



BIG-BORE ENDUROS!

Here they are folks,
the biggest, gruntingest, meanest
bunch of clod-throwers you've ever seen!

AUSTRIA



PENTON

WEST GERMANY



MAICO

U.S.A.



ROKON

SWEDEN



HUSQVARNA

SPAIN



BULTACO

DAVE EKINS:

We did it! We got all those big, expensive off-road racers and put them in one issue. All five bikes are brand-new to us, one of them, the Maico, the first-ever magazine test. There is Penton's 400 Mint, Bultaco's new Frontera, Husqvarna's latest 400WR, the new Rokon 340RT and a 450 Maico.

These are the biggest, best and most expensive dirt bikes you can buy. The five bikes represent over \$8700, and that doesn't include tax. At an average of \$1700 apiece, you've got to be serious if you're going to lay down that kind of bread for a dirt scooter.

Tagged as enduro machines, they are that in the strictest sense of the word. Not anything like Japanese enduros bristling with chrome and amber turning indicators, tachometers, and shod with tires that offer no boonie bonus. Silent-running, geared for the street, and suspended at best for a dirt road you could handle better in a good sedan, the Oriental enduro bikes just are not in this league.

You're not going to ride in front of city hall on one of these five grunt scooters; not that they are all noisy, a couple are amazingly quiet, and most have horns that hoot. But instead of turning indicators, these have knobbies. In place of a tachometer there's nothing, and they have number plates hung on three sides.

Nothing, but nothing will attract a cop quicker than a number plate. Number plates mean racing, and racing on public roads means breaking the law. So what we have are real-live enduro bikes that can double in any ISDT qualifier or even the real thing and be competitive, not the everyday

to-and-from-work, on-road/off-road enduro bike.

These are racers. They need to be treated like racers, hauled around in trucks, pampered, loved and taken seriously once you throw a leg over them. You memorize every nut and bolt, gladly spend \$6.50 for a platinum spark plug, or \$65 for shock absorber bodies. Nothing costs too much and nothing is more deserving of all your spare time. This is the way it is when you get serious about enduros and qualifiers, and the ISDT.

These are the things we took into consideration when we put this test together. Years of experience have taught us that if you're going to judge one motorcycle against another, you have to have them together, at the same time, and do the same things with them.

We ran them up a hill so long and so steep that 125s just die part-way up, and it's a fight to get any worthwhile 250 over the top. It has a hump in the middle that gets most bikes airborne, and when they land it takes all the grunt that's left out of the engine. A bike has to be good just to get over, a rocket to fly over in third gear—and most of our big-bores did just that.

Our private motocross course at the Petersen Ranch is a true motocross course, it has hoops and holes, off-cambers, fast places and tight, twisting slow places. It's not all used up because we're the only guys who use it and it tells us exactly what a motorcycle is doing. The special test course is just like it only faster in some places and tighter in others. It takes skill to ride a bike around any of them, but the better the bike, the easier it is to ride fast.



SPAIN

The Bultaco is a perfect open-country, rough-terrain motorcycle. It has all the qualities plus spares.

BULTACO 360 FRONTERA



360 Frontera is a motocross bike detuned to produce smooth power. Lights, big gas tank, and other ISDT paraphernalia increase gross weight to upper-250-pound bracket. Long-travel suspension allows very soft ride.

Bultaco's Frontera is as new and trick as you're going to find, a continuation of the long line of very successful trailing, enduro and woods Matadors, although they're not called that anymore.

The Frontera is a Mark 8 Pursang, with variations. Chrome moly chassis, suspension and rear wheel are definitely Pursang. The front wheel has a larger diameter brake and speedo off the Alpina. Frontera's engine is 363 Pursang with Alpina gearbox and custom downswept expansion chamber, muffler/spark arrestor. The very latest 36mm Amal carburetors beautifully, doesn't slop gas like the previous Amals, and has a starting bypass valve similar to Mikuni's.

The cylinder head carries lots less compression than the Pursang, and there are several pounds of weight

added to the crankshaft to slow power impulses and make the bike more manageable to ride. They bolted a Sherpa T weight on the drive side of the crank and used a heavy Femsa flywheel on the other. Ignition is pointed for supplying good spark at slow crank speeds, and there's also a single lighting coil.

The Frontera comes equipped with lights front and rear, an electric horn, and stoplight operated by the rear brake pedal only. A slick little toolbox mounts atop the 2.9-gallon gas tank that is very much out of the rider's way. Conveniences? The front number plate mounting bracket carries an air bottle for tire inflation—the most complete production ISDT-type bike we've seen.

Bultaco does not use magnesium, yet they very effectively keep weight down with the lightest wheels in the

business and that's low *unsprung* weight. Front and rear hubs are thin aluminum alloy forgings having brake friction surfaces of only a thin hard chrome coating. (Others have a steel or iron insert.) Stainless steel spokes, aluminum spoke nipples and Akront lugs have been replaced with six pointed screws through the rim and into each side of the tire bead.

With this genius for saving weight, Bultaco paradoxically sports a rubber number plate on the handlebars, another hunk of rubber that supports the taillight, and a four-pound, hand-laid fiberglass skidplate under the exhaust pipe.

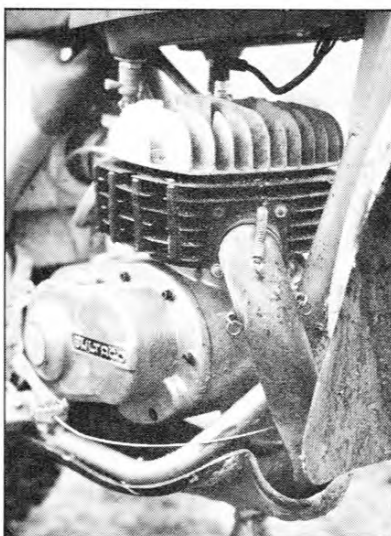
This particular test bike was run through a very tough 100-mile enduro before it ever got to the comparison. After 14.6 miles of whoop-de-dos, the rear fender, aided by taillight assembly



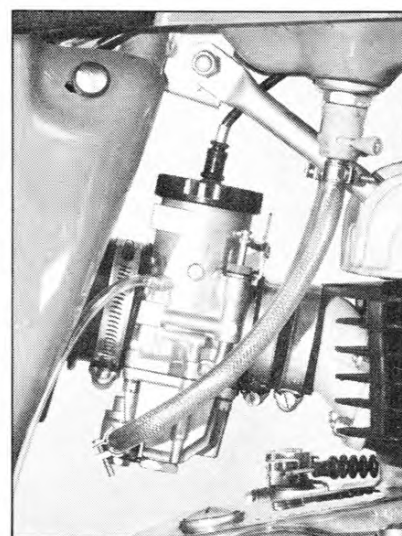
Wheelie's are easy in first, second and third gears. Exceptional traction reduced acceleration times.



