

February 1986

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# Two Wheels

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The Right Way

BMW K75  
The Big One's  
Better

HONDA XLV750

DUNLOP K700  
RADIAL  
True to Name

THE POWER RACE  
What Limits?



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**As an alternative to the current crop of power-at-all-costs Japanese 750s, BMW's K75 fits the bill nicely, but when you compare it to its big brother, the K100, the 750 triple loses out on price, performance and many other points as well.**

**B**MW's first attempt at a totally new design for more than half a century, the four-cylinder K100, was praised far and wide by both the press and the motorcycling public. Throughout its two-year life the K100 range has been extremely popular with diehard BM fans (the ones who used to say that buying Japanese is out of the question because two cylinders is the allowable maximum) and has pinched more than a few sales from the Japanese multi manufacturers.

The K100 and its RS and RT variants have always been reasonably competitive on price and are excellent roadsters which offer the best of BMW's traditional virtues and a fair bit more besides. The K100 rider has the excellent ergonomics and good cruising comfort of the flat-twins as well as lashings of power, especially in the midrange. The big Ks combine BMW poise and balance with better handling and far less quirky behaviour than their twin-cylinder predecessors.

Considering the outstanding success of the K100 range, BMW no doubt felt pretty confident of introducing the second of its new-generation designs. The decision was made as early as 1979 that there would be two new bikes, a four-cylinder 1000 and a three-cylinder 750. The first of the 750s, the K75C, has recently become available.

#### Looks familiar

Predictably, the 75C uses much of the K100's running gear and has very similar styling to the larger bike. But the triple does have some visual character of its own. Most obvious is the shorter three-cylinder engine, the appearance of a handlebar-mounted fairing and the new triangular muffler. BMW says that the exhaust pipe is shaped in that fashion to signify the configuration of the engine.

Looking closer, more differences appear. Minor styling changes to tank, radiator cowling and tail piece have been made while the new larger front guard is now decorated with a steel fork brace. Unlike the K100 the rear wheel is 18-inch rather than 17-inch diameter and the C has a drum rear brake in place of the K100's disc.

Aside from these changes the K75C is simply a K100 with the four-cylinder motor replaced by a triple of three-quarters the capacity. Frame and suspension components have not been altered significantly.

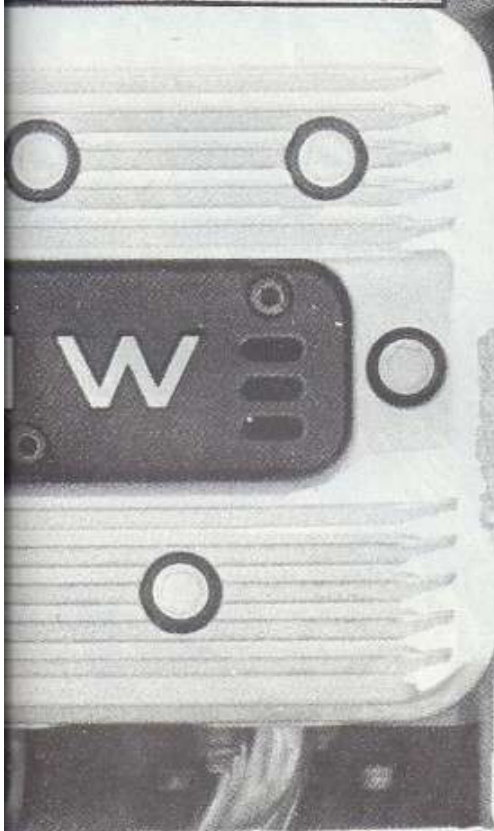
In basic terms, the three-cylinder motor is just a 1000 cm<sup>3</sup> four with one cylinder chopped off, although obviously the crankshaft has been redesigned for the 120-degree throw and the ignition system modified to suit the new firing pattern. Otherwise it's a pretty similar construction with two valves per cylinder, double overhead camshafts, Bosch fuel injection, integral crankcase/cylinder castings and nikasil bores. Conrods are identical while valve size and included angle remain the same, as does the 67.0 x 70.0 mm slightly undersquare bore and stroke. Some changes have been made upwards of the gudgeon pins with more hemispherical combustion chambers, the use of domed rather than flat-topped pistons and a rise in compression ratio from 10.2:1 to 11.0:1.

