Yamaha News

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YAMAHA MOTOR CO., LTD. AD & PR DIVISION 2500 Shingai, Iwata-shi, Shizuoka-kan, Japan Tel: 05383 (2) 111 Telay, Iwata 4383,751 Vannaha, LCalde, Vannaha Motor Iwata

INSIDE PAGES

Pages 2 to 5 are devoted to introducing the technical features of the '84 European motorcycle range, and pages 6 and 7 outline the '84 outboard range.

Break free ! A hot-going new Yamaha breed





The 1984 European model line-up of motorcycles

'83 "Salon de Paris" Motorcycle Show

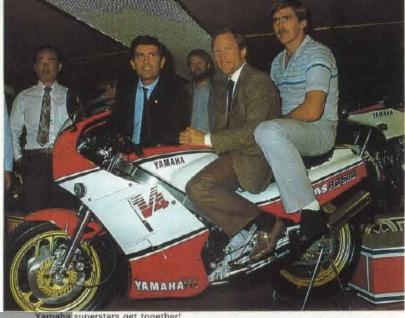
The 1984 European model line-up of motorcycles was introduced during the Salon de Paris Motorcycle Show in France held from Oct. 1 to Oct. 9.

Designed and built for sheer excitement and true quality that every enthusiast had long craved for, the new line-up came as a big sensation, proving Yamaha's great potential in all the fields of motors relief.

in all the fields of motorcycling.
It was truly a hot-going new Yamaha breed including the brand-new superbike FJ1100 and the real GP racer replica RD500LC which have set new high standards in both performance and quality, thus striking every visitor with an impression—"The Thrill Is Back".



Hakan Carlqvist and new YZ



Yamaha superstars get together! From right to left: Hakan Carlqvist, Kenny Roberts and Giacomo Agostini



Sonauto Yamaha director J.C. Olivier and new X.1600



Entrance to the show

The 1984 Outboard Line-up

Chicago (IMTEC) Show

The 1984 Yamaha outboard line-up which made its debut during Yamaha dealer conferences and press previews held in the United States, Canada, Europe, Australia, New Zealand and South Africa received enthusiastic responses from everyone.

The new line-up ranging from the 2hp Single to the 220hp V-6 Special has been developed to fit diversified customer needs, especially with widened pleasure-boat use in mind. In addition, the new line-up created a tremendous sensation when it was introduced to the buying public for the first time in the United States during the Chicago (IMTEC) Show held from Sept. 22 to Sept. 25.







The Strengthened Boat Line-up for '84



Yamaha Marina Hamana-ko
14 quality new models have added to the
Yamaha pleasure boat line-up for '84, to
meet the recent surge of boating enthusiasm in Japan. These new models
were introduced to Yamaha dealers, press
personnel and the buying public at Yamaha
Marina Hamana-ko from Sept. 8 to Sept.
10.



Leading the way into the motorcycle world '84

Behind all the valid, sensible reasons for buying a motorcycle there's still one fierce, primal urge and, in 1984, Yamaha are going straight for it. We're out to tap the rich vein of sheer excite ment at the very core of the motorcycle experience!

Motorcycling excitement can come in many ways. From attacking the back roads at speed on a supersports bike less than one step removed from the racetrack. Or by flying in luxury down the freeway fast lanes.

By battling off-road with the challenge of nature itself. Or even sneaking smoothly through city traffic while your fellow commuters curse in stationary frustration!

Whatever it is about motorcycling that gets your adrenalin pumping, Yamaha has a bike that'll throw the switch.

For this is the year that we've pledged to multiply the excitement factor. All across the Yamaha range, the thrill is back!



FJ1100

New potential in the superbike class

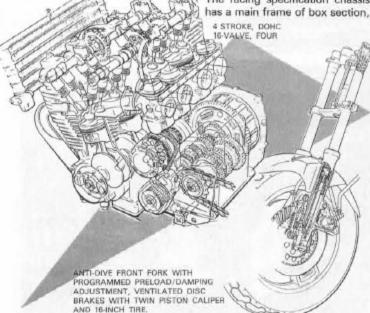
a big class superbike at Yamaha. Not because we weren't capable but because we preferred to emphasise the comparative values of a good power to weight ratio.

It's been some years since we built

Now we've joined the outright horsepower race and, in true Yamaha style, have shot straight to the front with the most awesome superbike so far. The Yamaha FJ1100, a chain drive, in-

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straight from the Bol d'Or starting grid. Styling and aerodynamics are pure endurance racer with highenetration nose fairing, streamined front fender shrouding the front fork legs and an engine undercowl with integral spoiler. The racing specification chassis



line four with double overhead camshaft 16 valve cylinder head. Valves are directly driven from the camshaft with no cam followers,

Yamaha's new superbike is a

machine that could have come

ly more compact!

A by-product of this 'lateral' frame thus reducing valve train powe design is superb accessibility to the engine. The cylinder head is It's a machine, however, that still exposed between the top frame holds true to the Yamaha ideals of tubes while the bottom chassis efficient power to weight commembers are both detachable to binations. Not only is the FJ1100 facilitate work on the engine's more powerful than the rest, it's also lighter, narrower and general

High-speed cruising potential

igh-tensile steel tubing with its

op rails joining ahead of the front

orks. This gives maximum steer-

ing head rigidity and allows the

mounting of the fairing and instru-

ment console direct to the forward

rame members so that their

weight does not detract from the

high speed, straight-line stability

of the front suspension.

petrol tank shape will easily ac

commodate a tank top bag while

the tail cowling spoiler has hook

We may have waited awhile he-

fore we decided to build the

ultimate superbike but, with the

advent of the Yamaha FJ1100, no-

one dare question our capabilities

RD500LC

A Grand Prix racer

Here it is at last! The Yamaha

RD500LC-the bike that the

daydreamers and rumourmongers

have been hinting at ever since

Kenny Roberts got a grip on the

500cc World Championship and

our liquid-cooled RD models

established themselves as the

most popular sports machines

The Yamaha RD500LC-a true

replica of the factory racing ma-

chine with which Kenny Roberts

replica for the

any longer!

road

ever made.

up points for tie-down straps.

Rising rate Monocross suspension is employed and offers five-way adjustment of both damping and spring pre-load on the single shock absorber. All possible combinations can be dialled in from the outside of the machine via a chaindriven remote control unit. Front suspension is also adjustable, via three pre-set options, again on both damping and spring pre-load. The telescopic forks have 41mm stanchions and a large alloy brace to resist torsional stresses, with anti-dive hydraulics keeping the FJ1100 straight and level under heavy braking.

The triple disc brakes are centreventilated for quick heat dissipation and operated by new, opposed-piston calipers containing semimetallic, 'all weather' friction

Ultra-wide section 16-inch wheels are used front and rear to gain cornering potential in line with the engine's power output.

The high-speed cruising potential of the FJ1100 also has an obvious appeal to long distance touring enthusiasts, which is why we have designed the bike with plenty of space for luggage equipment. The

1983 World Championship series! Even the specification details of the sensational new Yamaha sound more suited to the racetrack than the road but this is not actually the case. The RD500LC is a superbly tractable street machine, using the lessons learned on the racetrack to bring bonuses in terms of both power and safety.

The power bonus comes from the compact, lightweight, 50° V4 twostroke engine. The most powerful motor ever produced for the 500cc class, performing on a par with rivals twice its size. It features reed valve induction for smoothlycontrolled intake flow while the computer-controlled Yamaha Power Valve System (YPVS) matches exhaust port timing to engine speed for the maximum-possible spread of torque.

