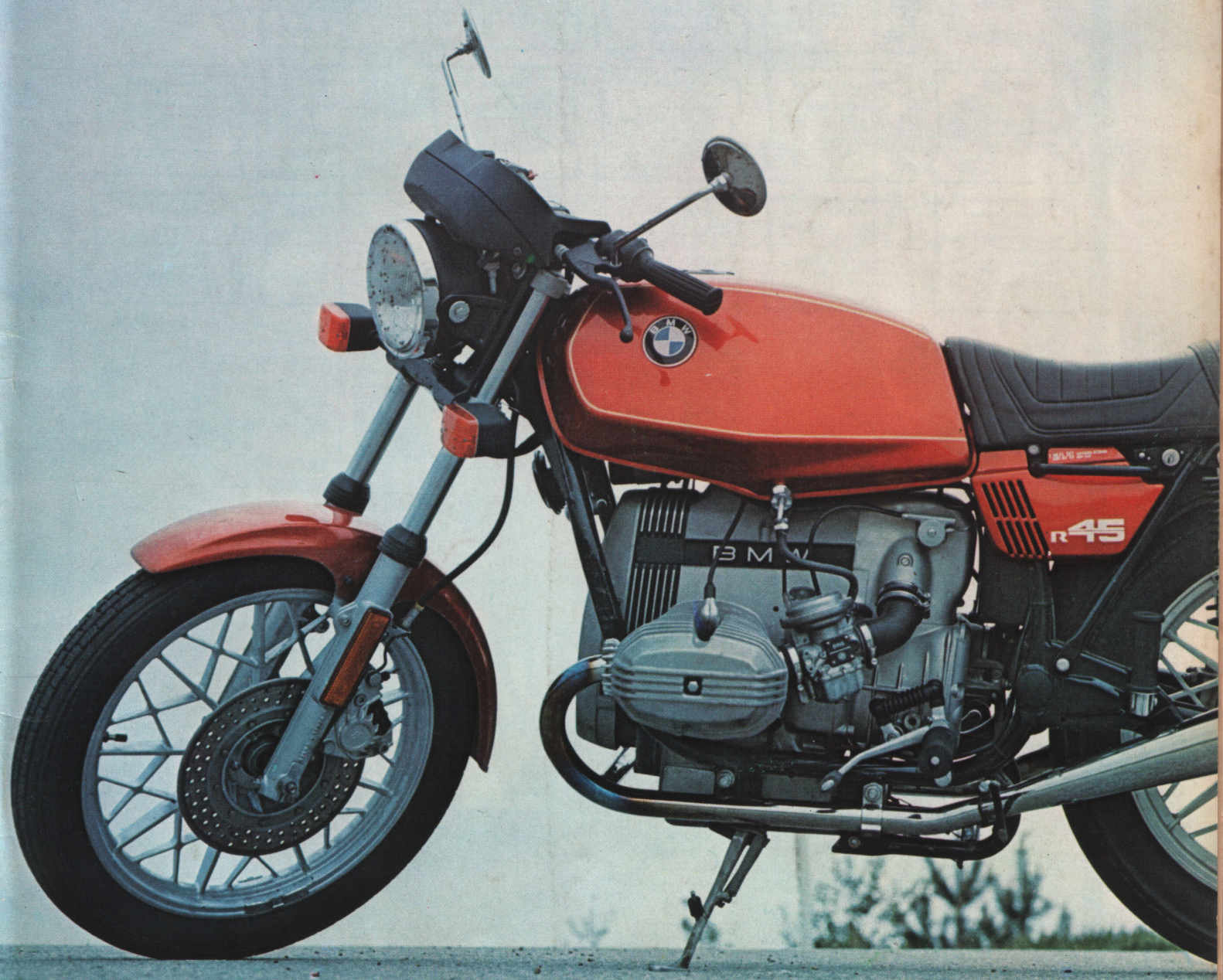
Which Bike?