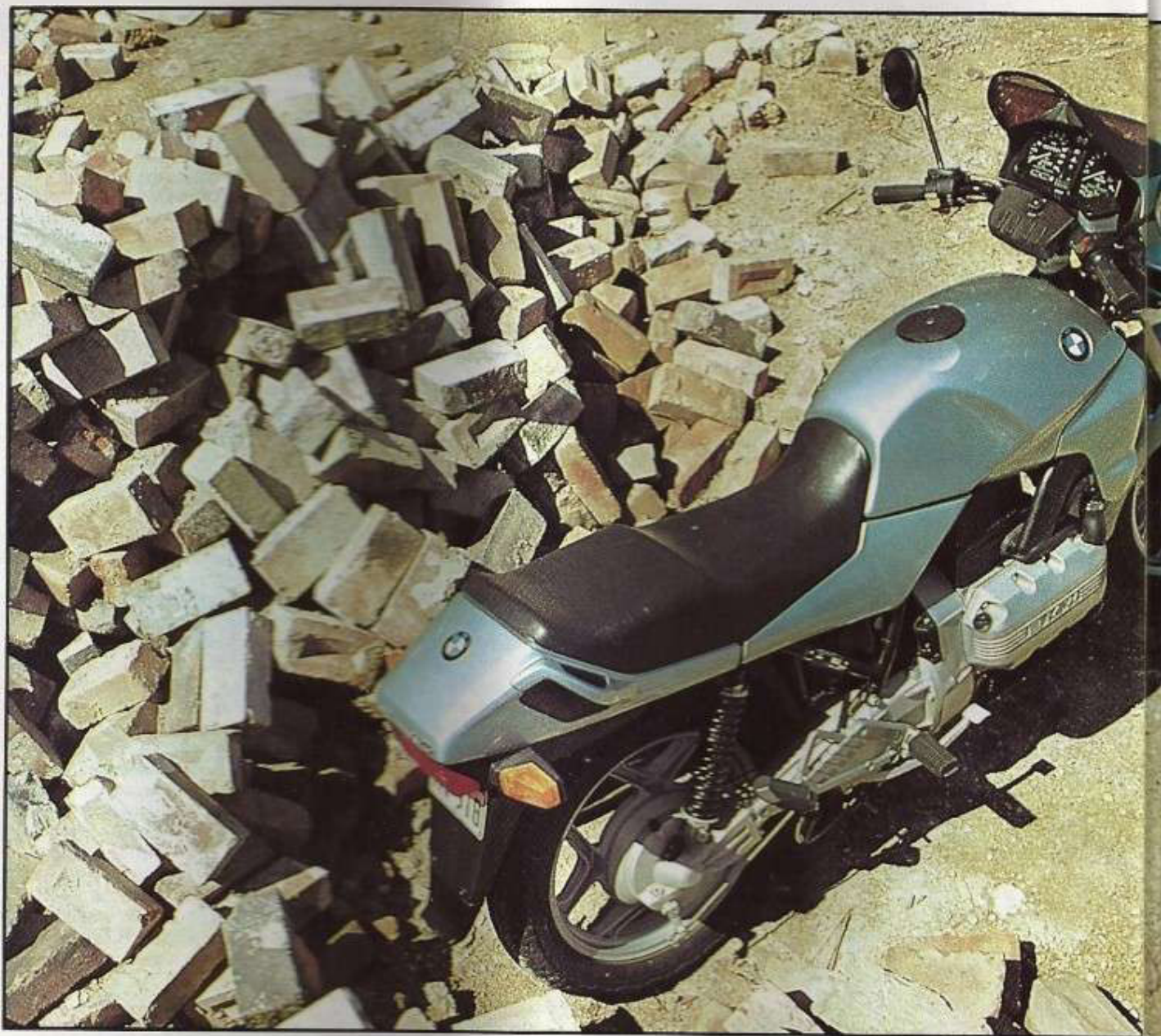
The reduction in number of cylinders and capacity has naturally led to a drop in power. The K100, according to the manufacturer, has a maximum power of 66.0 kW at 8500 rpm, while the K75 gives 51.3 kW at the same revs. This gives the K75 a higher specific power output (74.3 kW/litre) than the 1000 cm<sup>3</sup> model (66.9 kW/litre) and this would be fine but unfortunately the Australian model through very stringent noise limits and the requirement to use unleaded fuel loses 3.7 kW (5 bhp). In other words the specific power output drops to 69.3 kW/litre — much closer to the K100's figure — which compromises the K75's top-end power to the point where it's just adequate for the job.

