

SURPRISE WINNER: 125MX Showdown
Tests: Honda 750F, BMW RT, Yamaha IT175
Kawasaki's Radical UNI-TRAK 500

CYCLE WORLD

**AND THE
WINNER
IS...**

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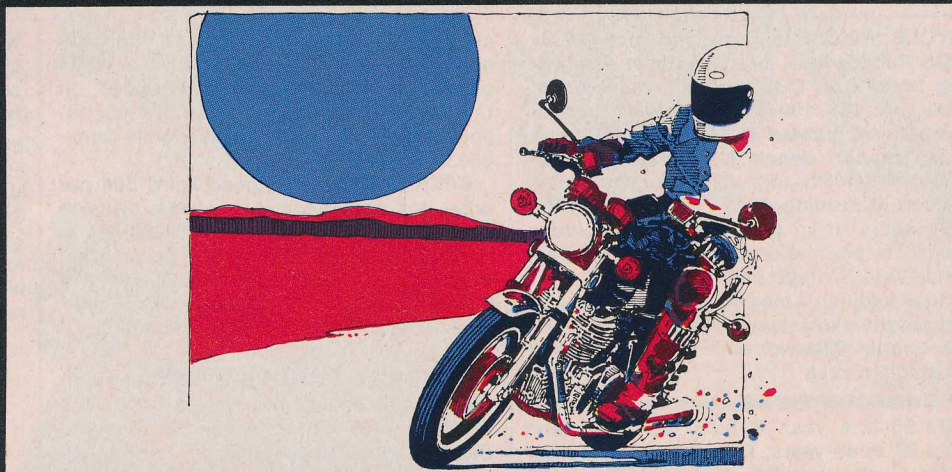
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BMW R100RT

Another Step Up For the High-Rolling BMW Owner

■ BMWs have always had a reputation for utility, a reputation with few detractors and a reputation which appeals to a small group of fiercely loyal owners. In years past—long past—there was little else about a BMW to appeal to most riders and BMWs were considered good for long-distance touring and for dragging around sidecars. Period.

That's changed due to very conscientious changes BMW has made to its motorcycles. Beginning with the first S, or Sport, models more than 15 years ago, BMW has ever so slowly turned the venerable flat Twin from a workhorse into not a race horse, but a fast trotter. Every couple of years a little more horsepower is milked out of the old Twin. Ten years ago the Earles forks gave way to the long-travel telescopic forks. Most interestingly, the biggest BMWs haven't gotten any lighter but have gained less weight than other big bikes and in the process have gone from being considered heavy bikes to being considered light bikes. Fifteen years ago



Cycle World commented on the heavy BMW R69S which weighed 450 lb. Today the R100RT weighs 550 lb. with fairing and saddlebags and it's a lightweight thousand.

It's also the heaviest, flashiest, most expensive BMW available.

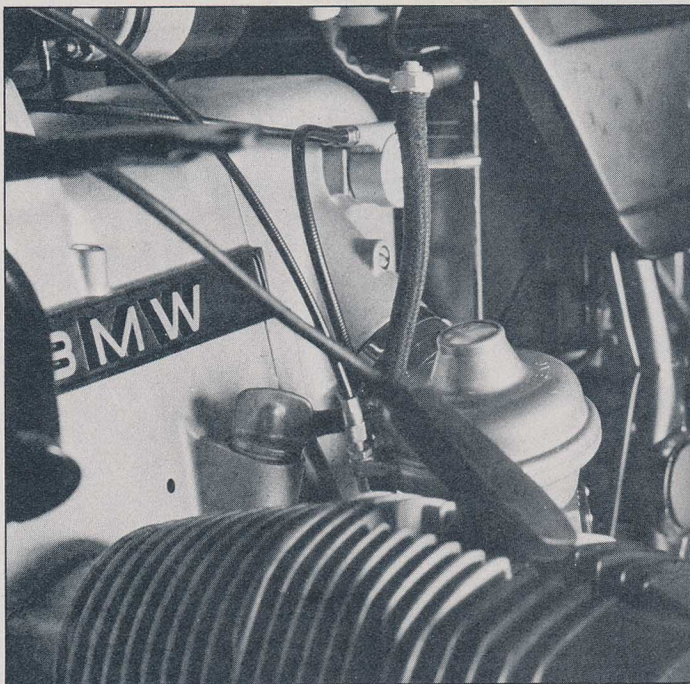
For being a new model, there is little about the R100RT that hasn't been seen before. For the most part it's made from existing parts or new parts seen on all the 1979 BMWs such as the new ignition points housing and new cush driveshaft. The fairing is a development of the R100RS, the saddlebags are standard Krauser saddlebags offered as BMW accessories before, the basic bike is identical to the R100RS except for the fairing and heel-and-toe rocker shifter which is new and exclusive to the RT.

