

BMW R 90S

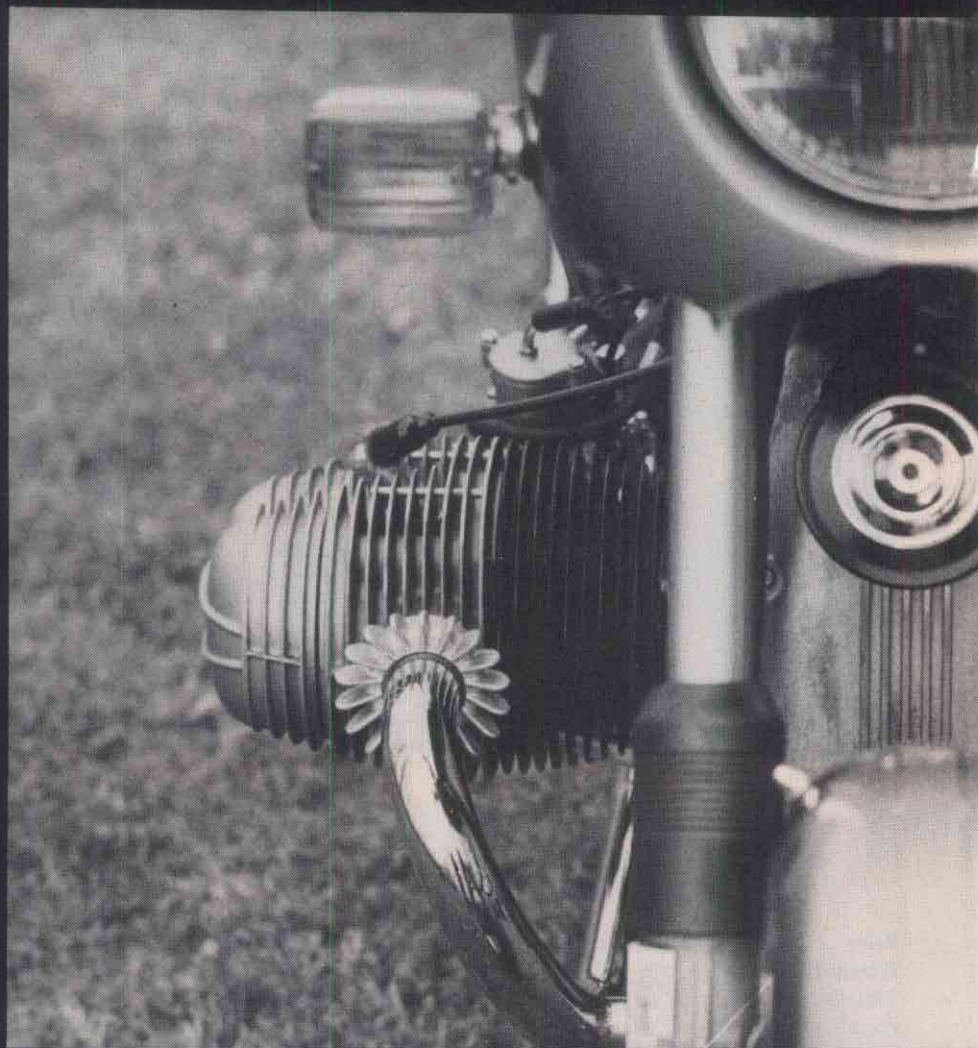
The high-priced, go-fast, do-everything street machine that comes stock with accessories you really couldn't afford if they were extras

■ In a time of cost rise and short supply of gasoline, a company that has long had an intelligent approach to the problem of performance versus economy has come up with an answer to the need for a long-distance, high-speed touring machine. The BMW 90S we tested achieved 49.6 mpg, and this would allow a comfortable, long-distance cruising range of over 275 miles. On this bike the average rider can travel to and from the various recreational areas located near each metropolitan area. The R 90S can only be described as a truly wonderful motorcycle. The superlatives apply to each and every area of superbike performance. Nothing strange, nothing trick, all straightforward engineering in the pursuit of excellence. The bike can be out-performed by a few in straight-line performance, but in the usable range that most of us utilize the BMW reigns supreme. We have long since become aware of the superior mechanical aptitude of the Teutonic breed, but to the new rider we must present the straightforward facts.