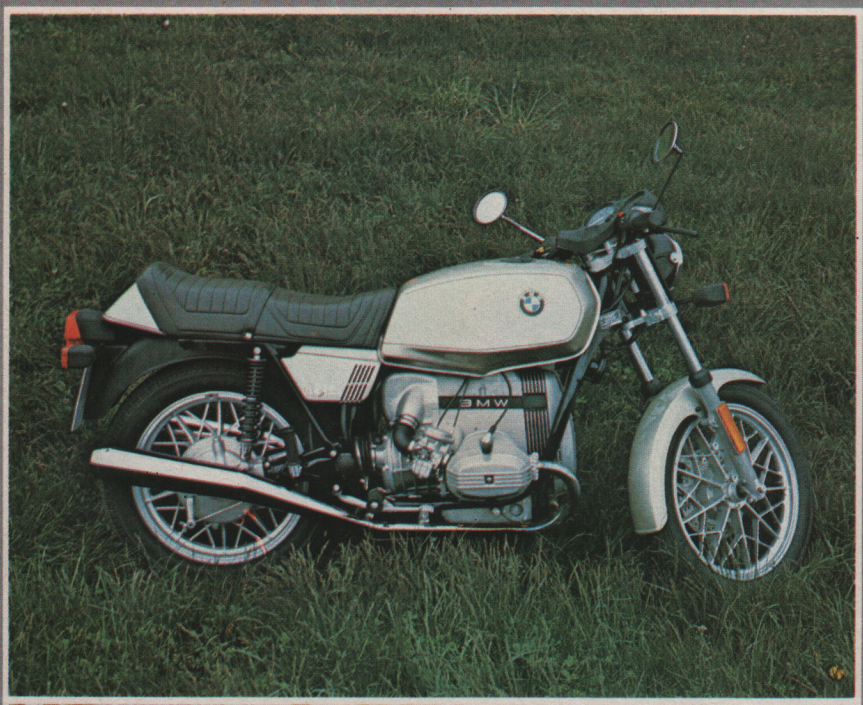
AUGUST
50p
No. 25

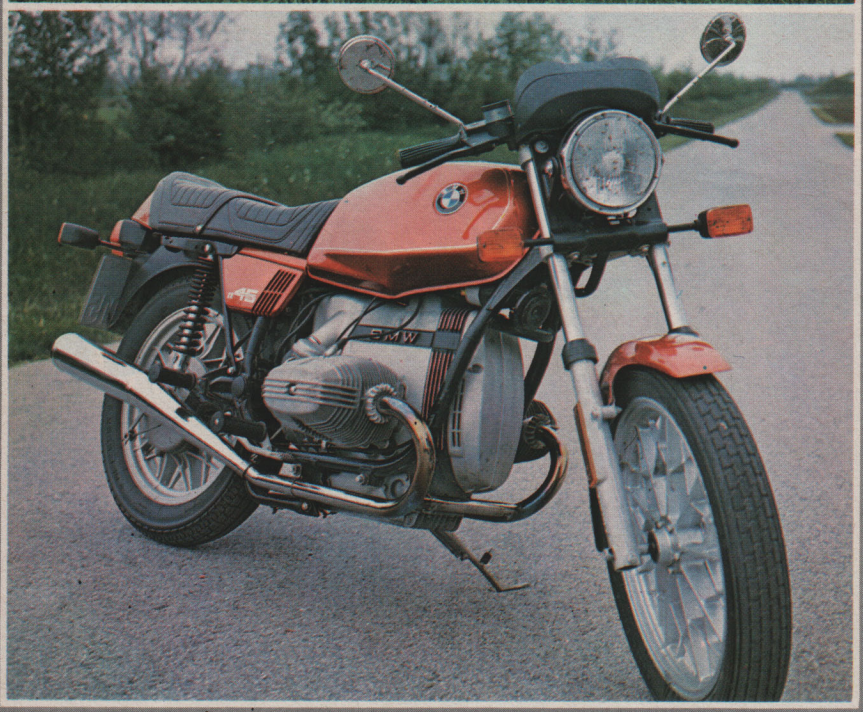
EVERY MONTH ALL NEW AND USED BIKE PRICES



BMW R45 & R65, LAVERDA MIRAGE, KAWASAKI & SUZUKI 400 TWINS YAMAHA DT 175, & HARLEY-DAVIDSON SST 125

QUICK SPINS





Photography by Dave Minton

BMW R45
BMW R65

THE SHAFT GETS SMALLER

Whilst most manufacturers engage in an apparently ceaseless quest for bigger capacity, heavier motorcycles, BMW continue to plough their own furrow with the launch of two all-new middleweights, the R45 and R65. *Dave Minton* rides and reports.

From a few yards distance the R45 and R65 look like any other modern BMWs, something only to be expected considering the dominant shape of the power unit and the company's design and construction philosophy: As ever, simplicity is the cornerstone. Closer up however, the changes become apparent, principally with regard to the overall physical size of the two models, both of which are identical save for engine capacity, and both of which are noticeably smaller than their slightly older relatives.

