PHOTOGRAPHY: ART FRIEDMAN

OSSA 250 SUPER PIONEER

Ride this bike in an enduro and you'll feel like you're cheating. It's that good.

It was a strike, a vein of pure gold, a treasure chest overflowing with pieces o' eight. It was the deliverance of everything promised, a rare example of getting something better than hoped for. It was the Phantom, a momentous jewel discovered just over two years ago.

That "find" was no accident, however. The 250 Phantom motocross chassis unleashed on the public in 1974 was the end result of years of planning, experimentation and development by the tiny Spanish OSSA factory. It was somewhat unfortunate, though, that it was a short-suspension-travel motorcycle that appeared at the very beginning of the long-travel motocross era. It was nonetheless an incredibly adept motorcycle, gifted with clairvoyant steering, silken power and a feathery 197-pound weight. The Phantom was a sheer delight in the way it made average riders seem exceptional and exceptional riders seem fantastic.

The Phantom quickly sired other models—enduro bikes, desert racers, long-travel Grand Prix motocrossers and the like—which became handling and lightness champions of their time.

One of those offspring was the Super Pioneer, a lightweight, serious enduro/off-road 250 that was first introduced as a short-suspension-travel machine about a year ago. The motocross-like rigors of some competitive enduros and Two Day Qualifier events have led to long-travel suspension becoming a necessity, so the 1977 Super Pioneer was mildly changed to provide more wheel up-and-down at both ends, along with numerous other improvements.

Light weight and nimbleness aside, the Super Pioneer has its work cut out if it hopes to fill the very large shoes left by its predecessors, the Pioneer and SDR (Six Days Replica) enduros. Those motorcycles were beloved by many off-roaders because of their uncanny engine torque and superb tractability. Once state-of-the-art enduro bikes themselves, the Pioneer and SDR remained the favorites of many tight-woods riders after their chassis became outmoded solely on the merits of their remarkable engines. They were quite an act, and one that the Super Pioneer will be hard-pressed to follow.

THE BIKE: The 1977 Super Pioneer consists of an engine that is essentially the same as all OSSA engines for the past ten years and a frame much like that of the Phantom motocross models. The bike's specific purpose and state of tune are aimed directly at competitive enduro-type riding and general off-road playbiking.

The engine has the usual 250 OSSA bore and stroke figures—72mm by 60mm—which produce a displacement of 244.3cc. The two-stroke single has an uncorrected compression ratio of 10.75:1 and is fed by a rubber-mounted 32mm Bing centerfloat carburetor.

Simplicity has always been the rule with OSSA porting, and experts have marveled at the outstanding power characteristics this Spanish firm has been able to obtain with only one unbridged intake port, two transfers and one unbridged exhaust port. A heavy-but-bulletproof Tarabusi two-ring piston times the operation of the ports without the aid of reed valves or rotary discs.

The Super Pioneer uses the larger, stronger Phantom-style crankshaft and steel-reinforced main-bearing mounts in the crankcase. Because the crank itself is heavier, the external flywheel for the Motoplat magneto CDI is now aluminum instead of the brass unit used on earlier Pioneers. Overall, the total amount of crankshaft flywheel weight is about the same but the total inertia is slightly less than with the older OSSA enduro models.

The left end of the crank drives the dual-row chained primary and a compact wet clutch through a spring-loaded cush drive. The clutch plates are now aluminum instead of steel, which in some small way also reduces the flywheel inertia of the engine.

The five-speed wide-ratio gearbox carries the same internal ratios as the Pioneer and SDR models, but numerous modifications were made to the shifting and selector mechanisms to improve the operation of the gearbox. The shift drum itself was made considerably lighter, and a positive stop device was built into the selector to eliminate any possibility of overshifting. This allowed the use of a lighter shift lever return spring for easier lever operation. The number of engaging dogs on third gear was also reduced to obtain easier second-to-third shifting.

The final drive sprockets for the No. 520 chain were changed from 12/40 (3.33:1) as used on previous models to 13/43 (3.30:1). The apparent reasoning was to extend chain life, since a 13-tooth sprocket doesn't force the chain to make as sharp a turn as a 12-toother.

