

BMW

R80/7

Big enough to be beefy, small enough to be within the range of a large piggy bank, the BMW 750 was an attractive buy. Is the new 800 an improvement or just a replacement?

RIDING and testing the latest from Munich raised no eyebrows. The R80/7 is an 800cc BMW, and that simple phrase defines the bike almost down to the last nut and bolt.

The biggest change is the increase in bore from the superceded R75/7's 82.0mm to 84.8mm. This increases the capacity by 52cc, to 797cc. Combined with a slight increase in compression ratio, power output is up by 5bhp to give a modest 55bhp.

Other changes are confined to details. The constant-vacuum carburetors are of a modified type, the gearchange goes through a linkage instead of being direct, the instruments have been redesigned, there is a crash pad on the steering head, the indicators have an audible warning, one key fits all the locks, and a first-aid kit comes as standard equipment.

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To say that the bike hasn't changed much doesn't mean that it is bad; it has all the usual BMW qualities. The Japanese 750s all weigh more but they develop a good deal more power which more than compensates. Even so, the BMW never feels short of power, and most of the power is available all of the time. There is no need to keep the engine on heat because the power is coming in strongly by 3000rpm, and keeps on coming to 7000rpm plus.

For smooth riding, 5000-6000rpm is the engine speed to change up at. Changing up at 7000, the momentum of the fast-spinning, massive flywheel gives a big surge forward as the clutch is re-engaged. Lazy riders need hardly change out of top gear once the traffic has been left behind, yet they'll still make it to the pub for a Sunday lunchtime drink before all the little cheese biscuits have gone.

There is a recent trend, particularly with big bikes, to make the centre of gravity high. The theory is that the bike will be easier to lean into a corner since the whole unstable lump is itching to fall to one side or the other all on its own. This is a great theory as long as the road is dry, which it often isn't; and as long as the tyres never lose adhesion, which they sometimes do.

Thanks mostly to the flat twin engine, BMWs feel as though their centre of gravity is about six inches below the tarmac, and this pays off with an unequalled stability under all conditions. The

test period started with rain, followed up with snow and black ice and, although not a confirmed BMW fan, I wouldn't have swapped bikes with anyone for the several long journeys I had to make under those conditions.

The low centre of gravity is the biggest plus factor when the road is slippery, because it allows the machine to drift or slide in one piece. The alternative is for the wheels to disappear from under you, leaving the high centre of gravity to fall on your leg. That doesn't mean that I was deliberately sliding the bike around on black ice. No way. The point is that you get a couple of public warnings to slow down without ending up wrestling with the road.

That kind of stability, combined with the smoothness with which the bike can be ridden, means that you can turn in a good journey time along with a safe ride. The flexible engine and shaft drive mean that power delivery is smooth enough not to upset the delicate balance of things.

As a final tribute to the handling and stability, I need only point to the section of the test data sheet which gives the weather conditions: very wet, heavy rain, high winds. Road testers may be a little mad, but they are not suicidal. We wouldn't normally feel that it was safe to test a big bike in weather like that.

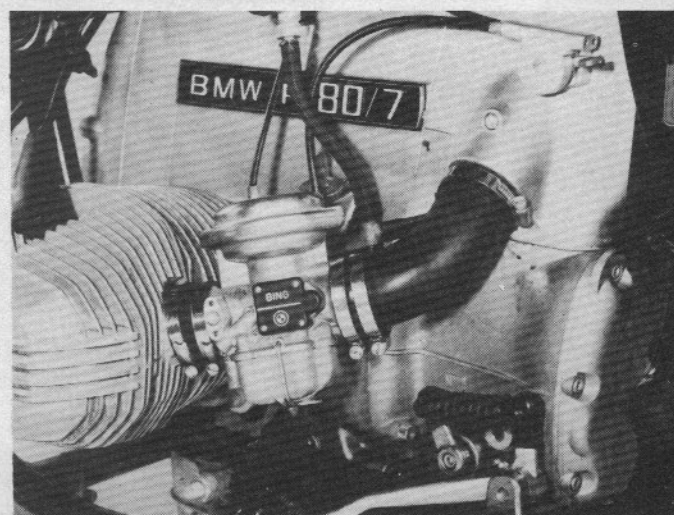
The single, drilled front disc brake is good without being outstanding, and the rear drum is more than adequate since it locks the rear wheel a little too easily. That said, the brakes are better on the road than they are on paper — because of the bike's stability.