The drivetrain is current by modern standards, using plain bearings on the big end of the rods as well as the main bearings. The layout of the engine follows the /5 initiative in regard to the placement of things mechanical.

The cam rides below the crankshaft, thus placing the major portion of the engine mass on a relative plane with the final drive. As with all BMW's a torque response is present at lower rpm. The R 90S continues a long line of reliable opposed twins that perform above the limits of their power rating. Among the

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The whole story behind BMW's success; a unique twin-cylinder engine design considered by some to be the best.

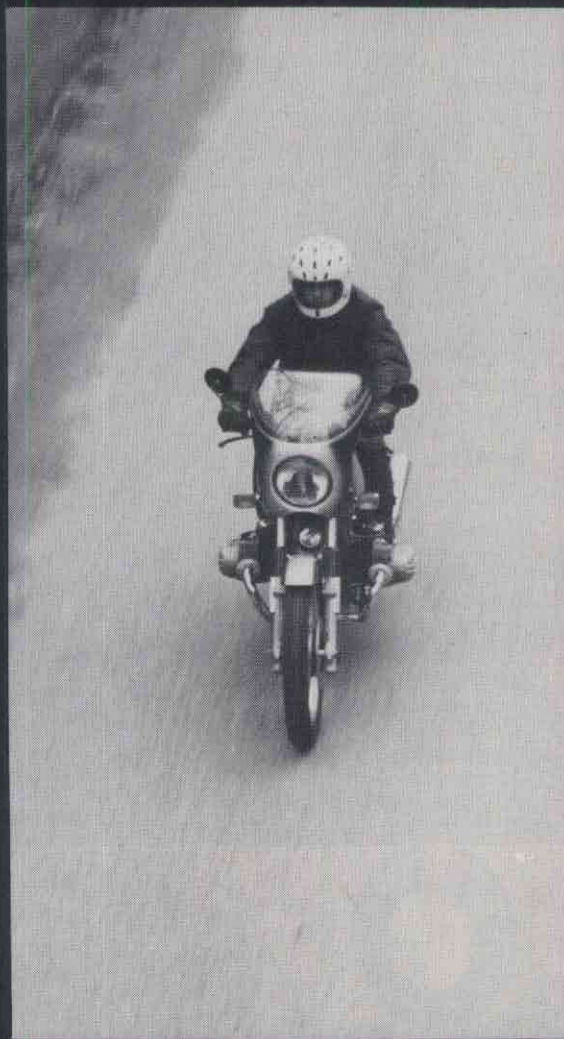
subtle refinements are an increased alternator output and a battery that has been increased to allow the electric starter to be employed in all but the most extreme cases. If it's too cold to use the electric starter, it's too cold to ride a motorcycle. The starter motor itself is the same basic unit found in the /5 series motorcycles. It can be found in its usual location above the main engine cases.

Early /5 series bikes were found to have some handling difficulties at cruising speeds. They lacked the high-speed stability that most people were looking for in this type of motorcycle. In the last half of 1973 the wheelbase of the entire line was extended, and this solved the problem. For 1974 BMW has also introduced a hydraulic steering damper. It is adjustable to two different rates — one for around-town use and one for

high speeds. On our test machine we felt that all the previous handling problems had been sorted out. The 90S is a truly fine road holder at any speed, but it is truly in its element on the open road.

One's initial ride on this new machine leaves an impression of sophistication and excitement. At first there is no hint of speed; the illusion is one of complete detachment, like a magic carpet ride. It's easy to get caught up in such reveries until you glance down at the instruments and suddenly realize that you're traveling just too damn fast. This is a machine that you have to ride by the instruments, like a Boeing 747 or the like; there's that much comfort and isolation from the elements.

A main contributor to this sensation is the amazing lack of mechanical engine noises. The R 90S makes a Bonneville seem like a freight train. Another reason



The new "S" machine at speed — it's deceptively fast and can "eat" hot Porsches for breakfast.

for this effect is its partial fairing. Touring riders familiar with fairings know just how much engine sound is reflected up in front of the rider rather than lost in the breeze as it normally would be.