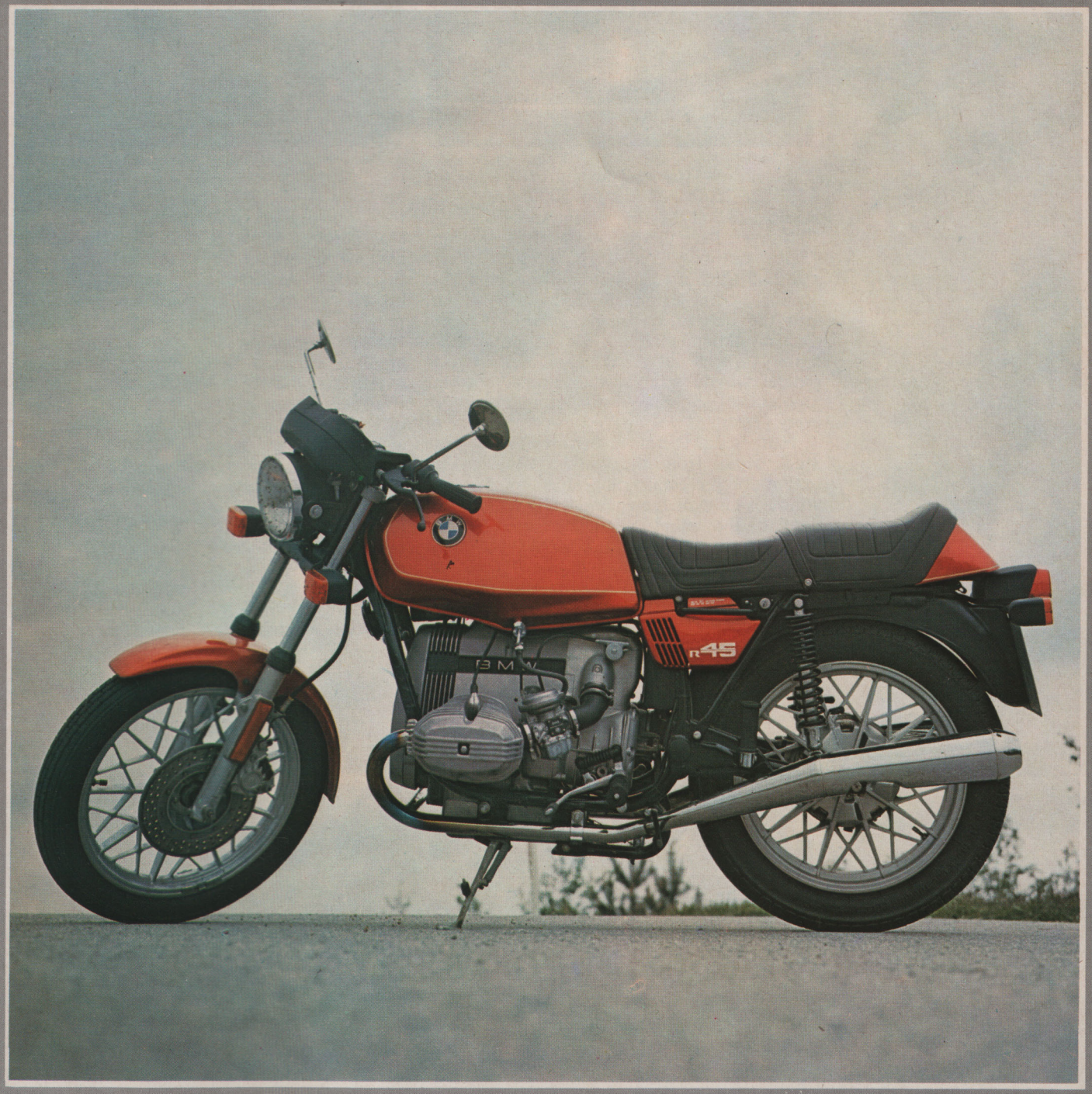
Somewhat surprisingly, although these more compact dimensions and the slightly altered steering geometry give an impression of considerably lowered weight, the new 650 is only 20lbs lighter than the R60/7. This in itself is something of an accomplishment in these days of continually increasing weight, and more especially so from BMW, a company long since dedicated to agile machinery. Riders who, quite understandably, complain about the distance of seats from the ground will be equally delighted to learn that these new twins enjoy a reduction in seat height of 1.5 inches,

down to a sensible 30.

Rounding off the whole thing, at least regarding size, is a loss of over two inches across the cylinders, reducing their width from the 29.3 inches of the /7 range to the new models' 27 inches. Wheelbase has been shortened by a couple of inches as well, so the result is a motorcycle that provides most of the improvements demanded by those saddened, and even angered, by the Japanese makers' cavalier attitude towards size and weight.

fork range, to which everybody refers in this respect, were so over-engineered that eventually they proved to be totally unmarketable and almost cost BMW their motorcycle division. A complete re-organisation of their approach to motorcycling persuaded BMW to adopt a more commercial attitude, and this included such necessities as pressed steel and plastic, where machined steel and aluminium held sway before.

