

ACE RIDE: BY TRAIL TO THE TOP!

two wheels

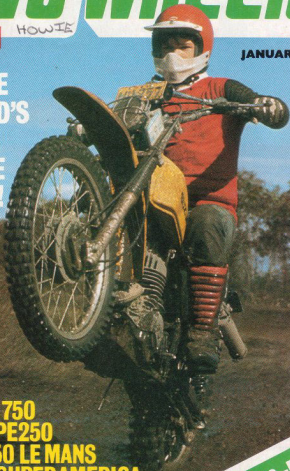
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HOWIE

EXCLUSIVE!

JANUARY, 1977

**WE RIDE
HANSFORD'S
GREEN
MEANIE
RAGER!**



PLUS

- * **YAMAHA 750**
- * **SUZUKI PE250**
- * **GUZZI 850 LE MANS**
- * **AGUSTA SUPERAMERICA**

DIRT RIDING TIPS—Part 2
MORE SET-UP TRICKS

From a feted racing
heritage comes the PE250...

SUZUKI'S ENDURO WINNER!



Not quite everything to every rider — but a new and competent off-road blast for most of the triers!

ENDURO events on the local calendar have become almost a weekly occurrence, from the desert-type Victorian competition to the more mountainous mini-ISDT competitions staged in New South Wales.

And into this rough-and-tumble hard-on-the-machinery sport comes the Suzuki PE250 — not really a new machine, but an Enduro and vaguely street-legal version of the highly successful Mr Motocross series winner. It looks every inch a winner, and stands a better than average chance of proving to be one, both on the showroom floor and in open competition.

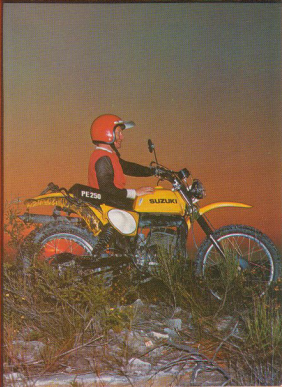
There are arguments for and against cosmetic and minor engine changes which make machines viable for several types of pursuit, but a bike which has won its spurs the hard way in the heat of battle ought to stand a good chance of holding itself together in a closely related and equally tough form of competition.

The PE250 has had a set of tiny lights and a longer muffler fitted, but is still pretty much the motocross mixture as before although this is an over-simplification. For a start, the motocrosser version has no need of lights and therefore has no lighting coils. Fitting these extra electrical components required an almost complete redesign of the crankshaft on the timing side and a detail modification to the outer crankcase cover as well.

The crank web is thicker and the shaft is longer with a different taper to accept the external flywheel. A bigger main bearing is also used. The large external flywheel offers more oomph down low in the rev range (essential for climbing those never-ending muddy hills!) and greater momentum when the engine is on the boil.

The original flywheel rotor assembly measured 58 mm on the RM model, but is a whopping 107 mm (4.2 mm) on the PE. A large, thick crankcase bash-plate is fitted and the exhaust muffler lapping the through-the-frame expansion chamber has been designed with maximum silencing and minimal power loss very much in mind.

The induction system is controlled by both piston ports and reed valve assembly, and the six-port scavenging system has also become part of the Enduro engine's



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design. The exhaust port height has been lowered to allow for better bottom-end power, and it's immediately obvious when riding the machine. An incidental advantage of the "slower" exhaust port timing is the very brisk throttle response, even with the heavier flywheels and larger rotor.

Suzuki's much-vaunted pointless ignition system (PEI) has been retained, and it performed utterly reliably during a very wet testing program. In a welcome return to sanity, the exposed fork legs on the RM model are now clad with close-fitting rubber boots, the factory obviously realising the machine will probably be used for trail riding between events and ought to be allowed to enjoy reasonable fork-seal life.

The frame remains very similar to the RM. It's chrome-moly, and semi-cradle design with the long-travel rear suspension. The shocks are tilted forward at an extreme angle, and are the gas-oil type. The swing-arm pivots on needle roller bearings. Front fork movement is a very good 195 mm (7.7 in.) and the rear (measured at the wheel spindle) is a respectable 198 mm (7.8 in.).

A larger, re-designed alloy fuel tank is used and we're pleased to see it's also fitted with a large diameter filler neck. It is a very neat shape, in no way obstructive.

The seat is pure motocross, but comfortable in the extreme, and well contoured to allow maximum leverage to the wide, high handlebars — but oh so high off the deck! To a rider with anything other than stilt-like legs the saddle position makes feet-up slides a matter of necessity! Well, if it's good enough for Gaston...

