

# MOTOCROSS

with TORQUE INDUCTION



# LT-MX

100cc MOTOCROSS

When it comes to 100cc Motocross machines, this one's got 'em all out classed. It's ready for the heat of competition as soon as you break it out of the crate. With a 5-speed gearbox, Autolube, Torque Induction and magneto ignition for fast starts and furious response all the way into the winner's circle.



[www.legends-yamaha-enduros.com](http://www.legends-yamaha-enduros.com)

### SPECIFICATIONS

<b>PERFORMANCE</b>	
Min. turning radius	82.7 in.
Min. braking distance	50.5 ft @ 31 mph
<b>ENGINE</b>	
Type	2-stroke, Torque Induction, Single
Displacement	97 cc (5.92 cu in.)
Bore & Stroke	52 x 45.6 mm (2.047 x 1.795 in.)
Compression ratio	7.8:1
Max. torque	.81 ft-lb @ 9,500 rpm
Lubrication system	Autolube
Starting system	Primary kick starter
Ignition system	Magneto ignition
Transmission	5-speed constant-mesh
<b>DIMENSIONS</b>	
Overall length	74.0 in.
Overall width	34.1 in.
Overall height	42.5 in.
Wheelbase	49.6 in.
Min. ground clearance	8.3 in.
<b>WEIGHT (Net)</b>	185 lbs
<b>FUEL TANK CAPACITY</b>	1.6 US gal
<b>OIL TANK CAPACITY</b>	1.3 US gal
<b>TIRES</b> front	2.75 19-4PR
rear	3.00-18-4PR

\*with a noise silencer

\* The gasoline should be high octane. Be sure to use "Shell Super M", "Shell Super 21", "Castrol R30" or oil whose quality is equivalent to these. The rate for mixing should be 30:1 when using the Autolube pump, and 15:1 when not using it. \* Specifications subject to change without notice.

# AT-MX

125cc MOTOCROSS

Like every Yamaha MX machine, the all new AT-MX is ready for racing right out of the crate. It's got a new built-in silencer and handsome silver paint with orange striping for '73. And, of course, the positive-shifting 5-speed gearbox, magneto ignition, Torque Induction® and 7-port breaching for all the extra power and response it takes to put you out in front and keep you there.



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## SPECIFICATIONS

<b>PERFORMANCE</b>	
Min. turning radius	74.8 in.
Min. braking distance	50.6 ft. @ 31 mph
<b>ENGINE</b>	
Type	2-stroke, Torque Induction, Single
Displacement	123 cc (7.51 cu.in.)
Bore & Stroke	.56 x 50 mm (2.205 x 1.969 in.)
Compression ratio	7.8:1
Max. torque	12.3 ft.-lb @ 8,000 rpm
Lubrication system	Autolube
Starting system	Primary kick starter
Ignition system	Magneto ignition
Transmission	5-speed constant-mesh
<b>DIMENSIONS</b>	
Overall length	77.4 in.
Overall width	35.8 in.
Overall height	44.1 in.
Wheelbase	50.8 in.
Min. ground clearance	9.4 in.
<b>WEIGHT (Net)</b>	202 lbs.
<b>FUEL TANK CAPACITY</b>	1.8 US gal.
<b>OIL TANK CAPACITY</b>	1.3 US qt.
<b>TIRES</b> front	2.75-21-4PR
rear	3.50-18-4PR

\*with a noise silencer

\* The gasoline should be high octane. Be sure to use "Shell Super M", "Shell Super 21", "Castrol R30" or oil whose quality is equivalent to these.  
 \* The rate for mixing should be 30 : 1 when using the Autolube pump, and 15 : 1 when not using it. \* Specifications subject to change without notice.

# MX250

## 250cc MOTOCROSS

Here's the new improved version of the MX 250 which totally dominated the 1972 Inter-AMA International Motocross series to capture Yamaha's first Manufacturer's Cup. It was also the first time in history the Americans beat the Europeans overall. At tracks all over the world, this is one MX 250 they all hate to tangle with. And for '73 it's got a lower center of gravity. Rugged new tubular steel frame. And a new center muffler to keep the heat safely away from your legs. Plus a long list of other race-proven performance features. Like beefed-up 5-speed gearbox, improved front forks and big 21" front wheel for better handling. And, of course, Torque Induction® and 7-port breathing for instant response at all rpm's. This 250cc proven winner promises to be one of the greatest middleweight motocross performers in the history of the sport.