BMW's have always been the oddballs of the cycle industry. The Earles-forked, shaft-driven, stark-black opposed twins certainly were eye-catchers, and if they didn't catch your eye you couldn't miss the unfailing "clunk" from the transmission during a shift, which rang out loud and clear over an almost nonexistent exhaust note. But times have changed. Gone is the Earles-type (leading-link) front suspension, gone is the all-black paint job, and with the new five-speed transmission you have to see the bike to know that it's there at all.

The transmission adds much more to the new R 90S than quiet, though. The

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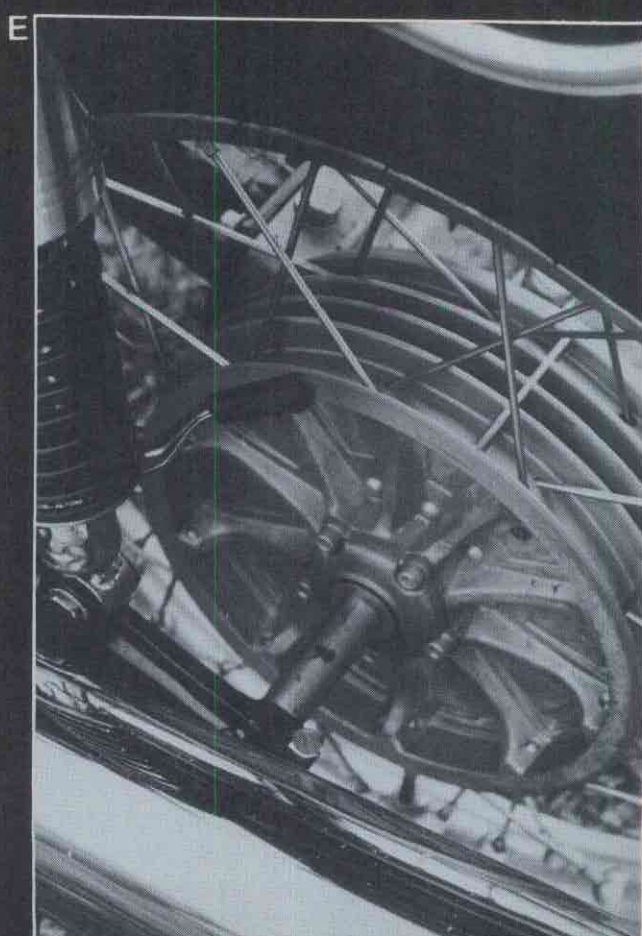
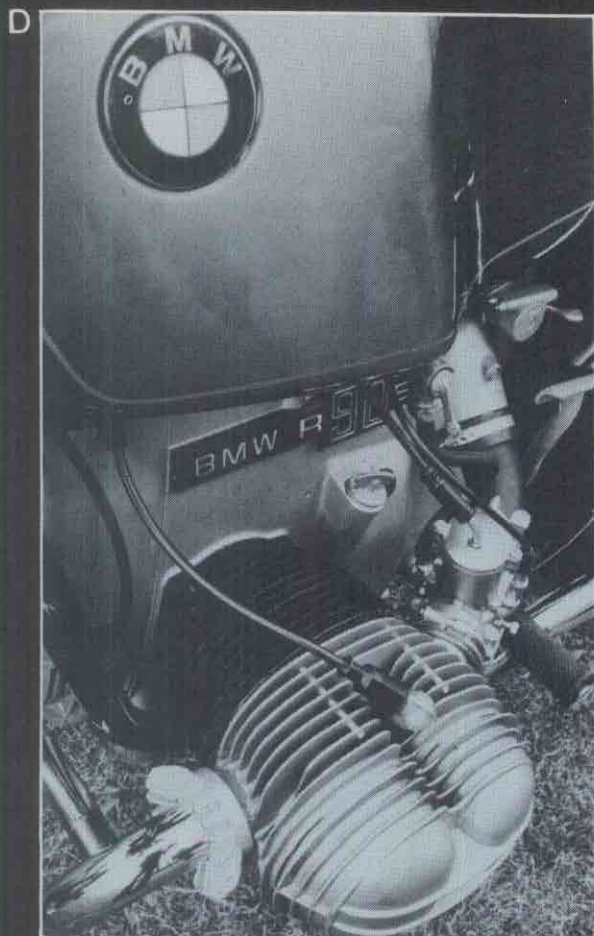
extra speeds make the new BMW line a much better group of motorcycles on two counts: first, acceleration off the line and through the gears is much quicker (the new first gear at about 13:1 overall is super-low for a 900); and second, the extra gear ratio allows a higher cruising gear for even better gas

