



# MAKING TIME: BMW R90S Road Test

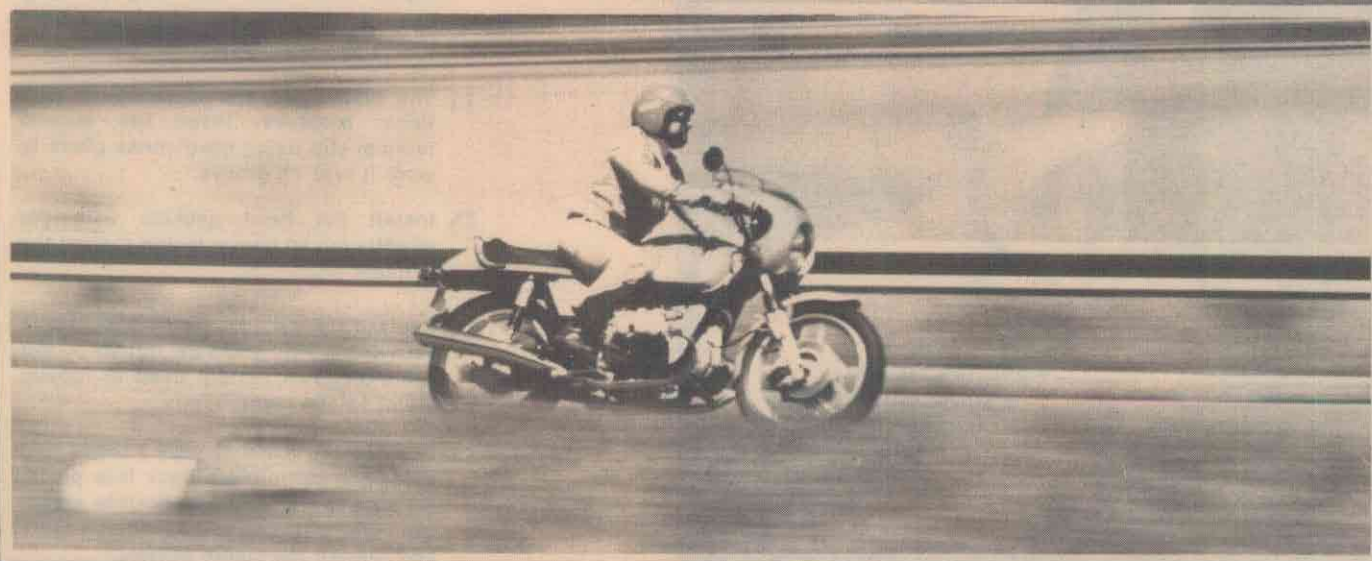
■ Complete objectivity is the primary consideration in evaluating any product, be it a motorcycle, an automobile, a washing machine or an accessory like a tool that takes the hassle out of fixing flat tires. Twenty years from now it may be possible to take the latest ultrasafetytized, zero polluting motorcycle and wheel it onto a machine that vaguely resembles a present day dynamometer. But the machine will be much more than that.