The engine rests in a double-downtube frame constructed of tubular thinwall high-carbon steel that is the Spanish equivalent of chromoly. After automatic machine welding the frame is coated with a black epoxy powder paint that is first applied in dry form by using static electricity, then oven-baked until it melts and affixes itself to the surface much more efficiently than normal wet-spray paints.

The front fork is the latest-style ribbed-slider Betor unit held in place by the newest flat-black triple clamps, also Betor products. The travel is just under seven inches.

In the rear, Betor gas shocks in a very mild cantilever position allow four spring preload settings and 4.75 inches of wheel travel. This shock mounting arrangement uses the same basic rear frame section as last year's Super Pioneer, but with the top shock mounts moved several inches down the rear frame downtubes.

The conical rear wheel hub is the same as on the recent OSSA motocross and enduro bikes, lacing to an Akront shoulderless alloy rim sporting a 4.00 x 18 Pirelli knobby. The conical front hub is new, however, and now utilizes the same brake shoes as the rear. A 3.00 x 21 Pirelli knob surrounds the Akront alloy front rim.

The Super Pioneer has a number of built-on features which reflect OSSA's long-standing participation in ISDT events and enduro competition: Engine case protection loops welded on the front downtubes, brush cables that prevent weeds, branches, roots or other trail brush from getting wedged between the foot controls and engine cases, and a rear fender loop designed to also serve as a lift handle.

There are other notable features, like the middle right-hand frame downtube, which is bowed inward so the high-mounted exhaust system can be tucked in out of the rider's way; a strong, lightweight perforated aluminum skidplate; a small, but useful, tool compartment built into the seat base; and an unusual airbox inlet system designed to cut down intake roar as well as prevent mud and water from getting near the foam element.

The Super Pioneer's front fender is an unbreakable plastic unit whose color does not quite match the greenish-yellow of the rear fender, side panels or 3.3-gallon fuel tank, all of which are fiberglass. The seat is high and thickly-padded, with a grab strap encircling its midsection. Since the swingarm has provisions for passenger pegs, we assume that the strap is there for the benefit of the European market, where this bike could be ridden legally on the street.

Our test bike was very attractive, and beautifully finished and detailed, even down to the chrome-plated shock bolts and handlebar clamp bolts. However, this particular motorcycle was a pre-production unit that had been carefully assembled by the factory on a one-off basis. How well the production-line bikes are finished remains to be seen, although the U.S. distributor assured us they will be just as nice as our test bike.

Because of its pre-production status, our bike did not have some other improvements that will be incorporated into the production machines. The most important of these features are those also built into the new G.P. II motocrossers, like needle bearings instead of bronze bushings on the gearbox layshaft.

ENGINE AND GEARBOX: OSSA motorcycles became famous for their tremendous low-end torque, and the Super Pioneer upholds that tradition well enough, although it doesn't have *all* the grunt put forth by the Pioneers of several years ago. Still, the SP has as much lugging power as almost any other 250 enduro you can buy, and more than most.

The Super Pioneer is fairly fast for an enduro machine—not quite as quick as a few of the motocrosser-cum-enduro bikes available at present, but capable of generating a more-controllable brand of power than offered by those highly-tuned machines. And it is definitely fast enough to win virtually any enduro held in this country at the present time.

Like a war, an enduro is won or lost in the trenches, as the saying goes, and in this case the "trenches" are the tight, tough sections that wear out a rider and slow down his average speed. It is here that the SP engine does its best thing. With the OSSA's type of low end and quick, predictable response, a rider can pick his way through rocks quickly and confidently; he can crawl up a steep, slick, winding hill without a-slippin' and a-slidin'; with a burst of torque he can scale long, steep hills that crop up without warning even though there is no chance to get a run at them. The SP's power makes difficult riding easier, even though the bike won't necessarily accelerate faster than some other bikes will.

The Super Pioneer's good low-end power also means tractability, which is another blessing on an enduro bike. The crankshaft inertia is sufficient to keep the engine from revving too quickly, which, in turn, allows the rear wheel to grab the soil more effectively. Ideally, we felt the SP could have used even a bit *more* flywheel for muddy or slick going, since wheelspin was sometimes a small problem on that kind of terrain.