Starting with the lower end of the engine, we find that it is in effect two racing-type, twin-cylinder power units geared together. Each of the twin-cylinder blocks has its own crankshaft and these are, in

turn, geared to a central mainshaft which takes the power to the transmission. The integral bal-

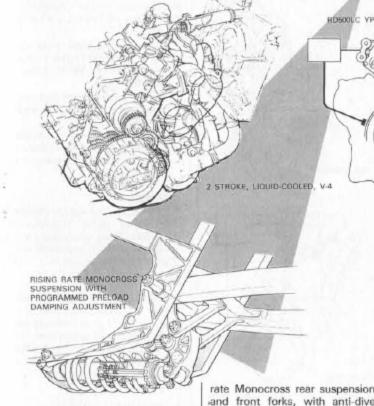


ancer gear, which smooths out vibration to permit sustained high rpm, is rubber-bushed to reduce backlash.

The engine has a diagonally opposed firing sequence to maintain equal loading on the primary transmission drive gear and its crankcase separates into three

Moving to the upper part of the engine, there are four separate cylinder blocks with special antifriction coating on the cylinder walls. The upper pair of cylinders are interchangeable from left to right, as are the lower pair. won six Grand Prix events in the Upper and lower cylinders, how-





ever, can not be interchanged Cylinder heads are one-piece units for each twin cylinder block and are not interchangeable

An F-1 dominator!

The box-section main frame tubes are widely-spaced to lower the fuel tank position and steering head height, therefore reducng overall frontal area. This has the added advantage of easy ac-

cessibility to the upper part of the

Front wheel of the RD500LC foll- | RD500LC represents the ultimate ows current racing practice and is in of 16-inch diameter, fitted with low-profile (120/80) tyre. Rear wheel is of 18 inch diameter with wide-section 130/80 rubber. Both tyres are V-rated for ultra highspeed use. Wheels are of new triple-spoke design, cast in light

The safety bonus comes from the precise, predictable handling of the chassis. This employs rising

but superstrong, high-density

up to racing standards-triple large-diameter ventilated discs. using technology developed first for Formula One racing cars. All this is cloaked in a streamlined

system keeping the machine level

The brakes themselves are right

under braking.

fairing that protects the rider while increasing top speed and fuel efficiency er before has any manufac-

turer produced so close a replica of a current Grand Prix winner for id-going use. The Yamaha supersports machinery and also be considered a legitimate and highly-competitive contender in the production machine-based Formula One motor cycle racing, which for 1984 will pit 500cc two-strokes against 750cc four-strokes, instead of 1000cc machines as before. With the RD500LC capable of outperforming many 1000cc superbikes, it must be considered a potentia Formula One winner.



XJ600

Big power boost and new chassis

This is the year in which Yamaha have vowed to emphasise their sporting capabilities by heading the performance stakes in as many classes as possible. Few people are likely to contest the claim of the new Yamaha XJ600 in the 550/600cc supersports category. Powering the new XJ600 is a high

compact in-line four that has proved so successful as the XJ550. It is not, however, merely a bored out version of the existing motor. Though some of the castings are the same, most of the XJ600 engine shows evidence of redesign or new manufacturing

A real supersports middleweight

Like all the other engines in the Yamaha XJ range, the XJ600 is generally lighter, narrower and performance, 598cc version of the more compact than its rivals. This.

cams, bigger (by 1mm) inlet and exhaust valves with ports opened up to match, big-bore 33mm carburettors and a large capacity air cleaner from the XJ900. Compres sion ratio rises from 9,2:1 to 9.8:1 while the free-flow exhaust system is also derived from the XJ900. Finally, the drive shaft from that bigger model is utilised to cope with the over-10% power boost that results from all of these changes.

In fact, there's a lot of our very successful XJ900 incorporated in the new XJ750. The chassis retains the variable-adjustment rear shocks and ventilated brake discs but uses large diameter telescopic forks without the anti-dive mechanism and air damping of the XJ900 components

Most visible item that the two bikes share is the new-for-1984 lead fairing, mounted direct to the frame rather than on the front forks. This eliminates the inertia of the fairing and instrument console, and increases rider protec-

In essence, the Yamaha XJ750 shares all the good points of its bigger brother but sacrifices just one or two of the high-tech

touches in the interest of preserving the solid middleweight values of good performance at a sensible

XJ900

The line leader in our highly-

Improved aerodynamics

popular XJ-series, the XJ900, looks even more exciting for 1984 with the addition of a new head fairing and engine undercowling. The new fairing has larger dimensions for better rider coverage with effective air penetration and is frame-mounted so that its weight does not affect steering at speed. The lower part of the fairing is duct-shaped to direct air over the cylinder head area, so the air scoops mounted beneath the fuel tank on last year's model are now

Otherwise, the Yamaha XJ900which was one of most successful introductions in 1983-ramains basically unchanged for the com-



XJ750

of course, is due to the rear

mounted generator position

pioneered by Yamaha on the XJ

series. The generator is now posi-

tioned behind the cylinders and

above the transmission case,

powered by chain drive from one

of the inner crank webs. Rival

models have their generators

hanging out on the end of the

crankshaft, adding to engine

width and promoting damaging

The new power plant is housed in

totally new chassis, using

'amaha'a famous rising rate

Monocross suspension for the first

time in the XJ four-stroke sports

As a result, the Yamaha XJ600 is

a compact, nimble-handling

motorcycle with a high perfor-

mance engine that marks it as a

real supersports middleweight

One which Yamaha are confident

will be right amongst the market

leaders in an increasingly impor-

A sporting seven-fifty

tant area of sales.

'amaha's XJ models (ranging rom 400 to 900cc) have become the primary choice for many riders hopping in the middleweight arketplace. They offer excellent power-to-weight ratios, compact dimensions, fuel efficiency and nimble handling—all the virtues that a good middleweight should

This year Yamaha introduce 750cc version that, for the first time, has dual-role potential. Housed in the sporting XJ900 rolling chassis is a new 750cc power unit to produce a bike that is equally effective as either sports machine or fast tourer.

A number of new improvements

The new engine displaces 749cc from a 65 x 56.5mm bore and stroke (stroke is 0.4mm longer than its 1982 predecessor). Significant changes in the twin-

cam cylinder head include high lift

Last word in touring luxury

For the first time in the history of the company, Yamaha have produced a motorcycle purely and simply for the long distance touring rider. The Yamaha XVZ12T/ 12TD is a 'full dress' touring bike in the American idiom and it sets new standards of luxury and mechanical-sophistication for the wo-wheeled world.

The Yamaha XVZ12TD was originally designed for the endless freeways of the USA. But what better bike is there for a fully loaded cruise across the moto rways of Europe?

The first Yamaha offered

XJ750

Europe exclusively for the long distance touring rider. The XVZ12TD is centred around

the biggest capacity Yamaha power plant ever built. A 1200cc vee-four with liquid-cooling hydraulic clutch and shaft drive for quiet operation with total reliabili ty. Thanks to its double overhead camshaft, 16 valve cylinder head design, the XVZ12TD has all the power you'll ever need....and plenty still in reserve. Yamaha's induction Control System (YICS) delivers fuel efficiency with the widest possible spread of torque. And on a 1200cc vee-four, that spread is wide indeed! The XVZ12TD does have a five speed earbox but once you're up to cruising speeds you can drive it on the throttle just as if it had automatic transmission! Smooth speed is what the biggest Yamaha is all about, which is why there's a crankshaft balancer to eliminate the vibration that's a major source of discomfort on rival tourers. Rider discomfort just cannot be

tolerated on a long distance machine. So the XVZ12TD has a full fairing integrated into its compact bodywork, an orthopaedicaly-designed seat with separate sections for rider and passenger and adjustable handlebars and footrests that allow an individuallytailored riding position. Largecapacity luggage equipment is part of the basic specification and added luxury comes in the form of a stereo casette player and radio adjusts the volume according to the surrounding noise levels!