Telesco shocks are same as MXer's only fitted with lighter springs. Rear fender, chainguard self-destruct.



Well-placed fender and mud flap kept engine whistle- clean and mudfree.



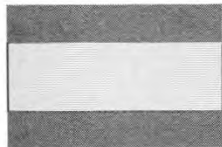
First new Amal we've seen features Mikuni-type starting plunger, 5 needle positions.



Bultaco's Frontera takes over where Matador left off. Transition has been from respected woods bike to uncompromising cross-country racer and special-test contender.

weight, broke off. Later, during that same ride, a gnarly *mesquite* branch grabbed a too-loose brushguard cable that runs from brake pedal to shift lever and bent that nice maleable aluminum shifter down around the left footrest. The lever had to be beaten back into place with nature's hammer, a rock. This bit of butchery caused ensuing shifting problems that affected subsequent overall performance. Even so handicapped, it still won the hill-climb.

Being built on the motocross chassis, it gets across rough ground very well. The additional weight on the crankshaft, the brutal Pirelli knobby, and what happened to be just-right gearing allowed the Bul to get up the hill the fastest, straightest and easiest. The rest of the Bultaco's tests became sadly annoying, with the test riders



BULTACO 360 FRONTERA

pulling neutrals out of the box often as not—very unusual since Bults normally don't behave this way. Part of the problem could be caused by weak shift detent spring pressure. We later slipped a 1/4-inch-diameter ball bearing between the spring and 19mm retaining nut, which half-cured the shifting problem. The *mesquite* had done its damage.

The bike is superbly sprung with Betor forks, built to Bultaco's specifications, over eight inches of well-controlled movement. The swing arm uses midmounted Telescos that required about 50 miles to soften up and give a good sit-down ride from their seven-inch stroke. After that the front-to-rear balance tuned in, permitting straight-line, high-speed, sit-down riding.

Power comes on evenly, without an explosion, every bit of it getting to the ground. The front end comes up in any of the first four gears, and the possibility of looping it in the first two is very real. Like the Penton, you get yourself over the back fender to plane over whoop-de-dos, then scoot up on the gas tank to take a motocross corner.

Stopping is another story. The Bul gets the job done but it requires more than the usual amount of lever pressure. These new backing plates offer pretty fair shielding against water splashes, but submerge 'em and they get just like the other drum types and stop working until dry.

Bul does offer something the others don't; you can put the shift on the right and brake on the left if you please. That's for those guys who learned how to ride English motorcycles and never programmed the change-over. That's the Frontera.

We had a conversation with the importer about the fragile rear fender and he said they are working on a plastic instead of fiberglass set. To complete our tests, we bolted on a Preston Petty I.T. It took a little stretching to fit inside the frame, but it's on for good now. •



Left-side rear brake pedal is possible; wheel has been flipped over and sprocket repositioned.



BULTACO 360 FRONTERA

TEST BIKE

Engine serial.....14300270
Base price as tested.....\$1625

ENGINE

Type.....Two-stroke, single-cylinder, piston-port inlet
Displacement.....363cc
Bore x stroke.....85mmx64mm
Claimed hp @ rpm.....N.A.
Compression ratio.....10:1
Lubrication system.....Oil mist
Carburetion.....36mm Amal
Air filter.....Oil-wetted foam
Ignition system.....Magneto / points
Electrical system.....Magneto generator
Starting.....Folding kick
Exhaust.....Downswept chamber, muffler/spark arrestor

DRIVETRAIN

Primary/ratio.....Duplex chain (2.37:1)
Clutch.....Wet, all-steel, multi-plate
Transmission/shift.....Left-side
Gear ratios.....(Internal) .287:1, .442:1, .625:1, .821:1, 1:1

Final drive/ratio (sprocket teeth).....3.23:1 (13/42)

CHASSIS AND SUSPENSION

Frame.....Chrome moly tubing, single downtube

Suspension
front.....Betor two-way-damped, 8.1" travel
rear.....Telesco two-way-damped midmounted on swing arm

Brakes
front.....125mm-dia. SLS
rear.....140mm-dia. SLS
Tires
front.....3.00x21 Pirelli
rear.....4.50x18 Pirelli
Rim locks, front/rear.....screws, 6 per side

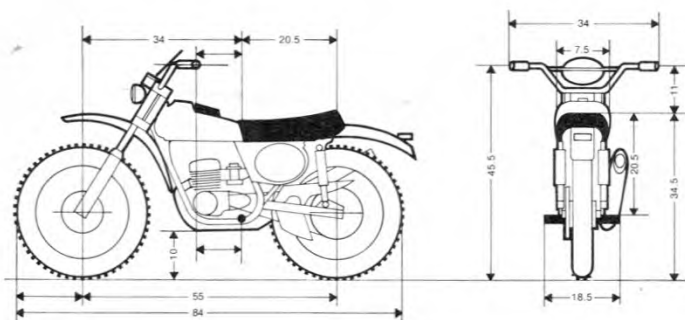
WEIGHTS AND CAPACITIES

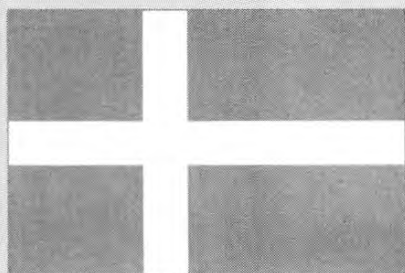
Weight, wet, unladen.....256
Fuel capacity.....2.9
Engine oil.....In fuel

STANDARD EQUIPMENT

Speedometer.....Veglia 10th resettable
Tools.....Yes
Stands.....Center

ALL DIMENSIONS IN INCHES





SWEDEN

Motocross tradition bred into the world's most successful cross-country racer; bolt on lights and it's an ISDT winner.

HUSQVARNA 400WR



We found Husky to be a superb grass-tracker. With six to choose from and the complement of a broad-power engine, you just can't be in the wrong gear. Bike works just as well standing or sitting.

"Take care of it, it is a good bike, you know."

Malcolm Smith had just loaned us his very last 1975 400WR model so we could put this test together. Malcolm's parting words indicated his love for the brand. He has six ISDT gold medals and one silver collected over a seven-year period of riding Husqvarna motorcycles for the U.S. Malcolm is also responsible, along with John Penton, for the introduction and success of Huskys into this country. Currently Mr. M Smith is the largest retail dealer for these Swedish-built two-stroke singles.

