

YAMAHA

# TY175C YAMAHA TRIAL

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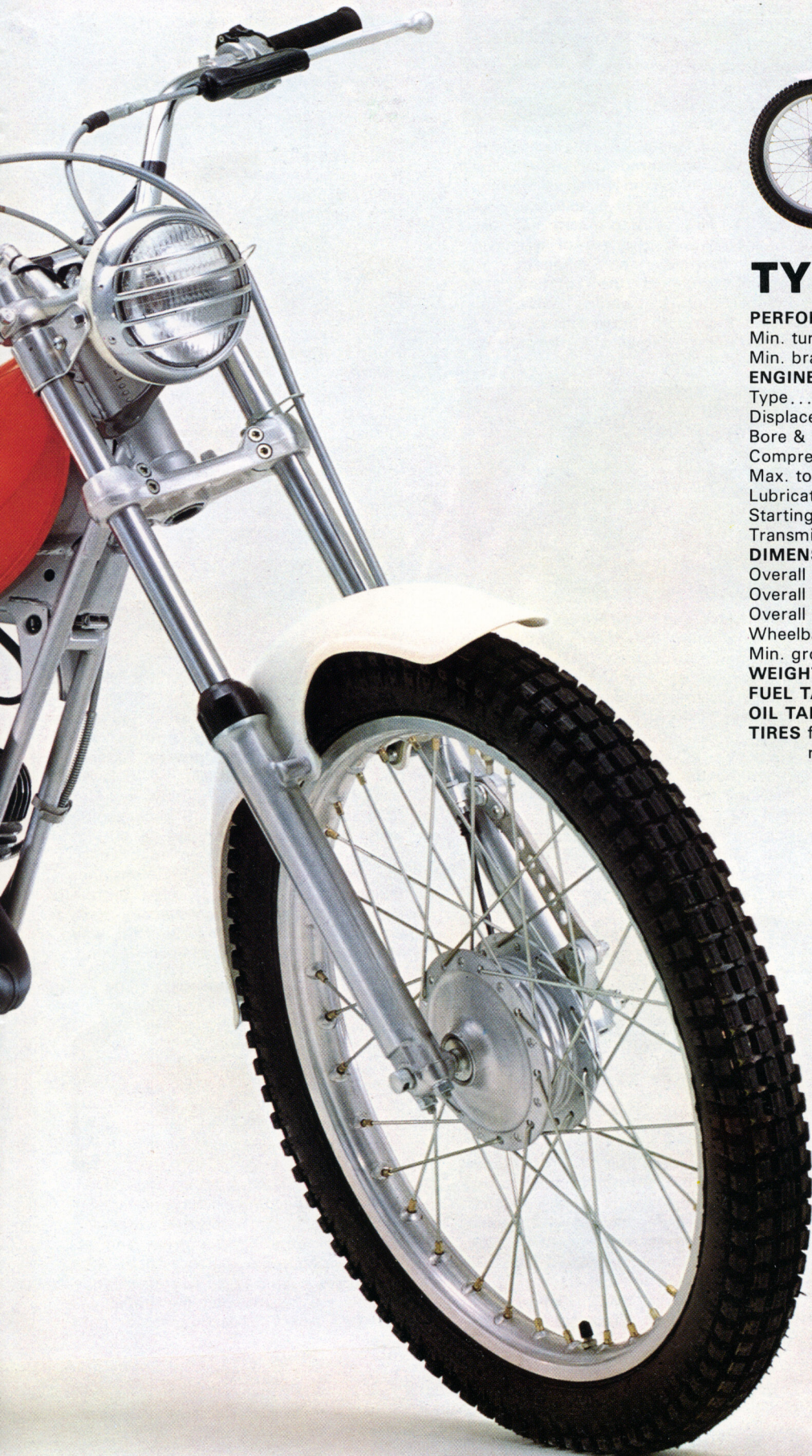




The TY175C is the ideal bike for a beginning trials rider or any rider who wants to go wherever the path leads him. This is a bike that will go places you'd never dream of taking another motorcycle. Torque Induction, Yamaha's exclusive reed valve intake system, gives the TY175C the low rpm pulling power you need to climb over logs and boulders. And, there's plenty of power and traction through the entire rpm range in case you hit an open stretch. The TY175C has a strong, lightweight frame and an exhaust that's tucked out of the way under the seat, so you can get through the narrowest paths and ruts. The TY175C. There's no other trials bike like it.







