

DIRT TEST: Maico 490 Spider

THERE'S REAL BITE IN THIS REDBACK!

AFTER years of gradual refinement of its models, West German manufacturer Maico has changed course and bounds into the 1983 motocross fray armed with a completely new 500 class weapon.

For the first time, Maico has adopted reed valve controlled induction on its 500 class bike, so not only has the new bike got more power, it is still as grunty as ever. This, coupled with a revised single shock rear suspension system means the Redback Spider has a lot more bite.

Maico has a long standing and deserved reputation for building bikes with stacks of power — and while this has not always been dyno-winning power, translated to the track it has meant bikes with very tractable power delivery.

Each year the graph shows a step up in power output, with last year's motor delivering 38.7 usable kilowatts (52 hp), compared with the 44.0 of a few years



drive. The clutch actuating arm now runs from the right side and turns with ease.

Clutch slip is controlled through springs instead of Maico's pre-war cup and washer system. This worked well, besides the occasional slipping problem, and the clutches were strong and gave a good feel, especially leaving the gate. They were hard to pull in though and many owners had their own little secrets for an easier life.

Primary kick starting has been designed into the cases and the new shaft sits high in the engine. Kicks are made easier with the new lengthened kick-starter as its action starts lower in the arc (so your foot will easily reach). At first it felt strange, almost as though it had broken off. It seemed to have no tendency to recoil from the full down position, but once your foot was removed, it sprang back with force.

The conventional radially-finned cylinder maintains its rugged appear-



Revised rear suspension linkages and Ohlins shock (top and above) have improved the Spider's rear end and continuing the use of quality components sees the standard fitting of a Magna profile assembly (below). Solid looking radial fins (left) are a Maico trademark, but new for '83 is reed valve induction and primary kick starting.

earlier which peaked at 30 kW (40.5 hp).

The all new 1983 Maico Spider serves you with almost 42 kW; 'new' and 'serve' being the optimum words. Between the 1982 and '83 models, the only thing similar is that they're different (more on that later).

Roughly two years ago we got our first glance at the new machine while at the factory readying our bikes for the Italian ISDE. It was wheeled past and in through a "VERBODEN" door which hadn't stopped swinging before I was parked next to it.

Peter Maish (a relative and racer of Maico) explained their ideas. He said the main object was to run a super long swingarm without lengthening the bike and thus making it lose its traditional tight turning ability. The longer swingarm was to improve handling over the rough stuff. A new engine also had to be designed to allow the swingarm to be moved forward in the chassis and maintain the desired shorter wheelbase. The crankcases, believe it or not, were shorter and narrower than even last year's bike. Since then there has been a season of testing done and a few changes have occurred.

The early prototypes ran five-speed boxes but the factory decided a four-speed was the go. In addition, it has opted for an aluminium clutch which is now gear driven, for the first time, eliminating the old style primary chain







once, although this time is located to the crankcase through 10 mm studs. It breathes at long last through a reed-valve. This has been long coming and Maico's reason was that the now older model motor wouldn't have benefited much in power because it wasn't possible to enlarge the transfer ports enough as there simply wasn't the room between the studs.

A Japanese-looking rubber manifold holds the 40 mm Bing carburetor in place, and this one is equipped with a choke lever and tickle button. It starts much easier than the older model Maicos and once warm needs only one strong kick.

After being punished for removing decompressors in the past, I've decided they are not such a bad thing. Make sure they are tight in the cylinder and they should be trouble-free. One word of advice though: Never half kick a Maico or it will full kick you back. Make sure the kick travels right through.

The new Spider breathes through a Twin Air filter identical to last year's and is protected by a similar design to last year's airbox.

A new alloy head-steady and lightened flywheels keep vibration at bay and it seems to vibrate less than the Alpha motor.

You could say everything is completely new in the motor department, except maybe the kickstarter, which apparently is off an early '60s motor.

Don't worry, it still works fine; besides, how else do you think Maico manages to boast about its 100 percent parts backup!

A glance at this year's frame shows more changes. A new single down-tube splits just above the exhaust port into a full cradle which still retains the 361 chrome moly tubing. The footpegs look similar, though the mounting and springs are fixed a little differently. The new style engine allows the removal of the folding gearchange lever without the hassle of removing the left side footpeg. The gearchange was a little long for this tester's boot (size 41) but instead of cutting and re-welding it, heating it cherry red and bending it in an upward curve fine tuned it to the correct length and height. This is important for good changes. The curve also allows your boot to come in closer to the cases without interfering with the lever until it touches the rubber tip.