With the bike comes the world's largest and most complete owner's manual, a tool kit containing about three special tools, two extra countershaft sprockets and a pair of exploded-drawing posters that show every part and part number for the WR. In racer

fashion the whole package was stuffed in a plastic baggie and wrapped with racer's silver tape.

The 400WR is a cross-country racer, nothing more. In order to make an enduro/ISDT bike it needs lights and a speedo. A second package handed us by Malcolm was Preston Petty's integrated taillight/rear fender and headlight/number plate kit. We passed on the speedo, but, that, like the lights, is also available at extra cost.

The WR uses a pointed Spanish Femsa ignition, a primary coil within the rotating magnets of the flywheel, and a secondary coil bolted to the frame. There is also a lighting coil next to the primary ignition coil. A simple matter of wiring the lights direct, omitting a brake light switch, will get you through most ISDT qualifiers. The enduro rules are dependent upon local

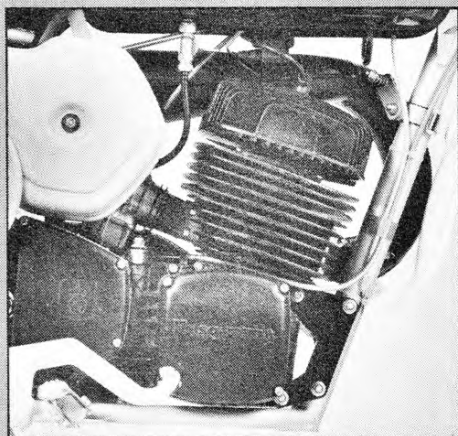
district dictates, so switches and whatever may or may not be required.

We installed the bare necessities to bring this one within qualifier standards. Topped off the tank and weighed it—260 pounds soaking wet—and that's within the ballpark. Two years ago we snuck Malcolm's 250 Husky qualifier, complete with aluminum gas tank, on the scales and it weighed 257 half-full of gas.

Our test Husky did not have reed valve inlet like its motocrossing cousins, nor was it fitted with laydown rear shocks. Cross-country bikes are to be ridden hard and fast all day. Motocross bikes are ridden hard and fast for 45-minute periods. Really good riders can stand up for 45 minutes, few could stretch it into several hours. Husky feels long-travel MX rear suspension is effective when you can stand up and



**HUSQVARNA
400WR**



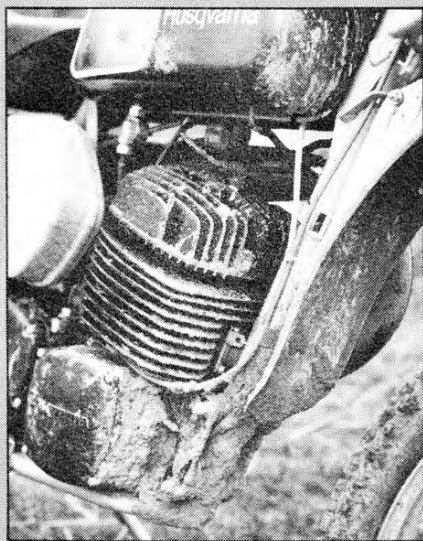
Mag engine is conventional piston-port type. New ignition makes it one-kicker.



Problem with all this hillclimbing stuff is keeping the front wheel down. 400 enduros set a blistering pace up the long incline, most getting over in third gear.



3.00/3.20x21-inch Barum tire is tad bigger than normal 3.00; we liked it.



Fender needs a mud flap, cases collected some goop while fins stayed reasonably clean.



Girling shocks are almost mid-mounted, Husky claims 5.5 inches movement at rear axle.



Preston Petty pieces are required to transform 400WR Husky into ISDT-type racer. Headlight/number plate was a snap to put on, Integrated Taillight/Fender took some fiddlin'.

use your body as a counterweight and fully work the long-traveling rear axles. If your legs turn to rubber bands and you have to park your duff on the seat, then all that rear movement starts working against you.

The WR is a combination of chrome moly steel tubing, aluminum and magnesium, with a little plastic thrown in. All the best material in the right places, costs be damned.

Most of the machine is built at their plant in Sweden. Yet the pieces that are brought in are the best. Magura control levers, Girling shocks, Barum tires, and the aforementioned Femsa electrics. Front forks are Husky's own, the sliders being pressure-die-cast magnesium for super-light weight, yet ribbed fore and aft for strength. They have seven inches of hydraulically controlled travel. Balance between these

and the rear Girings is correct for fast sit-down riding. Hit a sharp bump you weren't ready for and the bike jumps straight up in the air. This is a condition where some would come down on their noses, get sideways, or both.

Their slant-shock models aside, Husky hasn't changed the chassis much over the past few years. The engines, too, are much the same, making their horsepower at the lower revs where they are most at home. Shifting gears before top rpm will produce the best times; the wide power band makes incessant gear-changing unnecessary. The dependably positive gearbox does require a movement and a half to catch the next gear. Avid Husky riders complain about the short throws of other bikes, so it comes out even. And it is a fact that a longer shift throw makes it more difficult to accidentally knock out of gear. Horsepower is efficiently put to the ground without a lot of wheelspin.

"Stability" best describes Husky's handling. Suspension is somewhat stiff compared to many bikes, but the results are much the same; going fast, the suspension works. Both brakes offer very good feel, progressive and sure.

The unusually high location of the kick start lever is not in keeping with the rest of Husky's layout. The bike sits like a true motocrosser, comfortable sitting or standing. All other levers are well-placed.

This new ignition and heavier flywheel provide great spark at cranking speeds, making for easy starting. Generous tickling of the Bing is all that's required when cold, and we winter morning-started all these bikes.

We were surprised to find the 400WR had a six-speed gearbox. All engine cases are magnesium, even the inlet manifold. Head and cylinder are cast aluminum with a steel liner pressed in for the piston to run up and down in. This also allows additional cylinder borings when things get sloppy. A forged piston is used along with two very narrow rail-type rings. Ring end gap clearance is very tight, and because of this Malcolm recommends Hi Point oil at about 16 ounces to five gallons of gasoline. Naturally, the piston waltzes around in needle and roller bearings while the crank swings on caged balls as do the gearbox shafts. A drum-type shifting cam programs the gears via three shifting forks.

Also, the Husky is the only bike in this group to offer a treated paper air filter, opting to ensure air flow during a rainstorm. And qualifiers and enduros have been known to run during rainstorms. The whole motorbike reflects experience and applied knowledge seldom equaled in the motorcycle industry. Like Malcolm said, "It is a good bike."