What BMW has created is not a new motorcycle to compete with other brand motorcycles, but another step up for traditional BMW buyers. The merits and the liabilities of traditional BMW design remain with the RT.

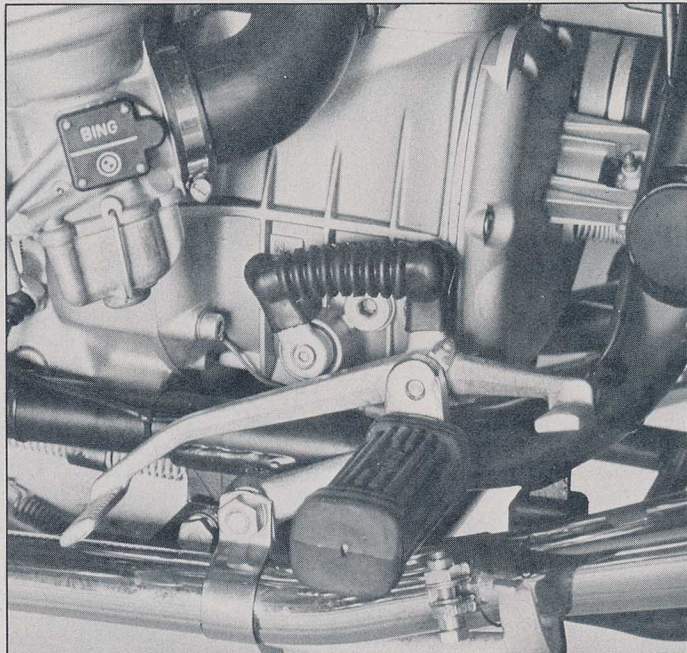
Take the engine, for example. It has always been a durable engine, smooth for a Twin and quiet for any motorcycle. The >







The BMW dipstick still makes checking the oil level a challenge. Throttle cable, choke cable and the fuel tank petcock are all positioned so the dipstick can't be easily removed.



New shift linkage was added to all BMWs in 1978. The RT gets a heel-and-toe rocker shift as well. Because the lower edge of the fairing is too close to the front of the shifter, it is difficult to use the rocker shift as it was intended.

power characteristics of the motor have endeared it to touring riders because of the excellent low-end power and the way it effortlessly cruises at high speeds. With a 94x70.6mm bore and stroke, piston speed is held down. And the 3:1 rear end ratio, a tad lower than the 2.91:1 of the S and RS models, is still high enough to allow the leisurely engine to relax in its duties.

It is a simple engine to work on. There are two cylinders and a total of four valves, easily adjusted with common tools. Ignition is provided by a battery and points, the points hidden under an engine cover and driven off the end of the cam. A new points assembly, allowing the BMW timing to be adjusted with the engine running and isolating the points from the camshaft with a tang-and-groove coupling, was added to all the BMWs this year.

The carburetors, two 40mm Bing CV, are easily accessible, accessible enough that the float bowls can be accidentally kicked off the carbs. With the overhead valve layout, it could hardly be easier to pull the heads or cylinders for top-end work.

The BMW's suspension has its own charm. With nearly 8 in. of travel in front and nearly 5 in. in back, the Bee Em is more than able to handle the largest bumps found on paved roads. It's particularly adept, for a thousand cc motorcycle, at handling unpaved roads. Although BMW can no longer claim to make the only street bikes with good suspension, the BMW suspension is still among the best available on street bikes.