The brake testing was done on a damp track — again a thing that we wouldn't normally dream of. The higher-speed stops resulted in a locked rear wheel hopping madly up and down, and the tail end had a tendency to start catching up on the right-hand side. In spite of this the rider felt that each stop was without drama. The bike might end up out of shape, but it stays in a straight line and doesn't try to fall over.

On the road, this means that you can confidently use all the braking power available, which gives you an edge over bikes with more ultimate stopping power but a greater risk of losing control. The disc brake has good



Technically Speaking



performance in the rain but there is, inevitably, a short delay. However, this is nicely disguised by the rear drum brake which starts slowing the bike straight away.

The final aspect of the handling is the tyres, which were Metzlers on the test bike. These performed well under all conditions and showed remarkably little tendency to follow white lines.

After handling, the area where BMWs are miles ahead is fuel consumption — up to 20 miles ahead for every gallon of petrol. Including the performance testing and several high-speed motorway journeys, our bike returned 55mpg overall.

A glance at the steady-speed consumption figures will show that there is no dramatic increase in consumption from 30mph to 70mph. Even at the legal limit the bike is doing 50mpg, so there's no need to feel guilty if you enjoy a bit of carefree acceleration and high-speed cruising.

The commendable fuel consumption and the sensible 5.3 gallon tank give a safe range of about 250 miles. The narrow, flat handlebars put the rider in a slightly crouched position that makes this distance quite practical at 70mph. Even 90mph will leave you safely in control, although it could become tiring on a long journey.

Riders with big feet may find that the carburettor manifolds get in the way (I wonder whether that's why motorcycle policemen seem to be more grumpy these days) but you soon get used to resting your feet on the outer edges of the footrests. The extra leverage from the new gearchange linkage has certainly improved the quality of the changes, although the 'box is still clunky at low speed.

Little things, like the positioning of the switchgear,

are less than perfect. Why, for instance, should an indicator switch move up and down instead of side to side? And why, just when other manufacturers are dropping them, should BMW choose to fit a warning bleeper to the indicators? Mercifully, the annoying little noise stops when neutral is selected or the clutch is disengaged. The new instrument layout, however, is clear and easily read at night.

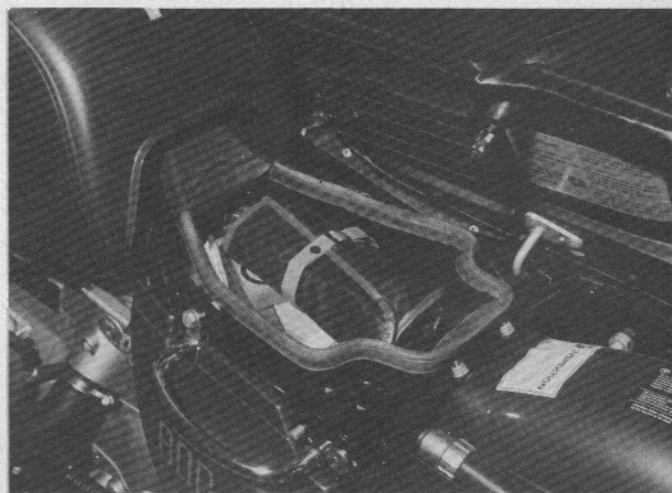
Another new gimmick on the R80/7 is a first-aid kit although, unfortunately, BMW don't trust journalists with things they can pinch so the test bike didn't have one of these. Or a toolkit! If the toolkit is up to the usual BMW standard it will be good. As the for first-aid kit, I can't imagine what they can put in it that will save a life at the side of the road. This wouldn't matter, except that space has been made for it under the front of the seat by reducing the padding at that point, and the lump can be felt after an hour or so in the saddle.

BMW's used to be well worth their inflated price because they offered levels of smoothness and reliability that others could not. Now there are several machines that equal or even surpass BMWs in these respects, at the same time giving far greater performance — and all for several hundreds of pounds less.

The unique stability and handling could be worth the extra to someone who rides a long way in all weathers. Also, it is easy to see that a high-mileage rider could get a lot of his money back in fuel saving.

