

# DIRT BIKE

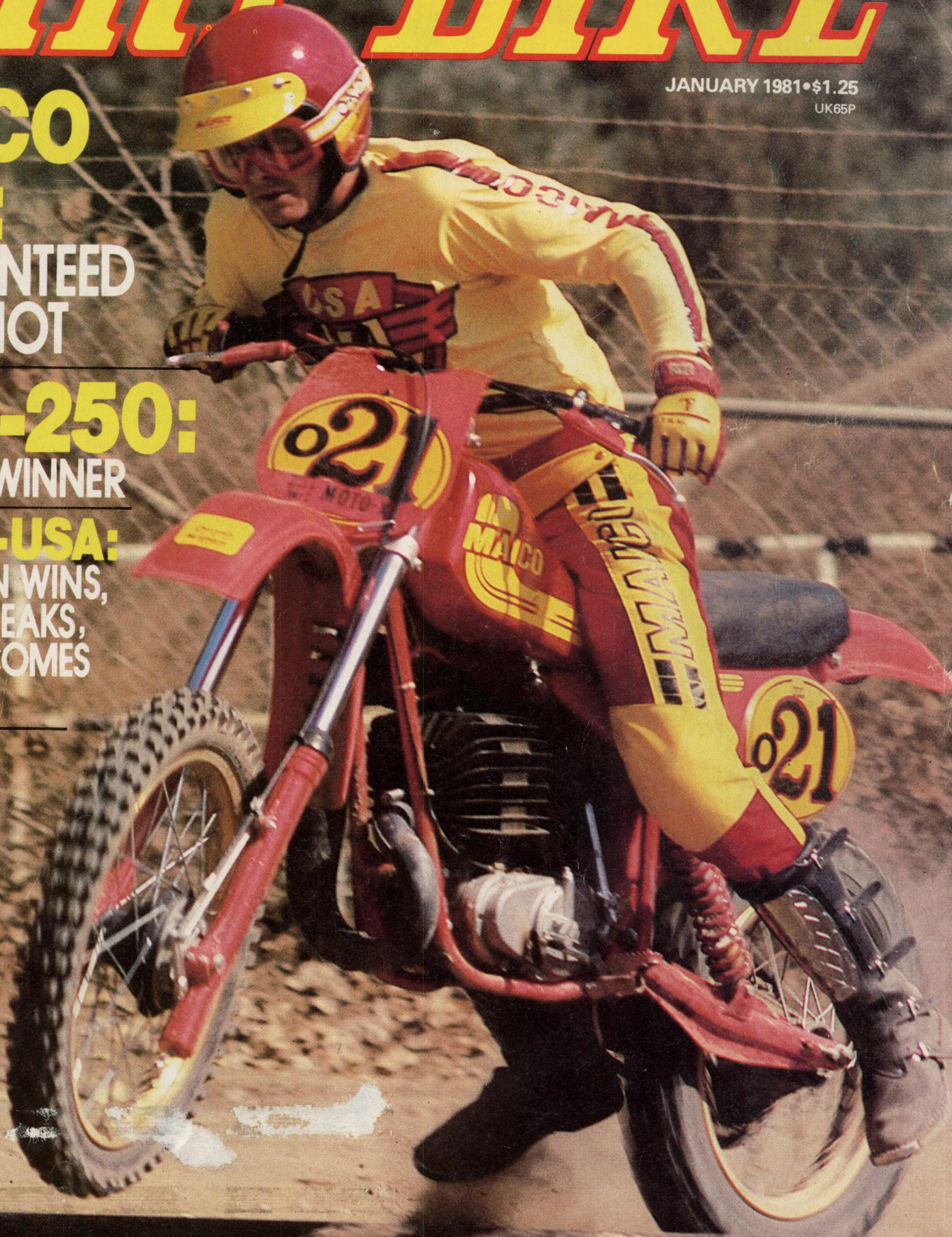
JANUARY 1981 • \$1.25  
UK65P

**MAICO**  
**490:**  
GUARANTEED  
HOLESHOT

**KDX-250:**  
WOODS WINNER

**TRANS-USA:**  
HOWERTON WINS,  
GLOVER BREAKS,  
HANNAH COMES  
BACK!

**TECH**  
**TIPS:**  
GEARBOX  
TRICKS



ISSN0364-1546

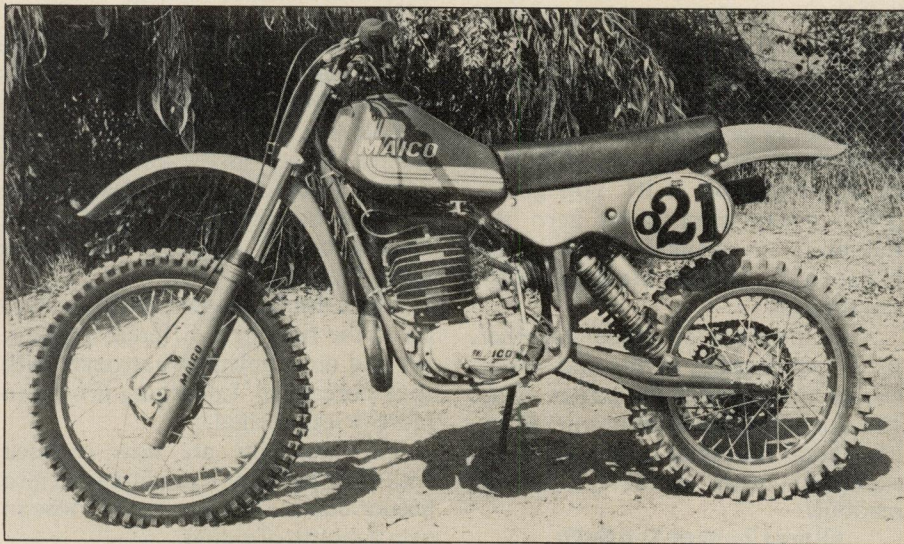




# 1981 MAICO 490 MEGA 2 THUNDERBALL!

## Big Inches, Raw Power and a Controlled State of Fear

Special thanks to Hal Sanguinetti of Track 'N Travel Motorcycles for technical assistance and guidance late in the night.



Totally changed for '81, the new 490 Maico is long and lean. Obvious changes on the new big bore are piggyback Corte & Cosso shocks, fresh plastic and a dramatically lengthened wheelbase.

**S**igh. It's so easy to write a test about a bike with flaws, glitches, blemishes and warts. It really is. All you have to do is pound your editorial fist on the DB podium and then find out some good points about the machine to balance out the scales. If the bad outweighs the good, you end up with a loser and go tsk, tsk, tsk, ain't it a shame?

But what do you do when the bike overwhelms you? When it leaves an emotional impact in the dark corners of your brain? When you try to be rational and all you can think about is a rush of acceleration that curls your socks up and down like a flapping window shade?

There are very few bikes that do this to a tester/writer. The Maico 490 however, is one of them.