Much of the appeal BMWs have always had has been in the special features. Things like the tool kit, which includes a monogrammed shop towel, six chrome-vanadium wrenches, five Allen wrenches,

13, 19, 21 and 22mm sockets, two screw drivers, a pair of lineman's pliers, tire irons, tire patching kit and an air pump. Then there's the H-4 quartz headlight, dual Fiamm horns, levers on the shocks for adjusting spring preload, and locking cable which fits inside the frame backbone when not in use. An auxiliary electrical circuit with a socket on the left side of the motorcycle, under the seat, can power electrical accessories like radios, electric riding clothes or a CB. BMW offers an AM-FM radio/intercom which plugs into the socket. Footpegs, for both the rider and passenger, are adjustable, allowing a rider to move the passenger pegs up for his own use or move them back to avoid interference with a passenger. On the RT there's a voltmeter and quartz clock, besides the usual electronic tachometer and speedometer. The controls are sleek; the throttle is a straight-pull Magura, a cable connects the dog-log brake lever with the brake master cylinder under the gas tank. Dual petcocks provide full use of the 6.3 gal. gas tank, give a backup should one petcock get plugged up, and enable a rider to have three levels of reserve going from only one petcock on to that petcock's reserve to the next petcock on and finally to the second petcock's reserve, each switch telling the rider he's that much closer to needing fuel.

All those features cost money and they all make for a quality motorcycle.

The features which turn a normal big BMW into a R100RT lend to the impression of quality. The fairing, which initially looks like the fairing from a BMW RS with a taller windshield, is in fact almost entirely different from the RS; it just looks so sleek it can be mistaken for the more sporty model. Incorporated in the fairing

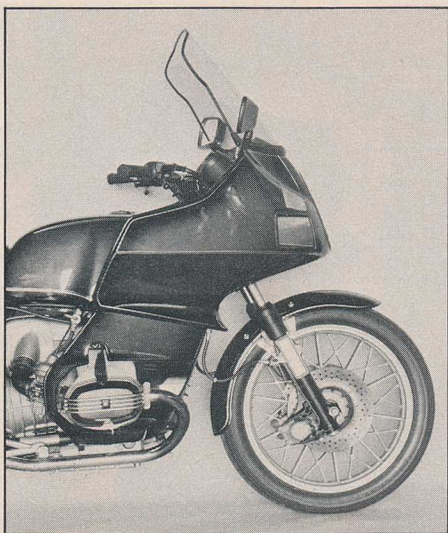
are lockable storage compartments, adjustable air vents, a windshield which can be adjusted over a 10° range to suit riders of different heights, the voltmeter and clock, and mirrors which look like part of the fairing, rather than an add-on accessory. Beyond the attractive shape, there is an impression of quality in the excellent paint work and nicely finished interior of the RT fairing.

Even the saddlebags, BMW's normal Krauser bags, are a quality product, carefully designed and produced. They can be removed from the motorcycle in seconds, mounted just as quickly, are spacious and attractive.

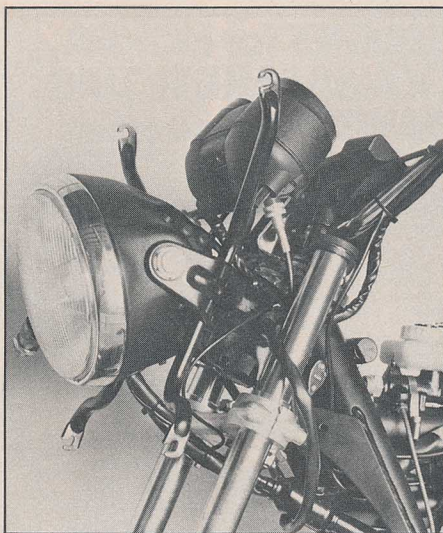
More than any motorcycle we've tested in the past year, the RT brought forth comments of approval from onlookers. It's normal enough for a flashy new Honda to elicit excitement from Honda owners or a new Superbike to win friends at the drag strip, but the BMW drew praise for its looks from dirt riders, Honda owners, non-motorcyclists—in short, people of all persuasions. The Beemer is not just attractive, it's striking; it doesn't look like any other motorcycle on the highway and the equipment on the RT is certainly unlike any other equipment available. At least for a little while.