#### Not so brisk

According to the illustrious R. Guntrip, the bikes provided in Germany for the model's international release had quite a brisk feel at high engine speeds; but the Australian model feels comparatively breathless. In fact responsiveness decreases markedly above 4500 rpm.

BMW claims that the motor produces 83 percent of maximum torque at a low 2500 rpm, which should suggest that the motor is quite grunty. Unfortunately, the addition of the remaining 17 percent between 2500 rpm and the maximum of 6750 rpm means that the rise in horsepower over the region is not very grand at all. Indeed, maximum power falls short of the figures of the top 600 cm<sup>3</sup> sportsters from Japan. The GPZ600R at 55.2 kW and the XJ600 at 53 kW have more power, and with higher redlines run considerably shorter gearing. Top gear speeds per thousand revs from the XJ and GPZ are 20.0 and





20.3 km/h respectively. The K75 does 23 km/h per 1000 rpm in top gear.

In short, the K doesn't respond nearly as eagerly above 140 km/h in top as these lighter, shorter-g geared, more powerful sportsters. Top speed of our K was a true 186 km/h (190 km/h on the speedo) and although the 750 did show 200 km/h on the clock this speed couldn't be maintained on the flat. Perhaps more kilometres on the test bike would see a slightly higher top speed but it's unlikely to be capable of the 200 km/h or 210 km/h top speeds of the XJ and GPZ.

But perhaps it is unfair to growl too much about the lack of top-end punch since the bike is designed primarily as an all-rounder. Even so, the K, with 25 percent greater capacity, should at least

be able to match the top-end power of the Japanese 600s.

