Pirelli MP7 v. Pirelli Phantom

IT is rare to have an opportunity to put two sets of tyres through a long-range test where they can be subjected to the rigours of high speeds and varied road surfaces. However, such a challenge presented itself when we conducted a head-to-head comparison between the VF1000FII Honda and the GSX1100EFF Suzuki. Instead of fitting top-flight tyres from two different manufacturers, we decided to put the new Pirelli MP7 radial into a direct comparison with Pirelli's more "conventional" MT29 (front) and MT28 (rear) Phantom Supercomp — but first a bit of history!

Motorcycle riders tend to have two quite opposite views on tyres. There are those who want grip and don't worry too much about wear rates, while others want a tyre to last forever and aren't too fussy about the grip it offers. In these dollar-conscious times, however, riders appear to have become more interested in tyre life, and are not so concerned about grip. Various tyre companies have tried meeting the challenge of providing good wear and grip and such tyres as Dunlop's Arrowmax (with a good blend of both characteristics) have earned their market share.

To our way of thinking, grip/safety is number one priority, because after all, there are only two contact patches between you and the road — if they let go you're gone. It's not quite like a car where greater compromises can be made as you are dealing with a vehicle which has four contact patches and which usually manages to stay upright by itself. In certain instances, though, the wear factor has to be considered. It's no good heading across to Perth with a super-soft sports compound tyre because there's every chance that the roads will rip it to pieces and you'll be faced with trying to find a replacement somewhere in the wilds of South Australia. Some manufacturers have made claims, usually based on customers' experiences, about how far their tyres will go. Our experience on the road tends to show that many tyres fall short of these claims, even though properly balanced, running at the correct pressures, and so on.

Early results obtained from testing of the new breed of radial-style motorcycle tyres have tended to show fine performance in wet weather and good stability. There has also been talk of extremely high mileages. The Pirelli MP7 is the first of this new breed of "super" tyres, but is it really so special? Bear with us; skip all the technical jargon if you must, but it's not tough to understand what the MP7 is all about.

Firstly, the motorcycle tyre is trying to perform dual functions: provide flexibility (what use would a completely rigid tyre be?); and enhance the bike's stability. In a conventional tyre, these two contrasting tasks have to be carried out by one carcass. At best the carcass has to be a compromise that satisfies both functions; by improving one characteristic, the other suffers.

No compromise?

Pirelli engineers recognised that compromise needed to be minimised if significant gains were to be made in tyre technology. The MP7, unlike normal crossply *or* radial tyres, has, as its basis two totally separate components, which are joined during manufacture. The first component, the carcass, is designed to give the tyre its inherent flexibility. Stability is enhanced by the second component, the belt. With two separate components designed to perform two specific functions, much of the compromise of conventional construction is said to be eliminated. In a motorcycle suspension system, you need both spring and damper — neither is much good without the other. In the same way, the MP7 is a combination of two components which work together to give rider feedback and bike stability.

A conventional tyre deforms and "grows" (its rolling diameter increases) at speed, which generates excess heat, reduces rider control and contributes to a high wear rate. Because of its two-part structure, the MP7 suffers less deformation, thereby running cooler and maintaining better rider control. The claimed benefits go further: because of its inherent dimensional stability, the MP7 needs less help from its tread pattern which can thus be designed for better water dispersion. And, in case you're wondering, braking stability is also said to be improved because of the tyre's "designed-in" stability.

In essence, you're getting more tyre working for you at a much reduced heat level than with conventional types. So that's the "technical" bit. What does it all mean when you're on the road?

For the test, the MP7s were fitted to the Suzuki, the conventional tyres to the Honda. Both bikes have fairly similar weights and power outputs and they were both ridden solo and carried very little gear. Riding conditions were bad: in 5300 km we encountered around 1500 kilometres of rain, and, as it was winter, temperatures rarely exceeded 17 degrees and were often quite a bit lower. We therefore have no way of predicting the tyres' performance during the summer months when most people tour. From the outset the tyres were run at the pressures recommended by the distributor: MP7s at 37 psi (front) and 44 psi (rear); and the Phantoms at 34 psi (front) and 42 psi (rear). Pressures were then checked twice a day. It's worth dwelling on tyre pressures for a second. Many riders don't run their tyres at the correct pressures and hence the performance of their tyres, is dramatically reduced. The myth that high pressures aren't good for tyres still appears alive and well. In actual fact, higher pressures help a tyre perform better and are quite safe provided you act within the manufacturer's recommendations. The other fact is that most riders are poor checkers of tyre pressures. If you doubt this, run around at your next club meeting and check. You'll be lucky to find 25 percent at correct pressures. We know, we have done it.

Effort required

On the road the MP7 is quite different in feel when compared with the conventionally structured Phantom. The MP7 has a lower profile than a conventional tyre and therefore feels a little odd at low speeds. We soon became used to this however, and recognised that it was necessary to put a little more effort than usual into driving the MP7-shod GSX into slow corners. Once over this mental block, the enhanced feeling of stability and surefootedness from the MP7s became apparent. As speeds increased, the MP7 appeared to perform even better, perhaps because of its reduced deformation when compared with a conventional tyre.