Lightweight magnesium alloy is used in many of the castings and this helps to keep the weight down to a respectable 109 kg (240 lb). So too does the total lack of any of the odd creature comforts one is used to on the more prosaic trail models. The PE250 is a very functional machine, totally devoid of frills and pretences. There are no blinkers and no horn button, there is no ignition switch — shades of the old British war horses! — and you can forget all about batteries and starter motors.

There are, however, a couple of

Comparatively minor modifications to the original motocross powerplant have offered the enduro machine a wide torque range and very quick throttle response. Note dimensions of bash-plate.

Sure, it's bred for specialised enduro work — but we'd predict a heavy trail onslaught. Much to our surprise the bike is also quite roadable.

miniscule lamps — a tiny 15 Watt headlamp covered by a pretentious stoneguard and a tail-light pinched from the old parts bins from which the factory occasionally supply parts for older, defunct step throughs. Never throw anything out, that's the name of the game! The headlamp throws a pale amber glow on the road ahead which serves only to announce your presence to the deaf bystander, and the tail-light, mounted to the rear guard by a very flexible rubber bracket goes out the moment the headlight is switched on! Suzuki is saved by the strong school of thought which considers that getting such a machine to the peak of efficiency in these regards is part of the charm of owning a pukka Enduro iron like the PE250, anyway. We don't agree . . .

Long-travel rear suspension brings with it the bonus of much better handling and an acceptably comfortable off-road ride, along with (to our surprise) a remarkably comfortable ride on paved roads. But is attended by great variations in rear chain tension. This is fairly well controlled on the PE by a roller-type tensioner fitted just behind the gearbox sprocket, keeping the chain in place under the worst possible conditions.

To round off the package, Suzuki has fitted the PE250 with a new set of wide-ratio gears, with internal ratios varying from low gear at 2.666:1 (the RM250 was originally 2.076:1) to fifth at 0.692:1 compared to the RM250 ratio of 0.913:1. A primary transmission reduction of 2.727 is adopted, with the final drive reduction of 3.854:1.

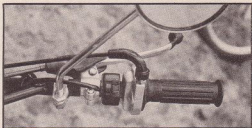
In effect there is a gear for every occasion whether dragging the bike out of a bottomless boghole, up a near-vertical rock-strewn cliff face or trying to launch it into orbit over a 10-storey jump. And if the gear ratios are well chosen, the engine power is more than enough to make the task of getting there and back in one hell of a breeze.

With no ignition key and a simple little pin on the carburetor's side to control the choke, starting procedure is pure basics. It required the old-fashioned "long-swinging kick" and some beef to spin the engine quickly, but the donk would spring into life with no more than two or three kicks and idle surprisingly smoothly.

The gearchange travel is very short and we couldn't beat the box, with or without the clutch, even though it's the instant "in-out — look out" variety and took some getting used to. The handlebar lever movement was about what you'd expect, but the throwout



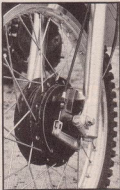
Feet-up controllability? Well, nearly!



In recognition of the true importance of the speedo to heavy enduro men, the instrument receives good protection, flexible mounting and commendable, easy-to-read positioning. It's matched by functional controls — nothing more than you need but nothing lacking either — with all cables well shielded.



Suzuki's long-travel rear end with the very forward mounted gas shocks has been labelled "Tru-Trac" by the factory — and true to name the machine both tracks well and offers a very well-sorted suspension all round. Pity about the rear brake though...



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mechanism is apparently race-bred!

The immediate impression is one of sitting on the top of a tall ladder with a motorcycle seat on it, a situation impossible to avoid with the LTR suspension, but there's the uncertainty that a long slide could get out of hand because a steady leg could hardly touch the ground. Forget it! The bike was so very manageable that the most lurid of slides could be corrected, or at least controlled, with both feet glued to the footrests!

And it was quite at home when well onto the sidewalls and pounding the suspension hard over deep ruts or coming back to earth after a long jump. The action of the well-sorted suspension at both ends was such that a lot of riding over softer surfaces was possible while remaining more or less normally seated. But the suspension was a little soft on some rocky sections of our off-road test area. So what else is new? You can't always go precisely where you would like while hustling through a fast, rocky section, anyway.

The most important consideration is a bike which is strong enough, at least reasonably

Real strength at both ends. Both frame and front suspension strength and performance is extremely impressive. Note slider is now gaitered. We had to rely heavily on the front brake of the test machine but it was utterly dependable in extremely demanding conditions.