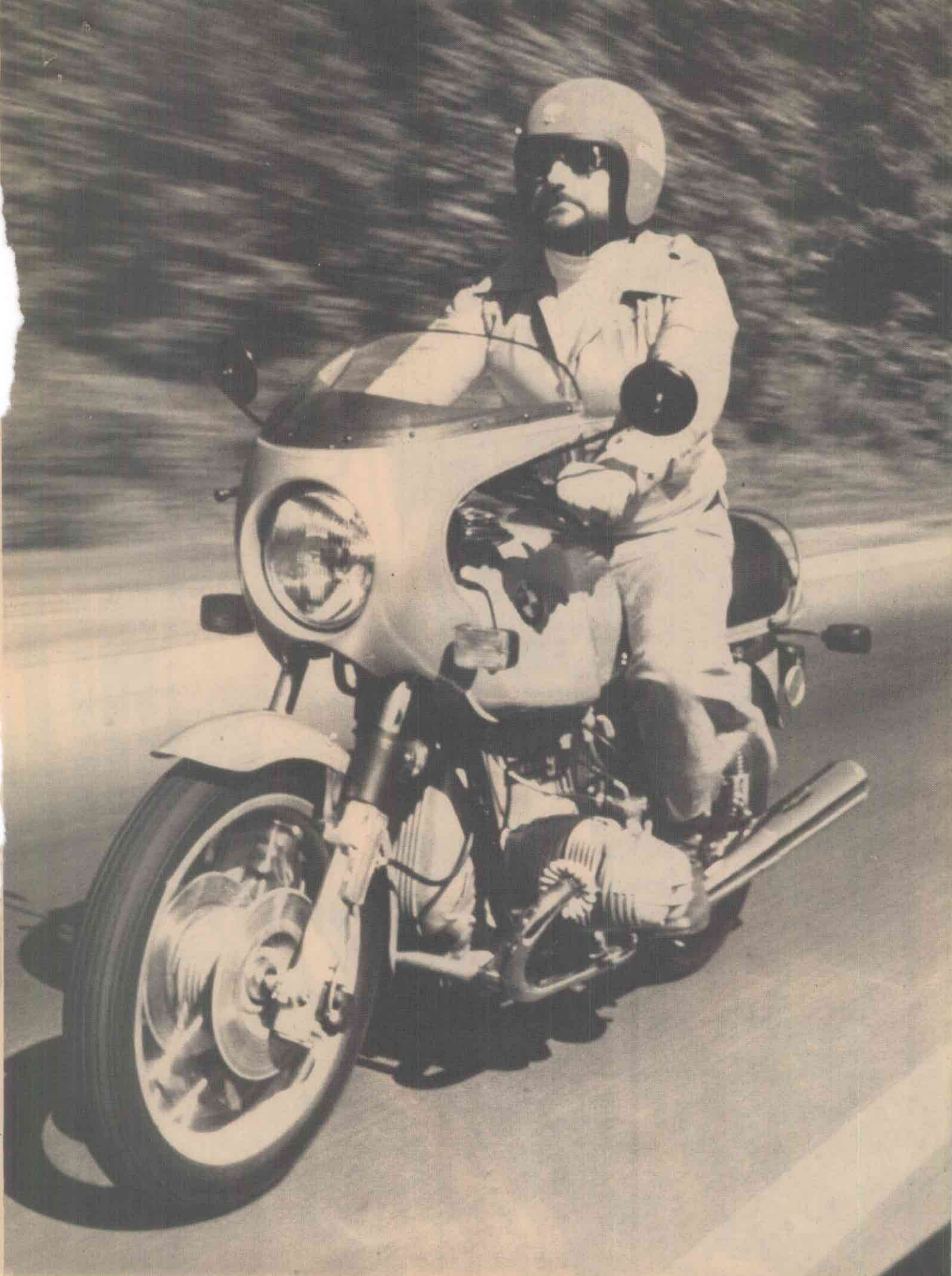
Numerous conductors and sensors will attach to the motorcycle and send bits and pieces of information to a bank of computers. The machine, once cali-