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### SPECIFICATIONS

#### PERFORMANCE

Min. turning radius ..... 82.7 in.  
 Min. braking distance ..... 50.5 ft. @ 31 mph

#### ENGINE

Type ..... 2-stroke, Torque Induction, Single  
 Displacement ..... 246 cc (16.01 cu.in.)  
 Bore & Stroke ..... 70 x 64 mm (2.756 x 2.520 in.)  
 Compression ratio ..... 7.4:1  
 Max. torque ..... 21.9 ft-lb @ 7,000 rpm  
 Lubrication system ..... Autolube and Gasoline & Oil mixed (30:1)

Starting system ..... Primary kick starter  
 Ignition system ..... C.D.I.  
 Transmission ..... 5-speed constant-mesh

#### DIMENSIONS

Overall length ..... 83.1 in.  
 Overall width ..... 37.4 in.  
 Overall height ..... 44.5 in.  
 Wheelbase ..... 55.9 in.  
 Min. ground clearance ..... 8.9 in.

WEIGHT (Net) ..... 227 lbs.

FUEL TANK CAPACITY ..... 2.4 US gal.

OIL TANK CAPACITY ..... 0.6 US qt.

TIRES front ..... 3.00-21-4PR

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

\*with a noise silencer

The gasoline should be high octane. \* Be sure to use "Shell Super M", "Shell Super 21", "Castrol R30" or oil whose quality is equivalent to these. The rate for mixing should be 30:1 when using the Autolube Pump, and 16:1 when not using it. \* Specifications subject to change without notice.

# MX360

360cc MOTOCROSS

The MX 360 features improved handling for '73. With a tough new lightweight tubular frame, Automatic Compression Release, for one-kick starts every time. Built-in silencer. A center muffler to keep the heat off your legs. An ideally low center of gravity for better balance. Exclusive Torque Induction<sup>®</sup> for quick throttle response and greater pulling power in the soft dirt. Put it all together with a super smooth 5-speed gearbox, and you've got a track-thrashing contender that can cut just about any course on the circuit down to size.



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## SPECIFICATIONS

### PERFORMANCE

Min. turning radius ..... .82.7 in.  
 Min. braking distance ..... 50.5 ft. @ 31 mph

### ENGINE

Type ..... 2-stroke, Torque Induction, Single  
 Displacement ..... 351 cc (21.42 cu.in.)  
 Bore & Stroke ..... 80 x 70 mm (3.150 x 2.756 in.)  
 Compression ratio ..... 7.2:1  
 Max. torque ..... 28.0 ft.-lb @ 7,000 rpm  
 Lubrication system ..... Autolube and Gasoline  
 & Oil mixed (30:1)

Starting system ..... Primary kick starter  
 Ignition system ..... C.D.I.  
 Transmission ..... 5-speed constant-mesh

### DIMENSIONS

Overall length ..... 83.1 in.  
 Overall width ..... 37.4 in.  
 Overall height ..... 44.5 in.  
 Wheelbase ..... 55.9 in.  
 Min. ground clearance ..... 8.9 in.  
 WEIGHT (Net) ..... 234 lbs.

FUEL TANK CAPACITY ..... 2.4 US gal.

OIL TANK CAPACITY ..... 0.6 US qt.

TIRES front ..... 3.00-21-4PR

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

\*with a noise silencer

\* Use high octane gasoline for the fuel regardless of whether the Autolube system is used or not. Be sure to use "Shell Super M", "Castrol R30" or oil whose quality is equivalent to these.

\* The rate for mixing when you are not using the Autolube pump should be 16 : 1. \* Specifications subject to change without notice.

# SC500

500cc SCRAMBLER

Here's the big news in Scrambler! The all new Yamaha 500cc challenger for open class competition. It's a dirt rider's dream, with new Omni-phase Balancing to keep all that big-bore excitement free of vibration. New Thermal Flow<sup>®</sup> system for cool, consistent, dependable rear shock dampening under the most rigorous competitive conditions. And that's not all. The new 500 features an Automatic Compression Release for easy starting. A newly developed tubular frame, for lighter weight and greater strength. A low center of gravity, for better control in the thick of things. And real motocross muscle, specially engineered for maximum performance at the twist of the throttle, thanks to Torque Induction<sup>®</sup>.