It has all the subtlety of a safe falling on a cricket. All the finesse of a cannon being fired in a handball court.

The bike leaves you stunned, rocked, wide-eyed and weak-kneed. In other words, it does what every other machine has been promising but has never delivered. Except maybe on paper.

Let us put it in the proverbial old

nutshell. The 490 Maico mega 2 delivers more stark-raving horsepower than any other motocrosser we've ever tested, including the factory jobs we've ridden here and there.

Power starts down low in the rpm range, builds early and hard, and then takes a deep breath at midrange before it revs out with a breathtaking rush. At no point is there any hitch or odd surge during the power build up. It's straight and smooth, yet more than enough to demand intelligent use of the right hand. You want some more acceleration? Fine. Then turn the handle a bit. You want a lot of acceleration? Then, twist that throttle harder. You want to loop out and stuff your head into the ground? OK. All you have to do is yank the throttle all the way open and not pay attention to business.

Pardon us while we dribble. Look, it's obvious that this is starting to sound like a rant and rave session, but you have to understand just exactly what we're talking about here. We're talking about a bike that'll out accelerate a 1980 YZ 465 by three or four lengths on a normal starting straight. A bike that'll torque out of a tight hairpin corner in third gear. A bike

that demands a thoughtful roll-on in fifth gear.