The new swingarm has contributed to a hefty 4.7 kg weight saving over last year's frame. Bridge sectioning lines the new super long sides and gives the new swingarm strength and rigidity.

Discarding the floating rear brake is a welcome change as it slowed down wheel changes and increased unsprung weight. It also increased the time needed to service the bike. Maicos never ran this system until the Alphas arrived and Hans Maish and Fritz Kobely both tried them for a short time in GPs in 1980, but were back to normal within a few rides.

Maico engineers have completely re-worked the rear-end, with both mechanical improvements and a revised rising rate. A double rocker arm has changed the rate and leverage on the shock, allowing the unit to work easier and run a much lighter spring. This year's Spiders are arriving with Ohlins shocks and Enduros with White Power.

Grease nipples provide ease of maintenance for all the lever arms under the shock.

The front forks look the same as last year's, although hidden inside are new progressive rate springs and different dampers. The most success from these came from using from 5 to 7 psi and 7.5 weight oil (mixing 5 and 10 wt) filled to 150 mm from the top of a fully compressed fork. Make sure the o-ring on the top air cap is clean and lightly oiled or greased.

Helping hold the forks apart is Maico's feeble attempt at a brake. It has been with them for only a decade now, so if you're a Maico owner from way back and are thinking on getting a Spider you'll at least be used to its consistency. Improvements can be made by using a better cable (Terry Cable, etc) and different linings as well.

Come to Marlboro Country.

Also available in Flavors Red 20's.

as removing any high spots. Keith Stacker in Victoria does a modification with oversize linings on a Japanese twin leading shoe brake and adapts them to the Maico wheel.

The handlebars are strong (tested personally) and were a comfortable bend, while the new Magura Duo 312 throttle did a great job of lifting the throttle slide, as well as making it a breeze to change cables and quickly lubricate the nylon wheel. Half undoing the large alloy nut is enough to do both.

New Nordisk (Norwegian) rims are a little wider and should be stronger than the seam cracking Akronts used previously and Pirelli Pentacross tyres came standard.

A red safety seat tops the bike, helping it resemble its new Redback "Spider" logo. The seat is in high density foam, being a compromise between the (three bears story) too hard KTM and too soft Honda.

Other details include a one piece plastic chain guide, squarish style number plates, aluminium muffler and an extra packet of tank, sidecover and swingarm stickers with each bike.

The bike was tested at Katoomba and Dargle motocross tracks in New South Wales, the former being a tight, mainly sand-based track, and Dargle varying from hard-packed long straights to powdery berms. The tracks were rough due to the off season lack of maintenance.

Leaving the starting gate for the first time is more than enough to rotate your eye balls.

From a few metres out and hooked up, the power really starts working. It punched hard early, quickly picking up to a broad and powerful mid-range which held the front wheel slightly off the track until the short interval to fourth, then picked the wheel up again until the power slowly started to taper off.

In the deep sand whoops at Katoomba the correct gear normally has to be selected before hitting the snarliest whoops, but on the Spider, simply shifting in the middle of them or rolling on more throttle was all that was needed.

Luggers and dabbers will find it pulls, and just won't load up, but a rider who keeps the engine in the middle of its torque curve to get through the worst situations will get the best from this Maico.

Out of the gate, second gear starts were the go, slightly slipping the clutch to ensure there wasn't too much initial bite. On the earlier Alphas, second or third gear could be used, but this year's four-speed has brought second gear up between the old second and third ratios, so it seemed a nice compromise.

Changing up or down was effortless. Maico has moved from a system in which the shifting plate ran along the bottom of the motor, to a rotary drum type. Even though first gear is noticeably higher than last year's, it was mostly used riding to the line, such is the torque of the new engine.

The four-speed gave more than enough top-end for the three courses

where the bike was ridden and came standard with 14 x 56 teeth sprockets. However, latest shipments have a 52 tooth rear sprocket. Besides options on the rear, 15 and 16 tooth counter shafts cogs are available.

More than once during our testing the drive chain came off, until the nifty new plastic chain guide owned up to being in the wrong place. It needed moving over to the left by spacing it with a few washers. Once that was done we went to the trouble of measuring exactly how much slack was needed in the chain. Due to the closeness of the counter shaft sprocket to the swingarm pivot it needs less slack than most bikes use, so tightening it up properly seemed to solve the problem.

Though the bike sits slightly taller than the 1982 model, there were no problems while stationary and once underway, all doubts disappeared. Approaching rough corners saw the old tendency of head-shaking to have been banished.

