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COVER

KAWASAKI KZ1300 DRESSED FOR THE OPEN ROAD/photographed by Mark Katayama





5WM 250

A Serious ISDT Bike From Italy

It's really nice to discover a new brand of dirt bike. Competition in the field has been extremely fierce the last couple of years, and some makes have all but disappeared. Only the factories that stay



right on top of the market demand have survived. Importation of new (to us) brands has also suffered as a result of previously popular makes losing their footing in the American market. So it's welcome when we have an opportunity to test something new to this country, especially so when it proves competitive.

Enter the SWM brand. John Taylor from Yankee has been importing the Italian SWM for about a year but we couldn't seem to find time for a test when one was available. Finally we made the connection.

The SWM 250 GS is a strikingly beautiful red, white and black machine that attracts lookers to the point of being a

nuisance. There is more to the SWM than good looks. Its main purpose is to win ISDT type events. A good ISDT machine needs a strong flex-free frame, powerful engine with a transmission that furnishes one mph in low and 80 mph in sixth, quiet exhaust, strong and waterproof brakes, enduro lighting, large unbreakable fenders, centerstand, good suspension, nimble handling and a heart made from Kryptonite to endure the torture of six-day competition. Not many bikes can claim all these features in stock form. The SWM 250 GS can. Completely stock it will out perform the abilities of all but a handful of professional

SWM makes its own frame, pipe, seat and tank. Other parts are supplied from Bing, Marzocchi and Bosch. The engine comes from Rotax, an engine builder in Austria that makes motors for Can-Am (Rotax is owned by Bombardier, parent company of Can-Am). Except for side covers that say SWM, the engine is the same as the one used in the Can-Am 250 Qualifier. It has generous finning on the

cylinder and tons of horsepower. Bore measures 74.4mm, stroke is 57.5mm for a total of 247cc. A 32mm Bing center float carburetor sits behind the cylinder and feeds fuel through a long intake tube to a left side rotary valve that opens a port into the engine's lower end. An electronic Bosch ignition furnishes spark for the plug and juice for the lights and feeble horn. The transmission has six widely spaced speeds and a gear is available for almost any situation. The counter-shaft sprocket is placed to the rear and the frame is constructed so the swing arm pivot rests as close to the sprocket as possible. A good case guard surrounds the front of the sprocket and prevents damage to the magnesium castings if the chain does happen to derail at the rear. The shift lever has a spring loaded end to prevent internal transmission damage if the rider jams it into a rock or tree root and primary starting is used, an appreciated extra when stalled on a muddy hill or creek bottom. Restarting is as simple as pulling the clutch and stabbing the left side kick start lever. A

Action photos by Ron Hussey

46/CYCLE WORLD



die-stamped snake pipe, made by SWM, is used on the GS. It manages to pull even more horsepower from the strong Rotax engine than Can-Am gets, but at a loss of low-end power. The large silencer effectively silences the two-stroke crackle but isn't forest legal as it doesn't contain a spark arrester. Pipe and silencer are securely mounted and vibration is isolated by rubber blocks.

The frame on the GS looks as if it was built in a custom frame shop. The steering head is set at 29° and rotates in tapered roller bearings. A large single front downtube leaves the steering head then splits into two smaller ones just above the exhaust port. The smaller tubes curl under the engine cases and terminate at the swing arm pivot. Cross bracing is employed in several places below the exhaust port, adding strength and furnishing protection for the engine cases. A big backbone tube is used but ends at the tank's rear, where two small diameter pipes weld to it after starting at the lower part of the steering head, heading rearward to the

backbone's end then curving down, ending at the swing arm pivot.

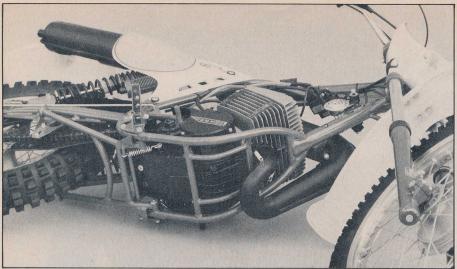
Seat rails and sub frame tubes are equally sized and three triangles are formed from straight pipes in the area under the seat. Frame flex? No way, not with a frame like this. A straight tube swing arm pivots in tapered roller bearings and uses double cross tube bracing at its front. An excellent center stand is furnished. It is made from small tubing and folds to a position that acts like an extension of the frame's lower part, a position that lets the machine slide over fallen trees without hanging up. The frame, swing arm and center stand are made from chrome-moly tubing, nicely welded and expertly painted red.

