Two years ago there wasn't a Japanese machine which in serious enduro work was really competitive with European models. The Japanese built bikes for 50-50 road trail riders, and if someone wanted to tackle something like a two day enduro then they had to do a lot of modifications or buy another bike. Consequently a good deal of Trail and Track's editorial was given over to modifications to Japanese bikes to make them competitive with the Europeans.

PE 250 THE START OF SOMETHING BIG

At the 1975 International Six Days Trials, two Japanese machines competed for the first time ever. A TT500 Yamaha and a Suzuki trail bike. Neither finished. Last year a host of IT400 Yamahas and PE250 Suzukis, among other Japanese models scored many medals at the ISDT. An indication of the improvements which have been made in 12 months.

Less than two years ago we were fond of pointing out that superior suspension and handling was, as a rule, found on European machinery. Such a generalization is no longer valid.

First came the IT400. Then Honda's MRs. Now Suzuki's PE250 is the second Japanese machine equal and in some cases, better than the Europeans for serious competitive enduro machinery.

Because of the speed with which the Japanese can produce a new model motorcycle, evaluation by comparision becomes difficult.

Take Yamaha's DT series. Their first effort, the DT1 was a great motorcycle compared with Japanese off roaders at the time. Many magazines rightly called it the best. But since then so much has happened. A year ago the DT400C was a great big bore trail bike, but the DT400D, (the test of which we'll be writing up soon) with its monoshock long travel suspension, and its excellent engine characteristics, make the DT400C feel overweight and barge-like.

What we're getting at is its hard to say what bike is really good, and have it be true for very long.

If we say in this test that the PE250 Suzuki is the best serious enduro machine to come out of Japan we mean it is at the time of this writing. Because you can bet by the time that this test is published Yamaha will have something like an IT250, or maybe Honda will send some of their MR250s to Australia, and the PE250 will running behind again.

Ask any A grade motocrosser who's had a lay off for six months, and then gets back into competition. He'll tell you how much faster the competition is going when he comes back. Last years machine is just outdated.

So what we're trying to get around to saying is that this report on the PE250 is based on evaluation made right now.

But all this is the same with any test you might say. Bikes get better, they get faster, have more travel, tyres improve, they get lighter etc. So why the big speech to introduce the PE. Because it's a new field for Suzuki. A serious enduro bike. Not a motocrosser, (although God knows, it's enough like the RM) and not a trail bike. In its own sweet way it's a little like the DT1. A pioneer (sorry Ossa). And we have no doubt that in 12 months time the PE250C, or whatever, will be better again, and so on.

Anyway, enough of this dribble, ladies and gentlemen and you dirt freaks.....THE PE250.

Well first off, obviously, it's very much like Suzuki's RM250B motocrosser. Not to be confused with the 250A which has different bore and stroke characteristics.

Because the PE will be running longer in enduros, the chamber volume of the cylinder head has been increased from 27.0cc to 30.9cc. This lowers the compression ratios and allows for cooler running.

A hole has been tapped in the head for provision of a decompressor. Rubber rings have been inserted between the fins to reduce engine vabration and noise.

Port dimensions are changed to give more torque down low. These dimensions are given in fig. 1.

The left end of the crankshaft on the PE250 has been shortened to accomadate a new magneto, which is fitted with lighting coils, and the magneto cover has also been altered. The only crankcase modification which has taken place has been to recess the wall in the gearbox. This is to avoid a tendency found in the 250B, for 5th gear to rub the wall.

The exhaust is basically the same. A baffle plate is added to reduce noise and lower the power spread. A spark arrestor has also been added.