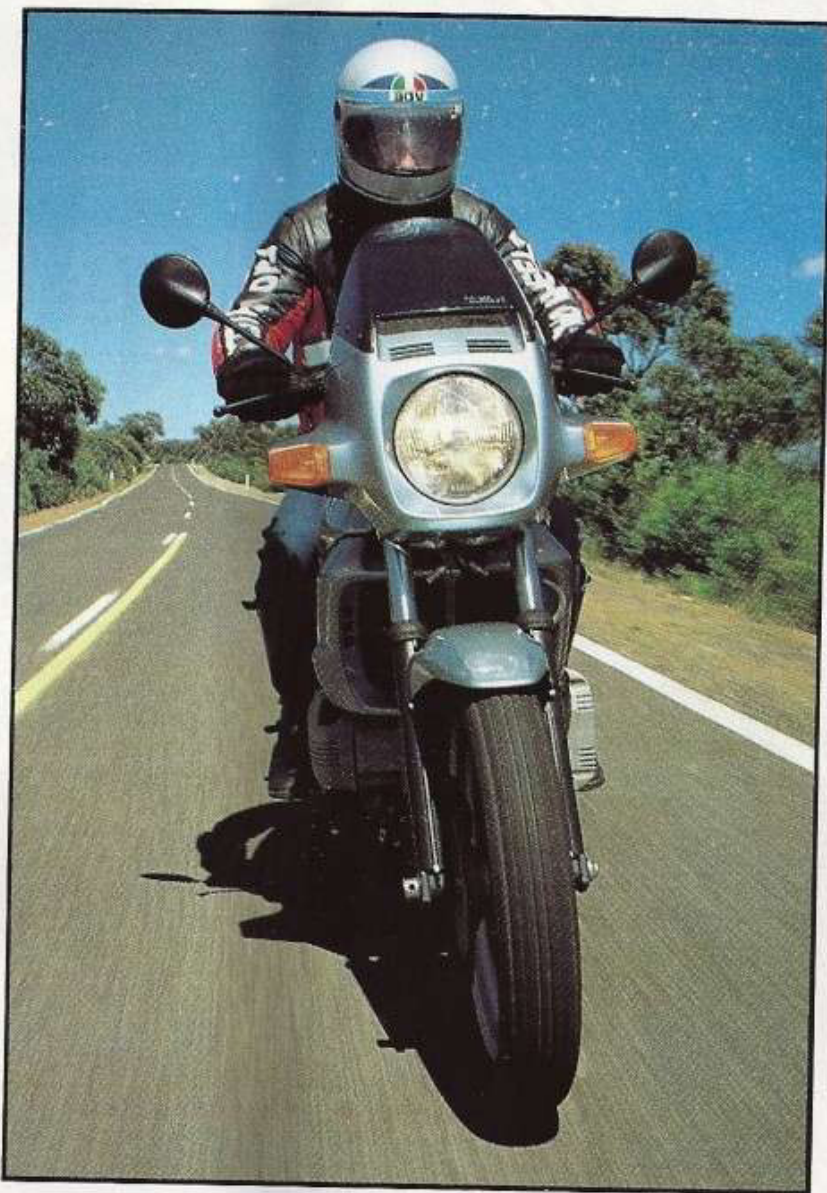
The poor top-end response could be forgiven if the bike really delivered the goods elsewhere, a la K100. But this isn't really the case. Although the K is quite brisk and agile at engine speeds between 2000 and 4500 rpm (60 to 110 km/h in top gear) the surge you get from opening the throttle in the same rev range with the bigger K is just not there. Midrange throttle response is good but hardly startling: the bike really needs an infusion of power so that top-gear overtaking from comfortable cruising speeds (120-140 km/h) is improved; if not, the Australian model should have shorter gearing to compensate for the loss of those five very necessary horsepower. As it is, the K is

good enough to beat the R80 at any engine speed but is hardly in the same class as the K100.

#### Mr Smooth

Having whinged about the power let's move on to the more positive aspects of BMW's new triple — and there are a goodly number of these.

Most significant are the bike's smoothness and excellent fuel economy. The K75 has two balancer weights on the counter-rotating clutch shaft; a system which is very effective at minimising vibration. The motor is delightfully smooth, a quality which only begins to disappear above 5500 rpm and even then the vibes are not intrusive — just noticeable because the engine is so smooth at lower revs.



Fuel economy is equally impressive. Around town, the K covered around 18.4 km/litre (almost 52 mpg) and at a steady 20 km/h this rate of consumption dropped to 21.6 km/litre. This means that the rider will see more than 300 kms on the odometer before the red light on the console announces that there's only five litres left in the tank. Even high-speed thrashing will not increase the bike's thirst dramatically and you can expect at least 5 km/litre despite all sorts of nasty behaviour.

Other positive aspects were the additional triple feel, the motor's long-leggedness, quietness, easy starting and quick warm-up.

Since the triple's firing intervals are different to those of the four and the

clutch shaft has to cope with stronger and more uneven power pulses, BMW found that the integral rubber damper used in the K100's clutch wasn't strong enough. A new system had to be devised so the K75 used a modified R80 clutch with internal damping. This change is noticeable and unfortunately the mini-K isn't good in terms of transmission smoothness. The clutch, although light and smooth, takes up too suddenly and the drivetrain freeplay is greater than with the K100.

Otherwise the K75's transmission is pretty traditional stuff. Gear changes need a minimum of muscle, and despite a long lever throw the action is quite positive. First-to-second changes (and vice versa) lack the easy smoothness of the rest, but essentially it's a good 'box.