1984 Yamaha Motorcycle Range (Europe)

One of the safest, most efficient machines

Technically, the XVZ12TD is loaded with features that make it one of the safest, most efficient, machines on the road. The Unified Brake System links the left from and rear disc brakes so that they are both operated, in perfect balance, from the foot pedal. The right front disc is operated by hand ever. The Computer Levelling Air Suspension System (CLASS) machines on the road. The Unified and rear suspension spring tensions to suit your own weight and load requirements at the push of

the kind of rider who thinks in it's your kind of bike! XVZ12TD MONOCROSS XVZ12TD MID-SHIP FUEL TANK

DT125LC

Maintaining Yamaha's lead in an exciting class

In recent years there have been some dramatic changes in the 125cc class. Once just another fairly-insignificant lightweight category, it is now a battlefield of technological advances and marketing rivalry.

Without any false modesty, we're proud to say that Yamaha started the 125cc renaissance by having the courage and foresight to use our most modern, race-developed technical innovations in what was previously a motorcycling backwater. We began to build 125cc contenders that were real motor cycles. Full-sized bikes with small capacity, high performance engines rather than dressed-up lightweights that were 'all show

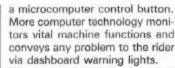
ind no go What we built were bikes like the Yamaha DT125LC-one of the models which blew the class wide apart as soon as it appeared on the scene. This motocross-inspired supertrail' bike is the leader in its class and has been a runaway success for Yamaha. But we're not getting complacent! Our DT125LC development is a continuing programme of improvement on a bike that's already the best!

The 1984 version of the Yamaha DT125LC hammers that point home in the most emphatic possible fashion. Its specification is closer than ever to the Grand Prix motocross racers from which the

More powerful but even more manageable

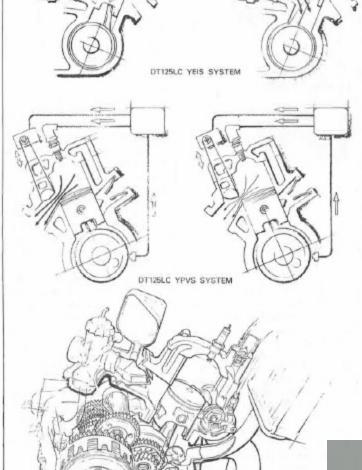
The liquid-cooled engine now utilises both the Yamaha Energy

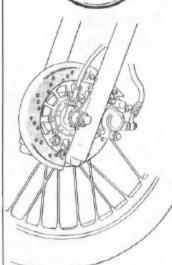




The heavy duty front forks are braced against torsional flexing and incorporate an anti-dive sys tem that prevents the hefty machine from dipping its nose under braking. The use of Monocross rear suspension, plus the under-seat location of the 20-litre fuel tank, combines with the wide profile, 16-inch rear wheel to drop the centre of gravity as low as possible to achieve a safe and stable ride.

No motorcycle is better-equipped for long distance touring than the Yamaha XVZ12TD. So, if you're terms of crossing continents rather than mere countries; then





DT125LC DISC BRAKE/PLASTIC SHIELD

nduction System and Yamaha Power Valve System for the most effective possible combination of outright power and big-pulling

The DT125LC has further increased its power advantage over anything else in its class and now s even more manageable

For the new power unit, there's a brand new chassis. Again a nearreplica of our Grand Prix racers with rising rate Monocross suspension that allows 210mm of wheel movement, Leading axle front forks have rugged 36mm stanchions plus 240mm travel and carry the latest Yamaha off-road development, our all-weather ront disc brake. Proved on the XT600 Ténéré, we have now prought disc brakes into the ightweight enduro classes. The specification is completed by rame mounted passenger foot rests and a strong luggage carrier High performance potential

that is sufficient to gain a good position in the World Championship races.

The '84 TZ250 was developed with

the following design concepts to

offer higher performance than its

- Light, strong chassis that provides good handling at high
- 3. Engine characteristics that are controllable enough for novice riders as well as for seasoned

CHASSIS

A lightweight, high-rigidity chassis that allows stable high-speed riding by utilising newly designed components which have sufficient strength for lateral and torsional

ELECTRICALLY-CONTROLLED YPVS

The new YPVS gives more precise control of exhaust timing than the previous mechanically-controlled unit, allowing engine to deliver higher horsepower over wider rpm

IMPROVED COOLING **EFFICIENCY**

To cope with increased engine power and the consequent heat, the '84 TZ250 uses a newly developed, larger-capacity radia-

BRAKES

To give strong, yet stable braking aster lan time, the '84 TZ250 features improved brake sys The front brake has a new, master cylinder. The rear uses a thinner, lighter disc rotor, new friction pads and newly designed master cylinder

ENGINE

DT125LC ENGINE

Styling of the 1984 DT125LC has

been updated again, keeping pace

with the aggressive look of today's

factory motocross racers. At first

glance, the Yamaha DT125LC

seems to be an out and out, high

performance motorcycle. Closer

inspection of engine and chassis

components emphasises that fact

TZ250

Since its introduction, Yamaha TZ250 has been one of the most

popular and competitive produc-

tion road racers. In the 1983 sea-

son Carlos Lavado, a Venezuelan

Yamaha rider, won the 250cc class

of the World Road Racing Cham-

pionships on his TZ250. This also

brought Yamaha its 11th manu-

facturer's Championship in the

beyond any possible doubt!

The result of GP

victories

The TZ250 power unit features optimal combustion chamber design give efficient fuel burning. The specifically developed pistons with 0.8mm-thick rings offer low frictional losses and high top-end power. The large-capacity expansion chambers and carefully designed intake manifolds provide smooth, efficient cylinder filling, while the 38mm-diameter carburettors ensure quick throttle

LIGHT WEIGHT

The rear shock absorber uses a superlight, high-tensile steel coil spring. The expansion-chamber exhaust pipes have light, efficient aluminium silencers. The clutch cover and oil pump cover are made of cast magnesium. The front brake uses aluminium caliper. The fairing is composed of thin, lightweight FRP skins. The aluminium-alloy brake pedal is specially coated to give higher





TY250

A real competitive machine

The 1984 TY250 is unique in being the only production trials motorcycle to use a single-shock Monocross suspension system. Yamaha's decision to use this system is hardly surprising as the company pioneered its use on the street and in all other forms of competition. Its effectiveness as a trials suspension has been immediately proved by the Isle of Man win and top placings in other British events on the test program

Technical close-up

The new, single-cylinder twostroke is built to be as light and compact as possible with a narrow crankcase width that is essential to any successful trials bike.

It/has a "square" bore to stroke atio of 68×68mm and the cylinder head uses a new dual squish band resembles a bell, with a flat outer rim tapered sharply up to the central spark plug. It is designed specifically for low-down power and even-running a minimal

Torque is further improved by the heavy full-circle flywheels used on the Yamaha YZ490 motocross racers. Crank web balance holes have been plugged to add even more to flywheel weight and to in-

YT60

crease the primary compression ratio....another aid to low-end power and smoothness

The six-speed gearbox has its first four ratios closely-spaced so that the rider can make gearchanges actually in the trials sections if nec-

The chassis of the 1984 TY250 is a classic 'diamond frame' with the engine forming the lower part of the parallelogram and acting as a stressed member. Below the motor is a flat alloy grid plate that is, in turn, shrouded by a sump guard. In addition to 325mm or ground clearance, therefore, the TY250 crankcases are doubly protected against rock-inflicted damage!