Does the striking styling lend itself to superior function, the way BMWs have always looked different and performed better than other motorcycles in their own little niche? The answer, generally, is no.

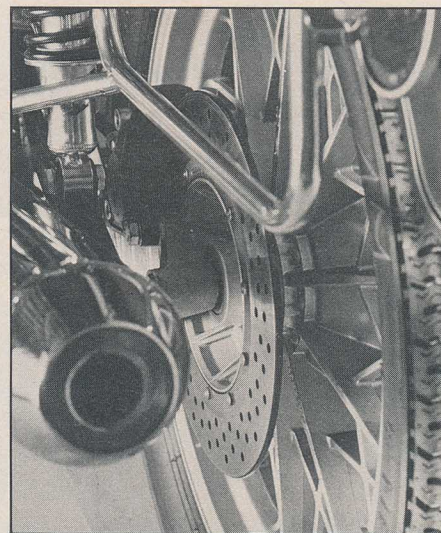
Most of the RT's identity comes from the fairing; also most of the problems come from the fairing. Unfortunately for BMW, the company also sells the Luftmeister fairing, patterned very closely after the successful Vetter Windjammer. And BMW riders, particularly those who



Overall outline of the RT fairing is similar to the RS fairing, but the RT is larger, has additional features and provides better protection.



Normal BMW halogen headlight is mounted to fairing brackets. A rubber boot mounts between the fairing and the headlight.



BMW's RT model has rear disc brake instead of the drum used on normal R100T model.

have been riding BMWs since the R60 days, frequently adorn their motorcycles with American-style touring gear, meaning lots of convenience and lots of very functional equipment. In Germany an accessory cannot legally be mounted on a BMW (or any other vehicle) without the accessory first being approved by the manufacturer of the vehicle. So in Germany the competition for BMW fairing has a handicap. Not so here. Lots of other fairings are available and Americans, generally, place high value on function.

On the surface, the RT fairing appears very functional. But when a rider tries adjusting the windshield to suit him, he will find that even in the most upright position it's a bit short for riders over 6-foot-2, and in the most angled position it's a bit tall for riders under about 5-foot-10. And then there's the matter of protection. All the test riders noted an abnormally high amount of buffeting around the head when riding on the RT. A passenger suffers even more. All the windtunnel testing apparently was done to reduce aerodynamic drag, not to improve protection from wind.

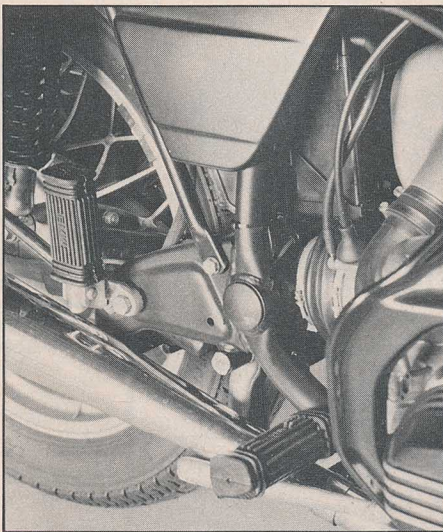
The windshield also is thinner than usual American windshields, so it needs creases in its edges to lend support. The creases detract from visibility through the windshield. At the outer edge of the windshield there is a cap strip, black and a half-inch wide, which trims the plexiglass nicely but, again, detracts from vision and is annoying for a rider. To have an adjustable windshield, BMW uses a rubber molding to seal the bottom edge. The molding has small rubber pins which are pulled through holes in the bottom edge of the plexiglass, but the pins will pull off after the first time the windshield is removed, making reinstallation of the windshield difficult.

Because the mirrors mounted on the fairing are farther away from the rider than usual bar-mounted mirrors, the field of

view is far smaller—too small, in fact. And the fairing vibrates enough that at low engine speeds, say below 4000 rpm, the mirrors yield a highly blurred image.

Air vents are a seemingly good idea, but the vents on the RT could give more air. The hottest parts of a rider on a warm day are still the shins and feet.

Then there are the storage compartments. By American standards, the storage compartments are tiny, not able to hold a standard size 35mm SLR camera. Worse is the position of the lock, at the lower outside corner where the peculiar hinged key rubs against the edge of the fairing when the covers are unlocked, making removal difficult. It took a half-hour to remove one of the covers the first time, although having the latch at one corner allows the other corner to be lifted up easily for a peek inside.