HUSQVARNA 400WR

TEST BIKE

Engine serial.....21162
Base price as tested.....\$1750

ENGINE

Type.....Two-stroke, single-cylinder,
piston-port inlet
Displacement.....395cc
Bore x stroke.....81.5mmx76mm
Claimed hp @ rpm.....N.A.
Compression ratio.....10.2:1
Lubrication system.....Oil mist
Carburetion.....36mm Bing
Air filter.....Treated paper
Ignition system.....Femsa flywheel magneto,
pointed
Electrical system.....Flywheel generator
Starting.....Folding kick starter
Exhaust.....Upswept chamber,
muffler and spark arrestor

DRIVETRAIN

Primary/ratio.....Spur gear (2.833:1)
Clutch.....Wet, multi-plate
Transmission/shift.....Left-side
Gear ratios.....(Internal) 2.357:1, 1.706:1,
1.300:1, 1.043:1, 840:1, 678:1
Final drive/ratio
(sprocket teeth).....3.692:1 (13/48)

CHASSIS AND SUSPENSION

Frame.....Chrome moly tubing, single
downtube
Suspension
front.....Husqvarna telescopic forks
7" travel
rear.....Swing arm, Girling shocks,
normal placement
Brakes
front.....160mm-dia. SLS
rear.....160mm-dia. SLS
Tires
front.....3.00/3.25x21 Barum
rear.....4.25x18 Barum
(step bead)
Rim locks, front/rear.....1/2

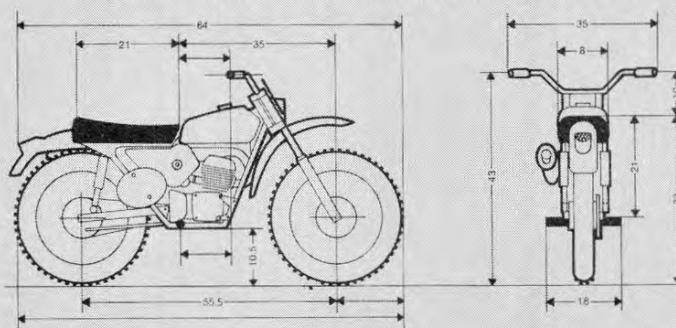
WEIGHTS AND CAPACITIES

Weight, wet, unladen.....260
Fuel capacity.....2
Engine oil.....In fuel

STANDARD EQUIPMENT

Speedometer.....None
Tools.....Special pullers
Stands.....Side

ALL DIMENSIONS IN INCHES





A fine chassis combined with the largest engine becomes a most formidable contender. It starts in gear too.

MAICO 450 ENDURO

WEST GERMANY



The forks will give away Maico's identity every time, they are supposed to be best in the world. Big-thumpin' 450 worked particularly well in tight riding like this.

Of all the bikes we have to deal with, Maico seems the strangest. Why? They are the only guys left in the business still making four-speed gearboxes. Here we are, sitting in the middle of a world full of five- and six-speed 250cc and open class dirt racers and Maico is hanging around with their old four-speeder. Or is there subtle method to this madness?

Remember, these are the guys who first moved the shocks on their motocrossers halfway up the swing arm for more travel at the rear axle. They had seven-plus inches of movement in their front forks when everybody else was still trying to get six. And, if you can believe this, Maico has had primary kick starting since the design of this current engine some two-dozen years ago. Many similar engines of European manufacture have come and gone, but

few with primary kick starting.

Maico, with its four-speed racers, has nearly won the World Motocross Championship twice in recent years on a very low budget, and did put the lock on the tough American Trans-Am three times.

We were fortunate in obtaining Maico's first limited-production (very) 450cc Enduro. But we believe it is more in character to call this an ISDT mount because there is a definite lack of street-legal goodies. You know, those things that get knocked off every time you throw the bike away.

Make no doubt about it, this is a motocrosser. It has the 450 MX engine set in a "vintage" MX chassis. We say vintage because it is not one of their late long-cushion types. This one has the conventional 4.5 inches of rear wheel travel.

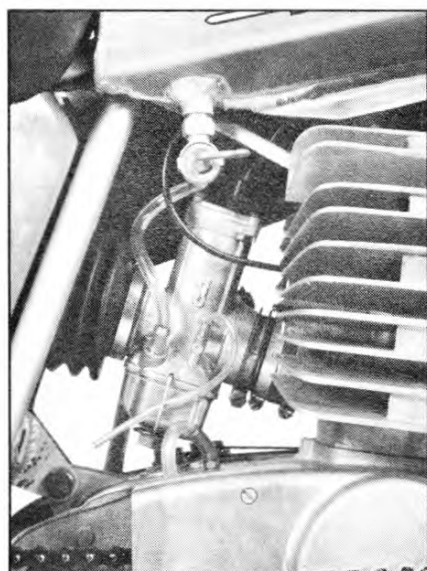
The engine won't get its rpm quickly like the MXer because of the big fly-wheel rotating around fixed magnets. It's still full of fine, low-energy-absorbing ball and needle bearings and uses those expensive Mahle forged pistons. The cylinder is die-cast aluminum with a steel liner while the cases and cylinder head are sand castings. A sand-cast piece is about 25 percent heavier than a comparable die casting of aluminum, which prods us to wonder how many additional pounds can ultimately be carved from its 257 total weight.

Speaking of castings, the rear hub is now an aluminum conical-type instead of fabricated steel, a bit lighter and a whole lot nicer looking. The front hub is similar, only about 15 percent smaller. Maico's brakes are good.

Being a production prototype, the 450 does have a few gorpory things. We



Motocross stunt shows off Maico's MX ancestry. Hp and proper steering produced fast times.



Proven Bing concentric carburetor feeds engine properly throughout rpm range.



Clean cylinder fins offer little evidence of too-short front fender. Frame tubes got it.



Headlight and horn turn high-pipe MXer into enduro mount. Tire rubs head pipe on compression, necessitates short fender.



Center stand allows removal of either wheel without laying bike on its side. However, stand doesn't work on soft ground; bike just falls over. Lights and horn really work!

were't real impressed with the plastic front fender they just sawed off at the bottom to clear the exhaust pipe. There are enough bracket-mounting places on the fork legs to put the fender over the tire.

The gas tank is a classic. Its whole outer form is made from a single piece of thick, soft aluminum, mitered and bent at the proper places and welded to a base channel that fits over the top frame tube. Welds are heavy but the two-gallon container fits the Maico scheme; it works.

We were a little surprised to see steel rims in place of the more popular alloy ones. Yet, from the viewpoint of the Six Days rider, a bent steel rim is easier to hammer back round than those harder aluminum jobs. In fact, each additional time the alloy job gets bent it work-hardens that much more

MAICO 450 ENDURO

and it takes a bigger hammer to beat back.