Yamaha's monocross suspension

is used for the first time on a trials machine. It features a single De bon-type shock absorber with gas/oil damping and a six-way adjustable coil spring. The shock unit is connected to the tapered box section swinging arm by forged aluminium linkage arms which are specially-cranked to exert more leverage as the suspension nears the end of its compression. Thus damping is increased in a rising rate to spring compression, givin a light ride on smooth terrain and more and more resistance as the bumps get bigger. An added benefit of this system to the trials rider is the fact that the suspension has added momentum on its rebound stroke, thus actively helping the bike to climb over rocks or

Outstanding safety features

front and rear. This, combined

with telescopic front forks, pro-

vides a soft ride over any terrain

to minimise the effects of bumps

on young bodies.

Footrests are integral with the widespread, flexible rear fenders and are positioned so that it is impossible for the rider to trap his leg the rear wheels

On the grab bar at the rear, behind

the deep-cushioned, protective seat, there is a unique engine stop switch. A long cord is linked to a pull-out confector in this switch so that the parent can actually have his young 'learner rider' on the end of a lead, just like walking a dog! If the child begins to go too fast for the parent's peace of mind (whether inadvertantly or not!), a quick tug will disconnect the switch and stop the engine. The parent is in control until he or she is confident that the child has mastered riding techniques in safetyl

There are other built-in safety factors to prevent a child going too quickly, too soon.

A power reduction plate cuts down the diameter of the exhaust port but can be removed when the child is actually capable of handling additional speed and acceleration.

YZ80/125 250/490

Production motocrossers developed by world champions

Since Heikki Mikkola put together successive wins for Yamaha in the 500cc class for both 1977 and 1978, there have been the 250cc class Championships of Neil Hudson and Danny LaPorte in 1981 and 1982 plus Hakan Carlqvist's well-deserved 500cc title that climaxed the 1983 season. All of these World Championship wins-not to mention our first title, courtesy of Hakan Andersson in the 250cc class ten years ago have had a distinct effect on the quality of production motocross racers built by Yamaha.

Yamaha YZ80

On the 1984 version of the YZ80, the improvements are made in lessening the weight, extending the suspension capabilities and spreading the horsepower more across the rpm range. Weight has been out by two kilograms over the 1983 version by various detail modifications.

None of them are drastic changes on their own account but collectively they reduce the weight of the YZ80 from 62 to 60kg

Engine performance has been slightly increased for 1984 and. perhaps even more important, this power has been spread across the lower end of the rpm scale to make the bike more manageable in all conditions.

Getting the power efficiently to the ground is the job of the Monocross suspension, which has been increased in travel this year big, low-pressure balloon tyres, I from 245 to 260mm. This is achieved by a new shock absorber with a 90mm stroke. Front forks gain the same 15mm extra travel, wheel movement now be ing 255mm

Front and rear wheels of the YZ80 both use the new Yamaha rim-to-rim "Z" spokes, cranked for positive location where they pass through the hub but actually holding the rim in tension rather than simply connecting it to the hub flange. The wheels stay true longer, spoke tension needs less adjustment and they have a stronger resistance to deflection.

Yamaha YZ125

Engine power has been increased by new porting in the cylinder body, on exhaust side.

Two sub-ports have been out in the cylinder barrel, one on each side of the main exhaust tract These speed up the extraction of exhaust gases, feeding them through matching sub-ports in the body of the Yamaha Power Valve System. These YPVS sub-ports are graduated to the same degree as the main valve cutaway, so that exhaust port timing is varied on both them and the main tract.

Swinging arm length has gone up by 38mm and the relay arms for the Monocross rising rate suspension altered to suit the other chassis changes. The rear shock absorber has been shortened by 47mm to 440mm overall length but its stroke is only reduced from 109 to 103mm

The rear shock is also reduced 6mm in diameter (to 40mm).

This allows a more compact chassis layout as well as reducing overall weight. The shock absorber has a smaller remote reservoir which makes for easier compression damping changes via an adjuster actually on the reservoir. On the equipment side, the fuel tank capacity goes up from 7 to 7.5 litres, there's a new, longer rear fender, re-designed side covers and a radiator cover specifically-shaped to keep it out of the way of the rider's knees and lower legs. The radiator itself is now protected by a tubular

Yamaha YZ250

YZ490

For 1984, the YZ250 promises to be even more competitive, with significant improvements to both engine and suspension components. It gets the same porting changes as the YZ125, with two exhaust sub-ports that link with the YPVS system to speed up the exhaust process. A large capacity air filter is easily accessible via the machine's side covers while the exhaust pipe is now routed down the right hand side and its noise vel reduced from 110dba to 108dba without any loss of power. The silencer is made of lightweight aluminium.

The water pump axle is strength ened for total cooling reliability New closer transmission ratios enable the rider to better use the added horsepower of the 1984 machine.

A new, compact shock absorber is fitted, being 38mm shorter than the 500mm 1983 component.

The front forks also now have adjustable compression damping (like on the YZ125) and the front wheel utilises Yamaha's new rimo-rim "Z" spokes.

On the rear wheel, these are used on one side only, so as not to interfere with the sprocket moun-

There's a new 8.5 litre fuel tank, a edesigned radiator cover plus a tubular guard to protect it in a crash and an even-more accurate electronic ignition system, new for 1984.

Again, the Yamaha development department's attention to detail will make the YZ250 an even stronger contender for next season. Even more competitive than a bike already capable of winning a Grand Prix in stock production

Yamaha YZ490

There are changes in both engine and chassis specifications that will make the 1984 Yamaha YZ490 a potent weapon for the private ride n the highly-competitive 500cc class.

Inlet and exhaust port timings have been changed for more perfomance and carburettor size goes up from 38 to 40mm

The reed valve Torque Induction now uses eight reeds instead of six and breathes through a new, double-element filter. This filter can be removed through the side panel for easy cleaning. Cylinder ead fin shape has been changed and an air-scoop installed on lefthand side of the engine for better cooling. There's an extra holddown bolt (seven instead of six) to gain a better seal between head nd barrel.

The chassis gives increased ground clearance and uses a more compact shock absorber for the Monocross suspension for better weight centralization and a lower centre of gravity. Though the shock is 38mm shorter, at 462mm, its stroke has been inreased from 112 to 116mm.

Both front forks and rear suspension have adjustable compression damping, the rear adjustment being made directly at the remote fluid reservoir (The rear shock is also adjustable in rebound damping). Wheelbase of the powerful YZ490 has been shortened by 25mm for 1984, to make it more controllable on tighter track sections and braking performance is improved by a larger rear brake (now up to 150mm diameter from



Safe, stable and so much fun

As the popular PW50 is to dirt bikes, so the YT60 relates to the bigger Yamaha Tri-Moto threewheelers. It's a scaled-down but fully-equipped Tri-Moto with many of its fittings aimed specifically at rider safety.

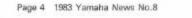
Children and their parents will appreciate the stability of three

vheels for low speed riding. An important confidence builder to any youngster just learning to ride a powered vehicle. The YT60 is powered by what is

essentially a 59cc version of Yamaha's QT50 moped engine, complete with its maintenancefree shaft drive. The shaft is totally-enclosed so that there is no possibility of injury....always a hazard with chain drive, which is why Yamaha have chosen a shaft on all machines designed for very young children.

