltd. (Y.M.N.L.). This campaign was a great success, thus enhancing further the brandname of Yamaha.



The celebration for the dealer, who won the first prize in the campaign; From left to right - the manager of the Parts Division of Yamaco, Mr. Teichert, the staff of YMC in charge of the Nigerian market, Mr. Kunimi, the winning dealer and the parts manager Mr. Okorodudu

## Advertising in several languages



Haenen Company's booth at a trade fair

**From Suriname:** The popularity of Yamaha motorcycles is rapidly growing in Suriname, located in South America. Therefore, the local Yamaha importer, J.F.D. Haenen Co., Ltd., is putting forth greater efforts in publicizing activities in trade fairs and sports events, and through the local press, television and radio. In Suriname, aside from the official language Dutch, a multitude of languages including Hindi, Indonesian, English, Spanish and local tongues are spoken. The radio commercials for Yamaha are broadcast in Dutch, Hindi and Indonesian, as well as in several local tongues. Efforts are being made to publicize the Yamaha brand name in the area of sports to reach a wider audience by not only backing motorcycle racers, but also by sponsoring a volleyball team which is currently the national champion.

## One hustling dealer from Germany



Mr. Shimada at Suzuka circuit

**From Iwata:** One unusual Yamaha dealer took part in the Suzuka Enduro Race this year. His name is Koichi Shimada and he is a Japanese who has lived in West Germany since 1950, and he is now one of the top dealers there. Mr. Shimada came to Japan with two primary objectives. The first was to take part in the enduro race and elevate the image of the standard Yamaha models. Mr. Shimada, married to a German, has one daughter and one son, both of whom helped to clock him during the race. Unfortunately, he experienced some trouble with his machine and the results were not all that good. Nevertheless, the second objective of Mr. Shimada was carried out very successfully. It was to help his group to get a better understanding of Japan, his own birthplace as well as that of Yamaha Motor. He brought along with him 15 people including his friends among dealers and customers, and a member of the police force as well as of an automobile association. He served as the interpreter and their visit to the headquarters of Yamaha Motor was the highlight of this tour. Mr. Shimada, who as a racer, dealer, tour guide, and as a father, was extremely busy every day in Japan, took the time to have some "sushi" (raw fish delicacy) with his son and daughter. This may well have been the highlight of the trip for his two teenage kids.

## Yamaha baseball team becomes as popular as soccer team



Yamaha fans wild with excitement cheer their team on

**From Iwata:** The baseball team of Yamaha Motor Company only two years since its formation, was chosen this year as the regional champion to represent the Yamanaishi and Shizuoka Prefecture Region for the 53rd All Japan Baseball Championship. In this event, the top teams from each area of Japan compete at the Kōrakuen Stadium to decide the best company team in Japan. In the first game of the Yamaha team, they almost lost to Denden Kyūshū from Kumamoto City (southernmost region) losing at 3 to 5 until the 7th inning. But in the bottom of the 8th inning, Noguchi, the right fielder, blasted a 3-run homer to turn the tables and clinch the victory. In the second game, they went up against Fuji Heavy Industries from Ōta City (80km north of Tokyo), a team regarded as a strong candidate for the championship. But Yamaha's pitcher Suzuki held down Fuji Heavy Industries to just four single hits, while the Yamaha team hammered out 8 runs in top form to win the game. The Yamaha team, as one of the

# '82 Pan Am Clipper Cup Yacht Series in Hawaii

**Class-D Winner**  
**YAMAHA-R41 CUSTOM RACER**

# SUPER WITCH



## One after another boats are forced to retire in 40-knot winds

The "Clipper Cup" becomes a "survival race"

Among the open sea races for big boats, the five most famous are England's "Admirals Cup", Australia's "Southern Cross Cup", Italy's "Sardinia Cup", America's "S.O.R.C." and this "Clipper Cup". The "Clipper Cup", in this its third running, attracted 75 big boats from the Pacific area countries of Australia, New Zealand, Hong Kong, Japan, Canada and the U.S.A.

World famous Waikiki Beach on Oahu island of Hawaii, the mid-Pacific paradise known for its marvelous year-round summer climate, was the base for this hotly contested series of 5 races which were held over a three week period beginning August 7th.

The "Clipper Cup" series consists of 5 races, including three races over a 27 mile triangle course, one middle distance race of 150 miles (Molokai Race), and a 780 mile long distance race (Round-the-State-of-Hawaii Race). This year's race was quite different from the second running in 1980 because of the strong trade winds that created terrible sea conditions.

The participating boats were divided into 5 classes beginning with the maxi-boats, A, B, C, D, E classes, with a long list of famous off-shore racers such as "Kialoa" and "Condor", making this the highest level race ever.



None of the boats were expecting these strong wind conditions. The strong trade winds created white-caps during this triangle race.