A pair of Konis suspend the back, using constant-wound springs rated at about 80 pounds. Balance between front and rear is pretty good except when you catch a whoop on a down-hill, then the back end comes up. This little unnerving trait showed up more than once; had the bars been bent a little differently, allowing the rider to get farther back, he could've held the rear end down and gone faster.

A handlebar-operated compression release screws into the back of the cylinder. The engine starts and runs with it open; in turn, you can't kill it by pressing the compression release lever either. It takes a kill button. The Bing took a lot of tickling, which allowed the bike to fire on the third kick dead-cold three mornings in a row. We found it to be a one-kicker during the rest of the day.

Gear engagement is positive; we never missed a shift with the wide-ratio gearset. The long-stroke engine pulls very smoothly through its range, no pipiness and no sudden dying. The big single absorbs the long steps from gear to gear, layin' it all on the ground.

Maicos stop, steer and go as good as the best. They have a tilted seat that slides you up against the tank, where you should be if you're trying to get around a turn fast. The tilt doesn't help if you're trying to go fast cross-country; but then, if you are as stout as the powerband, you will be standing on the pegs instead of sitting. The bike showed its best manners on the motocross course, making the transition from running nearly flat-out in third to hauling down for a 170-degree turn and narrow path. Most bikes just plain overslide the thing. The Maico lets you put it into a two-wheel brake-slide while you fish for first gear with your inside foot, then lets you bomb up the path, catching second all in one motion. It is a very deceiving bike to ride. We would ask a rider how he felt he did on the test and he would shrug his shoulders and say not as fast as the "Exploder." Then we would show him his times and try to convince him that the Maico was actually a few seconds faster and he would say, "No, it didn't do that."

Well, we can't argue with the clock. There's this thing about bikes that explode, get all squirrely and sideways, and force the rider to really work. They make you think they are going faster than they really are. The Maico isn't one of those.



MAICO 450 ENDURO

TEST BIKE

Engine serial.....441590
Base price as tested.....\$1828

ENGINE

Type.....Two-stroke, single-cylinder,
piston-port inlet
Displacement.....438cc
Bore x stroke.....82mmx83mm
Claimed hp @ rpm.....44 @ 7000
Compression ratio.....12:1
Lubrication system.....Oil mist
Carburetion.....36mm Bing concentric
Air filter.....Oil-wetted foam, "Twin Air"
Ignition system.....Bosch transistor magneto
Electrical system.....Flywheel generator
Starting.....Primary kick starting
Exhaust.....Upswept chamber/muffler

DRIVETRAIN

Primary/ratio.....Triplex chain (1.86)
Clutch.....Wet, multi-plate
Transmission/shift.....Left-side
Gear ratios.....(Internal) 2.78:1, 1.79:1,
1.29:1, 1.0:1
Final drive/ratio
(sprocket teeth).....As tested 4.0:1 (13/52)

CHASSIS AND SUSPENSION

Frame.....Chrome moly tubing,
double downtube
Suspension
front.....Telescopic fork, 7" travel
rear.....Swing arm, Koni hydraulic shocks,
normal placement

Brakes

front.....136mm-dia. SLS
rear.....160mm-dia. SLS
Tires
front.....3.00x21 Metzler
rear.....110/90x18 Metzler
Rim locks, front/rear.....1/2

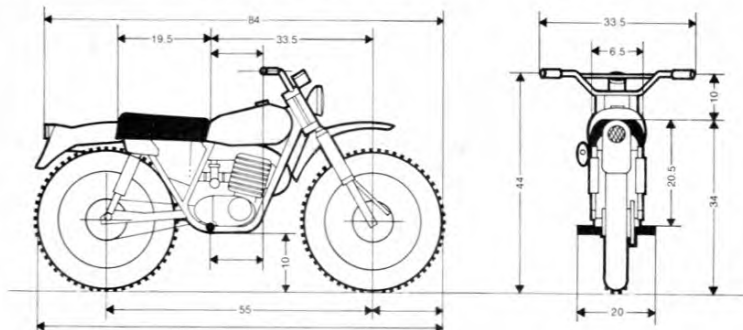
WEIGHTS AND CAPACITIES

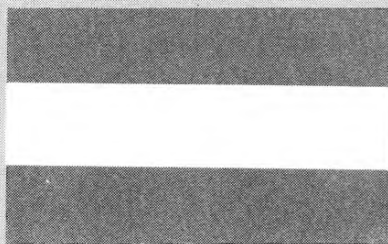
Weight, wet, unladen.....257
Fuel capacity.....2.0
Engine oil.....1 qt.

STANDARD EQUIPMENT

Speedometer.....VDO 10th resettable
Tools.....Yes
Stands.....Center

ALL DIMENSIONS IN INCHES





America's ISDT flagship. How could anything be better than this cantilevered, six-speed rocket?

PENTON 400 ENDURO

AUSTRIA



PHOTOGRAPHY: LARRY GRIFFIN & MIKE PARRIS

America's ISDT World Trophy challenger has it all—suspension, horsepower and six speeds to control the bike. Several years of intensive development have produced reliable package that is competitive in special tests.

Carl Cranke looked up and spoke with mixed feelings, "I didn't like my Penton at first. I rode it like a little bike, kept it wide-open and spent more time saving the thing than getting anywhere." The multi-International Six Days Trial medal winner was saying, "Then I found out there are really two engines in those big KTM singles. One's for going fast and the other is way down on throttle for plugging through tight trails and mud. I learned throttle control and started riding a lot faster. Another thing about the Penton, it really steers precisely. Some people mistake this for being quick, but it's not; it's precise. You have to ride the bike and get used to it before you can ride it properly."

This test, like the ISDT, is the same for everybody. We can't live with a single motorcycle, mold our emotions and riding habits around it and expect to

be fair about the others. All bikes take a bit of familiarization, and our guys are experts at quickly getting used to different machinery; they do it all the time. It's part of the job.

Pentons are interesting. They have represented America's ISDT Trophy Team since 1971. The bikes have performed respectably and competitively against the world's best, but not quite winning. The difference here is in the professionalism of the riders; our boys are good, the best we've got, but they're not allowed to work at it 16 hours a day, seven days a week as some Europeans do.

It is also a motocross bike and an enduro contender; the Penton does well at both. To become a motocrosser the lights come off and small gas tank bolts on. For enduros, the front-wheel-driven VDO speedo is retained. It's a serious bike for the serious-minded

competitor. If you don't believe this, just look at the price. But then, it isn't all that expensive either when you consider that the price includes a completely competitive motorcycle, nothing else to buy. And that we've run the bejeesus out of two of them for a year and all we have replaced are rear tires.