Wait a minute! Maybe, just maybe, we can describe how hard this big red beast pulls. Have you ever been to a drag strip and watched the cars run? Sure. We all have at one time or another. Well, have you ever listened to a car that is working? Really working? One of those things that turns under ten in the quarter and still looks streetable? Those special cars let out a moaning, shuddering sound when they hook up and light off. It's unmistakable. You can hear the engine working its heart out and actually *feel* the ground pulse with the energy being unleashed! As the car accelerates, the intensity builds and builds, until the end of the track is reached and you realize that you've been holding your breath—and you let it out, aware that you've witnessed something awesome!

That's the way the 490 affected us. If you can't tell that by now, then put this magazine back on the shelf and get a copy of Banking Action instead.

### Hold It! Nothing's Perfect, Buster

Right you are. And it's a good thing that there are a few flaws in the 490 mega 2, or this test would be so lopsided as to make one raise an eyebrow or three.

Those flaws, while minor, definitely bear mentioning, and, we might add, correcting at the factory level. The massive Maico is the most expensive production motocrosser you can buy, and you deserve nothing less than perfection if you lay the cash on the table. At least, in theory you do. In the real world, one always settles for a bit less. How much less you settle for determines, to a great extent, which bike you buy—and why.

Our biggest complaint concerns the carb. Whoops! Hold it right there. Bet you thought we were going to snivel about the Bing carb, as per usual DB practice, right? Wrong. The carb itself functioned in a thoroughly satisfactory manner. Once Steve Malin,

# MAICO 490

the Maico Bing genius, dialed the enormous 40mm carb in, it never burped or wheezed once. It was easy to jet and stayed clean running for the duration of the test.

It's just that the way the Bing carb was mounted was less than proper. A long aluminum manifold supports the big Bing and is locked in place by two clamps. No matter how much we leaned on the tools, we never could tighten those clamps down enough to keep the carb from coming loose. We had to resort to the time honored Maico trick of hanging a few rubber bands, from the carb to the head steady, to keep the breather from falling off.

When we disassembled the carb/manifold/air cleaner assembly for cleaning and normal service, we found that grit and dirt had worked into the manifold and carb. Left unattended, this could cause premature wear to the engine. That spells big bucks.

Part of the problems is the choice of sealing materials. Hard plastic inserts line the manifold and the carb housing and they just don't conform to the irregularities. Some sort of flexible neoprene, or rubber, would not only do a better sealing job, it would also keep the carb from slipping and sliding around. Even better would be a stout neoprene inlet manifold. This would also reduce vibration to the carb, which must be considerable with the current set-up.

Our other major gripe concerns the pipe. On the 1980 test Maicos, we found that the muffler brackets broke consistently after a period of time, letting the exhaust flop around. Rewelding was only a temporary fix'em. The 1981 bike had an all new rubber mount that looked good, but let the pipe mount crack just as frequently as the old setup. Some redesign is needed here.

Minor gripes included mediocre cables, a brake pedal that hung up on a footpeg bolt, a gas cap that took a set of vise grips to remove, weird barrel-shaped grips, and tank decals that died almost immediately.

## Big Inches Make For Big Changes

Naturally, the big news is that the Maico is now a 490. The old 440, or 450, depending on how you rounded numbers off, was actually only 438ccs in total displacement. For a good many years, the 450 Maico was enough to lead the horsepower race in a convincing fashion. Then, in 1980,

the YZ465 blasted on the scene and jolted the 450 right out of the horsepower lead. A good, crisp 450 Maico would put out a bit over 40 horsepower at the rear wheel, on anybody's dyno. The best reading we ever saw was 40.4. A clean running YZ465 registered 42 plus horsepower on that same dyno. Not much, but enough to get a new King of the Hill.

We got word through the rumor mill that Maico was upset about, well... the upset. So, they decided to build a motor that would put out 50 Big Ones at the rear wheel.

It's our sad duty to report that they did not achieve their goal. Nope. No way did they get 50 ponies to read out on the dyno scale. However, 47.2 ain't all that bad, now is it? You got it, sport! Forty-seven point zero two Palominos are available to shorten the life span of the best Metzeler money can finance.

Now maybe it all comes together. All of our ranting, raving and shameless slobbering over the power of the 490. And the dyno bears us out. Ahhh, it's a good feeling to have your jollies explained with a cold, rational readout.