Marzocchi leading-axle forks are used. They are the 10 in. travel models with 35mm stanchion tubes. Action and control from them is good until a square hole or sharp ledge is hit, then they jar the rider. Enlarging the compression damping hole slightly makes them almost perfect though. Wonder when the Marzocchi fac-

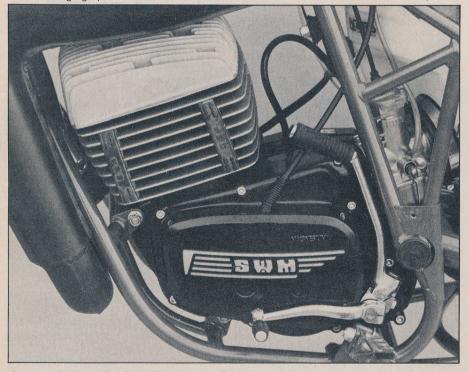
tory is going to start doing this for us? Laydown number 4 Marzocchi reservoir shocks are stock on the rear of the GS. They offer an air valve for controlling internal pressure and can be adjusted internally by changing the valving. Once broken in, they smooth out bumps and holes without kicking the back of the bike or jarring the rider. High speed users will have to fool with different damping valves and pressures.

Sachs conical hubs are employed front and rear, laced to Akront aluminum rims. Spokes aren't exceptionally large but only loosened once during several all-day outings and none of them broke. Tires are Italian-made Pirellis and don't match the high standards of the rest of the machine. They skate in corners and offer poor traction when braking or starting. After our first day of riding, the SWM rep replaced them with Metzelers and the front wheel skate and traction problems vanished. Tires that are less than first rate shouldn't be standard on a \$2100-plus motorcycle.

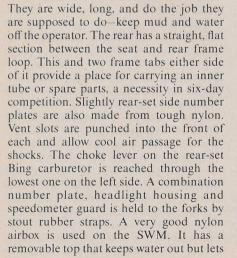
Nice nylon fenders are used on the GS. >



Beautiful chrome-moly frame has extra tubing to protect the magnesium engine cases. Center stand acts like an extension of the frame, making it easier to slide over logs and rocks without hanging up.



Rotax engine furnishes lots of horsepower. Frame is heavily triangulated under seat. Kick and shift lever may be removed with a 5mm Allen wrench.



the owner in for maintenance. The carburetor and engine vent hoses are also routed into this box so fording deep creeks won't pose a problem.

The SWM has a rather short, rounded seat. Its shortness is intentional; more room is provided for carrying parts on the rear fender. Foam firmness, width and thickness are perfect. The tank is a shape that seems strange to us but blends nicely into the seat and is mounted low on the frame. Made from steel, the tank only holds 2 gal. of premix but later models will be equipped with 3 gal. plastic tanks.

Serious European enduro riders have furnished much input on the SWM. Best of all, the factory has listened. Both brake arms have return springs so even the muddiest conditions won't cause them to stick.



Forks are made by Marzocchi and have 35mm stanchion tubes. Brake arm has return spring to eliminate sticking when packed with mud. Speedo cable has an extra-flexible housing.



Marzocchi reservoir shocks are adjustable by changing air pressure, spring preload and internal valving. Nylon airbox has a removable lid for servicing.

The speedo cable has the most flexible housing we have seen. It bends as easily as a screen door return spring. Probably the most overlooked feature on an enduro machine, and one of the most important to the serious enthusiast, is utilizing as few bolt head sizes as possible, thus reducing the amount of heavy tools he or the bike will have to carry. The GS has had special attention directed toward combining bolt head sizes. Bolts that screw into a tapped hole use 13mm heads; if a loose nut is used the nut is self-locking with a 13mm head and the bolt has a 6mm Allen head. The machine can be almost completely stripped with the following tools: 5mm Allen wrench, 6mm Allen, 13mm end wrench, 10mm end wrench, flat blade screwdriver, and a straight bar to turn the rear axle nuts. Removal of engine side covers, shift lever and kick starter require only one small tool—a 5mm Allen wrench.