The nice thing about a torquey engine like the OSSA's is that you don't have to be in precisely the right gear at the right time to make the bike accelerate. The SP speeds up almost any time you open the throttle and in just about any gear. How *fast* you

accelerate only depends upon the rpm and gear you're in at the time. You can inch along at a walking pace in first, but with enough power on hand to loft the front wheel over a fat log in the trail. Yet the power in the middle rpm ranges and in the higher gears is enough to provide acceleration only slightly less than that of the MX/enduro machines. It's a nearly-ideal power output for the majority of enduros and enduro riders in this country.

The SP's gear ratios are widely-spaced to give a large variation of available trail speeds and to make best use of the wide engine powerband. The gap between fourth and fifth is the only jump that seems perhaps too wide for the engine to make comfortably, but fifth is intended for fast riding on roads and as long as the roads are fairly level there's no problem.

The new gearbox shifts very easily and quite precisely with one stipulation: You *must* move the shift lever the full extent of its rather long throw or the gearbox will sometimes fail to engage the next speed. The lever isn't in a bad place nor is it hard to move, and shifting normally isn't a problem; but everyone occasionally gets lazy or tired and therefore doesn't execute shifts so crisply. Some bikes let you get away with shifting sloppiness but the Super Pioneer isn't one of them.

We purposely abused the clutch on our test bike to test its mettle, and we came away adequately pleased with the results. We did succeed in getting the small-diameter clutch to heat up enough to lose about half its free play, but after a brief cooling period it would return to its previous normal state. Only after about half a dozen of these brutal attacks did the clutch cable slack need to be taken up permanently,

and we never got the clutch to slip in the least.

HANDLING: By far and without question, the Super Pioneer is the most controllable, predictable, steerable enduro motorcycle we've ever tested or ridden under *any* circumstances.

First of all, the SP is light for an enduro machine—220 pounds dry—and its weight is distributed for proper load transfer and a lowish center of gravity.

Second, the suspension travels are realistic, in that they provide what the enduro rider really needs, not what he *thinks* he should have in his Walter Mitty (or Roger DeCoster) daydreams. For everyone but the Malcolm Smiths of the world, the OSSA's seven inches in the front and 4.75 in the rear are sufficient for enduros if properly sprung and dampened—and on this bike they are.

Third, the SP's steering geometry is, as far as we can determine, nearly perfect for today's state of the art. The high-speed stability is there, but so is the low-speed maneuverability and correct steering feel.

Put it all together and it spells one absolutely fantastic handler—the Super Pioneer.

The most remarkable aspect of the bike's handling is the way it will change direction almost instinctively if you want it to do so. But it's not so fickle as to veer off course the minute you stop thinking about what you're doing. As soon as you give the slightest indication you are going to turn, the OSSA almost seems to know and starts heading in that direction.

Consequently, the bike can zig-zag along a twisty trail so fast that your mind often struggles to keep up. You can toss it around bends in the trail so easily that at first, you may think you've entered the corner too fast. But then you'll find yourself turning the throttle back open before you get halfway through the turn.

The *preciseness* of the steering is also exceptional. You can pick your lines on a cobby trail and hit them almost every time without getting into arguments with the handlebars.

The Super Pioneer reacts to "body English"—small corrective movements of the rider's body—better than any other bike of its type we've ridden. Those intuitive little torso gyrations really help aim the OSSA where the rider wishes to go, be they enacted while standing on the pegs and grinding up a gnarly hill or while sitting down and flying low on a fast fireroad.

While the suspension would be no special treat on a real motocross course, it wouldn't be all that bad, either. And it proves to be excellent for enduro riding. The fork soaks up the small, rapid-fire shudders caused by ripples and little bumps as well as the biggies—the potholes, ruts, boulders and all the other large, traversable trail hazards. Big objects or riders over 170 pounds will sometimes bottom the fork, especially going fast downhill, but not badly enough or with great enough frequency to be bothersome. Ideally, though, big and/or fast dudes could use slightly stiffer fork springs.

The rear shocks hold up their end quite well, as it were. They let the back of the motorcycle do its job efficiently by keeping the tire on the ground whenever practical and by absorbing much of the abuse that would otherwise reach the rider. And no-throttle, sharp-lipped downhill jumps generally produce very little rear-end kickup.

The shocks have a spring rate and preload adjustment range that will benefit most riders other than the very large or very small. The damping of the gas Betors also seems well-matched to the single-rate springs.