These bikes are made in Austria at the KTM factory. The combination of KTM engineers and John Penton produced the concept, design and thinking that went into this machine. John's whole life revolves around off-road competition. He won the National Enduro title several years, and lots of ISDT hardware. He makes his home in mid-Ohio, this nation's hotbed of enduro competition. The bike that bears his name embodies his soul.

What Cranke said is true; the engine has two usable power bands. They get this by having a short-duration inlet cy-



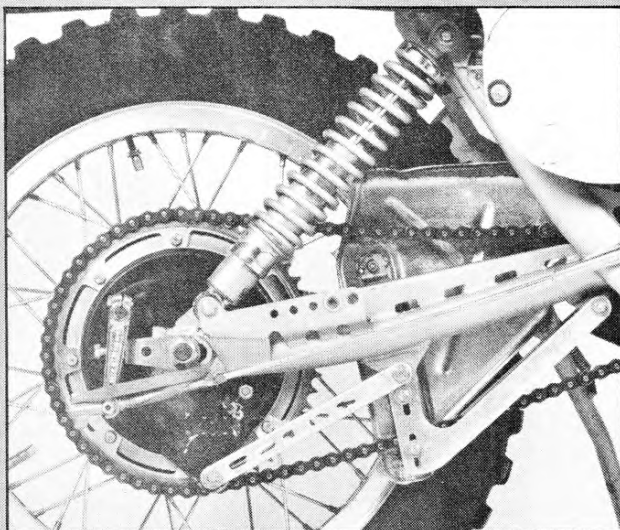
PENTON 400 ENDURO



Penton is capable if picking its way along without balking or loading up; you can gas it too.



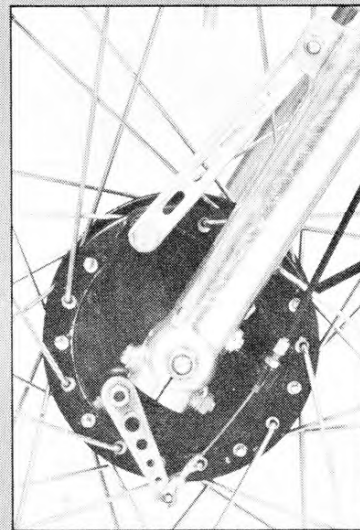
Trackside chat between new publisher Bryon Farnsworth on Penton and Frontera-mounted Dave Ekins. Both machines are serious ISDT packages with different approaches to the same problems.



Gas/oil Ceriani shock can be mounted in vertical position with five variations on the swing arm. Rubber band on brake rod is common retaining device.



Had they left mud flap on fender's end, engine would have remained cleaner.



Magnesium hub and brake backing plate complement vented stay and brake arm.



Frame has over 31 degrees fork angle which produces trail needed to compensate for long travel at the rear end. Handlebar/foot-rest layout favors sit-down riding; it stands well too.

cle with great area to benefit from a generous charge. Transfer ports are designed to scavenge really well at both ends of the power band, and the exhaust system has enough volume to be super-effective.

This particular engine began life as a six-speed 175. It grew to 250, 252 and now 355.5cc displacement. Bore/stroke is 81x69, with a claimed output of 42 hp at 6700 rpm. That's a lot—two horses per inch! Inner and outer engine cases are magnesium, cylinder and head are die-cast aluminum. The cylinder has a steel liner, and oversize pistons are available. A Mahle forged aluminum alloy piston is used with a Dykes-pattern top ring and rail-type second ring. Ignition is through a dependable CDI Motoplat unit which also juices the lights. There's even a brake light switch in the scheme.

Power gets to the clutch through straight-cut gears. No less than eight compression springs lean on the multi-plate clutch. The six-speed gearset is of very close ratio, and throwing competition shifts is exceptionally quick and easy. In fact, riding the bike hard is a series of trench-digging explosions, punctuated by crisp, machine gun-like gear changes.

This 400 Penton is the slant-shock model, with your choice of several shock positions, back and slanted a little or vertical and halfway up the swing arm. Carl said it worked best where it was: slanted. Besides, the gas/oil-type Ceriani rear shocks and springs are actually tuned for this position.

Forks are Ceriani with eight inches of travel. Balance between front and rear is very good, with both ends producing a soft ride. The seat is tall and narrow, which allows you good movement while on the bike. Riding position is like that of a motocrosser, although the machine is intended to be ridden for great distances. The Penton engine supplies plenty of power in all six gears. It will get down and pull even if you select the wrong cog. It comes on especially hard at higher revs. Gear selection is crisp and positive. Once the bike is gassed, you just keep grabbing gears. And that extra sixth gear really makes it over most five-speeds when you come to a fast, wide-open section and have to make up time. Steering is good, with no noticeable pushing or washing. Brakes are really neat, able to haul the bike down from top gear quickly without locking up... good feel at both ends.

But riding a long-travel bike is unconventional. First, there's this getting used to sitting way up on top of the thing, about two more inches between ground and seat. Then, with about seven inches rear axle movement, there's close to seven degrees head angle variation between extension and compression of the back end. For cornering, you sit up on the gas tank, which decreases trail and lets you steer. When those long whoop-dees come rushing up, you get back over the rear fender and try to wheelie through 'em, letting that long travel in back do all the work. In short, you have to adapt your style to ride one of these gangling critters.

The only things of much concern about the whole bike are the deep-lipped Akront rims. Strong and bullet-proof they are, and fill with mud they do. Other than that, we haven't a complaint about the entire scooter. It came to us with 400 miles on it; we whipped it a little more and sent it on its way. Nothing happened. It ran perfectly all the while. That in itself is worth the price.



PENTON 400 ENDURO

TEST BIKE

Engine serial.....	79681
Base price as tested.....	\$1895

ENGINE

Type.....	Two-stroke, single-cylinder, piston-port inlet
Displacement.....	355.5cc
Bore x stroke.....	81mmx69mm
Claimed hp @ rpm.....	42 @ 6700
Compression ratio.....	N.A.
Lubrication system.....	Oil mist
Carburetion.....	38mm Bing
Air filter.....	Oil-wetted foam
Ignition system.....	Motoplat CDI
Electrical system.....	Magneto generator
Starting.....	Folding kick
Exhaust.....	Upswept chamber/muffler

DRIVETRAIN

Primary/ratio.....	Spur gear (2.76:1)
Clutch.....	Wet, multi-disc, seven plates
Transmission/shift.....	Left-side
Gear ratios.....	(Internal) 2.57:1, 1.777:1, 1.333:1, 1.041:1, .884:1, .750:1

Final drive/ratio.....	4.00:1 (13/52)
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CHASSIS AND SUSPENSION

Frame.....	Chrome moly steel, down double-cradle
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Suspension	
front.....	Ceriani telescopic forks 200mm travel
rear.....	Ceriani gas shocks, slant-mounted