Starting the SWM is almost always a one kick procedure, hot or cold. The kick lever is left-side mounted but doesn't seem clumsy. It is easily reached without stretching, completely clears the footpeg and spins the engine with minimum effort.

First time SWM riders should be cautioned about the high bhp engine and light front end characteristics. Rapid acceleration in a sit-up position will result in instant wheelies through fourth gear and

the machine is very easy to loop if the rider doesn't lean over the handlebars. Clutch pull is heavy, but the clutch completely disengages once in. Shifting is stiff and requires the use of the hard pulling clutch when shifted fast, otherwise it will balk and refuse to move. Handling is quick and positive, almost too quick for all but expert level riders. Bars are overly wide and contribute to the machine's sensitivity to rider input. We trimmed about an inch from each end. Both brakes are excellent and they stop the bike in a controlled and progressive manner without being overly

sensitive. The powerful engine lets the SWM conquer hills without breathing hard, yet is perfectly happy at a turtle's pace.

The SWM 250 GS is aimed at the serious enduro rider and beginner/novice riders will find the bike too much of a good thing. Its ultra quick handling, explosive power and *light* front end could spell danger for a rider who hasn't yet developed the quickness and skill the SWM demands. But an 'A' or 'B' rated guy on the GS could very well fill his trophy shelf with first place gold.



SWM 250

SPECIFICATIONS
List price\$2130
Fork travel10.0 in.
Fork stanchion tube diameter35mm
tube diameter35mm
Rear wheel
travel10.0 in.
Tire, front3.00-21
Tire, rear
Enginetwo-stroke Single
Bore x stroke 74.4 x 57.5mm
Piston displacement247cc
Compression ratio14:1
Claimed
power35.6 @ 7250 rpm
Claimed torque
Claimed torquena Carburetion32mm Dell'Orto
Carburetton3211111 Dell Ofto
IgnitionBosch CDI Lubrication systempremix
Lubrication systempremix
Primary drivestraight-cut gear
Gear ratios, overall:1
6th9.87
5th11.84
4th14.17
3rd18.17
2nd 24.88
1st
Oil capacity2.5 pt.
Fuel capacity
Fuel tank
materialsteel
Swing arm
materialchrome-moly steel
Starter primary kick
Starter primary kick Air filtration oiled foam
Frame
materialchrome-moly steel
materialCilionie-inoly steel

DIMENSIONS	
Wheelbase	57.5 in.
Seat height	36.7 in.
Seat width	6.0 in.

Y 1	Seat length	21.3 ii	٦.
	Seat front to steering		
	stem center	13.0 ii	٦.
	Handlebar width	34.0 ii	٦.
	Footpeg height	14.8 ii	n.
	Footpeg to		
	seat top	21.5 ii	n.
	Footpeg to shift		
	lever center	5.2 ii	٦.
	Footpeg to brake		
	pedal center	5.2 ii	٦.
	Swing arm length	19.2 ii	n.
	Swing arm pivot		
	to drive sprocket		
	center	3.2 ii	n.
ī			

-	Gas tank filler	
3	hole size	1.5 in.
	Ground clearance	10.8 in.
Ì	Fork rake angle	29°
	Trail	4.72 in.
	Test weight w/half	
	tank fuel	239 lb.
1	Weight bias, front/	
	rear, percent	45.7/54.3
-	FEATUREO	
	FEATURES	
	Forks adjustable	
i	with air?	no

Rear shock damping adjustable?yes-internally
Rear shocks
rebuildable?yes
Provision to check
transmission oil
level?yes
Does owners manual
show how to disassemble
complete engine?no
Does pipe burn
rider?no
Brake pedal
height adjustable?yes







Engine has massive cylinder and head fin-ning. Bosch CDI provides spark. Case guard wraps around front of countershaft sprock-et. Gas line is held away from pipe by routing through a welded on frame guide.