In terms of performance the improvements



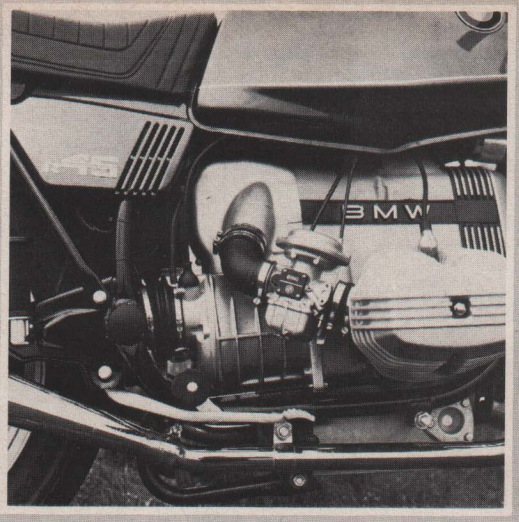
As anyone who knows his recent history should be aware, the launch of a 450 (in fact 473cc) is nothing new to BMW. They might well have not made anything of exactly that size previously, but throughout their entire existence they've produced lightweights, mainly as 250 singles. And there have always been the various 500 twins, of course, most of which where of 490cc or so. The R65 is a natural member of the 600cc family.

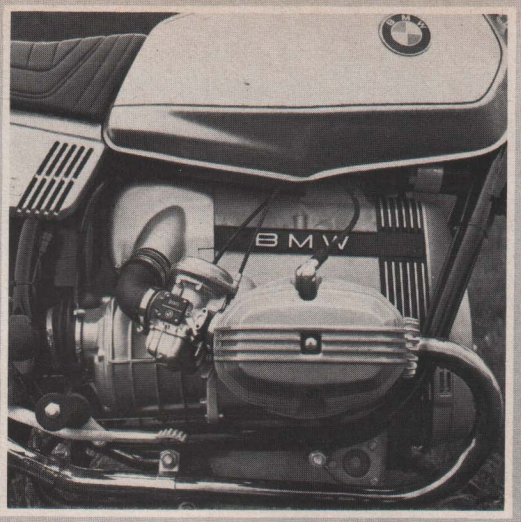
Many devotees, and others less kindly disposed towards the German flat twins, have claimed that, over the years, BMW quality has dropped. The hard fact is that the old Earles

have been considerable, whatever the older buffs might claim to the contrary, as best demonstrated by the following 500cc range figures. The R50 of the 1960s weighted 430lbs, turned out 25bhp at 5800rpm and had a top speed of 80 to 85mph. Admittedly there was a sports version, but it was so peaky with 35bhp at 7650 rpm it was neither easy to ride nor, in unskilled hands, particularly durable.

Following it in the early 1970s came the first tele-forked range 500, the R50/5. It weighed 441lbs, turned out 32bhp at 6400rpm and offered a top speed of about 5mph on from the old R50. Not much of an improvement?

Spot the difference. The R65 has a carburettor 2mm larger. All new instrumentation and switchgear, warning lights are all in the tachometer now and the biggest improvement, more orthodox indicator switch.





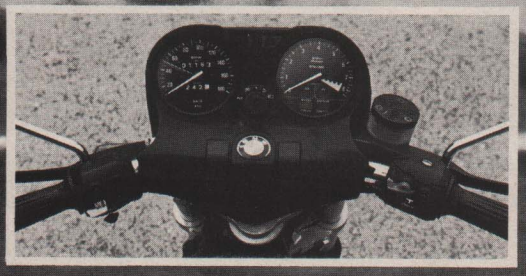
Consider how torque had improved from the R50's 25.3ft/lbs at around 5000rpm, to the R50/5's 28.2 at the same engine speed.

Now we have the R45, admittedly weighing 452lbs, but turning out 34.5bhp at 7250rpm and 29.5ft/lbs of torque at 5500rpm, as well as hauling around a powerful 280 watt generator into the bargain. If bikers did not demand electric starters then the big 12 volt 16 a/h battery would not be required either but in general we do want such equipment, so the problem of holding down weight increases every year.

Neither power unit nor frame have changed much at all from the familiar BMW layout, except for the compacting of all components, although most of the engine width reduction is due to the adoption of oversquare engine dimensions on both models. Ultra short connecting rods reduce engine width yet further.

Styling has undergone slight variations on the old theme, with new shaped dual seats and fuel tanks as the obvious new parts, but a new instrument console containing speedometer and rev counter and improved silencers follow the tradition of functional improvement, rather than purely cosmetic change. After that the less obvious alterations show themselves, such as the alloy castings which, although still of the highest material and casting quality, seem even rougher than before. This is a pity because all too few riders now seem able to fully appreciate the difference between the constructional excellence of BMW and the rather more seductive glamour of Japanese-style finish. Because of this BMW would probably be well advised to at least bead and vapour blast their alloy castings to give them the appearance of the top grade components they really are.