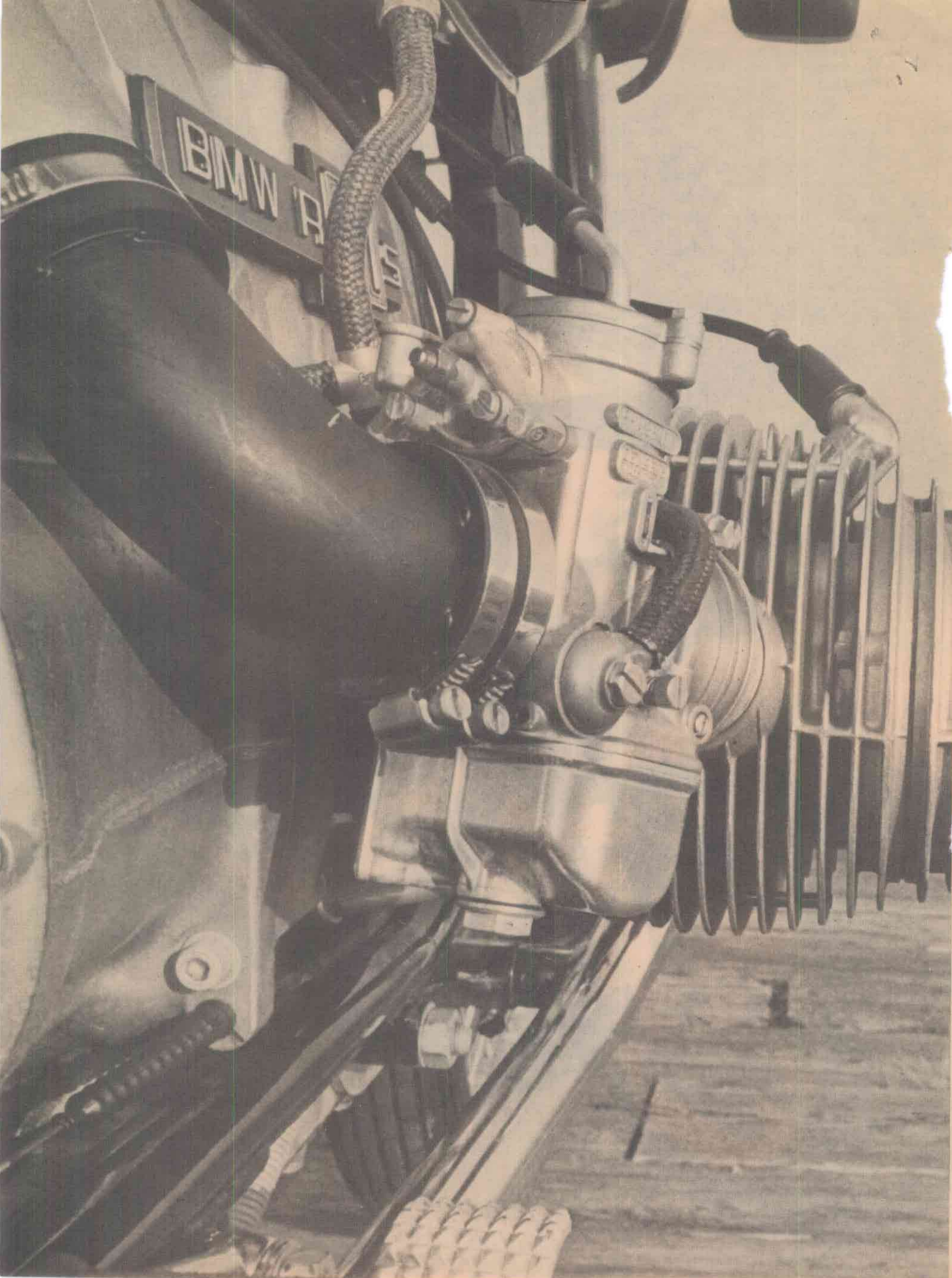
brated, will be able to evaluate handling, cornering, braking and acceleration parameters of the bike without leaving the air conditioned environs of the laboratory. The results of a battery of tests ranging from effects of crosswinds and hauling a passenger of varying proportions to the coefficient of friction of the tires will be spit out of the machine on a piece of magnetic film. The film will then be fed, automatically, into an advanced generation printer and out will pop an edited, proofread copy of a comprehensive, totally objective road test, ready for inclusion in your favorite motorcycle magazine.

Stalwart motorcycle testers will have long disappeared from unemployment insurance lines and in their new vocations as computer repair technicians, will talk about the "good old days" when road testing hazards included gravel rash rather than electrocution.