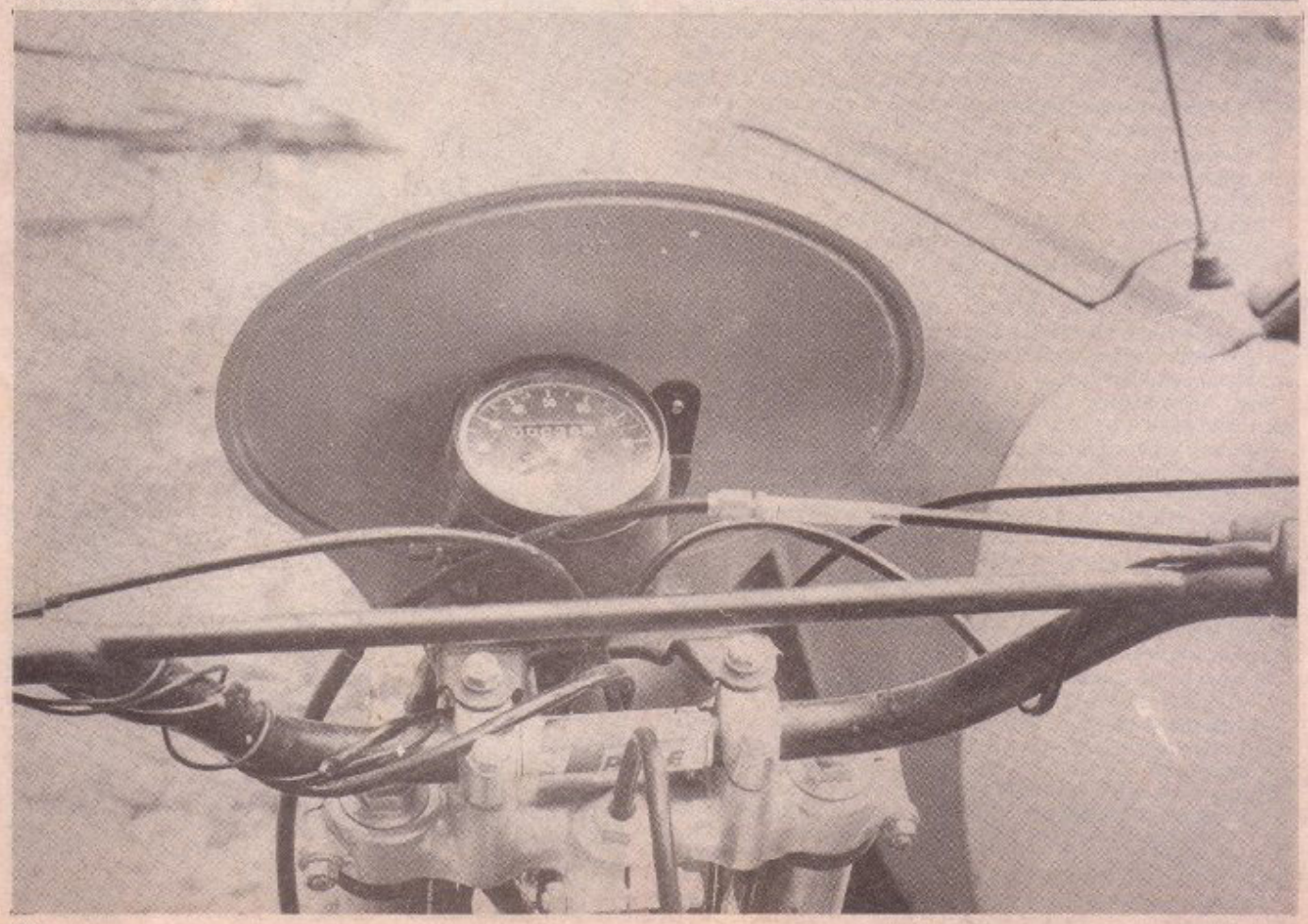
The carburettor on both machines is a 36mm Mikuni. The PE has a stop screw added so that the idle can be adjusted. The carburettor has been waterproofed, and smaller jets are used.

In the gearbox four of the five internal ratios have been changed. On the PE, first gear is lower, second is the same, and third, fourth and fifty are higher. The actual ratios are given in fig. 2.

With the exception of some minor additions, such as the brake light, the frames on the enduro and the motocrosser are identical.

Only the shape of the swinging arm has been altered slightly to add the chain tensioner.