## Other Changes And Such

A quick check of the tap shows that the swing arm is about two inches longer than the 1980 bike. This lends a

stability to the bike that the '80 did not have, but doesn't seem to slow the Maico down in the corners.

Travel remains the same as last years bike, with 12.2 inches, front and rear. Somehow, though, Maico has managed to reduce the height of the bike by about 40 millimeters.

A redesigned saddle does part of the job and a modified slider/tube assembly drops the front end a bit. Shocks are slightly longer at 15.4 inches, as compared to the 15.15 jobs of last year.

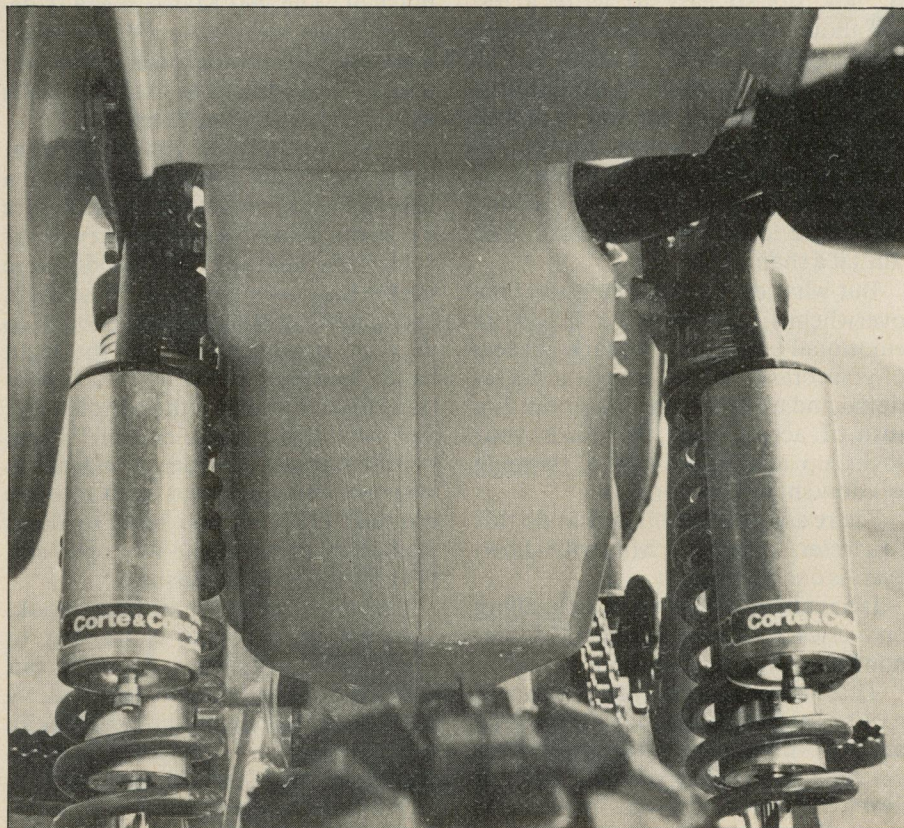
A new air box, rear fender and side panels make the mega 2 look worlds different than the Megaform I.

You won't find a brake stay arm on the rear wheel, as the swingarm now accepts a slot to hold the backing plate in place. So much for that old "full floating brake" baloney. The brakes worked just fine.

Bigger and stronger spokes now lace up to the rims in a different pattern. We had no problems whatsoever with spoke breakage. Loosening proved to more or less normal.

Sprocket bolts are now recessed with allen heads and are threaded into heftier bosses. Not one came loose in over a month of riding.

Footpegs are back a bit and about an inch higher. This should keep those toes from digging into deep ruts.



*Huge air box also protects the engine cases from accumulating mud. Rear fender is wider this year, preventing mud from getting splashed into the air box.*

Shifting, if anything, is even smoother than last year. The rider can slip from gear to gear in an arrogant manner, without even the slightest fear of hitting a false neutral.

Bars on the mega 2 are higher and flatter than the '80 bike. This makes them acceptable and correct in shape to a greater number of people. And, finally, one does not feel like they're sitting in a valley on the new bike. The saddle is flatter, slimmer and contours into the tank in a thoroughly pleasing manner.