Until that time, readers will have to be content with "human objectivity" which, as psychologists will tell you, is less than ideal. Take the case of our automotive counterparts. I defy any automotive roadtester to assume the same neutral objective set when turning the key in a Ford Pinto MPG as he would in a Ferrari Daytona. A chimpanzee







could do it perhaps, but not someone deeply involved and interested in a 4-wheel state-of-the-art.

The same thing holds true in the bike field. No matter how hard we try, we can't approach a BMW with the same vibes as swinging a leg over a Honda Dream.

The BM's always have commanded an extra measure of respect even before the bikes left their stands. Tradition and reputation for non-compromise no doubt influence our initial impression of the German machines but that just makes us scrutinize more closely to see if our initial reaction is justified. Past BMW's have always bowled us over with their quality of workmanship, but left us somewhat unsatisfied by their performance. Sure, they were extremely comfortable and reliable, but their heavy flywheeled engines, clunky transmissions and generally flat "git" made us eager to turn to the latest offering from the land of the rising sun. If the Europeans were content with an even-paced Point A to Point B, fine. But this is the US of A and one look at our soft

drink and beer commercials will tell you that no one, but no one, sits still for one minute. We're all either hang gliding or smashing tennis balls or doing crossed up jumps on our dirt bikes. No sir, but the staid old BMW wouldn't be at home here.

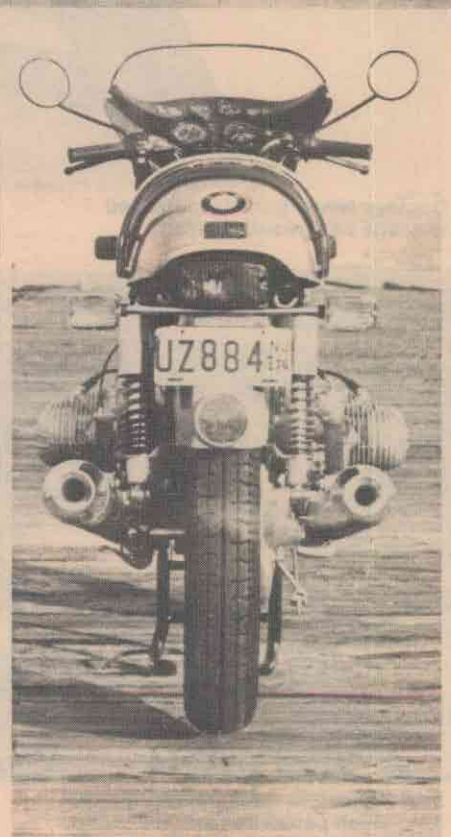
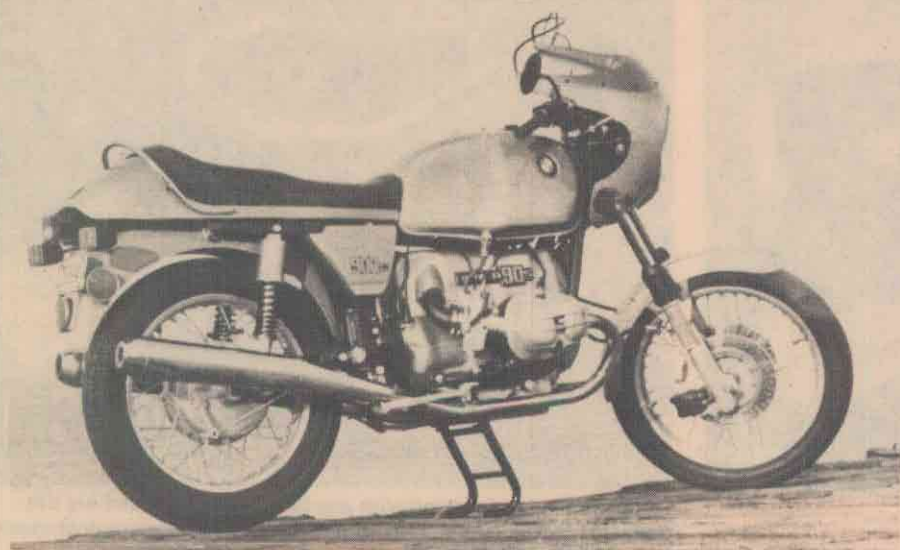
Apparently, BMW marketing people must have watched some of our Pepsi and Schlitz commercials because there suddenly appeared on our shores a new breed of BMW.