In time, the two most revered traits of the Super Pioneer will undoubtedly be its predictability and ability to forgive. It always seems to let you know what it's going to do, and then does just that. And even if you screw up badly and get unexpectedly sideways on a fast, cobby surface or overcook into a blind corner, you can usually bail yourself out of trouble if you stay cool and don't do anything foolish. On numerous occasions our testers got so out of shape that they should have fallen down, but didn't. In each case they credited the forgiving character of the bike for saving their skins.

The only time the Super Pioneer doesn't handle quite so superbly is in some very, very tight situations—like when sawing around and between closely-spaced trees, or climbing a narrow trail that has a lot of tight, 180-degree switchbacks along the way. There isn't enough steering lock to make such things pleasant and the front wheel will begin to plow slightly, too. At least the lightness of the bike and its low center of gravity make these close-quarter situations more bearable.

COMFORT AND RIDE: For a number of reasons, the 250 Super Pioneer is a delightfully comfortable enduro machine with only a few niggling annoyances to contend with.

The stand-up and sit-down riding positions have both been well thought out and should suit anyone who isn't unusually big or small, or anyone who doesn't own an odd riding style. The handlebars have a pleasing bend—even if the grips are rather hard and have some sharp edges—and all the controls are easy to reach and operate. The gearshift lever requires a rather lengthy stroke, although its arc is not long enough to cause any permanent inconvenience.

The level of vibration is, at its worst, no greater than average for a two-stroke single-cylinder dirt bike. The most annoying vibrations occur in the upper rpm ranges. If you ride for sustained periods at those engine speeds, your hands will start to go numb. Usually, though, the engine rpm is continually varying up and down, in which case the vibes will go mostly unnoticed.

The Super Pioneer is very quiet for a bike of its type, bouncing the needle on our General Radio sound level meter to 85.7 decibels. OSSAs have never exuded much piston rattle under normal conditions and rubber sound deadeners in the cylinder and head fins keep the mechanical clatter down even further. Most of the noise originates either in the exhaust system or intake tract.

The long, internally-baffled muffler is efficient from a noise standpoint, but our 6-foot-2 tester complained of a frequently toasted right calf when the front part of the pipe got the top of his boot extremely hot. Shorter riders reported that such problems were an infrequent occurrence, however.

The seat is rather high (35 inches), firmly padded and very comfortable. The thick padding is capable of absorbing a lot of the pounding, so the rider doesn't get his spinal cord bashed into submission. And it's long enough to allow the rider to move around in search of better traction or a more comfortable seating position on long stints in the saddle.

The seat strap is literally a pain in the rear end, though, since it's unnecessary and always in the way. The strap rolls and twists itself up as you slide back and forth over it, making it feel even thicker than it really is. Take it off and chuck it.

We also don't care for the lack of a kill button or shut-off device on the Super Pioneer. The only way to make the engine stop running is to put it in gear and let the clutch out while holding the brakes on—which is a fairly impossible maneuver when the bike is lying on its side with the engine running wild. Our test unit came with a compression release but the production bikes won't have them. Any motorcycle built in this day and age should most certainly have a shut-off device—and a damned good one at that.

BRAKING: The front brake is adequate but rather mushy; the rear brake is very powerful but a little too sensitive when the bike is new.

The front brake will lock the front wheel, but not easily. It did get better as the shoes seated but always required a lot of pressure to really slow you down. Basically, this is very good, but something between the lever and the shoes is too flexible, giving the lever a very spongy feel.

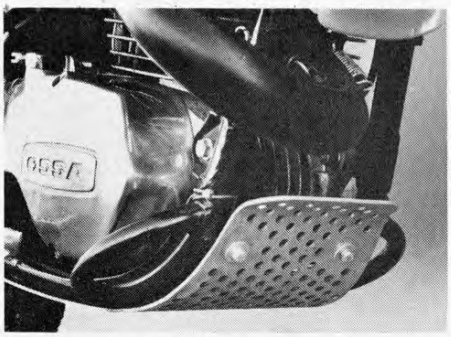
The rear brake is quite the opposite. At first it is easily capable of locking the rear wheel, often to the point of doing so *too* readily. This usually doesn't turn into an unworkable situation and almost ceases to be a problem at all once you get a couple hundred miles on the motorcycle. The only worthwhile exception occurs when you're trying to slowly descend a steep, slick hill. The brake will not cooperate as well as it could, which sometimes causes the wheel to hop or lock and kill the engine.