Brakes	
front.....	130mm-dia. SLS
rear.....	180mm-dia. SLS
Tires	
front.....	3.00x21 Metzler
rear.....	4.50x18 Metzler
Rim locks, front/rear.....	1/2

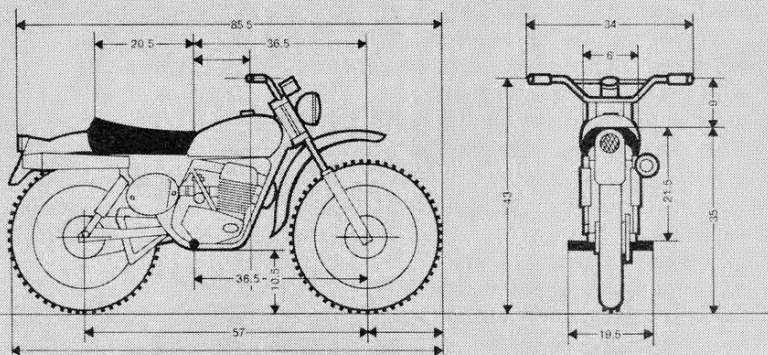
WEIGHTS AND CAPACITIES

Weight, wet, unladen.....	259
Fuel capacity.....	3.0
Engine oil.....	In fuel

STANDARD EQUIPMENT

Speedometer.....	VDO 10th resettable
Tools.....	Yes
Stands.....	Side

ALL DIMENSIONS IN INCHES





UNITED STATES

A racer without a gearbox? Why not? Someone has to look towards the future.

ROKON 340RT



Rokon is undoubtedly the 340cc automatic-shift hill-climbing champion of the world. Bike is set up to apply maximum torque to the ground at all times under full throttle. Pointed in other direction, it just coasts.

In theory, concept and design this shiftless scooter is all-American. In practice it is Yankee, German, Italian, Japanese and downtown Los Angeles (that's where the tried and true Salisbury torque converter is fabricated). The Sachs snowmobile engine comes from West Germany, Mikuni carburetor and Marubeni rear shocks from Japan, forks are Italian and the whole thing is put together in Keene, New Hampshire. (What else is there to do on the 20th of January when the snow is seven feet deep?)

The bike is unique, not because it is made in the good ol' U.S.A.; but rather it is a very successful attempt in a new direction for off-road motorcycles. On the drawing board and in actual practice the thing produces maximum torque the very second you twist the

power on. You don't have to fish for the proper gear, it's just there.

These variable-sheave torque converters aren't new; you find them on snowmobiles right along with the Sachs engines. There's been lots written on the workings of this Salisbury torque converter; we need not go into it here, only to say that the automatic clutch engages at 2000 engine rpm on this model (it used to come in around 1800). There is a speed reduction box between torque converter output and countershaft sprocket; without it the large rear sprocket would be even larger. Power from engine to speed reduction box is by notched V-belt. A V-belt has to be employed to allow this type converter to work. It has only one problem for woods riders. If you get into a deep enough stream, you can

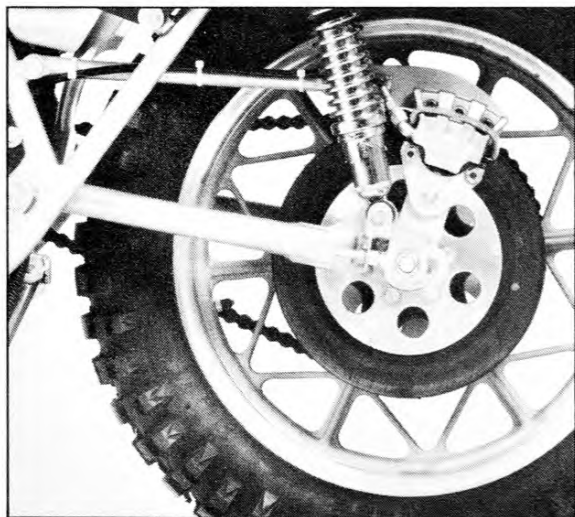
loose up to 70 percent power. What this really means is when the belt gets wet it slips.

But that isn't all that's "Keene" about this bike. It has disc brakes front and rear, and cast aluminum wheels. Disc brakes are not the accepted practice for off-road bikes but they are very necessary for Rokon because, unlike other bikes, you can't stop it with the engine. Shut the throttle off and the engine goes back to idle as the clutch disengages and the Rokon merrily coasts along. Squeeze the discs and the bike stops.

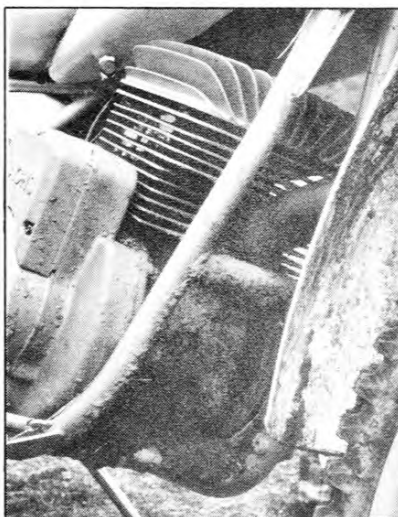
Conventional drum brakes do, on occasion, get soggy and refuse to obey. It usually takes a few hundred feet of going with the brakes on before the gook gets forced out and they come back to life. Meanwhile, you have only



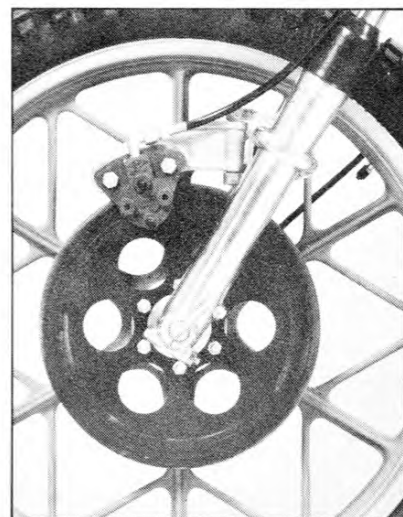
Couldn't miss a shift drag racing the automatic, times were consistent.



Disc brake is mounted high for woods-riding clearance, full-floating linkage works under compression when brake is applied.



Preston Petty fender kept important parts of Rokon's engine mudfree.



Mag wheel and disc brake are troublefree, but not light in weight.

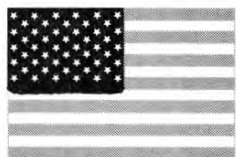


Automatic off-roader is truly an innovative piece of equipment; there are no others like it. Think you can find a way to trim another 30 pounds? Would certainly make it nice.

the engine to get you slowed down in a panic situation. Discs are immune to water and mud, so, in addition to being more reliable, they are ideally suited to the Rokon.