You could say that the R90 S is the BMW for people who hate BMW's. It is unmistakably BMW in appearance but "tradition" is not what is ringing up sales on this model. First of all there's the matter of styling. With trick paint that's the neatest this side of a custom, turn signals that actually enhance the bike's looks and cafe touches lent by the mini fairing, front dual discs and kickup seat, the R90 S has received more compliments than any other bike we've had in our possession. You have your choice of two colors with this model—the flashy orange treatment that we had or a more subdued, equally trick silver rendition.

We would beyond a doubt rate the R90 S as the most attractive motorcycle on the road today. If you really want to see something, take a peek at this bike equipped with BMW's optional mag wheels (at \$300 per). They're something else.

Changes in the '75 model include, most obviously, drilled discs. This certainly helps out the cause for unsprung weight, more important in BMW's case because it lessens the mass that 8.3 inches of fork travel has to maintain on road contours. Additional benefits are increased heat dissipation and better water dispersion.

Also new is the seat, which eliminates last year's slippery surface model. The seat is thinner than on the /6 touring models and at first glance it looked too thin to provide traditional BMW comfort. Our road test told us that when you have a suspension that can eat almost any bump in sight a fat seat isn't necessary. And as with most big displacement bikes, the R90 S favors the larger rider, so anything to reduce seat height is appreciated by the smaller set in their quest to put their feet on the ground.



# BMW R90 S

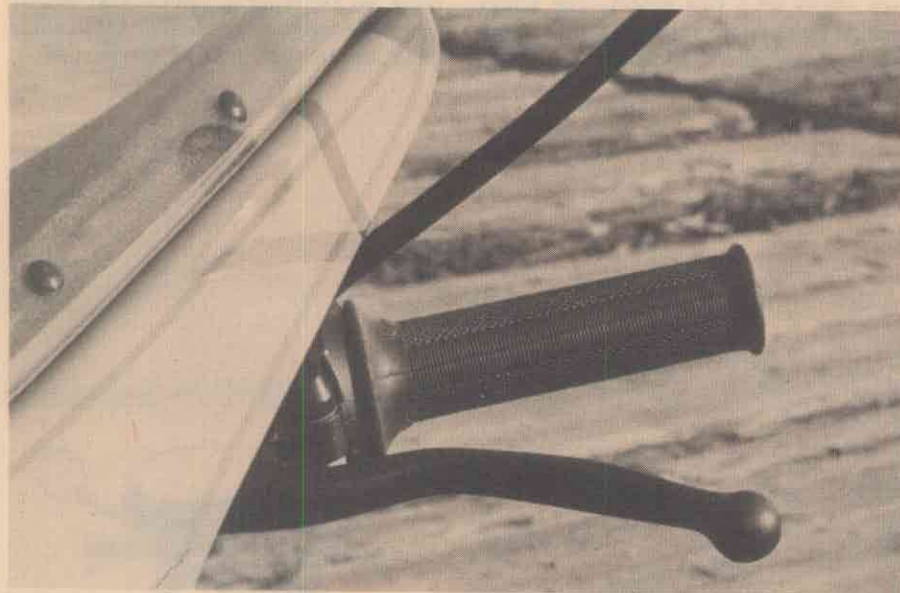
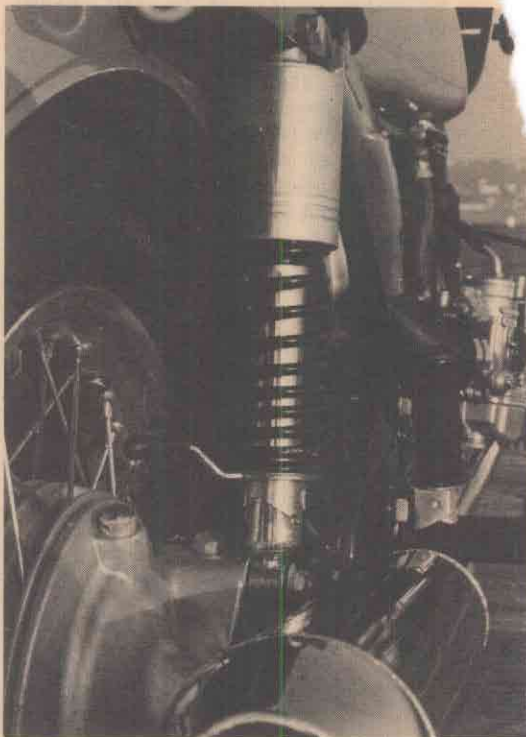
Left carb leaked fuel on shoes causing our tester great concern over staff practical joker's hotfoots.

