

YAMAHA

YZ250C/400C

YAMAHA

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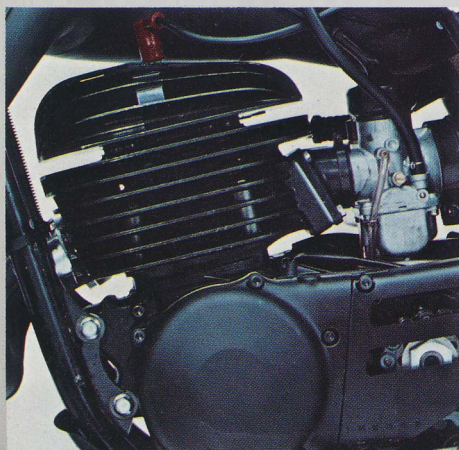
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It can put you in the winner's circle.

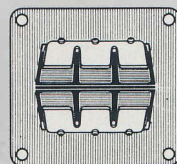


Engine

The YZ250C /400C are equipped with the proven 7-port "Torque Induction" power-plant which has been designed and engineered for more power, resulting in stronger response and acceleration. This is to say that the effective range of engine speeds has been further widened while, at the same time, the torque has been improved in the low-to-medium rpm range, thereby developing the advantages gained by the YAMAHA-exclusive 7-port "Torque Induction" system to a maximum. The construction of the engine is basically the same as that which was adopted for YAMAHA's GP Motocross machines.

V-type reed valve

The YZ250C/400C V-type reed valve is just one more key development supporting YAMAHA's remarkable Torque Induction system. Six special stainless-steel reed valves provide an instant response to negative pressure from the cylinder, eliminating blow-back to the carburetor at low speeds.





Magnesium materials

In order to decrease the unsprung weight and total weight for increased maneuverability, and to prevent damage caused by rocks and the rough abuse incurred on the toughest tracks, the right and left crankcase covers and brake shoe plates of the YZ250C and 400C are constructed of lightweight, highlydurable magnesium alloy.

Upswept exhaust

Tuned for optimum engine performance, the upswept exhaust rises from the engine and is routed under the seat enabling a more narrow bike profile to be attained for maximum maneuverability and stability.

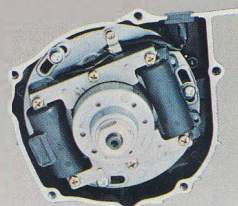
Brakes

To assure that the brakes will neither over-respond (lock up) nor under-respond (fail or fade), the size of the brake shoes and operating mechanism, front and rear, have been carefully selected and race-track proven for lasting reliability. Also, they are waterproof and dustproof.



Capacitor Discharge Ignition (C.D.I.)

Utilizing a semiconductor signal arrangement, conventional breaker points are not required with the C.D.I. system, therefore points have been completely eliminated. Also, the C.D.I. system maintains a constant high voltage, independent of engine speed, for stable ignition under all riding conditions.

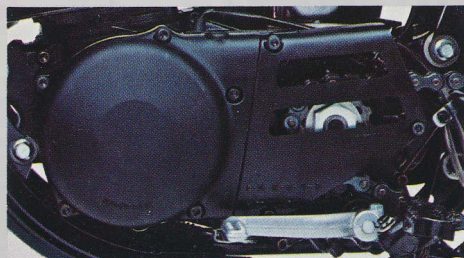


Monocross suspension® and frame

The Monocross suspension system has been studied and improved by the YAMAHA technical research group in order to utilize this new and unique system on the YAMAHA Motocross machines. The lower end of this new shock absorbing mechanism attaches to the rear swing-arm, as with conventional shock absorbers, but the unique feature is that the top end is connected forward on the machine under the tank area, yielding a much longer stroke capability, thereby offering a smoother, more-controlled ride. The frame is a high-tensile-strength, double-cradle construction. This frame, which is used on the YAMAHA GP Motocross machines, is able to withstand the twisting and shock forces encountered from the worst road.

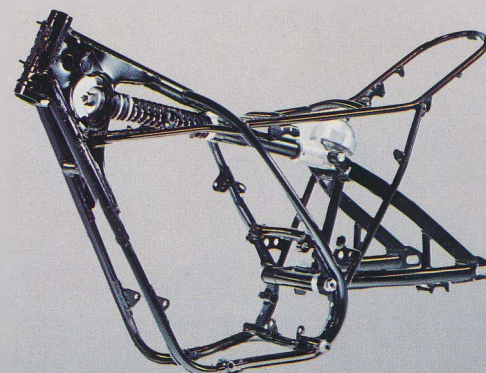
Transmission

The 5-speed transmission has been carefully selected for ratios which allow a wider range of speeds with less shifts. The mechanism contains positive-action gears for more durable operation.



Air cleaner

To assure that the engine maintains its durability and performance characteristics, a large wet-element air cleaner is used. This cleaner is able to prevent even extremely small dust and water particles from entering the engine and affecting the operation or harming the engine interior.