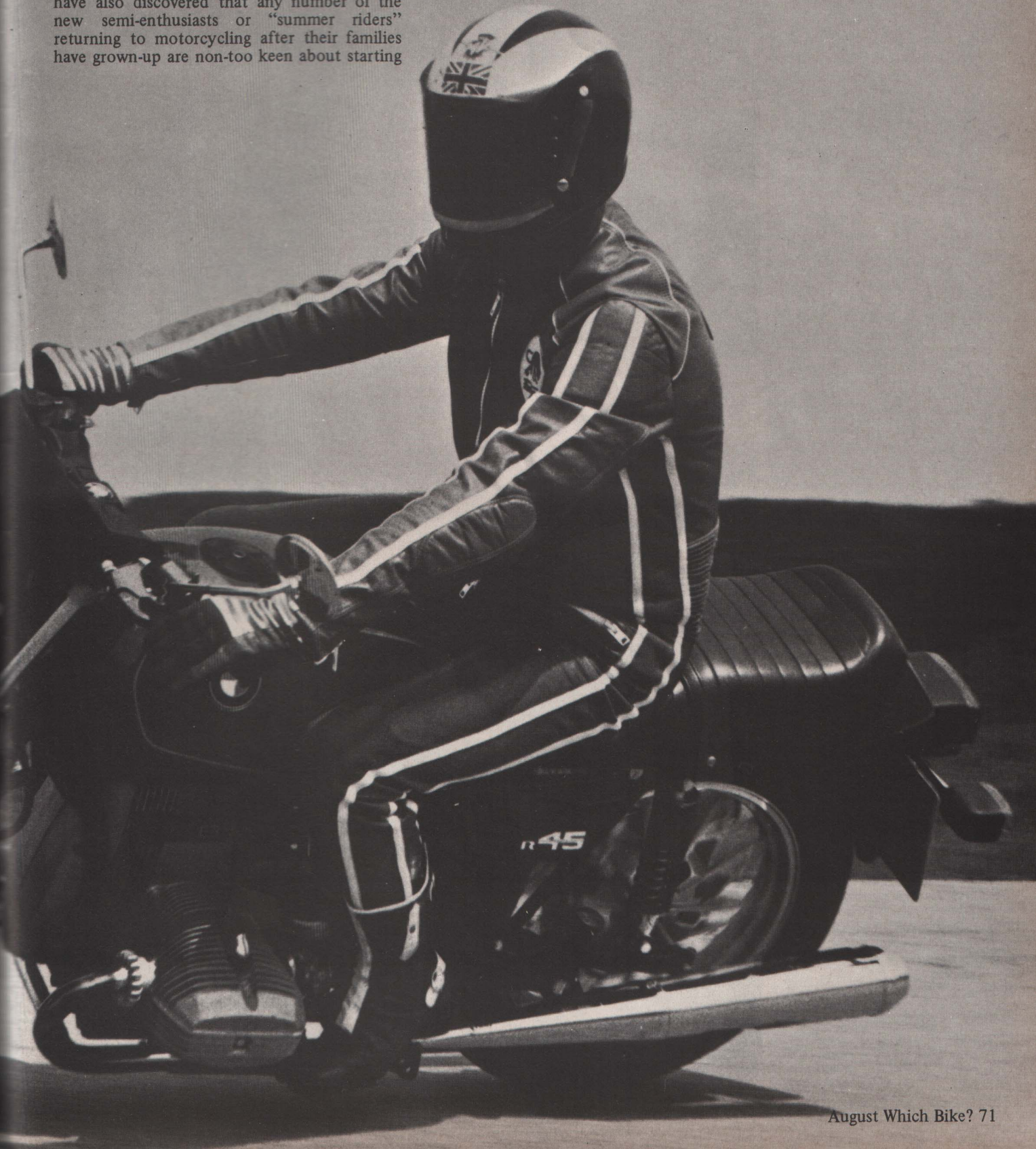
Switchgear has undergone a complete change for the better. The left switch console now contains nothing but the dip switch, which operates along a vertical plane via a comfortably large butterfly tumbler, and the turn signal, which slides horizontally to left and right. The right side contains start button, main lighting



switch, ignition cut-out and horn button.