The front brake cable on our test bike developed a problem during the first day of riding. The lower cable free play adjuster on the backing plate has no method of locking its adjuster nut, so the bouncing and jiggling caused the adjuster to back off while we were riding. We had to duct tape the nut in place to keep from losing all the brake adjustment while we were riding.

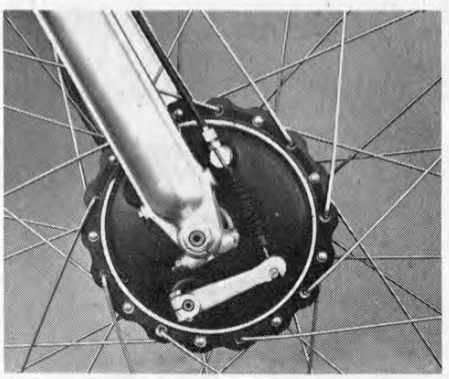
RELIABILITY DURING TEST: Our OSSA was very reliable during our test. The only maintenance required was regular things like chain and cable adjustments and air cleaner servicing. Otherwise, nothing broke, quit or fell off our test bike, and we were never even forced to change a spark plug.

The Joresa rear drive chain, though, leaves much to be desired. Despite reasonably frequent lubrication, the chain on our bike stretched quite quickly and always seemed to have about half a dozen kinks in it. A good accessory chain would be a solid, worthwhile investment.

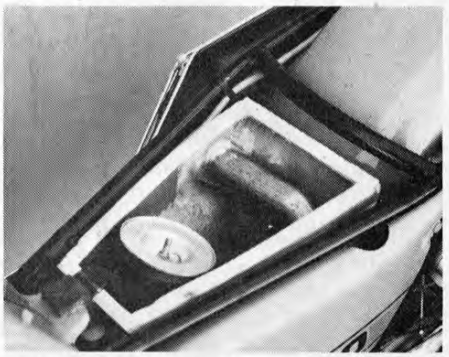
One other thing which didn't give us trouble but potentially could is the airbox. It has no drain, so if water gets in it will stay in. A drain would be easy to add and is certainly recommended if you plan to ride near water.



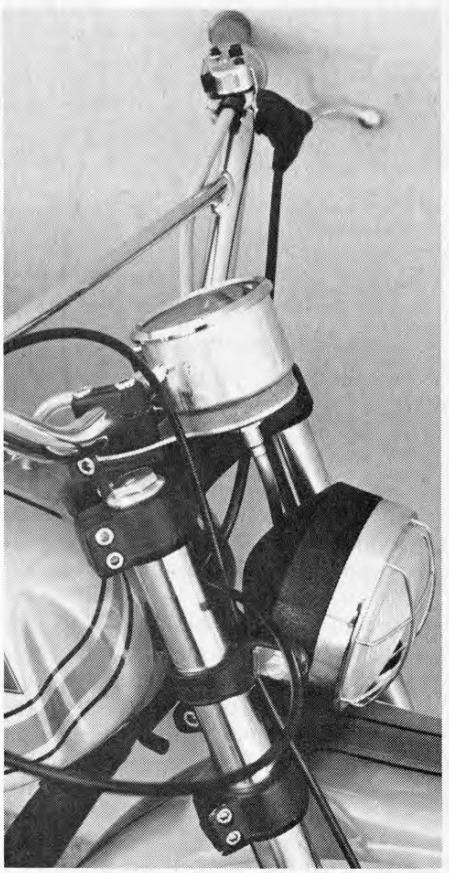
The perforated aluminum skidplate, engine-case guard loops and foot pedal brush cables are all indications of OSSA's heavy involvement in enduro and ISDT competition.



The conical front hub is new for OSSA and now uses the same brake shoes as the rear.

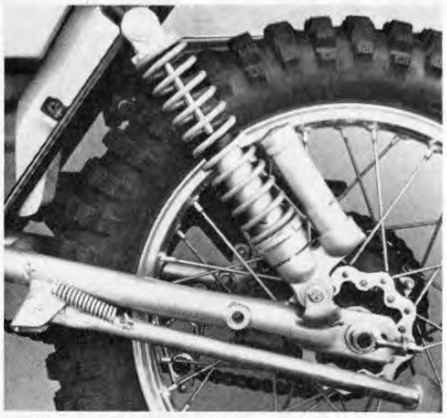


The ingenious under-seat airbox makes it extremely difficult for water to get in; but has no drain to let water out in case some does find its way in.