## TY175C

### PERFORMANCE

Min. turning radius..... 1,600 mm  
 Min. braking distance..... 15 m @50km/h

### ENGINE

Type..... 2-stroke, 7-port, Torque Induction, Single  
 Displacement..... 171 cc  
 Bore & Stroke..... 66×55 mm  
 Compression ratio..... 5.7:1  
 Max. torque..... 1.4 kg-m @6,000 rpm  
 Lubrication system..... Autolube  
 Starting system..... Primary kick starter  
 Transmission..... 6-speed gearbox

### DIMENSIONS

Overall length..... 1,955 mm  
 Overall width..... 835 mm  
 Overall height..... 1,100 mm  
 Wheelbase..... 1,265 mm  
 Min. ground clearance..... 295 mm

**WEIGHT (NET)**..... 81.0 kgs

**FUEL TANK CAPACITY**..... 4.5 lit.

**OIL TANK CAPACITY**..... 0.3 lit.

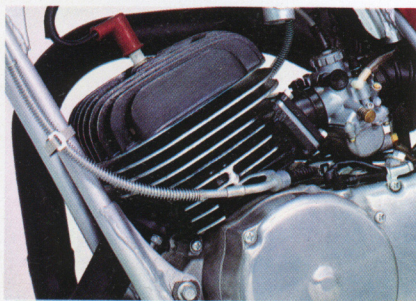
**TIRES** front..... 2.75-18-4PR

rear..... 4.00-18-4PR

*\* Specifications subject to change without prior notice.*



# Features

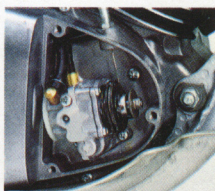


## Torque Induction engine

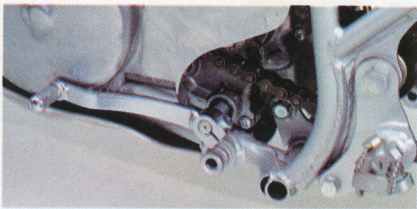
The all-new TY175C utilizes a single, 2-stroke, aluminum engine with Torque Induction to increase the intake efficiency and yield more available torque over the lower-and middle-speed ranges. This outstanding performance is attained through the use of the transfer ports in the cylinder wall, the addition of a seventh port which compresses a small quantity of fresh fuel on the intake stroke to be used for completely purging the combustion chamber of burned gases, and a 4-petal reed-valve assembly which supplies fuel to the engine on demand.

## Autolube

YAMAHA developed the Autolube system which automatically supplies oil from a separate tank



to be mixed with the gasoline. This is accomplished by precisely and continuously monitoring the engine speed and throttle opening so that only the exact amount of oil for optimum engine performance will be added. This system was developed in order to end the messy need for manually mixing the gasoline and oil, and as an extra benefit engine life is greatly lengthened because, the engine is always operating at optimum efficiency.