The little Yamaha 'trike' rides on





1984 Yamaha Outboard Range

system shows some problem in

performing these precise timing

adjustments accurately over th

full range of speeds with their dif-

fering combustion and output

levels. In short, if the timing is set

to give the optimum ignition at full

throttle, the hardest of all running

conditions, the medium throttle

range setting will have to fall

halfway between the full throttle

The YMIS is programmed to read

the signals from the sensors, from

which the actual operating condi-

tion of the engine is determined,

and select the optimum ignition

timing as indicated by the map,

which is relayed to the CDI unit

In this way the ignition timing can

be regulated freely according to

the actual operating condition of

the engine at any given time, thus

fulfilling the role of an ideal igni

The YMIS works on a program in

the form of a map that automa

tically provides the optimum igni

ion timing based on information

about the engine's operating con-

dition, using the carburetor's

throttle valve opening (fuel load)

and the engine's rpm as its two

The YMIS, with its primary func-

tion of ensuring optimum ignition

timing at all times, gives the fol-

lowing benefits and makes the V-6

Special unique in performance

and quality, even among the new

Consistently delivers its max-

imum power potential automa-

type of the boat, its weight, or

tically regardless of the hull

V-6 series models:

tion timing system.

setting and the idle setting.

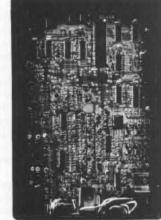
The strengthened new line-up with the 220-plus-hp V6 Special at the top

Yamaha V-6 Special

With an engine based on the standard specifications of the new V-6 series, this model has all of the new features a quality engine can include. For example, this model is equipped with an 8-bit microcomputer system (YMIS: Yamaha Micro-Computer Ignition System) that boosts the overall performance one step above the other Yamaha V-6 series models. The newly developed oil injection system is also standard on this model

Most advanced ignition timing control system

The ignition timing is one of the factors that directly effects the power output efficiency and the driving feel of the engine. The ideal ignition timing control system, therefore, is one which can advance or retard the ignition tim-



2. Gives better fuel efficiency in ing in response to the needs of the engine in varying running conditions. Even a proven mechanicallink type ignition timing control

the cruising speed ranges. Dalivers smoother neak power in the high speed and full throttle ranges.

4. Improves acceleration perfor-

Yamaha V-6 150/175/200

Using the best of our high leve engineering technology accumu lated from many years of experi ence, we have strived to achieve a new level of perfection in both performance and quality as fol-

. To insure sufficient displace ment to give the desired power output, a 6-cylinder layout has been chosen and a 90°V configuration with a 60° regular in terval firing has been adopted to insure sufficient exhaust tuning space and a smoother driving feel.

designed for the left and right cylinder banks, thus avoiding problems of mutual interference caused by exhaust pressure from the opposite bank

The engine employs three one float/two-bore type carburetors, each of which supplies a pair of cylinders simultane-

A new cooling system has been developed for this V-6 series. The new cooling system separates the thermostat and the pressure control valve, thus placing the valve in the bypass passage located inside the exhaust cover.

Because the new V-6 engines employ the same design for mat, they are able to make a lot of the parts interchangeable.

Increased reliability

Along with high performance potential and high fuel efficiency in the entire speed range, a number of new improvements have

2. Separate exhaust systems are | raised Yamaha's reputation for reliability even higher as follows:

A high speed type lower cas-

When compared to a conventional casing, it has the following

The abrupt ends of all protrusions on the casing are stream lined for smoother water flow.

The casing cross-section is reputer analysis into a new shape that reduces water resistance to a minimum at high speeds.

The leading edge of the lower casing is made into more of a acute angle to reduce "splash" and also to keep the created splash flow smoothly back along the casing to reduce its resistance energy.

The trailing end of the skeg is elongated to reduce the water resistance resulting from eddying during cruising, and at the same time to make the pro peller more effective because of the steadier flow it has to bite

developed earlier as an improve-

ment on the ogival type for use on the V-4 series. This propeller won

ed for use in the higher speed

range than the V-4 series. With

this in mind, we have designed a

* A new type propeller

higher fuel efficiency and a long service life.

Other outstanding features

* Pancake type combustion chambers to improve power-to fuel efficiency.

Yamaha V-4

115/140

The precision-forged, solid alum

given an exact 90°V configuration.

Firing interval is just equal 90°

This design format is very effec-

tive in the reduction of vibration

for smoother, quieter operation,

The pair of twin-bore, singlefloat chamber type carburetors is designed to deliver the same level of efficiency as a conventional 4-carb system.

Each cylinder's V-type reed valve intake mechanism functions to reduce the intake resistance very effectively

The new V-4 115/140, like the V-6 series models, has the following safety devices:

An overheat warning device An over-rev. limiter

Safety devices incorporated in the remote control box (starter safety switch, emergency switch and neutral lock)

The flywheel has a protection

Yamaha 3-cylinder and 80/90

The series consists of three basic model designs each of which has been used to built two models with different horsepower capacities, so that these models could develop the market more efficient-



ACCELERATION (Acceleration characteristic of three-cylinder models.)

40/50, 60/70

Along with the development of the Yamaha 60/70, 80/90 models. we have developed an original new shift mechanism that uses three steel balls in a detent. With this new mechanism, regardless of the speed with which the shift lever is moved, the dog clutch is activated quickly, giving a smoother, surer shifting action than a mechanism that relies on a manual shifting ac-

40/50, 60/70, and 80/90, to improve the engine's reliability.

Safety warning systems We have taken the already famous

Yamaha safety circuits and built them into the CDI unit, where they perform two different safety war ning functions as follows:

a) There is an over-rev, limiter to prevent the over-revolution of the engine due to such causes as cavitation, ventilation, or the drive unit jumping out of the

b) An overheat warning system lets the driver know that a clogged water intake or the like has caused the engine to overheat by dropping the engine rpm in a step down progression that the driver can feel, as well as by sounding a

Ease of handling

Included in the improvements for the ease of handling are the following devices:

Hydro tilt lock system Power tilt (only 50hp model)

Power tilt and trim

The Yamaha 40/50, 60/70, and 80/90 all come in two types, a conventional pre-mixed fuel/oil type and an oil injection type. For the Yamaha 60 and large models we have designed a high speed type propeller (optional)

Yamaha Twin 20/25/30

We have designed the new 20/25/30 with their use on a variety of boats ranging from rubber boat to small-sized cabin cruise for versatile pleasure purposes in mind.

The engine has been made as compact and lightweight as possible with the following major cha racteristics:

Exhaust pulse is effectively used by exhaust manifold.

Thermostat-controlled watercooling system ensures better cooling effect, which in turn increases combustion efficiency

Reed valve intake system results in better fuel efficiency and plenty of torque especially in low and mid-range speeds. In addition, the following features are standard on the new

Through-the-prop exhaust

Dual exhaust Electric starter and remote control console

Starter safety device and Throttle friction device for sure

operation Newly designed instruments

Yamaha Twin 9.9/15

"Superior trolling performance" and "quieter operation" were 9.9/15.

chamber which is located close to the exhaust port, has a small sub chamber with a spark plug. In this air/fuel mixture is swiftly induced into the sub combustion chamber through both main and sub transfer ports.

Exhaust noise and high-frequency friction noise of gears are the main causes that make an outboard

The former has been reduced by means of the newly designed multi-stage expansion chamber which absorbs the exhaust energy very effectively while the latter by introducing one significant improvement to the shift mechanism, a source of noise.

Yamaha Twin

Innovative technology has been boldly adopted one step ahead of all competitors in the new Yamaha 6/8 in order to distinguish them with features unique to Yamaha. Efforts have been devoted to create as high a product value as possible. Major technical improvements include the use of CDI system instead of a contact breaker ignition system, and a load-type steering mechanism instead of a full pivot type.