mileage, reliability and touring comfort. Once your eye gets past the sexed-up seat-tank arrangement on the "S" model, you quickly notice the front discs. The "S" machine gets a twin set of 10 1/4-inch stoppers up front, while the other members of the 1974 BMW lineup get only one. The smallest BMW, the R60/6, retains last year's d.l.s. drum brake sans left hub cover. As is standard practice, the discs are hydraulically actuated and the calipers are built right into the lower fork legs. The rear brake is the same drum unit as always and can easily squeal the rear sneaker at will.

The folks at YBM Cycle Sales did a great job of preparing the motorcycle for delivery. We are happy to find a dealer with such dedication to the brand and such a conscientious service department. We were certain, therefore, that our test machine was truly representative of a well-tuned, properly set-up R 90S. Even so, we returned the machine after testing with a bit of skepticism in our hearts. It is undoubtedly one of the outstanding motorcycles ever created, but that near-\$3,500 price tag was still too much to swallow.

Just think what you can have for

- A New double hydraulic discs for the R90 S; others get just one at best.
- B Complete automotive-like instrumentation. Clock is newest item.
- C Plastic fairing stands out as "cheap" on a \$3500 machine.
- D Half of the story. Each 450cc cylinder gets a 38mm Dell'Orto.
- E Rear drum rides naked on the left for style, whatever that is.
- F The other half. Exhausts have a balance pipe below, at the front.



\$3,500. How about a Kawasaki 500, a Suzuki 500 and a good Yamaha dirt bike to round out your stable? Or how about a new Z-1 and enough cash to tour all summer around the U.S.? Or maybe just a Yamaha RD 350 for you and a Volkswagen for your wife. It's one big chunk of dough, but if you must have the fastest BMW ever made, it's there for the price. The average BMW rider probably won't be paying that price, though; he'll certainly settle for the R 90 without the "S" (if indeed he wants to go as high as a 900) and save a good deal of bread.

BMW R 90S

Price	\$3450.00
Warranty	6 months/6,000 miles
Distributor	Butler & Smith Inc. Norwood, New Jersey
Resale value after one year	NA

ENGINE

Type	4-stroke OHV opposed twin
Displacement	898cc
Bore & Stroke	90mm x 70.6mm
BHP @ rpm	75 @ 7200
Advertised c.r.	9.5:1
Carburetion	(2) 38mm Dell'Orto
Overall gear ratios	
First	13.21
Second	8.59
Third	6.21
Fourth	5.01
Fifth	4.50

RUNNING GEAR

Frame	double-cradle tube steel
Rake & trail	NA
Suspension	telescopic forks (f) shocks/swinging arm (r)
Tires	
front	3.25 by 19-inch Metzler
rear	4.00 by 18-inch Metzler
Brakes	
front	(2) 10.25-inch discs
rear	200mm by 30mm s.l.s.d.
Electrics	12 V battery/280 W alternator, electric starter

GROSS MEASUREMENTS

Weight	490 lbs. (wet)
Wheelbase	57.5 inches
Seat height	30.75 inches
Ground clearance	8.25 inches
Handlebar width	29 inches
Fuel capacity	6.4 U.S. gallons

COMFORT RATING

1. Vibration	10
2. Suspension	9
3. Noise level	9
4. Seat	9
5. Handlebars	8
6. Start mech	10
7. Controls	9
8. Stand	9
9. Shift mech	10
10. Switches and instr	10
Overall rating	93

PERFORMANCE

¼ mile	13.4 sec @ 100.20 mph
0 to 60 mph	4.2 sec.
braking dist. from 60 mph	NA

SUMMARY

More displacement, more horsepower, more speeds, new disc brakes and a super-slick transmission that doesn't go "clank." It's one super motorcycle with one super price tag.