The cockpit concept is impressive. Clustered behind the fairing are the usual tach and speedo plus the unusual voltmeter and electric clock which kept accurate time. There also is a "festival of lights" panel with brake failure, neutral, generator, oil pressure and directional signal warnings laid out in very readable fashion. The tach has a more distinct redline this year—a wise move in view of the engine's willingness to churn past the 7000 rpm limit.

BMW touts "human engineering" in its switch designs. We liked the horn/high beam flasher rocker switch, as it's convenient to give a slow-moving auto a double blast (although we wouldn't consider the timid horn a "blast"). The headlight switch has three positions (the

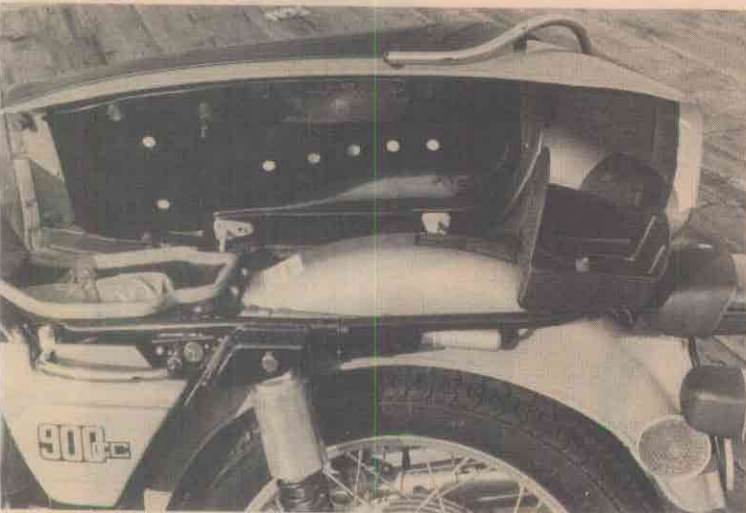
second burns a running light) but the control (along with the like designed kill switch on the right handlebar) was made to be reached by long fingers. We felt a better set up would have been to swivel the switches 180 degrees. Directionals are up and down a la Triumph. BMW says this follows the natural movement of the thumb, but we constantly had to tell ourselves "we are making a LEFT turn, and left is up." We prefer the more conventional arrangement of not thinking of which direction we're turning but just dumbly moving our thumb in the direction we point the wheel. (You can always say that BMW is the thinking man's motorcycle).

The kickstarter has gone the way of  
*(Continued on page 60)*



Doglegs levers provide increased leverage with reduced effort.

Rear shocks provide nearly 5 inches of wheel travel and have handle for easy preload adjustment.



Seat flips up to reveal removable tool tray, small parcel box and tire pump.



Tools are the best offered with any bike. Also included are tire repair kit and an owner's manual that carries routine maintenance to a 120,000-mile interval.