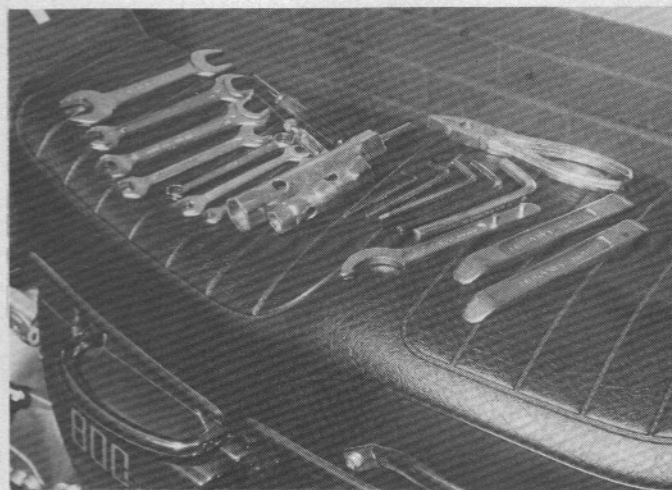
The R80/7 could never be described as a bike with exhilarating performance, but it is a BMW, with all the strengths and weaknesses that go with the name. That said, it is a good deal cheaper than its bigger brothers, so could it be the bargain BMW?

Neil Millen



ABOVE: Under the BMW's comfortable seat is one of the best bike toolkits around plus a tyre pump and first-aid kit. In the left-hand corner of the pic. is the new, rubber covered gear linkage to eliminate that 'clunk click every trip'.

BELOW: The R80 carries the same comprehensive German-made, 21 piece toolkit common to all the BMW range. Be sure to keep an eye on it 'cos it costs £25 to replace.



ENGINE

It goes without saying that the R80/7 is an air-cooled horizontally-opposed transverse, four-stroke, pushrod twin. An increase in bore and compression ratio give it 5bhp more than the R75/7 it replaces.

The test bike used no oil during its time with us.

Capacity, 797cc

Bore, 84.8mm x 70.6mm stroke

Compression ratio, 9.2:1

Maximum bhp, 55 @ 7000rpm

Maximum torque, 46.3ft. lbs. @ 5500rpm

Two Bing V64 carburettors

Wet sump lubrication

Sump capacity, 6 pints

TRANSMISSION

The gear lever now pivots about the footrest, with a remote

linkage transferring the motion to the gearbox shaft. Compared to previous BMWs, changing involves less effort, is more positive, and clunks a little less.

As with all BMWs, gearchanges are best if not hurried, and it helps a lot if the revs are well matched.

The clutch is light and showed no signs of slipping; and the shaft drive is, as always, impeccable.

Overall ratios, 1st: 14.08:1; 2nd 9.15:1; 3rd:6.62:1; 4th: 5.34:1; 5th: 4.8:1.

Final drive ratio, 3.20:1

Dry, single-plate clutch

FRAME & FORKS

Long-travel but well-damped suspension gives excellent ride without compromising handling.

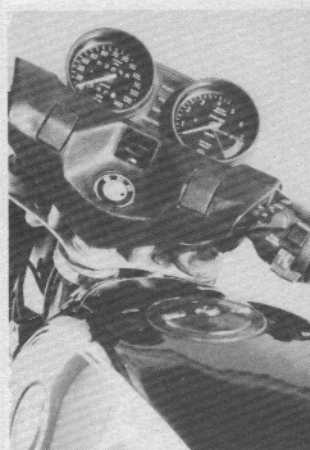
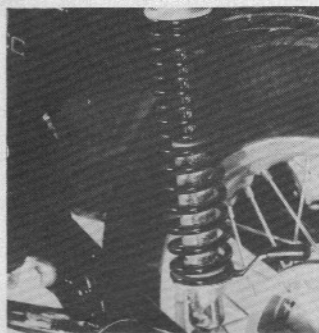
Rear suspension units have

adjustable pre-load with three settings.

Tubular, duplex, welded cradle with bolt-on rear subframe

Telescopic front forks

Swinging-arm rear suspension, incorporating drive shaft, with adjustable shock absorbers.



MAXIMUM & MINIMUM SPEEDS

GEAR	Solo max.	Prone max.	Min.
1	43.26	43.26	8.7
2	63.63	63.63	11.8
3	87.94	87.94	14.29
4	105.44	105.85	16.16
5	104.69	106.54	17.40
6	—	—	—

SPEEDO CORRECTIONS

Indicated mph	30	40	50	60	70
Actual mph	29.29	38.89	47.76	56.98	66.75

ACCELERATION FROM REST (secs)