For German home market consumption only, a low powered R45 "insurance special" is on offer. This machine turns out no more than 26.6 bhp at 6500 rpm, which should deliver a top speed of no more than 75mph. Although the machine will not be sold outside Germany it does illustrate perfectly BMW's determination to widen their market appeal outside the present one of the wholly dedicated enthusiast or the well heeled semi-enthusiast. With the R45 especially BMW hope to attract younger riders who, unable to afford high purchase prices and insurance of big bikes, normally turn to the Japanese, plus more experienced and/or enthusiastic riders without the desire and/or cash to invest in heavyweights. They have also discovered that any number of the new semi-enthusiasts or "summer riders" returning to motorcycling after their families have grown-up are non-too keen about starting all over again on motorcycles of a size that, in their youth, were machines of near mythical size and power. Thus it can be understood that the R45, whichever version, is much, much, more than simply a tail-ender to a prestigous range. On its success BMW have invested a large slice of their future.

Despite their compact dimensions both of the new models hold true to the very best BMW anatomic and ergonomic traditions, painstakingly matured over many years empirical and scientific development to such an extent that no other company is able to currently match them. From the outset both machines felt as though they had been tailored to fit *me* personally, especially for the task of

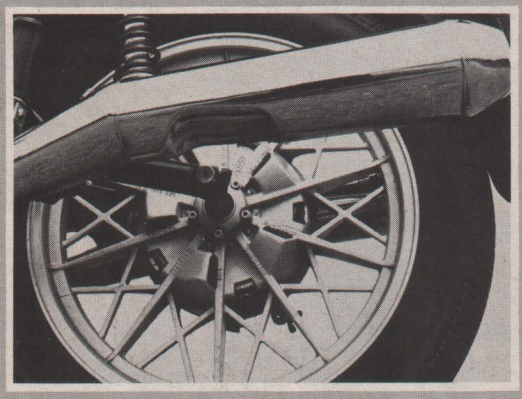


providing long, fast and relaxing journeys.

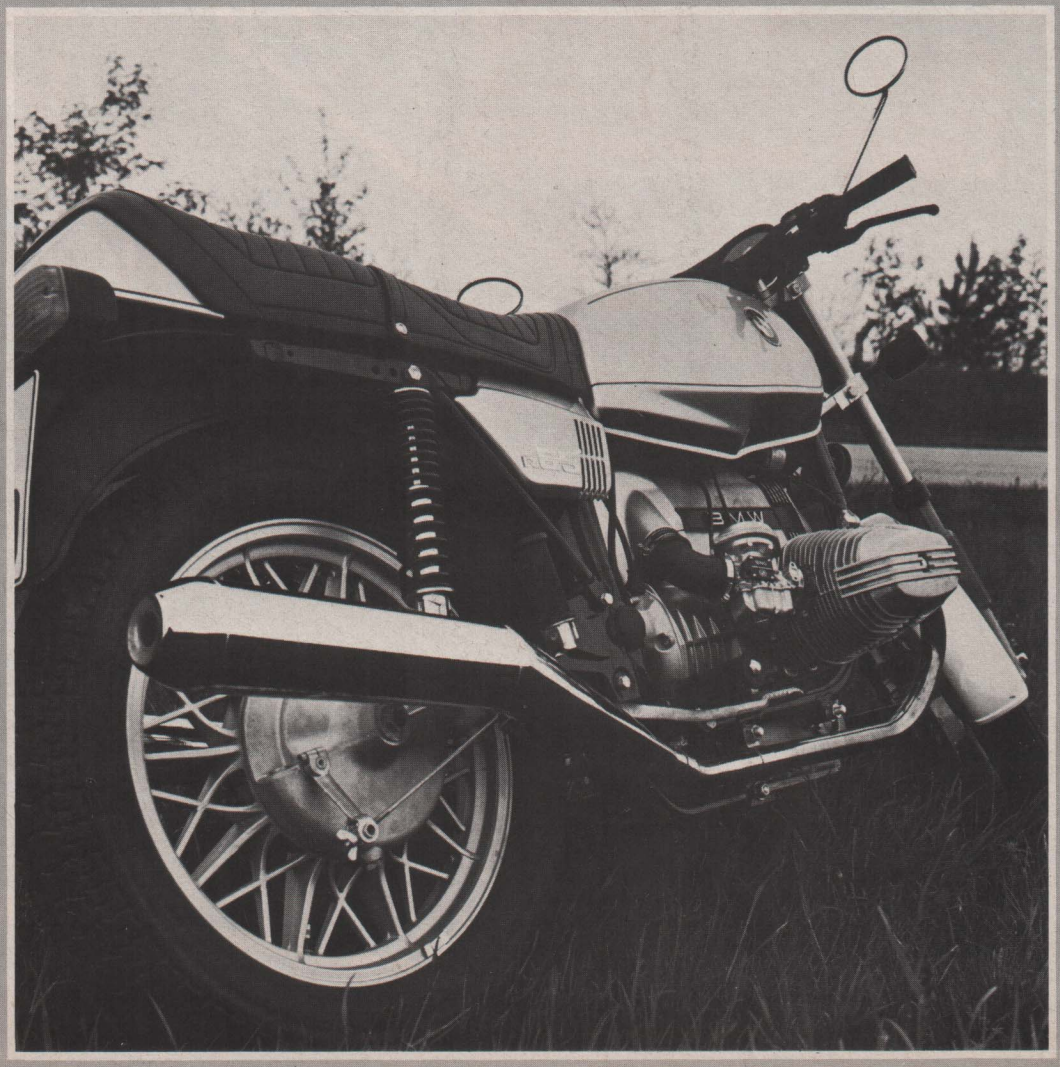
It goes without saying that the R65 was the faster of the two models, so it was this one that provided the basis of the handling analysis, it being more able to stress its frame and suspension than the less powerful R45. All BMWs currently made are good in this department, despite a chassis group as a whole that requires tyres with unusually high lateral damping to ensure the machine's directional stability. As many a luckless owner who has incorrectly equipped his BMW has found to his painful cost, Metzelers and Contis (apart from the odd Michelin) are absolutely vital. Providing a BMW is so equipped it will perform with the best, as anyone who has seen Helmut Dahne or Hans Butenuth race in the Isle of Man will agree with. Nevertheless, they can be made to step out of line under certain conditions, especially at high speed and given a heavy rear wheel load. I tried to uncover this on the R65 but was unable to providing the rear suspension was set to suit me. If it was set in the softest setting then the machine gave every impression of slight front end lightness at its top speed. But this only manifested itself in straight lines strangely enough. Around bends, no matter how fast I attempted them, handling and stability remained totally secure and encouraging. With the rear spring preloader – as always a permanent fixture on BMW – set at medium the R65 ran straight and true as an arrow, (I weigh close on 200lbs fully togged in a storm-suit etc)