The same dual spring rate suspension system is retained on the PE. Travel length is shortened on the enduro, and the suspension is softer and the beginning of the stroke and firmer in the second. See fig. 3.



PE250

Make	Suzuki
Model	PE250
Price	$1199
Engine	
Type	Two stroke cycle air cooled.
Intake System	Piston and reed valve.
Bore x Stroke	67 x 70mm (2.64 x 2.76in).
Piston Displacement	247cc (15.1 cu. in)
Corrected Compression	7.0:1
Carburetor	Mikuni VM36SS.
Air Cleaner	Polyurethane foam element.
Starter System	Primary kick.
Lubrication System	Fuel-oil premixture of 20:1.
Transmission System	
Clutch	Wet multi plate.
Transmission	5 speed constant mesh.
Gearshift pattern	1 down, 4 up.
electrical System	
Ignition Type	Suzuki "Pei" (Pointless electronic ignition.
Spark Plug	NGK B-8EV
Ignition Timing	23 percent B.T.D.C. at 6,000 rpm.
Chassis	
Front Suspension	Telescopic, oil dampened.
Rear Suspension	Swinging arm, gas-oil dampened.
Steering Angle	50 percent (right and left).
Caster	60 percent 25.
Trail	126mm (4.96 in.).
Turning Radius	2.2 (7.2 ft.).
Front Brake	Internal expanding.
Rear Brake	Internal expanding.
Front Tyre Size	3.00-21-4PR.
Rear Tyre Size	4.50-18-4Pr.
Dimensions	
Overall Length	2,140mm (84.3 in.)
Overall Width	855mm (33.7 in.)
Overall Height	1,270mm (50.0 in.)
Wheelbase	1,440mm (56.7 in.)
Ground Clearance	260mm (10.2 in.)
Weight (Dry)	109 kg. (240 lbs.)
Performance	
Max. Horsepower	28 HP at 8,000 rpm.
Max. Torque	2.78 kg-m (20.1 lb-ft) at 6,500 rpm.

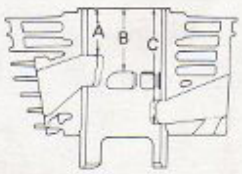
Other than these the changes are the bigger fuel tank, the shorter seat and the "enduro fittings" (speedo, headlight etc.)

With so few major changes between the models we can envisage a lot of riders converting their motocrossers to enduro bikes.

On the trail the PE is all enduro. Box stock it's ready to go with only a few minor refinements needed. The refinements are the kind of thing that manufacturers like KTM and Ossa learn from having teams compete in events like the International Six Days Trial.

We'd like to see a better grab rail at the rear, which would unfortunately mean frame modification.

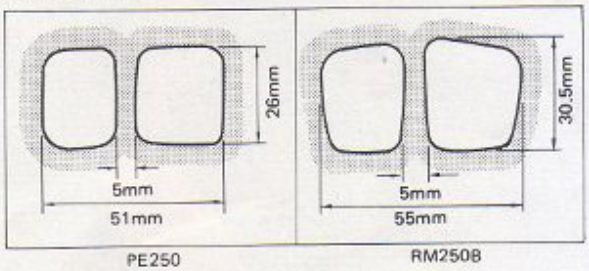
	PE250	RM250B
LOW	32/12 (2.666)	27/13 (2.076)
2nd	28/16 (1.750)	28/16 (1.750)
3rd	25/20 (1.250)	23/17 (1.352)
4th	21/23 (0.913)	21/19 (1.105)
TOP	18/26 (0.692)	21/23 (0.913)



PORT DIMENSIONS

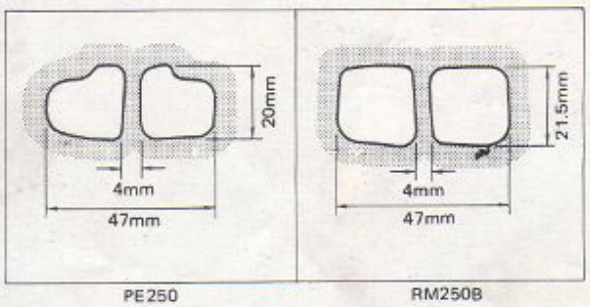
Model	PE250	RM250B
(A)	43mm	38.5mm
(B)	57mm	56mm
(C)	97mm	102mm