A resettable-by-tenths enduro speedometer/odometer sits atop the Betor-built fork and triple clamps.

The long exhaust system sometimes gets in the rider's way, but it keeps the noise down to 85.7 decibels.



The mildly laid-down Betor gas shocks give 4.75 inches of wheel travel, which is a nice amount for this type of bike. The rear end behaves impeccably on enduro terrain.

CONCLUSION: The OSSA people know a lot about building enduro motorcycles, a fact that is clearly evident the first time you throw a leg over the Super Pioneer. It was built *for* people who enjoy off-road riding *by* people who enjoy off-road riding. The superb engine, remarkable handling and thoughtful detailing are all by-products of their enthusiasm for the sport.

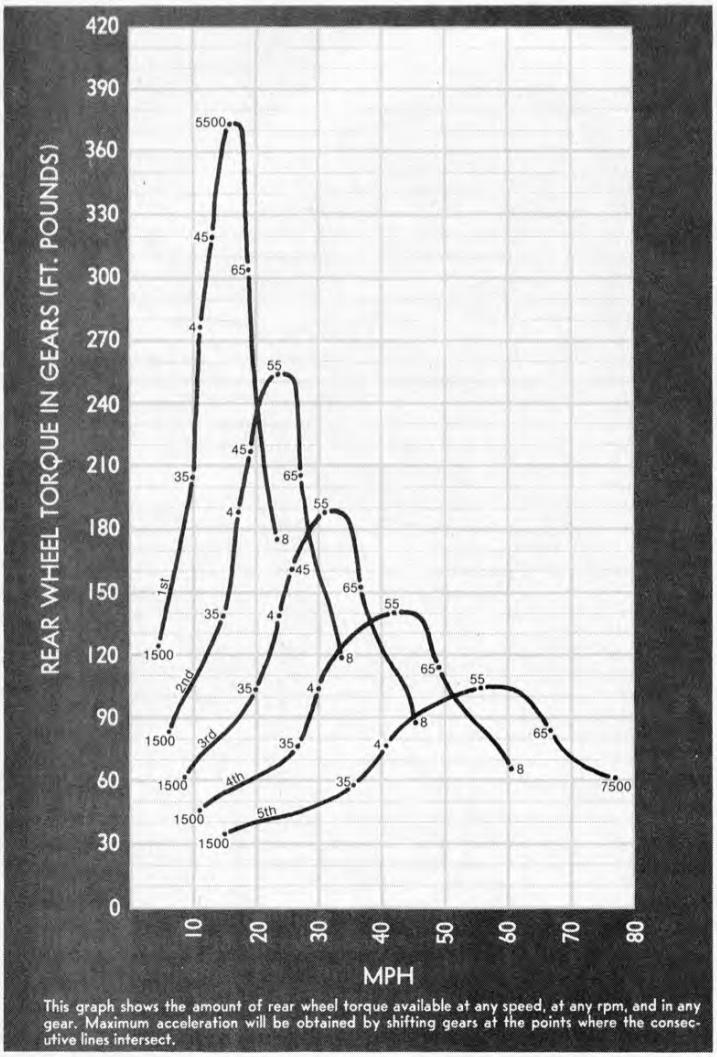
The SP is easily the best bike of its type we've ever tested. It has its flaws and could be improved; but those shortcomings are so minute and so overshadowed by the splendid competence of the critically-important pieces they seem insignificant by comparison.

When you examine the things an enduro bike is supposed to do and compare them to what the Super Pioneer *does*, it's easy to see why the bike is that good. How good? Well, like we said, riding one in an enduro is just like cheating.