Air suspension system

The new air suspension system on a front fork has been developed through Yamaha's long, successful experience of GP racing.

High-pressure compressed air in an inner tube functions to provide much better cushioning efficiency than a conventional spring/oil system and soaks up sharp jolts without bottoming.



SPECIFICATIONS

YZ250C

ENGINE

Type 2-stroke, 7-port Torque Induction, Single
 Displacement 246 cc (15.01 cu.in.)
 Bore & Stroke 70 x 64 mm (2.756x2.520 in.)
 Compression ratio 7.69 : 1
 Max. torque 3.11 kg-m @7,500 rpm
 (22.5 ft.-lb. @7,500 rpm)
 Lubrication system Pre-mix (20:1)
 Starting system Primary kick starter
 Transmission 5-speed gearbox

DIMENSIONS

Overall length 2,120 mm (83.5 in.)
 Overall width 985 mm (38.8 in.)
 Overall height 1,170 mm (46.1 in.)
 Wheelbase 1,430 mm (56.3 in.)
 Min. ground clearance 255 mm (10.0 in.)

WEIGHT (NET) 101 kg (223 lbs.)

FUEL TANK CAPACITY 8 lit. (2.1 US gal.)

TIRES front 3.00-21-4PR
 rear 4.60-18-4PR

YZ400C

ENGINE

Type 2-stroke, 7-port Torque Induction, Single
 Displacement 397 cc (24.22 cu.in.)
 Bore & Stroke 85 x 70 mm (3.346x2.756 in.)
 Compression ratio 7.57 : 1
 Max. torque 3.95 kg-m @7,000 rpm.
 (28.6 ft.-lb. @7,000 rpm.)
 Lubrication system Pre-mix (20 : 1)
 Starting system Primary kick starter
 Transmission 5-speed gearbox

DIMENSIONS

Overall length 2,120 mm (83.5 in.)
 Overall width 985 mm (38.8 in.)
 Overall height 1,170 mm (46.1 in.)
 Wheelbase 1,425 mm (56.1 in.)
 Min. ground clearance 255 mm (10.0 in.)

WEIGHT (NET) 104 kg (229 lbs.)

FUEL TANK CAPACITY 8 lit. (2.1 US gal.)

TIRES front 3.00-21-4PR
 rear 5.00-18-4PR

* Specifications subject to change without prior notice.

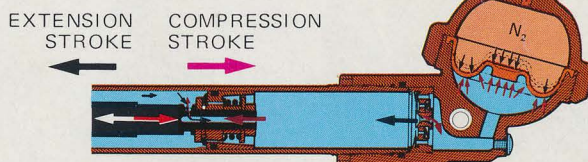
Monocross Suspension®.....

Better Traction with Less Side Sway and a Longer Stroke

Monocross suspension® is a revolutionary, new rear-cushioning mechanism which was developed by YAMAHA from an unusual cantilever-type suspension that was invented by Prof. Lucien Tilkens of Belgium. Monocross utilizes a structure that extends from the frame-head pipe through an accumulator mechanism, which is located under the seat, to a large, unit-constructed swing arm on the rear. Inside the damper, oil and inert gas are used to effectively cushion the shocks without incurring the problem of fluid cavitation. The coiled spring mechanism, on the outside of the damper and working in conjunction with the large, unit-constructed rear swing arm, allows the rear wheel to follow the worst terrain with no side-swaying action. With this suspension system, maneuverability is greatly increased even on the toughest tracks and rider fatigue is drastically reduced.

Operation of the Monocross Suspension

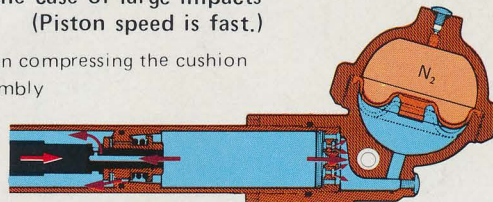
1. In the case of small impacts (Piston speed is slow.)



1. The fluid flows only through the orifice in the center of the base valve assembly and the piston valve assembly.
2. The membrane is forced up or down by the degree of motion of the piston rod.

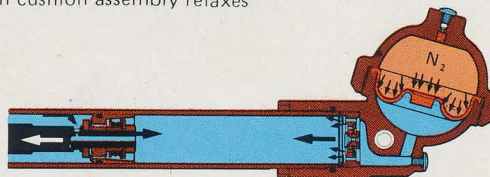
2. In the case of large impacts (Piston speed is fast.)

- A. When compressing the cushion assembly



1. When the piston speed increases, the fluid does not flow easily through the central orifice, therefore the pressure increases until it becomes more than the force of the leaf spring. Then the relief valve opens and fluid flows through this opening.
2. The membrane is raised by the degree of motion of the piston rod.

- B. When cushion assembly relaxes



1. The relief valve, which was opened under compression, is closed, and the relief valve on the opposite side opens, creating a fluid path.
2. Because the force of the nitrogen gas pressure exists, the membrane forces the piston rod back with fluid and the membrane moves to its original position.



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