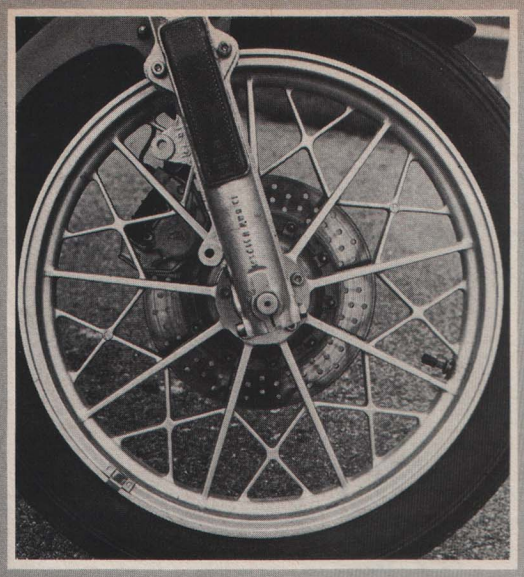
Although still comfortably soft I received the impression of slightly firmer damped suspension than before, and to this end it can be seen that suspension movement has been limited still further to a tele-fork 6.8 inches and a rear end 3.7 inches, where the /7 range provides 7.8 inches front, and 4.9 inches rear, and even they, as the /5s, were once equipped with a full *9 inch* fork stroke.

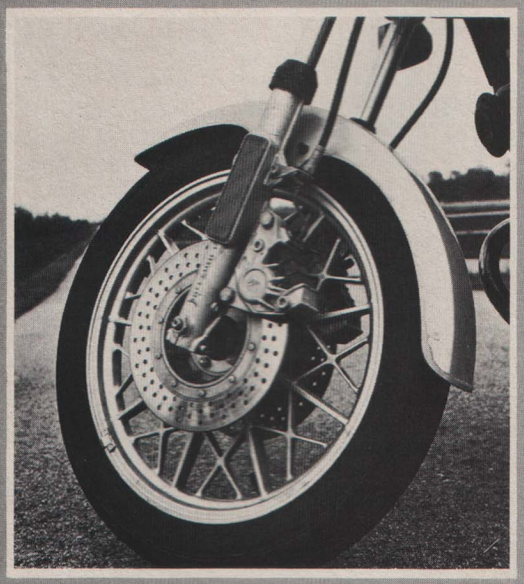
Every year BMW have tried valiantly to improve their gear selection mechanism, although anyone with a spot of motorcycling empathy in his head should have no trouble with the /7s save on the change between bottom and second gears, but that engine speed clutch has earned itself a reputation that obviously causes the company some embarassment. To their credit BMW refuse point blank to adopt weighty, complex solutions, but this year another positive step has been taken to improve the cog swap still further. In this instance the shaft of the rear transmission has undergone development, in the shape of a sprung loaded, twin lobe face cam at the rear wheel end. It closely resembles the crankshaft shock absorbers once popular on older British bikes.