EXHAUST PORT

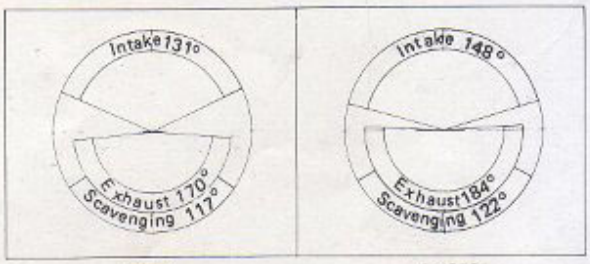


PE250 RM250B

INLET PORT



PE250 RM250B



PE250 RM250B

Front forks

Item	PE250	RM250B
Cushion stroke	195mm	220mm
Spring rate	0.75 kg/mm for up to 90mm	0.818 kg/mm for up to 120mm
	1.048 kg/mm for over 90mm	0.938 kg/mm for over 120mm

Rear shock absorbers

Item	PE250	RM250B
Cushion stroke	195mm	220mm
Spring rate	1.35 kg/mm for up to 72mm	1.63 kg/mm for up to 60mm
	4.89 kg/mm for over 72mm	3.13 kg/mm for over 60mm

The seat is thinner and shorter than the RM. The length doesn't worry us, but we feel it could be thicker.

A bigger bash plate underneath the bike would be an advantage. Especially if the enduro is going to take in rocky terrain. The PE's bash plate is a tiny little affair, and for Australian conditions especially, a heavy gauge aluminium job would be a good accessory.

The lights are all that are needed. The P.E. is going to present registration problems, because it doesn't comply with the Australian Design Rules. For this reason it's sold unregistered as a competition machine only, and can only be used in enduros.

Some sort of provision of tools would be welcome. The serious enduro riders have a few spanners, tyre levers etc. to carry. A small pack rack on the rear wouldn't add much weight, and would be ideal.

The aformentioned shorter suspension is actually straight off the RM250A model. It would be reasonable to assume future PE models will have the longer suspension of the B model.

Meanwhile however, the PE doesn't suffer. The suspension is very good and the bike handled well because of it. For the more exacting rider replacement rear shockers might be the only mod worth considering. Inverted gas Girlings perhaps, or similar units. The stock ones will be OK for most work, but they are a little on the heavy side.

Otherwise the suspension will not have to be worked on in any way.

We found the bike would track well in corners, and that it seemed to revel in hard riding conditions. Almost unintentionally we got into thekind of riding that's best left for the MX track. But the PE handled it OK. Only the extra weight of the enduro fittings gave it away.

For fire trail work or the desert rallies, an owner could even consider putting on the RM barrell. Whereas the RM250A was a peaky 250, the longer stroke of the 250B provided more down low.

On the PE, the longer stroke, combined with the different barrel give the bike a lot more down low for slow negotiation.

N tachometer is fitted, but the PE will pull from a shade above 2,000 rpm. We tackled reasonably steep hills, and where the going got slippery found we could back off in second gear and keep the traction. Knocking back to the low first would have induced too much wheelspin. Second gear was the climber, and the power spread of the PE was spot on. Where the bike was also useful, and this is important, was the response from these low chugging speeds. The engine would pick up quickly to lift the front wheel over a log, or break the back loose to straighten up with a slide. The engine was really very controllable.

Naturally it sacrificed the higher up peaky power that the desert enduro racer is going to need, but this is something else again.

The PE has set new standards for Japan in the enduro category. We were really impressed with it. It still lacks a few of the fine edges that the two or three top European enduros have, but it's backed by Suzuki servicability, along with the knowledge that if this is their first serious enduro bike, imagine what they'll be like in one or two years.