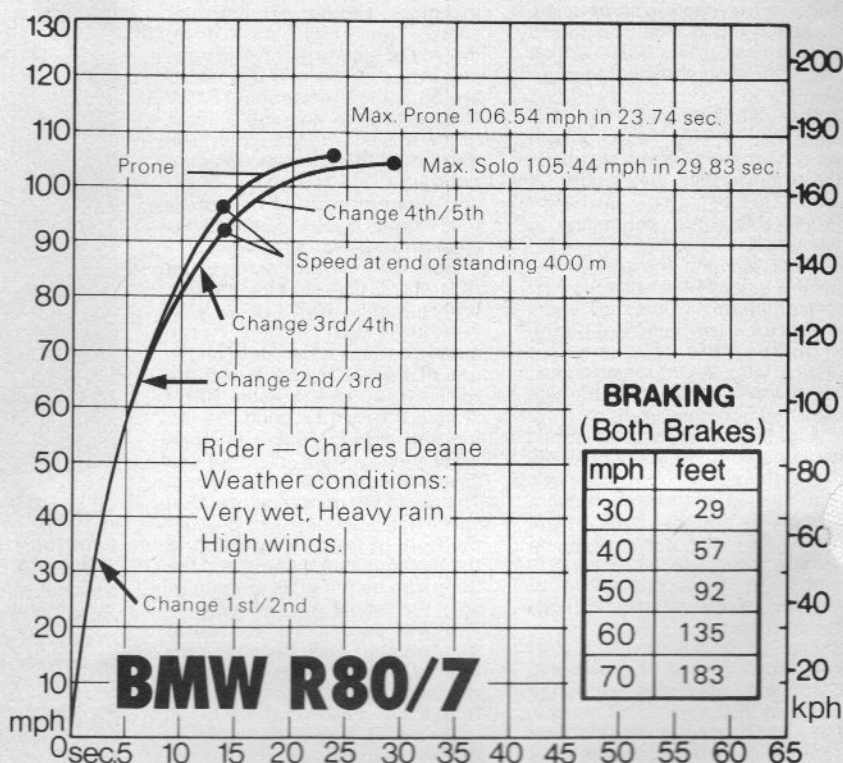
0mph to	20	30	40	50	60	70	80	90	100	110	120	Max.	400m
Solo	1.31	2.26	3.01	4.28	5.79	7.58	9.47	12.34	19.06	—	—	29.83	14.23
Prone	1.31	2.26	3.01	4.28	5.68	7.39	9.28	11.00	15.70	—	—	23.74	13.74

FLEXIBILITY, Top Gear

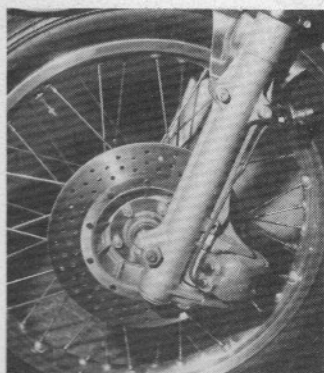
mph	20-40	40-60	60-80	30-50	50-70
Solo	9.12	6.75	11.51	6.93	9.11
Prone	9.10	6.43	10.72	6.90	9.04

FUEL CONSUMPTION

mph	30	40	50	60	70	80
mpg	72	64	58	54	50	—
Overall consumption					55 mpg	



Technically Speaking



WHEELS & BRAKES

Conventional, spoked wheels with alloy rims. Test bike was fitted with Metzeler tyres which

performed well under all conditions. Some bikes may be fitted with Continental tyres.

The single, drilled front disc brake is adequate under all conditions, but the rear drum brake will lock rear wheel if care is not taken.

Single 260mm front disc. Full-width 200mm rear drum

ELECTRICS

The H4 headlamp is one of the best around, and night driving can be as fast as the other distractions allow.

The electric starter fired up the engine first time, every time.

Battery, 12v, 28Ah
Headlamp, 60/65W H4
Stop/tail lamp, 21/5W
Spark plugs, Bosch W200T 30

DIMENSIONS

Only the old-fashioned styling makes this bike look heavy, because it is almost the lightest in its class. Whether weaving through traffic or a high-speed chicane, the only thing to overcome is the psychological barrier.

The bike is also perfectly balanced on its centre stand — which is just as well, because the spring-loaded side stand does not inspire confidence. But the centre stand, annoyingly, drags on the ground until flicked up.

Riding position is excellent at speed or in town, and a large-capacity fuel tank makes good use of this.

Wheelbase, 57.7in. (1465mm);
Length, 85.8in. (2180mm);

Width, 29.4in. (746mm); Height, 42.5in. (1080mm); Ground clearance, 6.5in. (165mm); Dry weight, 430lb. (195kg); Fuel tank capacity, 5.28 imp. gal. (24ltr.)

EQUIPMENT

Centre and prop stands. Steering lock and lockable fuel tank and seat. Tool kit, first-aid kit, and tyre pump. Dual seat with lockable compartment.

GENERAL

Price: £1899 inc. VAT. Test machine supplied by BMW Motorcycle Division, 361-365 Chiswick High Road, London W4.