Considering the frame and suspension changes are minimal one would assume that the K100 and K75 would be much of a muchness in handling behaviour, and to a point this is true. The K's low centre of gravity and lightness make it extremely nimble and the fine neutral steering and excellent high-speed stability do a great deal for the rider's confidence and the bike's ability in most situations. Sweepers, tight turns, and most things in between are well within the bike's capabilities. Like the K100, the soft front suspension and average cornering clearance don't give the bike the same aptitude through tight, twisty territory as the specialist middleweight sportsters but the K is still pretty impressive here. The excessive front-end dive under brakes and the bike's

tendency to stand up when the stoppers are hauled on in mid-corner limit the bike's scratching ability but it's still much better than the R80 when the going gets tough. In fact the 10 kg weight loss over the K100 gives the 750 noticeably greater agility.

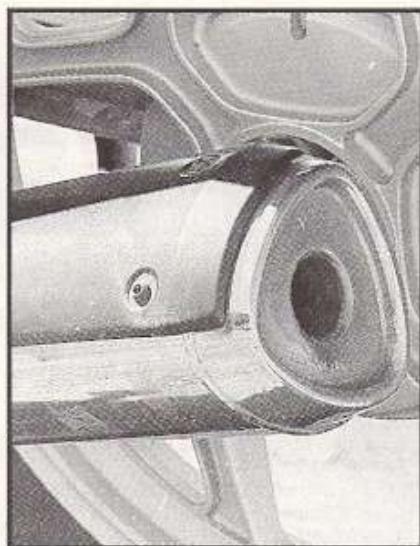
One significant change was made to the frame in the transformation from K100 to K75. Since the rear of the 750's motor is in the same position as the rear of the 1000's motor relative to the rear frame structure, the front downtubes have been swept further back to the front engine mounting points. This effectively means that the motor's centre of gravity is closer to the rear wheel and since both the K100 and K75 have the same rake and trail the result is that there is less weight on the 75's front wheel, even though the 750 runs a larger back hoop. Thus the steering effort is reduced (good) and it appears that rough road behaviour has taken a turn for the worse (bad).

In a straight line the front end would occasionally twitch over a bump, but if the bike encountered a rut running parallel to the direction of travel around a high-speed sweeper the front wheel would do the right thing until the tyre started to run off the edge of the rut. Then the wheel would jerk quite sharply in a direction away from the line of the corner. Never any side to side tank-slapping antics (unlike some 16-inchers), just a sharp and sudden

**Best points:** Motor is super-smooth in the lower two-thirds of rev range and very economical. Bike is well-balanced, manoeuvrable, and agile in suburbia. Handling and high-speed stability on smooth roads is good. Switches, instruments and riding position are A1 while mirrors and horns do their appointed tasks very well.

**Worst points:** Performance is not what it should be. The motor runs out of puff at high revs and didn't offer the expected midrange surge. Front end isn't too happy around bumpy bends and mid-corner braking isn't highly recommended. Clutch action and drivetrain smoothness are not up to K100 standard. Rider's portion of the seat uncomfortable on a long trip. Bike is too expensive.

*Listen, BMW; mufflers are supposed to be round!*



movement of the bars in one direction. This was unnerving at high speed and perhaps firmer springs might help minimise this unpleasant trait and reduce the bike's tendency to follow ruts and grooves — which could also be aided by careful tyre selection.

#### Plush

Suspension was traditional BMW fare. The long-travel forks were very compliant and the rear shock mimicked this characteristic so ride quality is excellent.

There's adjustment for rear spring preload (three settings) but no provision for altering damping rates, which is a pity since the shock did get a bit tired over rough roads and it would be handy to be able to increase rebound damping.

On most roads the comfort offered was top notch in most departments. Both rider and passenger have plenty of leg room and the small fairing, though obviously not very protective, did what most bikinis do — kept a fair amount of the air blast off the chest so that fatigue is reduced. The air stream wasn't lifted right over the helmet but there were no complaints of excess buffeting.

Seat comfort could have been better though, especially for the rider. While the seat seemed quite plush at first it didn't take long for the buttocks to start feeling the frame rails underneath. The passenger is better off here and the only complaint concerned the pockets in the tail piece which inadequately serve as grab rails.

Front brakes come straight from the K100 and not surprisingly the same comments apply — good strong stopping power and average feel. The same cannot be said of the single-leading shoe drum set-up. The rear brake is underpowered, doesn't supply sufficient feedback and was quite noisy. Apparently the squeal can be caused by glazed linings but no amount of heavy right-foot stomping could banish the noise permanently.