## Outstanding sailing performance against the world's top racers

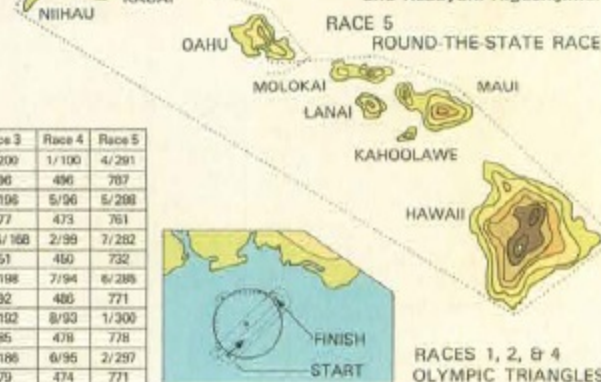
5th-1st-1st-1st-4th place finishes for a decisive class victory

"Super Witch", a 41 foot sloop designed by the Yamaha Design Team was entered in the D class of this year's race. Famous skipper, Lowell North, was called on to mount the challenge against the 18 top class racers in the highly competitive Class D. North had to use all of his sailing skills in what turned out to be a hot race between such famous boats as "Police Car", "Hitch Hiker", "Brooke Ann", "Tomahawk", and "Irrational". Amidst this tough competition, "Super Witch" only managed to finish fifth in the first triangle race, but then came back to finish the second and third triangles in first place. She later showed her beautiful sailing qualities in pulling away to finish first



RACE 3 MOLOKAI RACE

The ten-member crew of "Super Witch" includes skipper Lowell North ('74 2-Ton World Championship winner, '76, '78 S.O.R.C. winner), navigator Rick Mogel, and crew members Warwick M. Tompkins, Stan Gibbs, David W. Miller, Richard Martin, Robert Schuster, Yasuyuki Hakomori and Kazuyuki Higashijima.



RACES 1, 2, & 4 OLYMPIC TRIANGLES

### Class D: points table

	Race 1	Race 2	Race 3	Race 4	Race 5
SUPER WITCH	26	196	306	496	787
HITCH HIKER	3/96	DNF/83	3/105	5/96	5/208
POLICE CAR	98	181	377	473	761
IRRATIONAL	1/100	DNF/83	DNS/168	2/99	7/282
BROOKE ANN	100	183	351	450	732
TOMAHAWK	6/96	2/99	2/198	7/94	6/288
	95	194	392	480	771
SEAQUESTA / SM 202	2/99	7/94	6/192	8/93	1/300
	99	193	385	478	778
PACHENA / KC-89111	4/97	5/96	8/105	6/95	2/297
	97	193	379	474	771

### Class D

	Aug. 7	Aug. 8	Aug. 11	Aug. 14	Aug. 21	TOTAL
	Race 1	Race 2	Race 3	Race 4	Race 5	
POLICE CAR/KA-300	1	2	3	4	5	① SUPER WITCH
BROOKE ANN/US-77519	2	1	2	1	1	② BROOKE ANN
HITCH HIKER/KAR-303	3	3	1	2	2	③ IRRATIONAL
TOMAHAWK/US-67377	4	4	4	3	3	④ TOMAHAWK
SUPER WITCH/J-3631	5	5	5	5	4	⑤ HITCH HIKER
IRRATIONAL/US-67666	6	6	6	6	6	⑥ SEAQUEST
ZINGARA/US-35031	7	7	7	7	7	⑦ WILL O' THE WISP
SEAQUESTA / SM 202	8	8	8	8	8	⑧ KO TERU TERU
PACHENA / KC-89111	9	9	9	9	9	⑨ MOONSHADOW
MOONSHADOW/B-51	10	10	10	10	10	⑩ POLICE CAR

in the 150 mile Molokai Race. Throughout the strong winds and choppy sea conditions that caused one boat after another to drop out with mast or rudder troubles, "Super Witch" and its crew, with Lowell North at the helm, made an impressive display of the best teamwork along with their sound sailing tactics. In the end, both boat and crew proved themselves with consistent finishes of 5-1-1-1-4, giving "Super Witch" a convincing victory in Class D. Following the "Wing of Yamaha" 's victory in the 1975, Pacific Ocean Single

Handed Race and the 1/4 Ton World Championship won by "Magician V" in 1978, this makes the third time that the Yamaha Design Team has produced an outstanding boat with excellent sailing performance that has outsailed the world's top competition and won the attention and praise of yachtsmen the world over.



"Super Witch" performed magnificently while running free before the wind. At a speed of 12 knots she seems to be flying along as she rides the surf.



With the beautiful summer coastline of Hawaii in the background, the "Clipper Cup" has become the race that every off-shore racer wants to enter.



Maxi-boats that have made names for themselves on race courses the world over, such as "Kialoa" (80 foot sloop/owner, John B. Kilroy/designer, Holland) and "Condor" (80 foot sloop/owner, R. A. Bell/designer, Holland), added to the color and excitement of this year's race.