A new backing plate rides up front and has additional reinforcing ribs. Cable guides are the same as last year and could be improved. We safety wired the brake cable in place to keep it from jumping out of the retaining slot. Fair warning.

A new head steady allows more room to get to the carb. You can now remove the slide for needle adjustments without tilting the carb or kinking the cable.

Totally new shocks ride on the new long swingarm. They're still Corte & Cosso, but they're piggyback reservoirs, rather than the old style clamp on units.

A new brake rod design is cleaner, simpler and sticks out too far if you happen to wear plastic boots. We bent ours in with a hammer for superior

clearance.

**Ok. But How Does It Work In The Turns, Bumps And Such?**

Thought you'd never ask. Here's the bottom line. The bike carves through flat corners like, well, a Maico. The inside line is available for the odd pass, but the Mega 2 is just as happy slamming off a berm under full power.

Straight line stability under power has been greatly improved with the additional two inches of swingarm length. You merely choose the right gear, point it in the desired direction and ignore the ruts and the whoops. No head shaking was experienced when decelerating over bumps, but the rear end would skip off the ground if the forks were set up too soft.

We found out that minor adjustments in preload and air pressures made a huge difference in how the 490 worked. For most of the tracks that we rode on, we used five weight fork oil and 11 pounds of pressures. The oil level in the massive forty-two millimeter fork tubes was six inches from the top of the tubes, with the springs out and the forks fully compressed.

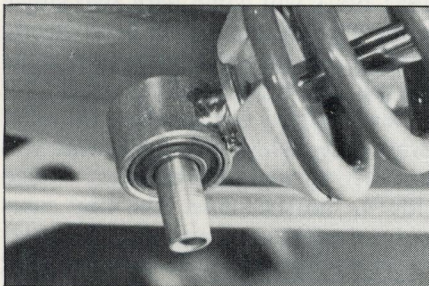
At Sunrise Cycle Park, probably the roughest track in the District 37 area, we had to run 12½ pounds in the forks because of the severity of the whoops and the high speed nature of the track.

To compensate for the increased pressure in the front end, we also pre-loaded the shocks more. This gave us an overall stiff ride on the small bumps, but the medium-to-deep ruts could be taken comfortably at warp speeds.

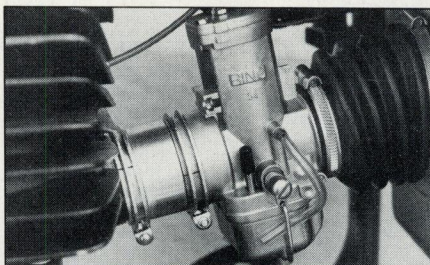
At first, the Corte & Cosso shocks didn't work to our satisfaction. They were delivered with way too much compression damping and too little rebound damping. This meant that the shock didn't want to stroke over a square-edged bump and the wheel would smack you in the butt when returning from the bump. A Maico rep showed us how to adjust the Corte & Cossos to correct this situation. These new shocks have an air fitting and fully adjustable compression and rebound damping valving, even though they must be taken apart to change the damping.

The new shocks will come in three different flavors. Ours had the marking "2H" on the reservoir cap, which meant that it was a Grand Prix shock. Other markings are 4H and 5G for normal MX and enduro work. Pressure in the 2H GP shocks should be set at 174 pounds for most conditions, although pressures can range from a minimum of 116 p.s.i. to a maximum of 261 p.s.i.

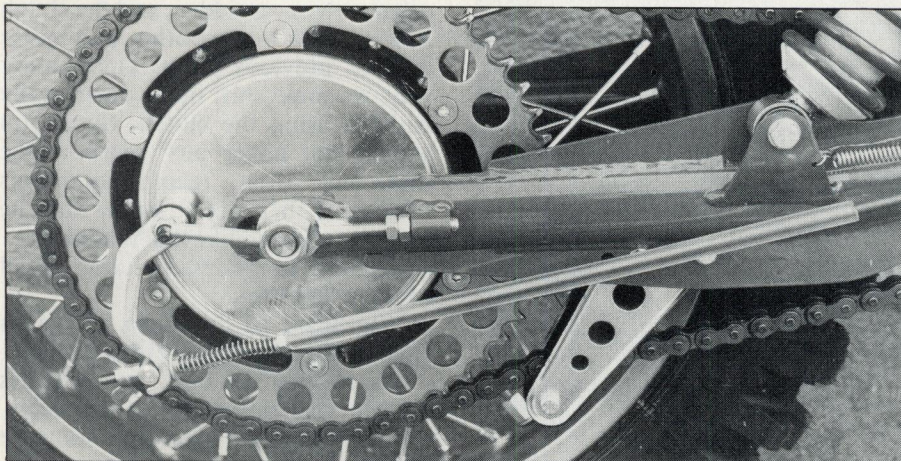
We also had a chance to try a set of the