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## SPECIFICATIONS

### PERFORMANCE

Min. turning radius ..... 82.7 in.  
Min. braking distance ..... 50.5 ft. @ 31 mph

### ENGINE

Type ..... 2-stroke, Torque Induction, Single  
Displacement ..... 496 cc (30.27 cu in.)  
Bore & Stroke ..... 95 x 70 mm (3.740 x 2.756 in.)  
Compression ratio ..... 7.1:1  
Max. torque ..... 37.1 ft.-lb @ 6,000 rpm  
Lubrication system ..... Autolube and Gasoline & Oil mixed (30:1)

Starting system ..... Primary kick starter  
Ignition system ..... C.D.I.  
Transmission ..... 4-speed constant-mesh

### DIMENSIONS

Overall length ..... 83.1 in.  
Overall width ..... 37.4 in.  
Overall height ..... 44.5 in.  
Wheelbase ..... 55.9 in.  
Min. ground clearance ..... 8.9 in.  
WEIGHT (Net) ..... 236 lbs

FUEL TANK CAPACITY ..... 2.4 US gal

OIL TANK CAPACITY ..... 0.6 US qt

TIRES front ..... 3.00-21-4PR

rear ..... 4.60-18-4PR

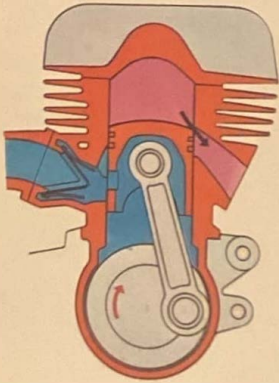
\*with a noise silencer

\* Use high octane gasoline for the fuel regardless of whether the Autolube system is used or not. Be sure to use "Shell Super M", "Castrol R30" or oil whose quality is equivalent to these.  
\* The rate for mixing when you are not using the Autolube Pump should be 15:1. \* Specifications subject to change without notice.

# TORQUE INDUCTION®

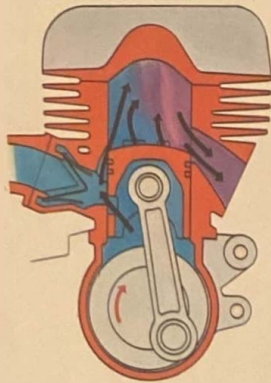
Yamaha has built a better breathing competition machine for '73. The secret is Torque Induction. It gives your Yamaha MX more effective horsepower to get you through the soft stuff, around the corners and back up to speed with less effort on the part of the 7-port, 2-stroke powerplant. The "key" to this superior system is a reliable stainless steel V-type reed valve, located between the carburetor and the cylinder. It opens on engine demand, to supply the

air and fuel mixture your engine needs, when it needs it. Then the assembly closes to prevent blow-back from the crankcase into the carb, which can rob you of power. With Torque Induction®, your engine will run smoother, cooler, stronger and longer than any other machine without this exclusive Yamaha performance edge.



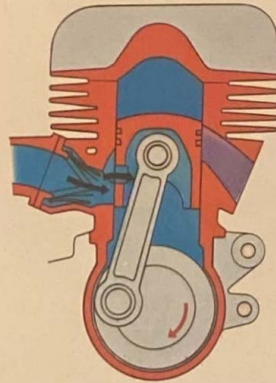
## IGNITION, POWER AND EXHAUST

The piston approaches top dead center, and the spark plug fires. Combustion pressure forces the piston down. As the piston crown passes the exhaust port, exhaust gases begin to flow out.



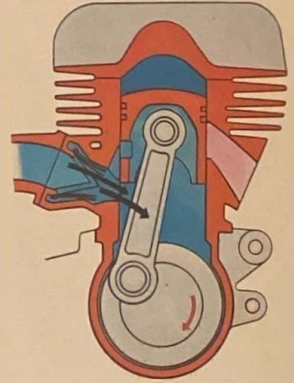
## TRANSFER

As the piston continues down, it passes the transfer ports, opening them. They allow the compressed fuel/air mixture in the crankcase to flow into the combustion chamber. All the remaining exhaust gases within the chamber are pushed out by this transfer action.



## COMPRESSION

The piston starts up, closing all ports. As it moves up, it compresses the fuel/air charge for ignition. At the same time, the upward movement of the piston creates a suction effect or "demand" in the crankcase.