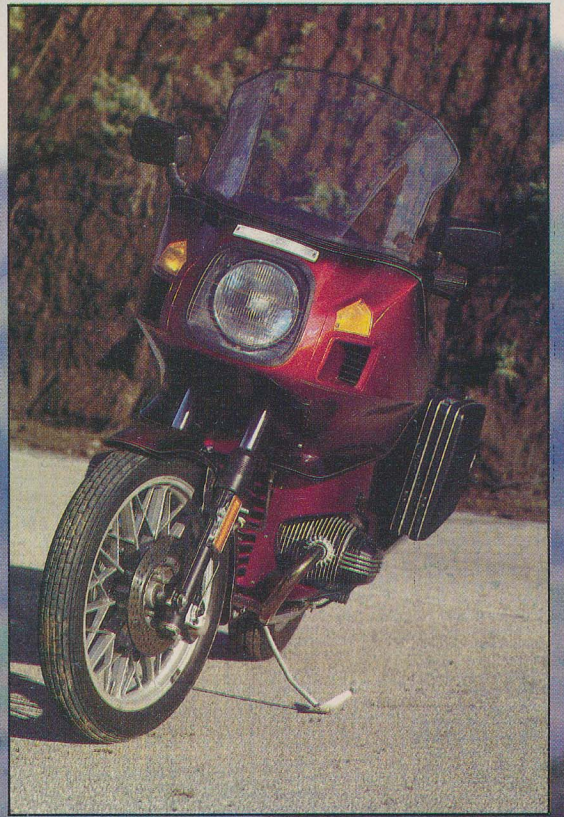


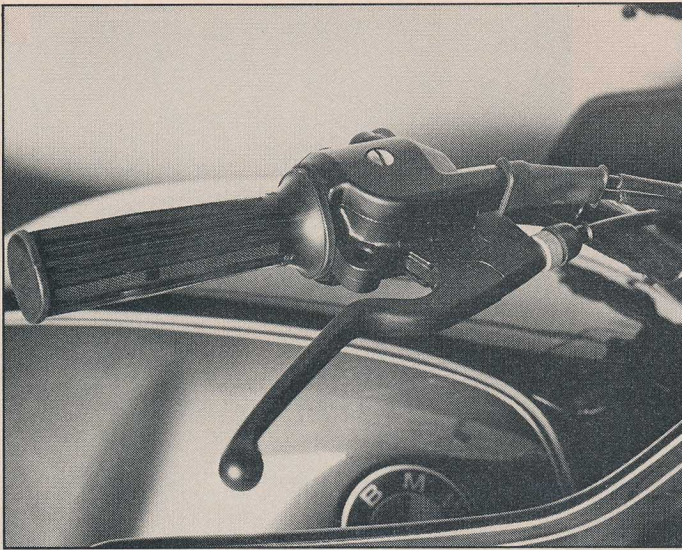
Passenger footpegs as well as rider pegs are adjustable, allowing a more comfortable seating position. Adjustment is limited, however, and the distance from fairing edge to front of saddlebags makes for a tight fit with a passenger aboard.

Designing a fairing for only one brand of motorcycle does allow some benefits. The mounting system should be simpler and fit better, though our RT arrived with the fairing loose on the mounts and correct installation required first loosening up all the mounts and remounting the fairing. But the fairing fits around the motorcycle closely, two foam pads on the inside of the fairing touching the sides of the gas tank. The best feature of the fairing is also its worst. The panel which fits around the fork tubes, which has rubber boots to allow the forks to move, stops the updraft common on other fairings that makes rainy weather riding miserable. The panel also necessitates a restricted steering lock, a total of 70° rather than 84°.