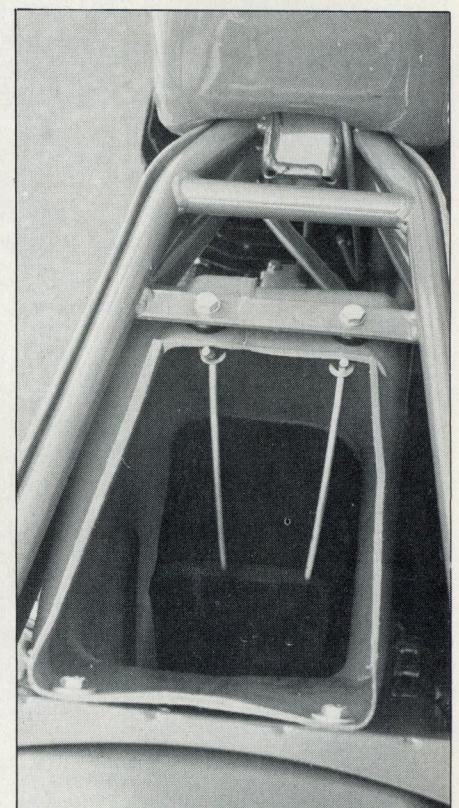
*Nifty innovation; barrel shaped shock bushings do the same job as a heim joint, with less complications.*



*Flaw in an otherwise sound design: the aluminum inlet tract let grit and crud pass through. The Bing carbureted well, once we dialed the jetting in.*



*New sprocket/bolt setup, elimination of the brake arm and a two inch longer swing-arm are part of the mega 2 design.*



*Filter is held in place by thick, formed wire. To remove, merely squeeze the wire in and down.*

# MAICO 490

4H shocks and found them superior in action to the 2H units. The Corte & Cosso shocks are very sensitive to slight preload adjustments, and some experimentation will be needed to get the best combination for steering and shock action. Too little preload on the shocks and the steering accuracy suffers. All things considered, we found the Corte & Cosso shocks much better than in previous years. Also, none of the spring sacking of the older units

was experienced. Don't throw these away.

## Happy Bings— The Inside Scoop on Jetting

Our test 490 came with a 40mm Bing carb with the following specs:

Pilot Jet	..... 50
Needle Jet	..... 280-2
Needle	..... 6L2
Cutaway (Slide)	..... 220
Main Jet	..... 185

Here's what we ended up with for our 490. Remember, our jetting was for about 1200 feet above sea level, with the temperature running between

75 and 85 degrees.

Pilot Jet	..... 40
Needle Jet	..... 278-2
Needle	..... 6L2
Cutaway	..... 220
Main Jet	..... 185

We also ran the needle in the full lean (lowest) position most of the time but occasionally raised it one notch for an early morning (cool day) first moto. This jetting was used with a 50:1 gas/oil ratio. The only hassle we had was starting the bike cold. No matter how much we slobbered gas all over the cases by tickling the button, it still took a dozen kicks to bring the beast to life. Some of those kicks kicked back, too! Eventually, we utilized another old Maico/Bing trick. We would hold the tickle button down with one hand and pinch off the over-flow tubes with the other two hands, until some raw gas would slurp down the manifold. Then the 490 would light off on the first or second kick. We can attribute this to the very lean pilot jet, but this was an absolute necessity to get the bike running hard off the bottom. Once hot, the 490 was an easy one-kick starter.

## Bits and Pieces

As usual, the Maico has a primary chain; but, this year, a slight difference exists. Instead of a two- or three-row interconnected chain, all of the 1981 bikes will come with two single rows. This is supposed to be as strong as the old setup and a lot more flexible for greater lifespan and less wear.