Cockpit concept is responsible for much of the R90 S' charisma. We found fault with some of the switch layouts.

#### BMW R 90S SPECIFICATIONS

Price .....	\$3965.00
Warranty .....	6 months/6,000 miles
Distributor .....	Butler & Smith Inc. Norwood, New Jersey

#### ENGINE

Type .....	4-stroke OHV opposed twin
Displacement .....	898cc
Bore & Stroke .....	90mm x 70.6mm
BHP at rpm .....	74 7000
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 & Trall .....	NA
Suspension .....	telescopic forks (f) shocks/swinging arm (r)
Tires	
front .....	3.25 x 19-inch Metzler
rear .....	4.00 x 18-inch Metzler
Brakes	
front .....	(2) 10.25-inch discs
rear .....	7.87 x 1.18-inch drum
Electrics .....	12 V battery/280 W alternator, electric starter

#### GROSS MEASUREMENTS

Weight .....	474 lbs. (wet)
Wheelbase .....	57.7 inches
Seat height .....	32.3 inches
Ground clearance .....	8.25 inches
Handelbar width .....	24.8 inches
Fuel capacity .....	6.4 U.S. gallons

#### COMFORT RATING

1. Vibration .....	9
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 .....	8
10. Switches and instr. ....	8
Overall rating .....	8.8

#### PERFORMANCE

1/4 mile .....	13.2 sec at 107.3 mph
0 to 60 mph .....	4.1 sec.
braking dist. from 60 mph .....	NA

#### SUMMARY

A deceptively swift machine that takes some getting used to. It thrives on high speed work which it handles with quiet efficiency. The suspension will spoil you for any other motorcycle.

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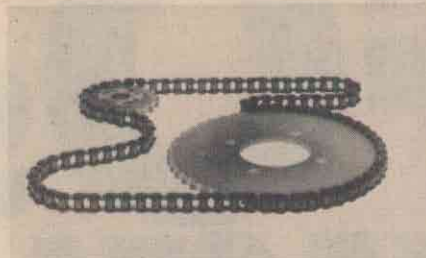
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## New Products

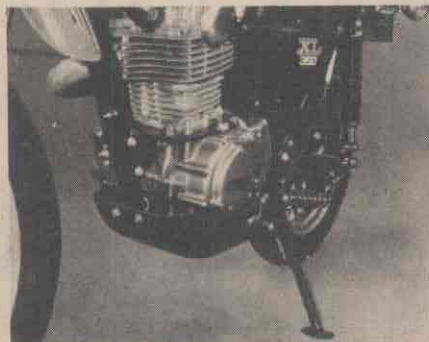
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available and being packaged with a Superchain and SuperSprocket in the Power Transmission Kit as a standard size replacement set or in the Super Power Pack, which upgrades a bike's final drive system to #60 chain for greater strength.

### UNBREAKABLE SKID SHIELDS

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### MINI BASH BARS

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## BMW R90 S

(Continued from page 31)

leather helmets and acetylene lighting. The starter motor has been beefed up so it cranks things over faster than it did before. If the 25 amp/hour battery goes dead, the owner's manual advises that you have it recharged. Push starting would seem a tedious task at best.

Brake and clutch levers feature a "dogleg" design for easier reach and better leverage. Absent from the right handlebars is the master cylinder and brake fluid reservoir found on most other bikes. This unit has been tucked out of harm's way under the fuel tank. Two hydraulic brake hoses hang in the breeze from the master cylinder to couplings mounted on the forks. The

"RAAACK"  
"HACCKK"  
"AHHHEM"  
"COUGH"

"I HEAR  
YOU'RE STILL  
SMOKING"

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THIS SPACE CONTRIBUTED BY THE PUBLISHER

lines are not shielded and appear vulnerable to evil-minded vandals and possible road hazards.

The 898cc engine has the largest diameter pistons in the industry. They ride on die-forged I-beam rods and move out and back in unison. The flywheel is a hefty 8-pound unit and is responsible for rear wheel screeching downshifts if you neglect to bring up the revs before disengaging the clutch. The dry, single-plate clutch requires a moderate pull and engages during the last quarter of its travel.