Upswept silencers are contoured to allow easy removal of wheel spindle. Pump is still retained on both models, but ten spoke wheels are new.







Two discs for the R65 but another caliper can be added very easily to the R45 as the mounts are there, note much larger reflectors on the fork sliders.

True enough, gear changing is now on a par with anything else, at least to an experienced BMW rider, although I suspect a first-timer would find it necessary to modify his style a little. However, because of the adoption of a shock absorber in the shaft drive system, on the instant of overrun from high speed a coarse grinding reaction set in for a moment or two, at least it did on the test models. From past experience with various older British machines exhibiting similar characteristics, I can only presume that the shaft-mounted, sprung-loaded face cam design requires a few final touches before achieving absolute perfection.

Top speed of the R65 finalised at a mean average two way run of 103mph in a racing position and 96mph sitting up in a slight crouch. Its fastest cruising speed appeared to be around 85 to 90mph, where it would remain come hill or headwind and, at these speeds, (5500 to 6000rpm), the engine was smack in its best torque band, a safe 1650rpm away from its top rev limits.

The R45 was very similar in characteristics, providing an absolute mean average top speed of 93mph, and a sitting up one of 87mph. Its fastest cruising speed was around 80mph (6000rpm).

Both bikes exhibited wide and very useful power bands, the R45 proving a willing little smoothie from as low as 1500rpm in top gear (20mph) from where it would accelerate fast enough to keep pace with the quickest city traffic.

Fuel consumption could not be checked, owing to the nature of the ride, but BMW claim an overall mean average of 63mpg for the R45 and 61mpg for the R65.

Acceleration was checked, as can be seen in the spec lists, although only for 0 - 60mph. The standing quarter mile figure should approximate to that claimed by BMW, who are one of the most honest of all factories. They claim the 0-400 metres time for the R45 is 15.8 seconds and that for the R65 is 14.7.

Braking was excellent in all aspects but not as overpowerful as machines from some other makers, who seem hell-bent on proving that an inability to come to terms with wet weather inefficiency can be overcome by brutally increasing dry weather power. It's good to know that BMW refuse to followssuit.

The wheels of the new models are new, using one spoke less that the /7 range, and a brand new rim profile designed to improve stability should a tyre blow out. The shape of the rim itself provides some support for the deflated tyre, as well as holding it firmly on to the rim. BMW consider this to be a more important development than tubeless tyres which, they feel (wrongly or rightly), present private owners with numerous pit-falls regarding safe fitting and adequate sealing.

All in all, these new BMW middleweights are motorcycles of sensible, proven design, and provide modern motorcyclists with a fine example of the way a fundamentally sound simple design can beat a complex and sophisticated one.

	R65	R45
Engine:	4-stroke twin	4-stroke twin
Bore & Stroke:	82x61.5mm	70x61.5mm
Capacity:	649cc	473cc
Compression Ratio:	9.2:1	9.2:1
Carburration:	2x32mm c/v Bing	2x28mm c/v Bing
BHP @ RPM:	44 @ 7250	34 @ 7250
Clutch:	Dry single plate	Dry single plate
Gears 1st:	15.13:1	17.11:1
2nd:	9.83:1	11.12:1
3rd:	7.12:1	8.05:1
4th:	5.74:1	6.49:1
5th:	5.16:1	5.83:1
Electrics:	12v battery, coil and c/b ign.	12v battery, coil and c/b ign.
DIMENSIONS:		
Wheelbase:	54.7ins	54.7ins
Seat height:	30ins	30ins
Ground clearance:	n/a	n/a
Weight:	452lbs	452lbs
Fuel capacity:	4.8gal inc. res.	4.8gal inc. res.
Tyres (F):	3.25x18	3.25x18
(R):	4.00x18	4.00x18
Brakes: (F):	10.2ins hyd disc	10.2 hyd disc
(R):	7.8ins sls drum	7.8 sls drum
EQUIPMENT:		
Trafficators:	Yes	Yes
Electric starter:	Yes	Yes
Trip meter:	Yes	Yes
Steering lock:	Yes	Yes
Headlamp flasher:	Yes	Yes
Extras:	Clock Voltmeter	Clock Voltmeter
PERFORMANCE:		
Top speed:	103mph	93mph
Standing ¼ mile:	See text	See text
Speedometer Correction at 60mph:	2mph fast	2mph fast
Fuel consumption:	See text	See text
Stopping distance:	n/a	n/a
Cost of spares:	n/a	n/a
Price:	n/a	n/a
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