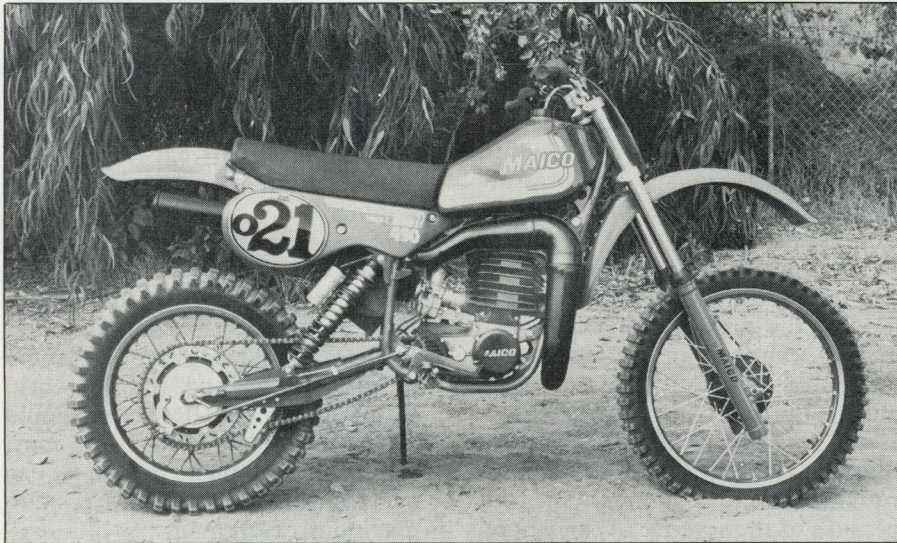
We changed our gearbox oil after every ride, while the engine was still hot. We strongly advise every Maico rider to do the same. The tiny cases only take 600ccs of gear oil and regular doses of fresh oil will insure a long tranny life and smooth clutch operation.

Our '81 shifted better than any other we've ever ridden, and the clutch action was a bit smoother and easier than in previous years. Once under way, we could shift up or down easily without using the clutch. Sure, you *should not* abuse any gearbox like that, but often, racing conditions demand it. It's nice to know that the bike will respond like that if it has to.

Metzeler tires come standard on all Maicos. The best.

Wheelbase of the mega 2 bikes is right at 60 inches; plenty long enough.

We slipped the bike on the scales after it was taken out of the crate. After deducting for the gear and fork oil, we came up with 224.7 pounds, bone dry. This makes the 490 Maico



## 1981 MAICO 490 mega 2

NAME AND MODEL	..... 1981 Maico 490 mega 2
ENGINE TYPE	..... Single cylinder, piston port, two-cycle
BORE AND STROKE	..... 86.5 x 83.0mm
DISPLACEMENT	..... 488cc
HORSEPOWER (CLAIMED)	..... 53 hp at crankshaft
CARBURETION	..... 40mm Bing
FABRIY RECOMMENDED JETTING:	
MAIN JET	..... 185
NEEDLE JET	..... 278-2
JET NEEDLE	..... 6L2
PILOT JET	..... 40 or 45
SLIDE NUMBER	..... 220
RECOMMENDED GASOLINE	..... Premium 92 plus octane
FUEL TANK CAPACITY	..... 9.5 liters (2.5 gals.)
FUEL TANK MATERIAL	..... Plastic
LUBRICATION	..... Oil in gas (pre-mix)
RECOMMENDED OIL	..... Bel-Ray MC-1 at 50:1-60:1
OIL CAPACITY	..... N/A
AIR FILTRATION	..... Oiled foam, in air box
CLUTCH TYPE	..... Wet, multi-plate, sintel metal
TRANSMISSION	..... five-speed, constant mesh
GEARBOX RATIOS:	
1	..... 2.71
2	..... 1.97
3	..... 1.50
4	..... 1.20
5	..... 1.1
GEARING, FRONT/REAR	..... 14/56
IGNITION	..... Motoplatt pointless
PRIMARY KICK SYSTEM?	..... Yes
RECOMMENDED SPARK PLUG	..... Champion N84G - N86G
SILENCER/SPARK ARRESTOR/QUALITY	
EXHAUST SYSTEM	..... Silencer only, average noise
FRAME, TYPE	..... High pipe, right side
WHEELBASE	..... Double loop, chrome moly tubing 1528mm (60.15 in.)
GROUND CLEARANCE	..... 372mm (14.64 in.)
SEAT HEIGHT	..... 960mm (37.7 in.)
STEERING HEAD ANGLE (RAKE)	..... 28.5 degrees
TRAIL	..... 126mm (4.96 in.)
WEIGHT WITH ONE GALLON GAS	..... 235 pounds (dry - 224.7 lbs.)