In this day and age, durability has become an obvious prerequisite for any brand, and it is no longe a point for hot competition. The real value of an outboard motor today hinges on whether it can provide good response in the low and mid-range speeds in addition to reliable high-speed performance. Yamaha, fully confident and secure with its technical ex pertise, has developed these motors that bring both high per formance and fuel economy

Yamaha **Single 2/4/5**

The Yamaha 2/4/5 have been designed and engineered to meet the diverse and widely-ranged needs of small-power outboard customers that make up the base of the pleasure boating market, by giving specific emphasis to the following three points:

1. True portability: Must be handy to carry. Must be mounted on and demounted from the boat easily.

2. Better maneuverability: Must be operated and controll ed easily even by a woman

child or boating beginner. 3. Improved maintenance cha racteristics:

> Must be virtually maintenance free to increase the ease of servicing.

Yamaha Kerosene

won wide acceptance in a number of countries including Indonesia India and Sri Lanka. In these countries outboards are playing a big role in coastal-water fishery or

kerosene outboards are greatly ap pealing to a lot of people because the cost of kerosene is substantially lower than gasoline and it is very easy to obtain anywhere.

Although kerosene has some shortcomings as a fuel for internal combustion engines, it shows the same level of performance as gasoline due to technical im-

provements as follows: The Yamaha-original dual float chamber carburetor features an automatic changeover system. The engine starts on gasoline, through the auxiliary gasoline carburetor, and switches to kerosene operation by means of the main carburetor at around 1500 rpm. This system eliminates starting trouble usually associated with

The large fuel tank is divided into two compartments. The upper section holds 6 liters of gasoline and the main lower section 18 liters of kerosene enough for four hours of operation even at full throttle.

Back in 1960. Yamaha introduced the first kerosene outboard (P7K). Since then, Yamaha has continued research and development on kerosene models and has retained its role as a pioneer in this field. At present, four kerosene models ranging from 8 to 40 hp are available from Yamaha. No other manufacturer has such a strengthened line-up of kerosene models

Yamaha **Enduro Series**

The Yamaha Enduro Series Out boards, which range from 15 to 75 hp, are designed and engineered as extremely tough, dependable performers in the most demanding fishing or commercial operations.

Both top and bottom cowlings with double-seal lips have greatly increased water-tight characteristics. Large sealing areas on the starter handle keep out water. The air duct is also sealed by a labyrinth type intake.

Shift operation is easy, smooth and sure

Almost all exposed surfaces are made of highly corrosionresistant stainless steel and aluminum alloy.

To ensure even better protec tion, a primary coat, corrosionresistant coat and finish coat are applied, thus shutting out salt water, while also giving a neat, glossy appearance.

Two double oil seals are install ed in the lower case as extra protection for the mechanism. The drive and propeller shafts are both made of stainless steel with highly corrosion-and-rust

resistant characteristics.

The water pump housing is This prevents rust and corrosion very effectively. The water pump cartridge is chrome plated for added durability and better performance in muddy

To protect the outboard from the corrosive action of salt water, anodes have been pro-

A large-capacity rubber damper is installed on the aluminum alloy propeller. This damper is designed to resist axial force.

Yamaha Oil Injection System

Convenience plus economy

In stepping boldly into the bigpower field with the new V series and also into the mid-power field with the new 3-cylinder series, we have developed two new types of oil injection systems exclusive to 2-stroke outboards, based on our long proven 2-stroke motorcycle engine technology, while at the same time keeping a resultant cost increase to a minimum.

The oil injection system adopted in an outboard spares the user the messy job of preparing the gasoline/oil mixture, thus making the outboard much more conve

nient and enjoyable to use. The system sets the mixing ratio at 200 : 1 in the ultra-low or low speed range for idling or trolling, while giving the ratio of 50: 1 or 100: 1 (40/50 hp models) in the full-throttle high speed range. The ratio for the middle speed range is set midway between the above

This system not only reduces the amount of oil consumed, but also gives the following advantages: . Less exhaust smoke in the low speed range.

Reduced carbon accumulation around the piston head, cylin-



der head, exhaust manifold,

Less oil fouling of spark plug. pollution.

two types of oil injection systems: One type is designed for use the V4 and V6 series models (Yamaha 115/140 and 150/175/200/V-6

This type has a separate largeoil into each cylinder.

The "oil injection" pump which is fitted to the outside of the power unit, is driven by the rotating rankshaft via a worm gear fitted to the bottom of the crankshaft. The pump is also interlocked with the arrount of throttle valve open ing in the carburetor via a link The rotation speed of the crank-

4. Effective prevention of water We have prepared the following

capacity sub oil tank, as well as a main oil tank built in the cowling. The oil injection pump is used to supply the oil into each cylinder. The other type is used on the cylinder series models (Yamaha 40/50, 60/70, 80/90), An oil tank is built in the cowling and oil injection pump is used to supply the

General features

changeover to 50:1

(b) Detachable oil injection pump (c) Letting the air out of the oil in

shaft and the amount of throttl valve opening-the pump uses these two factors as parameters to regulate the supply of lubricating oil to the engine, so that the engine can always get just enough oil for its actual requirement. The oil injection pump has the same number of injection nozzles as the number of cylinders, namely 6 fo the V6 series, 4 for the V4 series and 3 for the 3-cylinder series thus allowing independent oil sup ply to each cylinder.

When the oil level falls below the prescribed level, a yellow oil leve warning lamplight goes on, thus telling the necessity of immediate oil replenishment into the sub oil

In case the engine has run low o lubricating oil, a red oil level warning lamplight goes on instead of the vellow light and the buzzer in the remote control box begins to sound to tell the necessity of urgent oil replenishment.

Other common features (a) Safety device for automatic

jection pump

new type cup propeller for higher * A new shift mechanism Quick response and good feel are

what one expects from a good shift mechanism. For the new V-6 series, we have developed a new original shift mechanism which utilizes a detent containing six steel balls. In this new mechanism. regardless of the speed at which the shift lever is activated, a dog clutch action is always sure and quick enough to shift the gears

Excellent safety features

Safety features are always one of Yamaha's top priorities but in the design of the new V-6 series we have taken high level safety systems one step further.

An independent safety war ning unit

This unit has the control unit independent of the CDI unit, and to it two new safety features are added as follows:

(a) An over-rev limiter b) An overheat warning device

the remote control box

a) A starter safety switch (b) An emergency stop switch c) A neutral lock

Safety features included in

The 150/175/200 are available in an oil injection type or conventional pre-mix

A large anode for the brac ket

Because it prevents the engine from corroding by being corroded itself, the anode is an essential feature of any outboard that comes in contact with salt water. As with the V6 and V4 series, the 3-cylinder series features a large anode on the bracket

on the part of local dealers.

The outstanding feature of

2-stroke 3-cylinder engine is the

even firing characteristics of the

120° interval. Careful design of the

exhaust system can mean an

engine that delivers plenty of tor-

que in a flat curve over the entire

speed range, as well as a high level

of fuel efficiency. The 3-cylinder

engine with its 120° firing interval

can use the exhaust pressure ever

better than a good twin engine

with the 180° firing interval. The

blow-by of fresh mixture is also

kept to a bare minimum, at the

Shape of the combustion

For the Yamaha 60/70 and 80/90,

a pancake shaped combustion

chamber has been chosen. This

shape of combustion chamber in-

creases the available pressure

while also strengthening the

For the Yamaha 40/50 a specially

shaped cylinder head with a sub-

combustion chamber and a main

combustion chamber has been

adopted. With this design, fresh

gas is concentrated quickly into

the sub-combustion chamber in

the cylinder head for positive fir-

A new shift mechanism

(Yamaha 60/70 and 80/90)

Reliability

squash and swirl effects.

same time that scavenging eff

nev is improved.