SPECIFICATIONS

MAKE	SUZUKI
MODEL	PE250
PRICE	\$1299
ENGINE:	Air-cooled, single-cylinder, all-alloy two-stroke. Piston port and reed valve-controlled induction. Built-up crank with needle roller big end. Ball and roller main bearings.
Bore x stroke	67 x 70 mm
Capacity	247 cm ³
Compression ratio	7:1
Claimed power	21 kW (28 hp) at 8000 rpm
Claimed torque	27 Nm (20 lb/ft) at 6500 rpm
Lubrication	Fuel/oil premix (20:1)
Carburation	1 x VM20SS Mikuni
Air filter	Foam element
Ignition	Suzuki pointless electronic system
Starting system	Primary kick start
TRANSMISSION:	Gear-driven primary drive through wet, multi-plate clutch and five-speed constant-mesh gearbox. One down — four up shift pattern.
RATIOS (internal 1:1):	
1st	2.666
2nd	1.750
3rd	1.250
4th	.913
5th	.892
Primary reduction	2.727 (60/22)

Secondary reduction 3.846 (50/13)

FRAME: Chromemoly tube semi-double cradle type. Steel box section swing arm.

SUSPENSION: Front: Suzuki telescopic forks, double-damped, 195 mm (7.7 in.) of travel. Caster: 60 deg 25 min. Trail: 126 mm (5 in.).

Rear: Suzuki Tru-Trac LTR, needle bearing pivoted box section swing arm, forward-mounted shock/spring units, one-piece, double-damped.

WHEELS AND TYRES: Alloy rims, 3 x 21 front wheel with single rimlock, 4.50 x 18 rear wheel with two rimlocks.

ELECTRICS:

Source: Flywheel magneto with factory CDI ignition

Lighting: 6V 15W headlamp plus tail light (no battery)

Fuel tank 12 litres (2.8 gal)

Transmission 900 cc (1.6 pint)

DIMENSIONS:

Dry weight 169 kg (240 lb)

Wheelbase 1440 mm (56.7 in.)

Overall length 2140 mm (84.3 in.)

Overall width 855 mm (33.7 in.)

Overall height 1270 mm (50 in.)

Ground clearance 260 mm (10.2 in.)

TEST BIKE SUPPLIED BY: Suzuki-Cornell, Grand Ave, Camella, NSW.

comfortable, quick enough and which handles well enough.

The PE250 is all of these.

But it's more than just a very good tool for the job because it hauls itself well on paved surfaces too, although the very knobby tyres are hardly ideal for the job. It was ridden briskly for a day or two on streaming roads and handled these with ease, amazing many road machine punters and the PE's rider as well.

The engine runs petrol lubrication requiring a 20:1 ratio mix. And there is some oil smoke noticeable at low speeds.

We tried the PE250 with both lanky and short riders aboard. All of them reinforced our view that the machine can be ridden over most soft surfaces at speed without recourse to too much footing, regardless of the juxtaposition of both wheels. Whether crossed-up or mono-wheeling the bike was very stable and extremely responsive to throttle opening, but it was a disappointment to find that the rear brake leaked water and lost efficiency. In our photographic outing the course included several great berms, thick mud, and a small water crossing, and a couple of hours spent pounding the machine over this resulted in a rear brake which would not work at all!



This was even more noticeable on the road because the brakes — which are not really designed to do the job under high speed road conditions anyway — were quite good under most conditions, but the rear would not work when wet. In the Enduro scene that's a more than slightly serious failing.

It may well have been a little trick of the test machine — it's hard to imagine this to be a fault of a bike which has racked up such an impressive list of wins in motocross form. Overall, the PE has had a lot of care lavished on small and seemingly inconsequential things all too often overlooked. The speedo is mounted where it can be scanned in a moment and has the essential odometer included. And it's mounted very flexibly and lucked in.

The control cables have rubber

Probably the only quirks in the bike's whole off-road performance were with both ends wound right in. Overall it's an extremely impressive package, made more so by excellent damping.

protective caps on both ends and performed perfectly, along with other clean-running goodies like the huge foam air filter and bullet-proof ignition system. The bike's finish is listed as *Pholine Yellow* (whatever that is!) and the first small batch began its production run in September, 1976.

A reputation as an honest motocrosser preceded the new machine and should ensure a long production regardless of it being specialised. You can bet there are going to be some PE250s in your local Enduro before very long — and just watch 'em go!

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