RIM MATERIAL	..... Aluminum alloy
TIRE SIZE AND TYPE:	
FRONT	..... 3.00x21 Metzeler
REAR	..... 4.50x18 Metzeler
SUSPENSION, TYPE AND TRAVEL:	
FRONT	..... 42mm tubes, air assist 310mm (12.2 in.)
REAR	..... Swingarm, Corte & Cosso shocks 310mm (12.2 in.)
INTENDED USE	
COUNTRY OF ORIGIN	..... Motocross Germany
RETAIL PRICE, APPROX.	..... \$2699
DISTRIBUTOR:	
Maico West	
110 E. Santa Anita Ave.	
Burbank, California 91502	
Maico East	
1256 Progress Rd.	
Suffolk, Virginia 23434	
Maico Canada	
R & M Motocross	
1441 Kings Way	
Vancouver, B.C.	
Canada V5N 2R6	

PARTS PRICES, HIGH WEAR ITEMS:	
NOTE: 1980 450 prices. 1981 prices N/A	
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SHIFT LEVER	..... \$20.20
BRAKE PEDAL	..... \$24.80
FRONT SPROCKET	..... \$13.20
OVERALL RATING, 0 TO 100, VARIOUS CATEGORIES, KEEPING INTENDED USE OF MACHINE IN MIND:	
HANDLING	..... 98
SUSPENSION	..... 98 front - 96 rear
POWER	..... 99.999
COST	..... 88
ATTENTION TO DETAIL	..... 95
EFFECTIVENESS, STONE STOCK	..... 97



Val gets some air over a combo turn/jump.

the lightest big bike on the market by a long shot.

The Maico retains a five speed gear-box with sensible spacing. A 14-tooth countershaft rides up front and a 56 rear sprocket does the rear. With stock gearing, the 490 is good for 78 to 80 mph. With a 15 counter and a 52 rear, 90 can be approached.

While all of the plastic is of good quality, the tank is still coated with red paint for some mysterious reason. When the red wears, the white primer underneath detracts from the appearance of an otherwise handsome machine. We understand that Maico paints their plastic to make the bikes look good on the showroom floors. This doesn't pay off in the field, however.

There are no fork boots on the big legs, but apparently, none are needed. We encountered no weeping or leakage of any sort. Very little break-in time was required on the forks. Seal drag was virtually non-existent.

#### The Verdict

Not much question about it; the mega 2 490 Maico is the finest, fastest, best handling open class motocrosser we've ever ridden, to date. We haven't tested an '81 YZ465 yet, but a peak at the spec sheets shows that the 1981 bike hovers near the 240-pound mark. That's close to a twenty-pound load.

Still, there are plenty of new open bikes coming out this year. The all new 431 Honda, the 495 KTM, the RM465 Floater, a revised KX and a bigger Husky. Rarely have we ever seen so much activity with the big iron at one period of time.

While we won't prejudge, it's hard to see how any of the new big bikes can put it all together like the 1981 Maico 490. We'll test the rest of the field as they emerge.

But, for now . . . all hail the new King!

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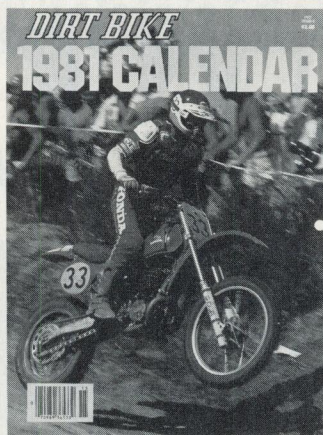
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