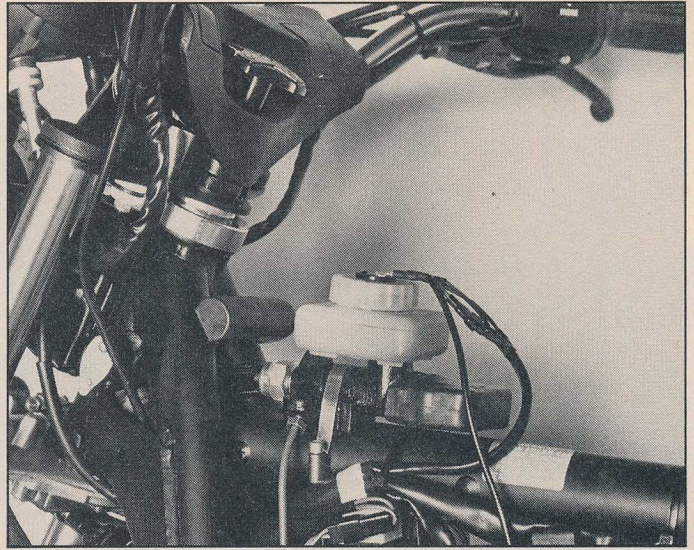
Overall the additional RT equipment does little to hinder serviceability. Removable panels around the engine are easily pulled for normal service. The only particular difficulties are in changing fuses and tires. The fuses are in the headlight shell and to reach them the headlight cover lens must be removed, the rubber gasket which holds it has to be pulled, the headlight taken out of the shell and finally the fuses are accessible. Rear tire removal is made more difficult by the saddlebag mounting bars and is further complicated by the rear disc brake. The drum brake BMWs are among the easiest cycles on which to change rear tires, so the difference is noticeable.

One other piece of the RT package attracted considerable comment: the heel-and-toe shifter. A year ago BMW changed to the Heim-jointed shift lever which improved shifting. Now the same linkage is connected to a lever extending fore and aft of its pivot point. Because the shifter is mounted closely to the lower edge of the fairing, a rider with a size 12 boot couldn't downshift without moving his foot off the footpeg. No one could use the heel portion of the lever for upshifts easily. The answer >