Performance

Exhaust efficiency

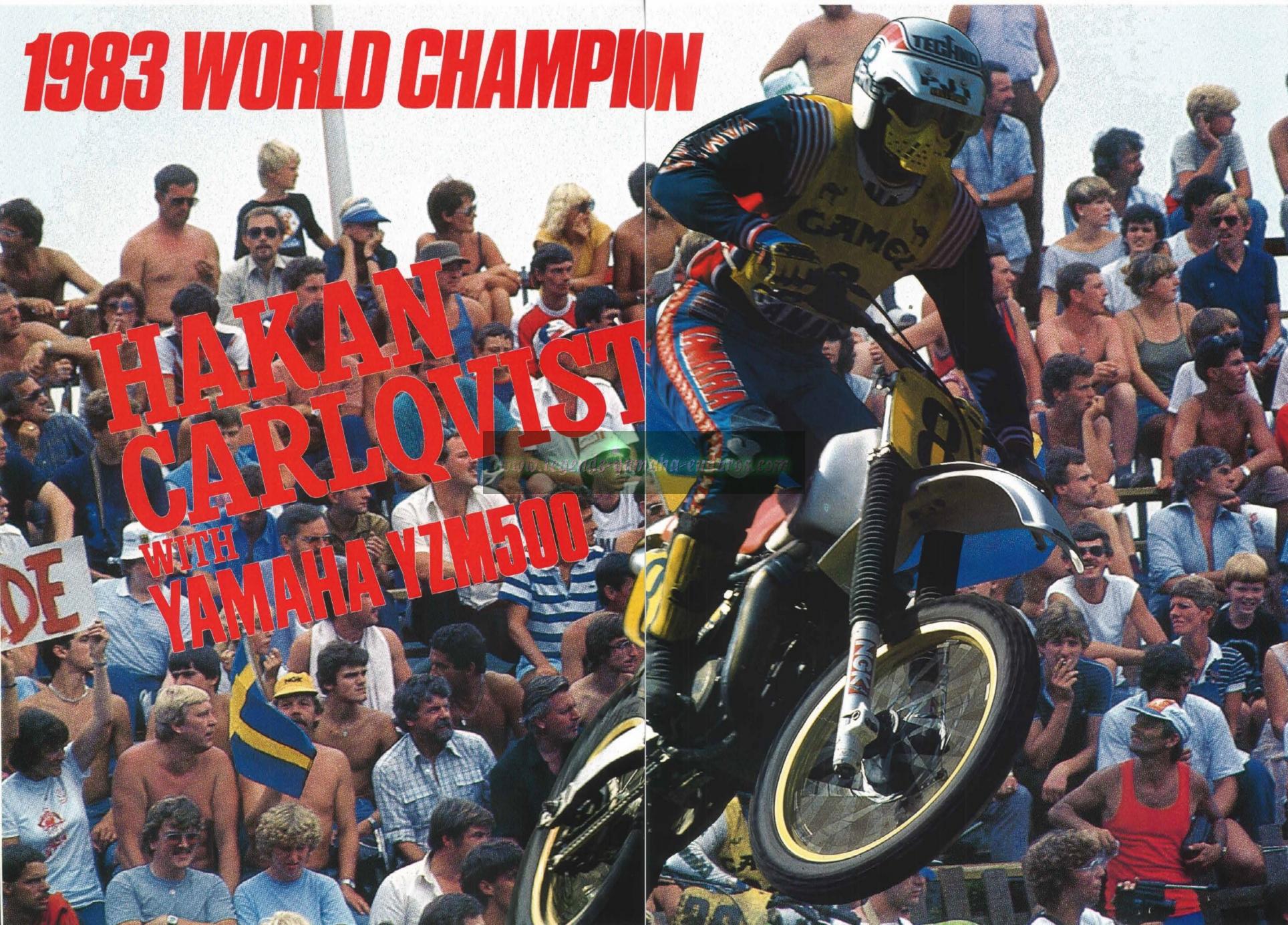
A CDI unit

The adoption of a CDI ignition system contributes to the engine's compactness while it also helps to reduce the overall weight. A special CDI unit is provided for

taken up as the two main factors in the design of the Yamaha On these models, the combustion

Series Yamaha kerosene outboards have

each of the three engine types, I new design, a fresh charge of I other commercial operations, and



MEETING MORE DIVERSIFIED **CUSTOMER NEEDS**



Engine Type; 2-st. Twin Cylinders * Displacer 496cc(30,27ci) * Bore & Stroke: 72*61mm (2.83*2.40in) * Horsepower: 30hp @5500rpm RPM Range: 4600–5500rpm * Ignition System CDI * Starting System: Manual (Electric)

(2.64×2.40m) • Horsepower: 25hp @5500pm • RPM Range: 4500–5500rpm • Ignition Syste CDI • Starting System: Manual [Electric]

· Engine Type: 2-st. In-line Three Cylinders • Displacement: 698cc (42.6ci) • Bore & Stroke: 67×66mm(2 ×2.60in) • Horsepower: 40hp @5500 rpm • RPM Range: 4500–5500rpm • Ignition System: CDI • Starting System: Manual (Electric) Engine Type: 2-st. In-line Three Cylinders Displacement: 1140cc (69.6ci) Bore & Stroke: 82×72mm(3.23) ×2.83(n) • Horsepower: 80hp @5500rpm • RPM Hange: 4500–5500rpm • Ignition System: CDI • Starting Engine Type: 2-st. 90°V-6
 Displacement: 2596cc(158,4ci) • Bore & Stroke: 90°68mm(3,54°2,68in)
 Horsepower: 150hp @5000rpm • RPM Range: 4500-5500rpm • Ignition System: CDI • Statis Control of the Property of the (158.4ci) * Bore & Stroke: 90x (158.4ci) . Bore & Stroke: 68mm(3.54×2.68in) • Horsepowe 175hp @5500rpm • RPM Range: 200hp @5,500rpm • RPM Range 4500-5500rpm • Ignition system 4500~5500rpm • Ignition System: CDI • Starting System: Electric CDI . Starting System: Electric

Yamaha News New Model Line-up Stroke: 67×66mm(2.64×2.60in) Horsepower: 50hp @5500rpm
 RPM Range: 4500–5500rpm · Ignition System: CDI · Starting • Engine Type: 2-st. In-line Three Cylinders • Displacement: 849cc . Engine Type: 2-st. In-line Three (51.8ci) • Bore & Strok: 72×69.5mr (2.83×2.74in) • Horsepower: 70hp Ø5500rpm • RPM Range: 4500— 60hp @5500rpm . RPM Range 4500-5500rpm • Ignition System CDI • Starting System: Electric 5500rpm • Ignition System: CDI
• Starting System: Electric 90 · Engine Type: 2-st. In-line Three * Engine Type: 2-st, in-line Toree Cylinders * Displacement: 1140cc (69-6ci) * Bore & Stroke: 82×72mm(3.23× 2.83m) * Horsepower: 90hp @5500rpm • RPM Range: 4500–5500rpm • Ignition System: CDI * Starting KEROSENE Engine Type: 2-st. 90°V-6 • Displacement: 2596cc (158.4ci) • Bore & Stroke: 90×68mm(3.54×2.68in) • Horsepower: 220hp @5500rpm • RPM Range: 4800-5800rpm • Ignition System: Micro Computer Ignition • Starting System: Electric * Engine Type: 2-st, Twin Cylinders • Displacement: 669cc • Bore & Stroke: 78× 70mm • Horsepower: 40hp @6500rpm • RPM Range: 4500 -5500rpm • Ignition System: CDI • Starting System: Manual YAMAHA

ENDURO

Displacement: 1140c
 Bore & Stroke: 82×

Bore & Stroke: 82×
72mm • Horsepower:
75hp @5500rpm • RPM
Range: 4500-5500rpm
 Ignition System: CDI
 Starting System:
Manual

75



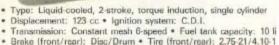
THE THRILL IS BACK!