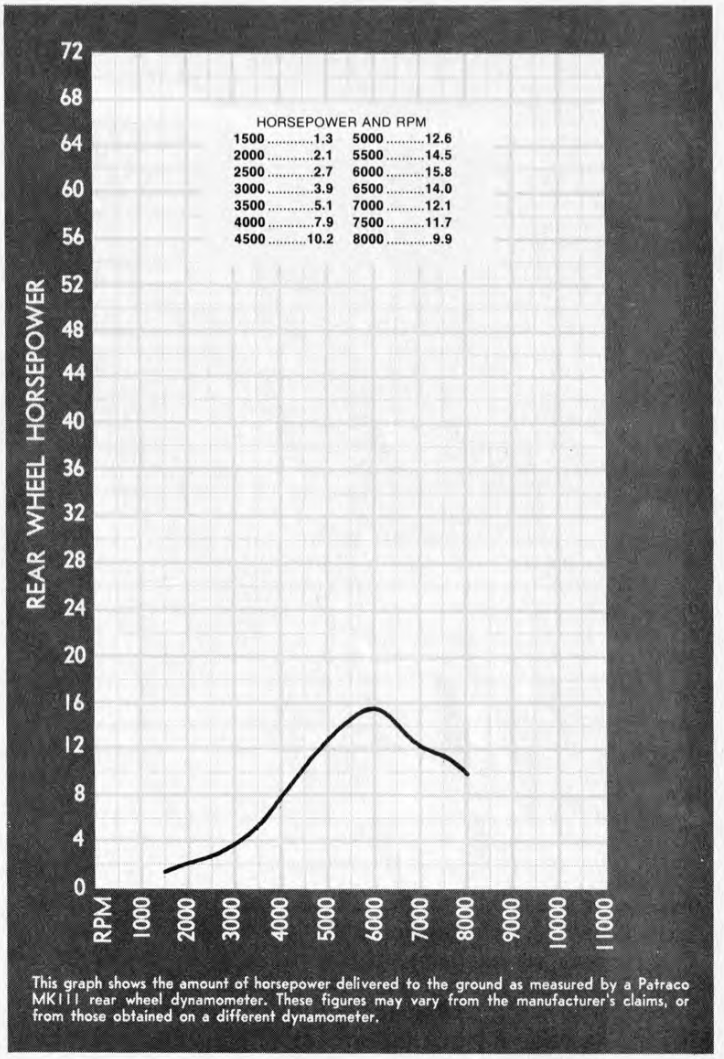
SPECIFICATIONS

Engine type	two-stroke
Cylinder arrangement	vertical single
Port arrangement	one piston-controlled intake, two transfers, one exhaust
Bore and stroke	72mm x 60mm
Displacement	244.3cc
Compression ratio (uncorrected)	10.75:1
Ignition	Motoplat magneto CDI with aluminum flywheel
Charging system	none, direct AC lighting
Carburetion	one 32mm Bing slide/needle
Air filter	washable oiled foam element
Lubrication	pre-mixed fuel and oil
Primary drive	double-row chain, 2.26:1 ratio
Clutch	wet, 6 drive plates, 6 driven plates
Starting system	kick, in neutral only
Transmission	5-speed, left-foot shift
Overall drive ratios	(1) 26.91; (2) 18.23; (3) 13.45; (4) 10.09; (5) 7.47
Transmission sprocket	13-tooth
Rear wheel sprocket	43-tooth
Drive chain	⅝-in. pitch, ¼-in. width (#520)
Front fork	Betor, 6.9 in. (175mm) travel
Rear shocks	Betor, 4-way adjustable, gas-charged, 4.8 in. (122mm) rear wheel travel
Front brake	drum, single-leading shoe
Rear brake	drum, single-leading shoe, rod-operated
Front tire	3.00 x 21 Pirelli knobby
Rear tire	4.00 x 18 Pirelli knobby
Frame	tubular chromoly steel, double front downtubes
Steering head angle	29.5 degrees from vertical
Front wheel trail	4.6 in. (117mm)
Wheelbase	54.8 to 55.8 in. (139.2 to 141.7cm)
Length	82 in. (208.3cm)
Weight	220 lbs. (99.8kg)
Weight distribution	44.1% front, 55.9% rear
Ground clearance	11.2 in. (284mm), at skid plate
Seat height	35 in. (889mm), unladen
Handlebar width	34 in. (864mm)
Handlebar grip height	44 in. (111.8cm)
Footpeg height	13.8 in. (351mm)
Instrumentation	speedometer, odometer resettable in tenths
Gas tank	fiberglass, 3.3 gal. (12.5L)
Sound level per SAE XJ 331a	85.7 db(A)
Suggested retail price	$1545, East and West Coasts