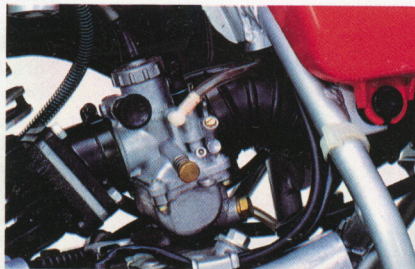
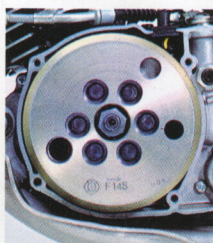
## Transmission

Utilizing a 6-speed transmission, the TY175C is ready to encounter the most varied trials section. The lower gears are designed for really slow going with smooth pulling power and a comfortable overlap between gears so that the power flow will be continuous. The higher range of gears allows the machine to be easily ridden on the roads in between the sections without straining the engine. Also, all gears have been precision constructed using specially-hardened tool steel for maximum durability and

minimum back-lash when the machine is suddenly accelerated.

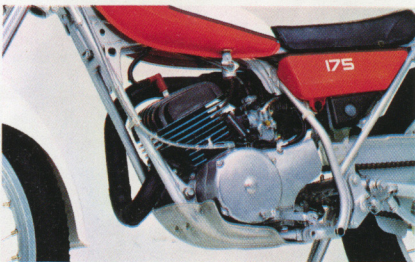
## Flywheel and magneto mass

For the most part on trials sections, the operating speed of a trials machine is very slow, and slow walking speeds are not uncommon. Generally, slow-speed operation is hampered by the pulsing forces of the piston which is operating just above its stall speed, but with the TY175C, this problem has been eliminated with the use of a heavier-mass flywheel and magneto. The inertial force of the rotating mass compensates for engine pulsing and yields a smooth performance without appreciably decreasing throttle response.



## Carburetor quick-change lever

For optimum low-speed, high-torque operation through a trials section, the engine should be operated with a leaner fuel mixture, however, to obtain the best performance at higher speeds, such as on the roads in between the sections, a normal-rich mixture is recommended. To eliminate time-consuming, troublesome adjustments, the TY175C is equipped with a quick-change lever on the carburetor so that, with a simple flick of the finger, the fuel mixture can be quickly changed for either section or road riding.



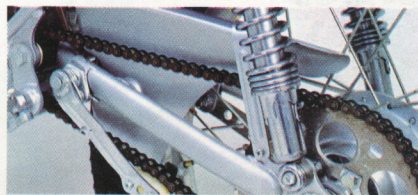
## Frame

In order to assure that the TY175C will be able to withstand the severe treatment encountered on the roughest section, the frame design is a double-cradle type. This frame, with its high-tensile-strength, tubular-steel construction, is based on the frames of the famous YAMAHA Motocross and Road Racer machines which have been consistent championship winners on leading

tracks throughout the world. The double-cradle frame has become well-known among experienced motorcycle riders as a frame which can withstand the stresses, strains and shocks of competition riding and come out on top.

## Front forks

The new TY175C is equipped with hydraulically-damped, inner-spring front forks. These front forks have been selected after studying the data accumulated from some of the most formidable race tracks around the world in order to assure that the TY175C has forks with lasting performance and durability. Among the criteria searched for are those which offer machine stability without impairing maneuverability, and as a result, the TY175C is able to cushion larger road shocks and maintain a more uniform performance attitude.

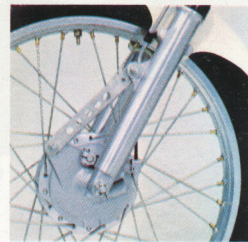


## Chain tensioner

When riding through a trials section, precise control of the throttle and brakes are essential to prevent footing, and the machine should be able to respond quickly and smoothly. In order to prevent the chain from back-lashing when suddenly accelerating, a spring-loaded chain tensioner is attached to the rear swing-arm. This tensioner maintains a constant pressure on the chain at all times to remove any slack which may occur, and in this way eliminates the cause of back-lashing.

## Brakes

The TY175C has been designed from the ground up to be a top contender at trials events. In obtaining this ideal design,



all types of terrain must be considered, therefore, the brakes have a special labyrinth seal that prevents water and dust from entering the drum and affecting the brake performance. Also, the brakes have a large heat-dissipating capability to assure that the brakes will not fade even under repeated hard use.



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