Finish is typical BMW standard and most of the ancillaries follow this example. Twin horns are excellent and the mirrors generally offer a clear view of the world to the rear. Headlight spread is great on both beams and the switchgear, though quite unusual is, after a short period of adjustment, very easy to use. In fact for the first few kilometres on the next test bike (not a BMW) I was fumbling around with the right thumb trying to

## SECOND OPINION

**A**FTER the events of the past three months it seems to me as though the K75 has been around for a very long time indeed. Altogether I must have covered around 3000 kilometres on various examples of model and probably know more about the bike than most; but I still can't decide whether the bikes deserves a no-holds-barred recommendation at its price.

Given that the K75C will do everything you can reasonably expect from a modestly powered 750, with an added dose of BMW up-market swank, it all boils down to that \$6150 price tag — and it's too close to the price of the base-model K100 for comfort.

Close enough, perhaps, to assume that the two bikes will be appealing to the same buyer, who'll have to make a choice between the 1000 cm<sup>3</sup> model's longer country legs and the 750's slightly greater agility for the urban hack.

Personally, I'd probably take the 75 on the grounds that I'm below average height and therefore find its dimensions more suited to my frame; but in terms of

available power the larger K wins hands down despite the 75's fairly linear delivery. As you'd expect, the 75 takes more stirring up, though when cruising it feels as relaxed as its larger brother and a fair bit smoother, too.

The riding position is another mark in favour of the 75. The wide, slightly raised bars offer greater leverage than BMW's widely used short sporty bars and offer a more reassuring feel.

But that's just about the end of the story. Obviously, the 75 has more than a little in common with the four-cylinder Ks and will do the same things as the big bangers — if not quite as quickly. It's a little better 'round town, but that isn't where most Beemers see service. All up, I'm simply not convinced that BMW has offered enough purchase incentive to woo the potential buyer away from either the K100 range or more modestly priced Japanese alternatives. I prefer the 75, but I'm not everybody; and in a good many cases BMW may well lose a potential convert by dint of simple economics. Sad, but there it is.

— W.R.G

# BMW K75C

## ENGINE

Water-cooled in-line three-cylinder four-stroke, mounted longitudinally and on its side. Chain-driven double overhead camshafts, two valves per cylinder, clearance adjustment by shims. Barrels integral with crankcase, nikasil bores. Forged one-piece crankshaft, plain main and big-end bearings. Wet sump lubrication.

Claimed maximum power	51.3 kW at 6500 rpm
Claimed maximum torque	68.0 Nm at 6750 rpm
Bore and Stroke	67.0 x 70.0 mm
Displacement	740 cm <sup>3</sup>
Compression ratio	11.0:1
Maximum engine speed	6500 rpm
Carburation	Electronic fuel injection
Air filtration	Pleated paper
Starter system	Electric only
Ignition	Magnetically triggered battery/coil
Mean piston speed at redline revs	19.8 m/sec
<b>Fuel Consumption</b>	
Touring	21.6 km/litre
City	18.4 km/litre
Hard riding	15.5 km/litre
Average on test	18.9 km/litre

## TRANSMISSION

Helical-gear drive through dry single-plate diaphragm-spring clutch and helical-gear primary reduction to five-speed constant-mesh gearbox. Left foot shift, one-down four-up pattern. Shaft final drive.

## FRAME AND BRAKES

Welded tubular steel open trellis frame using engine as stressed member. Telescopic forks with progressively wound springs. Rear suspension by forged-alloy single-sided swingarm and single gas/oil spring/damper unit. Three spring preload positions. Twin disc front brake with twin-piston fixed calipers. Rod-actuated single leading shoe drum rear brake.