These "mag" wheels are also pretty trick; the spokes will never get loose. They are much stronger than conventional wheels and, being cast, are totally rigid. This model, the '75 Enduro, has the new 21-inch-diameter front rim which noticeably improves handling. A little more trail on the latest model permits it to track a lot better, even in sand.

Wheels, tires, brakes and even Preston Petty fenders all find their way to the Keene assembly plant. Frames are made right there, and each reduction box and engine is individually hand-checked. All bikes are dyno-run, and if



ROKON 340RT

not up to specs, they are turned back to a troubleshooting department. Nary a bad one is shipped out.

Our test bike had a single fuel shut-off valve that pulled on. The Mikuni carb is fitted with a starting valve, the problem being that it is under the exhaust pipe. But you don't use it unless the bike's cold, so is the pipe.

An important part of the starting drill is to hold the front brake lever on while pulling the recoil starter. Not that the bike is gonna fire up and run away; the brake keeps the bike from moving as you pull the handle. The RT340 has a throttle-off starting procedure like all Mikuni-carburetted bikes. Once running, blip the throttle a few times, shut off the bypass starting valve, and ride.

The engine produces a steady drone between 6000 and 6800 rpm. With higher turns, it's accelerating, and holds its own at 6000. The steady exhaust tone gives no indication of how fast the thing is going. Giant clods cannonade from the rear tire and the big 340 goes almost anywhere.

During the acceleration test nobody ever missed a shift on the Rokon. Nor did anyone throw it away. It produced the most consistent times simply because there were no human errors attributed to changing gears. There's a minus side here too. If you come across a fallen tree, where the normal drill would be to use the clutch to pop the front wheel over, the Rokon hasn't this capability. It will lift the wheel from a dead top, but pop a rolling wheelie? Never.

These bars are one of the reasons the bike feels to be longer than it really is. You sit back farther. If the Rokon has one drawback, it has to be weight, both sprung and unsprung. We ran it right to its suspension limits over rough ground which wasn't too terribly difficult. The back end bottomed a lot, the front occasionally. The thing is cast iron strong, so you can't hurt it. It just takes a lot of effort to hang on.

Rokon, with its torque converter, is heralded as the greatest hillclimber ever. In theory the torque converter and muscular Sachs engine should do the job. Problem found in running with this bunch of open class racers is about 20 pounds too much weight and 60cc too little engine. But the machine from Keene is still a very worthwhile effort. David Munganast, many-time ISDT medalist of the motorcycle Olympics on Pentons and Huskys, provided us with a very timely observation: "The Rokon required less maintenance during the qualifiers and Six Days than any other bike I've ridden."



ROKON 340RT

TEST BIKE

Engine serial.....3401560
Base price as tested.....\$1645 F.O.B. N.H.

ENGINE

Type.....Two-stroke, single-cylinder, piston-port inlet
Displacement.....335cc
Bore x stroke.....78mmx70mm
Claimed hp @ rpm.....37 @ 6500
Compression ratio.....13:1
Lubrication system.....Oil mist
Carburetion.....36mm Mikuni
Air filter.....Oil-wetted foam
Ignition system.....Bosch pointed magneto
Electrical system.....Flywheel generator
Starting.....Recoil, pull-type
Exhaust.....Upswept chamber/muffler

DRIVETRAIN

Primary/ratio.....Speed reducer (1:1.73)
Clutch.....Automatic
Transmission/shift.....None
Gear ratios.....(Infinitely variable) 3.76:1 to .87:1

Final drive/ratio (sprocket teeth).....4.15 (13/54)

CHASSIS AND SUSPENSION

Frame.....Mig-welded steel double-loop
Suspension front.....Betor telescopic 7" travel
rear.....Swing arm, Marubeni shocks, normal placement
Brakes front.....11-inch-dia. hydraulic disc
rear.....11-inch-dia. hydraulic disc
Tires front.....3.00x21 Carlisle
rear.....4.00x18 Carlisle
Rimlocks, front/rear.....No

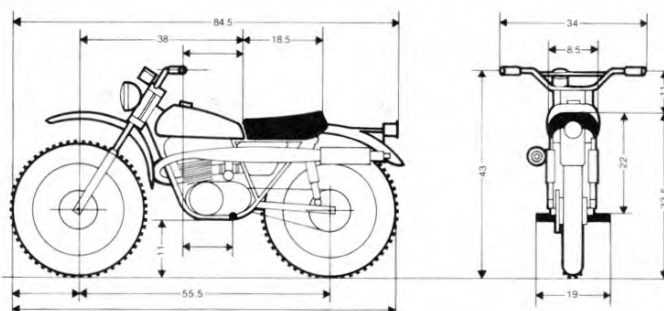
WEIGHTS AND CAPACITIES

Weight, wet, unladen.....279
Fuel capacity.....3.25
Engine oil.....In fuel

STANDARD EQUIPMENT

Speedometer.....VDO 10th resettable
Tools.....N.A.
Stands.....Side

ALL DIMENSIONS IN INCHES





1/8-MILE ACCELERATION (Secs.)

9.8 10.0 10.2 10.5

BULTACO	10.5	<div></div>
HUSQVARNA	10.0	<div></div>
MAICO	9.8	<div></div>
PENTON	9.8	<div></div>
ROKON	10.2	<div></div>

HILLCLIMB (Secs.)

10.5 11.3 12.6 13.0

BULTACO	10.5	<div></div>
HUSQVARNA	12.6	<div></div>
MAICO	11.3	<div></div>
PENTON	11.3	<div></div>
ROKON	13.0	<div></div>

MOTO-CROSS COURSE (Min.)

3:00 3:02 3:05 3:08 3:18

BULTACO	3:05	<div></div>
HUSQVARNA	3:08	<div></div>
MAICO	3:00	<div></div>
PENTON	3:02	<div></div>
ROKON	3:18	<div></div>

SPECIAL TEST COURSE (Min.)

3:20 3:24 3:26 3:30

BULTACO	3:26	<div></div>
HUSQVARNA	3:24	<div></div>
MAICO	3:20	<div></div>
PENTON	3:26	<div></div>
ROKON	3:30	<div></div>

WEIGHT

256 257 259 260 279

BULTACO	256	<div></div>
HUSQVARNA	260	<div></div>
MAICO	257	<div></div>
PENTON	259	<div></div>
ROKON	279	<div></div>

PRICE

1625 1645 1750 1828 1895

BULTACO	1625	<div></div>
HUSQVARNA	1750	<div></div>
MAICO	1828	<div></div>
PENTON	1895	<div></div>
ROKON	1645	<div></div>