Just sitting on this bike is an interesting experience. The low, narrow bars bend you forward towards the cockpit. There exists an intimacy between you and the instruments similar to the feeling you get in a sports car. With your feet on the pegs, the big Dell'Orto accelerator pump carbs nestle lightly against your shins. It's a very tucked in feeling, one that the sit-back-and-enjoy touring types will find uncomfortable at first.

The ignition key fits into the lock on the left side of the headlight nacelle. Flick the dual fuel taps to the "on" position, advance the choke lever mounted on the left side of the engine and punch the "start" button. The starting motor cranks a while before the big twin kicks to life. A healthy warmup period is required before the bike will idle smoothly. Blipping the throttle causes a marked torque reaction to the right. All kinds of shaking and shuddering occur in response to throttle application at under 3000 rpm.

Snick into first. The neutral light winks off instantly, but you're not in first. Feather the clutch some and try again. This time you're rewarded with a satisfying "click," a far cry from the old "clunk."

First gear is on the tall side, so you have to be generous with the throttle and slip the clutch. More power. The tach needle climbs to the red. Bang shift. The bike lifts up on its suspension like it was goosed. Bang third. The speedo is well into the 70's. It sure doesn't feel that fast. The engine elicits a sports feel, like a Porsche. There's a muted sympathy of pushrods, but little else.

Fourth. Approaching 100 mph, you're totally impressed with this machine's behavior. There are plenty of other motorcycles that will do the ton, but the sensation on most of them is that the bike is taking you for one hell of a ride. Better hold on tight. Not so with the R90 S. Hunched down over the fairing, the BMW seems completely unobtrusive between your legs. It is traveling at an incredible speed but the feeling is one of the bike being an extension of our own body. You are in total control of the situation. It's almost as if the bike is saying "Okay, what's next?"

Fifth. Twist the throttle at 100 and the

bike moves off smartly. Crank the steering damper to the second of its three positions and a very subtle dampening force is activated. Twist the knob once again—a position recommended for high speed riding over rough roads—and a bit more control is added. We'd like even a little more, thank you.

Running out of road, we crunch on the brakes. The front discs have a good feel—not overly sensitive. A moderate tug on the lever produces a good progressive action. The rear drum would lock the wheel if desired, and showed adequate fade resistance. The rear brake features inspection windows allowing you to peek in and determine your lining's degree of wear. The linings are color coded. The inspection windows also permit lining dust to escape. But, as we learned after a thorough washing, those nifty windows also allow water in as our rear brake became totally useless until it dried out.

We experienced two other problems while the R90 S was under our observation. First, the left carb must have picked up some dirt as it leaked profusely. Since our foot was positioned under the carb most of the time, we contracted a good case of gas saturated shoes. The second difficulty was that the steering lock refused to lock. The "one key fits all" (ignition, steering and seat locks) would slide in and turn but the lock refused to be pushed home. Kind of scary when you're entrusted with \$4000 worth of motorcycle in Rip-off City. The BM didn't care much for the city. The tall first gear and low bars don't blend well with snail-paced traffic. Taking off at stoplights produced the rather unusual sensation of the front, rear or both ends of the suspension rising up like an elevator as the bike started to move.

The open road is a different story. The degree of control offered by the suspension and the strong engine torque made for some of the best Point A to Point B times of any large displacement motorcycle we've tested. Riding the R90 S is a sport unto itself. One that motivates you out of bed at ungodly hours to seek the excitement of long, empty, winding roads.

## YAMAHA

(Continued from page 25)

ring fit is measured by determining the gap between the ends of the ring where they almost touch. That "ring end gap" obviously must be measured with the piston ring in its normal operating position inside the cylinder barrel. It's okay for the ring or rings to be off their pistons as long as the ring is perfectly square with the sides of the cylinder

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