Handling big holes was loads of fun. It didn't seem to bottom but after a few big jumps a black mark appeared under the rear guard. Bumping up the spring and dampening a few notches suited the rough sand course well and the effort to lighten this year's bike was noticed and appreciated once in the air. Holding the quicker revving motor hard on while up there bought the back down quickly.

The front forks are plusher than ever before on the smaller bumps and when the power is completely backed off it drops the front down for a nice tight

turn. The Spider turned so tight that following a berm, especially a soft one, meant extra work and a rider would be better off taking the low line or keeping the bike's surprising turning capability up his sleeve. On a short rough track like Katoomba, the front brake was adequate, though braking bumps assured fairly light use of it. Just backing off in some sandy instances is almost enough to put you over the bars.

The lighter flywheels help build engine revs for quick exits from turns and fanning the clutch pushed as much power out as this tester could handle.

Besides the problem with the chain guide, the sidecovers occasionally seemed to grab the top of my boots. It was distracting to say the least and the occasions they weren't grabbed, I was anticipating them to be, which was almost as bad. Dust tape removed the catching edge.

The rubber seal under the fuel cap fell out twice during re-fuelling and if not positioned back deep in the cap, tightening was restricted and leaking followed.

For 1983 Maico has made the biggest changes since the AWs in '78. They have finally abandoned the primary chain drive, the five-speed gearbox, the non-reed-valve cylinder and the Cortec-Cossa shock.

In their place they have designed a new frame, suspension and motor which all work together for a much lighter and faster package, which makes the Maico 490 the best yet from the West German manufacturer.

SPECIFICATIONS Maico 490 Spider ENGINE

Single cylinder air-cooled two-stroke using reed valve controlled induction. Built up crankshaft riding on ball bearings with roller bearing big and little ends. Lubrication by pre-mixing two-stroke oil with petrol between 40 and 50:1.

Capacity	488 cm ³
Bore and stroke	86.5 x 83 mm
Carburetion	40 mm Bing V54/2
Compression ratio	12:1
Ignition	Motoplat CDI
Starting system	primary kick only
Max Power (claimed)	41.7 kW at 6800 rpm
Max torque (claimed)	NA
Air filtration	oiled foam

TRANSMISSION

Gear primary drive through multi-plate clutch running in oil bath to four-speed constant mesh transmission and chain final drive.

Gear ratios

1	2.07:1
2	1.56:1
3	1.19:1
4	0.96:1
Primary reduction	2.13:1
Secondary reduction	3.71:1 (14/52)

CHASSIS

Semi double cradle with single front down tube

splitting into double cradle above exhaust port; chrome moly tubing. Front suspension: air assisted telescopic forks with internal coil springs and two-way hydraulic damping. Rear suspension: Maico single shock rising rate system with Ohlins strut using remote reservoir and floating (de Carbon-type) piston, nitrogen charged. Remote adjustable rebound damping.

Steering rake	27°
Front wheel	1.60 x 21 Nordisk
Rear wheel	2.15 x 18 Nordisk
Front tyre	3.00 x 21 Pirelli Pentacross
Rear tyre	4.50-5.00 x 18 Pirelli Pentacross
Front brake	136 mm internal expanding drum in conical hub
Rear brake	160 mm internal expanding drum in conical hub
Suspension travel:	
Front	310 mm
Rear	325 mm

DIMENSIONS

Wheelbase	1490 mm
Ground clearance	372 mm
Seat height	1020 mm
Fuel capacity	9.5 l
Dry weight	106 kg

GENERAL

Manufacturer	Maico Fahrzeugfabrik, Pfallingen, West Germany
Test bike	Maico Motorcycles Gladesville, NSW 2111
Price	\$3395



IAN PALMER

MOTORCYCLE ACCESSORIES
FREE FITTING ON OUR TYRES

PIRELLI DUNLOP
METZELER Continental

BE-RAY

CHAMPION

SCOTT SUSAN

BELL

MXL
Dirt tough Street wise

D.I.D. CHAINS

NOVA
HELMETS

SHOEI
HELMETS

OPEN
6 DAYS
& THURS NIGHT

ALL SALES PRICED AND FITTED FREE

IS YOUR BIKE OVER FOUR YEARS OLD?

Give yourself a treat
FIT NEW "SHOCKS"

ONLY \$28.50* each

TOURER *Wide range KONI 23F gas-hydraulic, 76F adjustable, 76V finned alloy, GIRLING hydraulic and OFF-ROAD gas. Special price specified stock only. BE QUICK. Spring (linear) \$9 extra.

Please send details shocks (M/O) encl. to:

Name Address

Model Yr

K-Shock INDUSTRIES
(02) 681 3585
P.O. BOX 333
P. MATTA 2150