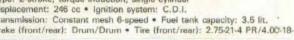


Type: 2-stroke, torque induction, single cylinder
Displacement: 487 cc • Ignition system: C.D.I.
Transmission: Constant mesh 4-speed • Fuel tank capacity: 10.5 lit.















RD500LC

Type: Liquid-cooled, 2-stroke, V-4 cylinder
Displacement: 492 cc • Ignition system: C.D.I.
Transmission: Constant mesh 6-speed • Fuel tank capacity: 23 lit

Brake (front/rear); Dual disc/Disc
Tire (front, rear): 120/80 V 16, 130/80 V 18



- id-cooled, 2-stroke, piston-valve, twin cylinder
- Displacement: 249 cc Ignition system: C.D.I.
 Transmission: Constant mesh 6-speed Fuel tank capacity: 23.5 lit.
 Brake (front/rear): Disc/Disc Tire (front, rear): 3.00/3.75-18, 3.75/5.00-18



- Type: 2-stroke, reed valve, single cylinder Displacement: 59 cc
- Ignition system: C.D.I. Transmission: Single speed automatic
 Fuel tank capacity: 4.0 lit. Tire (front/rear): 15×7/15×7

Type: 4-stroke, DOHC, 16-v.
Displacement: 1,097 cc • Ig
Transmission: Constant mesl
Brake (front/rear): Dual disc
Tire (front, rear): 120/80 V

150/80 V 16



- Type: 4-stroke, DOHC, 4-cylinder Displacement: 598 cc Ignition system: T.C.I.
 Transmission: Constant mesh 6-speed Fuel tank capacity: 19 lit.
 Brake (front/rear): Dual disc/Disc

XVZ12T/TD

Transmission: Constant mesh 5-sp Fuel tank capacity: 20 lit. Brake (front/rear): Dual disc/Disc

Tire (front, rear): 120/90-18-65 H

- Transmission: Constant mesh 5-speed Fuel tank capacity: 22 lit.
 Brake (front/rear): Dual disc/Disc Tire (front, rear): 100/90 V 18, 120/90 V 18.

XJ750/[900]

1984 YAMAHA NEW BOAT LINE-UP

RESPONDING TO A SURGE OF DEMAND FOR QUALITY PLEASURE BOATS ... Along with the strengthened ranges of motorcycles and outboards, the Yamaha new boat line-up also comes with a lot of significant improvements and exciting features, responding to a surge of demand for quality pleasure boats. The new boat line-up for the Japanese market which was

recently unveiled at Yamaha Marina Hamana-ko consists of 14 models (7 new, 4 redesinged, 2 minor modified and 1 variated models), each of which has been designed and built in full quest of higher cruising performance, better steering characteristics and excellent livability.



amaha's first bow rider-equipped multi-purpose family runabout

- LOA: 6.65 m Beam: 2.41 m Draft: 1.11 m
 Hull weight: 820 kg(OB), 850 kg(IO)
 Recommended horsepower: 175 PS(OB), 188 PS(IO)
 Maximum horsepower: 200 PS(OB), 188 PS(IO)
 No. of crew: 8



Increased stability against the wind Improved layout for pleasure fishing

- LOA; 3.90 m Beam: 1.16 m Draft: 0.46 m
 Hull weight: 63.6 kg No. of crew: 3
- An ample cockpit for plea
- LOA: 7.95 m Beam: 2.92 m Draft: 1.53 m
 Hull weight: 2.000 kg Recommended features
 188 × 2(PS) No. of crew: 11

Increased performance. YAMAHA-11 Mini // 6000 improved rigging and renewed styling redesigned model LOA: 3.43 m • Waterline length: 3.16 m • Beam: 1.32m • Draft (C.B-up/C.B-down): 0.10 m/0.75 m • Hull weight: 45 kg Sail area: 5.7 m² AMAHA-18



A multi-purpose family type . LOA: 5.50 m . Waterline lengthy 5.23 • Beam: 1.87 m • Draft (C.B-up/C.B-down): 0.15 m/1.15 m

Hull weight: 195 kg
 Sall area: 14.7 m²
 No. of crew: 6

A grade-up sloop type

YAMAHA-13 CICOZO

- LOA: 4.09 m Waterline length: 3.89 m Beam: 1.73 m
 Draft(C.B-up/C.B-down): 0.15 m/1.03 m
 Hull weight: 93 kg Sall area: 11.50 m²



Coming with a new turbo diesel

- LOA: 6.64 m Beam: 2.18 m Draft: 0.98 m
- Hull weight: 615 kg Re
 No. of crew: 7

ROW-13



A turbo diesel-powered high performance boat

- LOA: 7.34 m Beam: 2.42 m Draft: 1.12 m
- Hull weight: 990 kg Reco
 No. of crew: 10 er: 107 PS



V-type hull with outstanding seawortheness and stability

Sufficient speed and high fuel efficiency with a 150 PS outboard

- LOA: 7.80 m Beam: 2.55 m Draft: 1.19 m
 Huil weight: 1,170 kg Recommended horsep
 Maximum horsepower: 175 No. of crew: 12



V-type hull with increased seawortheness and stability; inboard direct drive system

- LOA: 7.95 m Beam: 2.65 m Draft: 1.35 m
- Hull weight: 1,450 kg Recommended horsepower: 158 PS
 No. of crew: 8

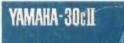
FC-33 minor modified model

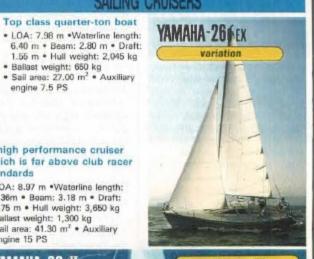
Increased lateral stability High performance, fuel-saving Yamaha MD-45K diesel engine

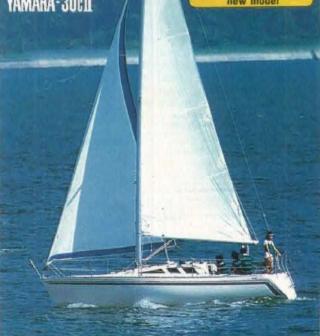
- LOA: 9.90 m
 Beam: 2.82 m
 Draft: 1.59 m
- Hull weight: 2,170 kg * Total tonnage: 7,05 tons
 Recommended horsepower: 214 tons
 No. of crew: 10

A high performance cruiser which is far above club racer standards

- LOA: 8.97 m *Waterline length:
 7.36m * Beam: 3.18 m * Draft:
 1.75 m * Hull weight: 3,650 kg
- Ballast weight: 1,300 kg Sail area: 41.30 m² Auxiliary engine 15 PS









Top model of the U line for added boating

- LOA: 6.86 m * Beam: 1.96 m * Draft: 0.98 m
 Hull weight: 490 kg * Recommended horsepow
 Maximum horsepower: 70 PS * No. of crew: 7