The Phantom Supercomps performed very well and quite predictably; but, like all conventional tyres, they needed to be well warmed-up before working properly, or would slide about in corners. In contrast you could start pushing the MP7 almost at the first corner without the fear of an unsettling moment. Once warm, the rear Supercomp provided good grip and proved quite easy to push into slow corners because of its generously rounded profile.

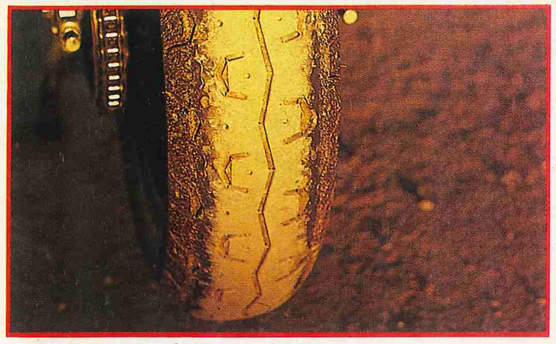
The Honda's stability was excellent, as we have come to expect from bikes fitted with Phantoms. Tread patterns are continually evolving and the new Phantoms appear to have greater support between the individual treads than previously. This has reduced distortion and the tyre now seems less prone to squirm under high cornering stresses. Normally the extra rubber in the tread could be expected to result in extra heat build-up, but this has been overcome by reducing the amount of rubber earlier Phantoms used to have between the tread and the carcass.

There are specific areas in which the MP7 performed brilliantly. On high-speed sweepers they instilled confidence that dared you to push the GSX even harder. The MP7 appeared to give increased feel — allowing you to read the attitude of the machine much more accurately than with conventional tyres. In wet weather, the rock steady confidence-instilling aura remained. The speedometer needle crept up to a point approaching dry weather speeds, and even then we didn't experience any of those "moments" when the tyres slide, signifying immediate problems . . .

The Phantoms, in contrast, though very good wet weather tyres in their own right, showed signs of sliding when the pace began to quicken in the wet. On high-speed sweepers (especially if they were bumpy) we sensed that the Phantoms were flexing under the increased cornering forces, although they continued to grip the road very well. And that flexing introduced a feeling of uncertainty when compared with the MP7s.

There were areas in which the Phantom outperformed the MP7. On dirt roads the MP7 left a bit to be desired, probably due to the nature of its tread pattern which is less open than that found on the Phantom. The MP7 wanted to skate around on dirt surfaces, demonstrating an unwillingness to bite through the gravel to the hard road base below. At moderate speeds it created no real problems but when upping the pace a feeling of uncertainty about the direction of travel prevailed. The MP7 was designed for the black top and that is where they will work best. In contrast, the Phantom reacted well to dirt roads, proving that it is an exceptional all-round design.

The MP7, a new design with many benefits.



The Phantom, a top class conventional tyre.

The large chunky tread dispersed the gravel easily and gave good drive out of corners.

At speed the MP7 offered excellent stability. With standard tyres the GSX just wasn't up to the high standard set by the MP7. A word of caution, however. Good though they obviously are, you should not be lulled into a false sense of security by the MP7. We didn't find its limits, but they are there somewhere.

The advantages of the MP7 also show up under brakes when again it resists the flexing customary under these circumstances. It may not actually decrease braking distances or effort but stability is definitely enhanced. The whole operation of crash stops appears to be more fuss-free. Under similar conditions the Phantom proved better than most, but simply not up to the standard set by the MP7.

Pirelli's "radial concept" MP7 is a pretty special tyre, there is no doubt about that. It offers better wet weather roadholding and stability than top-line conventional tyres — in this case, ably represented by the Supercomp Phantom — and the average rider will feel more confident under most riding conditions. From a safety point of view, it is superior to conventional tyres. In the distance stakes, it didn't display any great advantages. Both the MP7 and the Phantom wore quickly early in their lives, before settling down to a more reasonable rate of attrition. Here's how they went:

Rear tyre wear (mm)

Distance	MP7	Phantom
0-1200	1.0	1.8
1200-2300	1.2	1.0
2300-3200	1.3	0.7
3200-4300	0.5	0.5
4300-5300	0.8	1.0
Total:	**4.8**	**5.0**

The MP7 tended to wear faster in wet weather than the Phantom. This is because it does not benefit as much from the cooling efect of water as the Phantom — it doesn't run as hot to start with. In fact, the MP7 tended to scuff under these conditions.

Over the whole test the MP7 rear wore at a rate of 1 mm per 1200 km and the Phantom rear at 1 mm per 1000 km. We didn't find a significant mileage benefit in running the MP7 in comparison with the Supercomp Phantoms, but depending on your riding style you may.In spite of its greater wear rate, the Phantom is the cheaper of the two tyres to run. In terms of cost per 1000 kilometres, the MP7 ran out at $29.33, and the Phantom at $24.60.

Prices:

MP7	
120/80 V-16 front	$139.50
140/80 V-16 rear	$176
Phantom Supercomp	
110/90 V-18	$101
140/80 V-17	$123

Pirelli tyres are distributed in Australia by **Matich Australia, 84 Darley Street, Mona Vale, NSW 2103, 'phone (02) 997-2733.**

— Geoff Hall