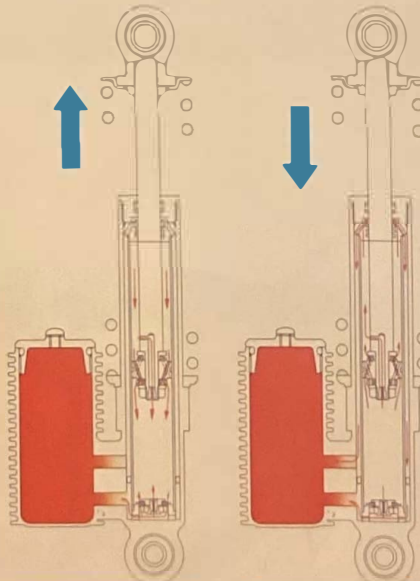
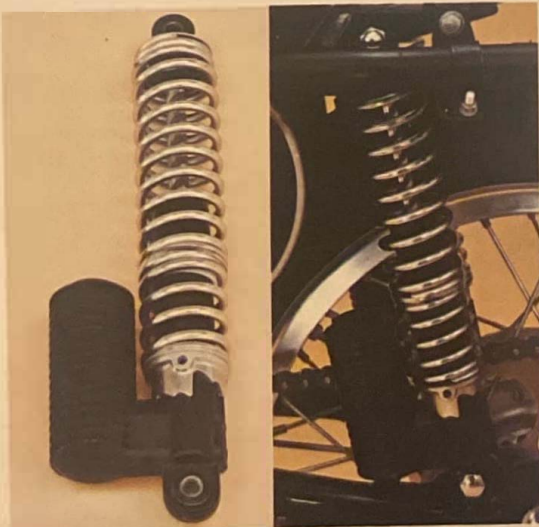
## INDUCTION

The "demand" continues to be created by the piston traveling upward, causing atmospheric pressure to "ram" air into the crankcase. The steel reed valve remains open, and the fuel/air mixture continues to flow in. This is the real secret behind Torque Induction®. There is no mechanically-governed device to arbitrarily open the crankcase — sometimes at the wrong time. The fuel/air mixture from the carb comes in only when it is wanted.

Torque Induction® means more horsepower at all rpms, for better performance and cooler running throughout the entire operating range of your Yamaha. See your dealer for additional details on this Yamaha exclusive feature.

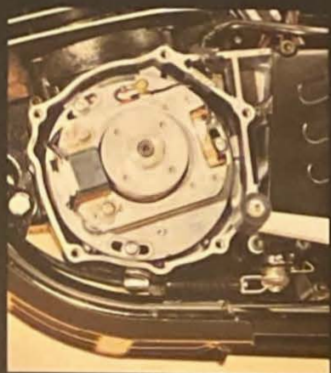


# THERMAL FLOW SYSTEM



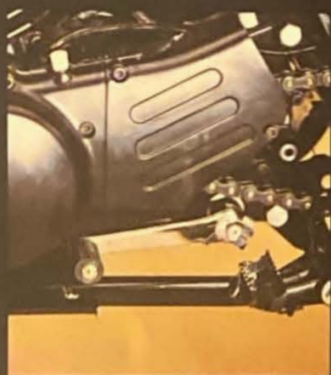
New Thermal Flow® rear shock absorber System utilizes the natural shock action to continuously force the shock oil through a heat exchanger, cooling the oil and maintaining its viscosity. The result is dependable dampening action under the most rigorous competitive conditions.

# FEATURES



## C.D.I. IGNITION SYSTEM

New Capacity Discharge Ignition System builds a better charge in the condenser for a hotter spark, cleaner combustion efficiency and quicker power response at all times.



## TRANSMISSION

The 5-speed transmission is the smoothest and has a 1-down and 4-up positive action that can be depended upon under the trying conditions that are found at every turn of the motocross.



## FRONT FORKS

The front forks are the familiar Enduro type, and the brakes are dust- and waterproof for safe, sure, controlled stops. \*The rims are tough, durable aluminum motocross type designed to be lightweight yet able to withstand the most severe shocks.



## LIGHTWEIGHT FENDER AND GAS TANK

Light, durable FRP front fender and new, lighter gas tank with quick-release gas cap for faster refueling.



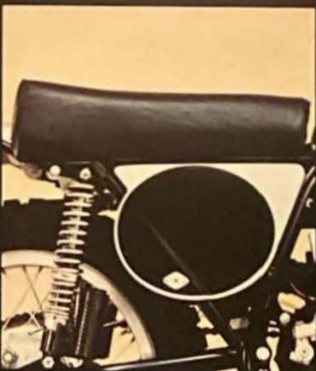
## TIRES

21" wheel with full deep-tread knobby tire for maximum traction in all competition conditions.



## NEW FRAME

1973 models with new hightension steel frames, cradle the engine lower and farther back for better balance, more control, less fatigue to rider and machine.



## SEAT DESIGN

A bigger and more comfortable seat that reduces wear and tear on the rider for '73.



## NOISE SILENCER

Reduces the wearing factor of exhaust noise without a sacrifice in engine performance.

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 **YAMAHA INTERNATIONAL CORPORATION**

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