Front suspension travel	135 mm
Rear suspension travel	105 mm
Front brake diameter	285 mm
Rear brake diameter	200 mm
Front tyre	Pirelli Supertourer 100/90-H16
Rear tyre	Pirelli Supertourer 120/90-H16

## DIMENSIONS

Dry weight	205 kg
Seat height	795 mm
Wheelbase	1515 mm
Fuel capacity (incl. reserve)	21 litres
Fuel reserve	None

## TEST MACHINE

Manufacturer	Bavarian Motor Works, Munich, West Germany
Test machine	BMW Australia, South Yarra, Vic.
Price	\$6150

## SUMMARY

RATINGS	Poor	Below Average	Average	Above Average	Outstanding
<b>ENGINE</b>					
Responsiveness		●			
Smoothness				●	
Bottom end power				●	
Mid range power			●		
Top end power		●			
Fuel economy				●	
Starting				●	
Ease of maintenance				●	
Quietness				●	
Engine braking				●	
<b>TRANSMISSION</b>					
Clutch operation		●			
Gearbox operation				●	
Ratio suitability		●			
Overtrain freelay		●			
<b>HANDLING</b>					
Steering				●	
Cornering clearance			●		
Ability to forgive rider error			●		
High speed cornering				●	
Medium speed cornering				●	
Bumpy roads		●			
Tossing side to side				●	
Changing lines in corners		●			
Braking in corners		●			
Manoeuvring				●	
Top speed stability				●	
<b>SUSPENSION</b>					
Front				●	
Rear			●		
Front/rear match			●		
<b>BRAKES</b>					
Resistance to fading			●		
Stopping power			●		
Braking stability			●		
Feel at controls				●	
<b>CONTROLS</b>					
Location of major controls				●	
Switches				●	
Instruments				●	
<b>TWO-UP SUITABILITY</b>					
Passenger comfort				●	
Stability with pillion				●	
Cornering clearance two-up				●	
<b>GENERAL</b>					
Quality of finish				●	
Engine appearance			●		
Overall styling				●	
Seat comfort			●		
Riding position				●	
Touring range				●	
Headlight				●	
Other lights				●	
Stands				●	
Rearview mirrors				●	
Horn				●	
Tools				●	
<b>VALUE FOR MONEY</b>					
		●			

activate or cancel the indicators. The instruments, a tachometer and speedo, are very large and extremely easy to read at a glance while the comprehensive array of idiot lights up the centre and along the lower edge of the console are bright and supply all the necessary information. Centrestand is great to use thanks mainly to the fold-out grab handle and BMW gets top marks for supplying a comprehensive tool kit, good owner's manual and a tyre repair outfit.

Having said all that, the comments about some of the aforementioned ancillaries will have to be qualified. High beam was not penetrative enough, the mirrors swung inwards at speeds above 130 km/h and the owner's manual didn't say how they could be adjusted to prevent this unfortunate occurrence. Horn switch is not really sited sensibly as it's easier to press in rather than up in an emergency.

## Up to scratch?

The unusual layout of the switches and the unique motor placement tend to indicate that BMW tried so hard to avoid any characteristic that could possibly have any Japanese influence or flavour. If that's not convincing then the new sidestand set-up will be. For years we have whinged about the spring-loaded sidestands and at first it appeared that our prayers had been answered — and they have to a point. The stand doesn't retract automatically when the weight comes off it. Now, when the clutch lever is pulled in, the pushrod activates a mechanised device which pushes the sidestand back towards the retracted position. It is better than before but it does have a few possible pitfalls. Wouldn't the Kawasaki starter lock-out system be more foolproof?

It's unlikely the K75 will encourage the same enthusiastic market response as the K100. For a start, the new 750 BMW won't have the all-new-technology impact of bigger brother, and while it's lighter, more agile and more economical than the big Ks the question has to be asked — is it a better bike? The answer has to be no. Handling is not quite up to the litre bike's standard while top-end acceleration and midrange responsiveness is inferior. The \$290 saving over the base-model K100 doesn't compensate for this.

If you desire a 750 sportster then a GSX-R750 or FZ750 would undoubtedly be the best choice; and if you lean towards a sports/tourer then a member of the K100 series would be a better buy. The BMW K750 is a pleasant motorcycle capable of performing most tasks adequately — at a price. Were it \$1000 cheaper it would be a better and more realistic bet; as things are, it simply doesn't cut it as a \$6000-plus motorcycle.

— Dave Bourne