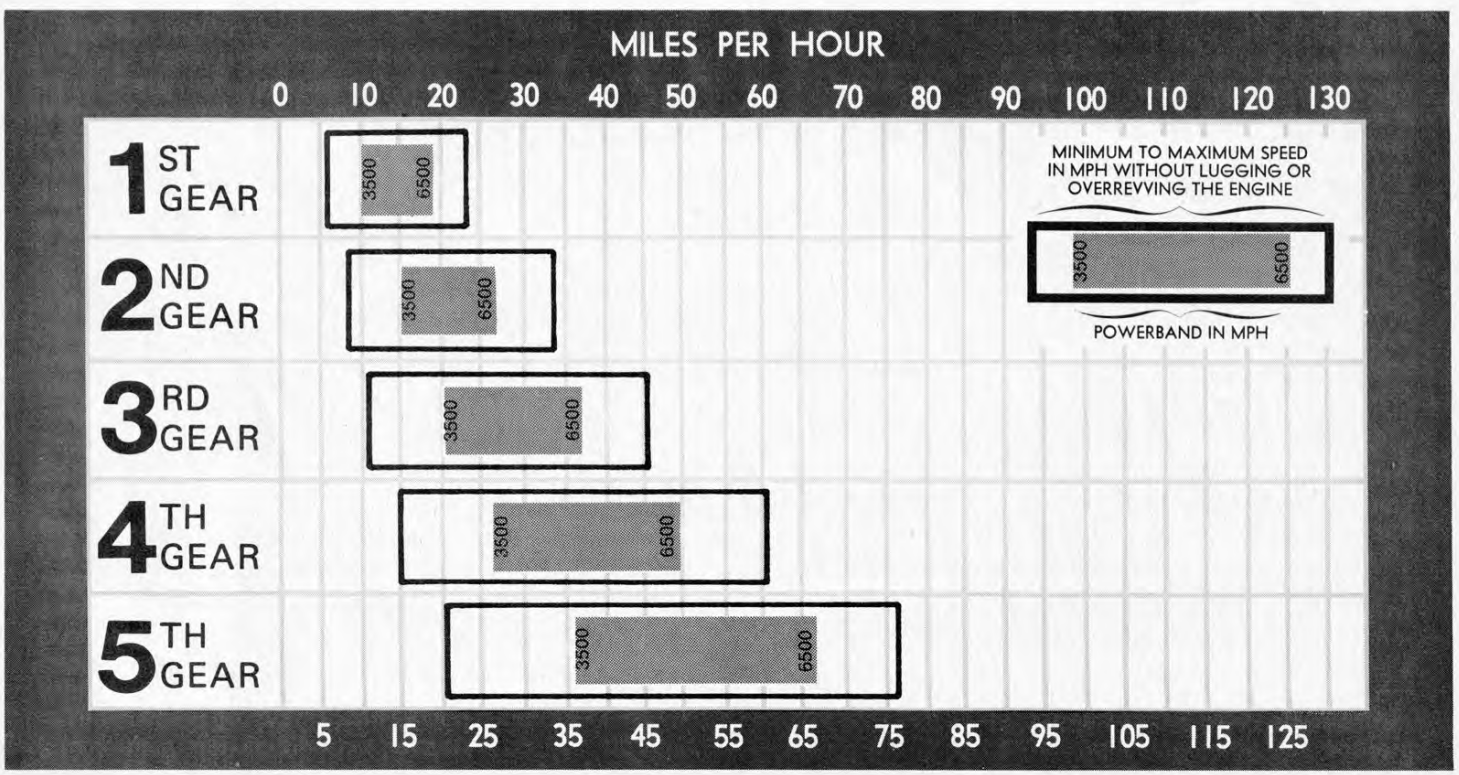
OSSA 250 SUPER PIONEER



This graph shows the amount of rear wheel torque available at any speed, at any rpm, and in any gear. Maximum acceleration will be obtained by shifting gears at the points where the consecutive lines intersect.



This graph shows the amount of horsepower delivered to the ground as measured by a Patraco MK111 rear wheel dynamometer. These figures may vary from the manufacturer's claims, or from those obtained on a different dynamometer.



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