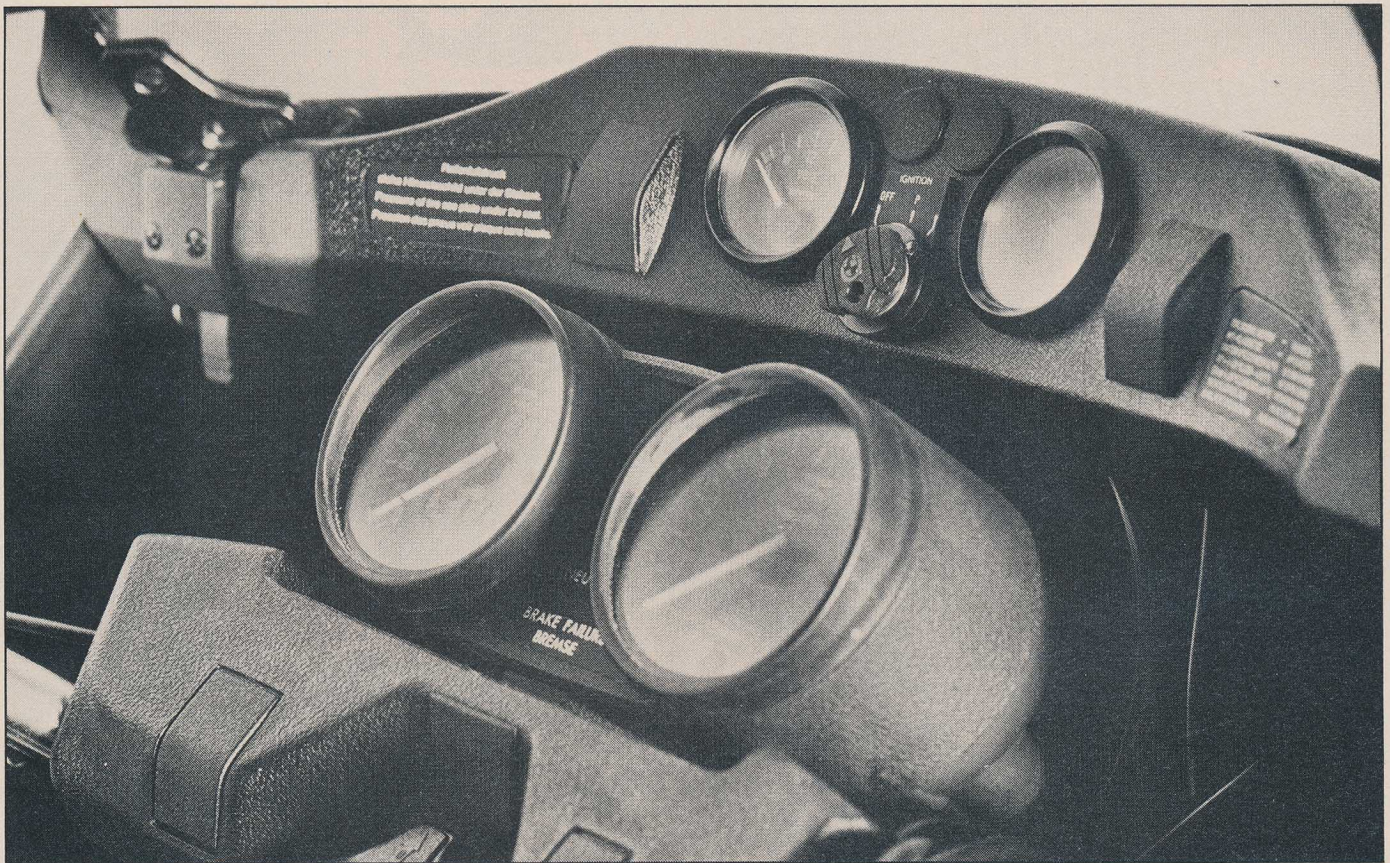




Magura dog-leg levers, straight-pull throttle and handgrips are used. The levers are fine, the throttle works well, but the grips were uncomfortable for most riders.



Master cylinder for the front brakes is hidden under the gas tank. A cable connects the cylinder with the brake lever. Steering damper, with four-position handle shown at the steering crown, is a hydraulic damper.



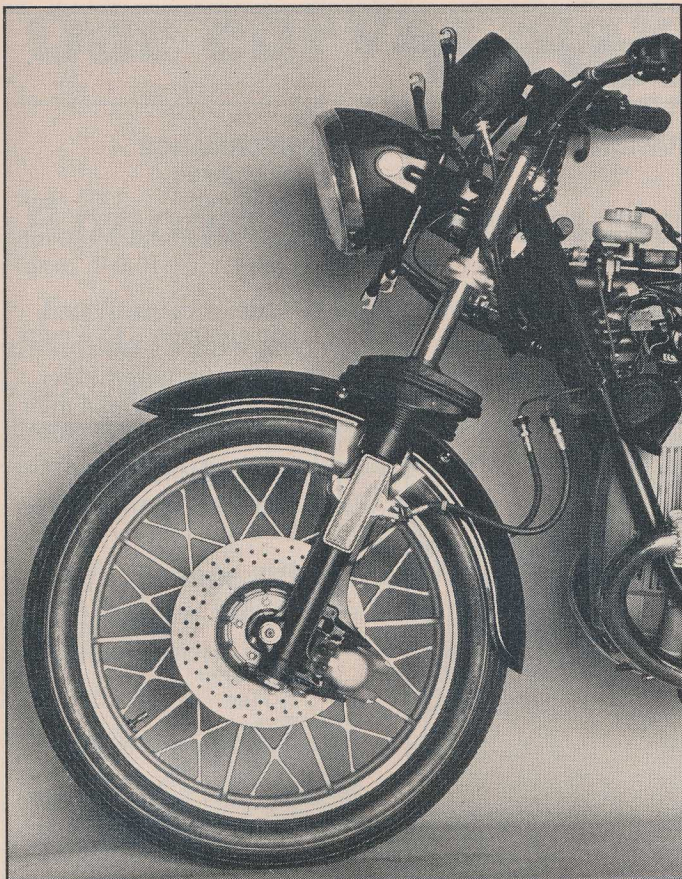
RT fairing has a dashboard for voltmeter, quartz clock, ignition switch, and has room for additional switches. RT uses the same gauges as last year's BMWs, rather than the larger gauges from the R65.

was to use just the front portion of the lever as a normal shift lever, but in that case a conventional rubber-covered lever would be superior.

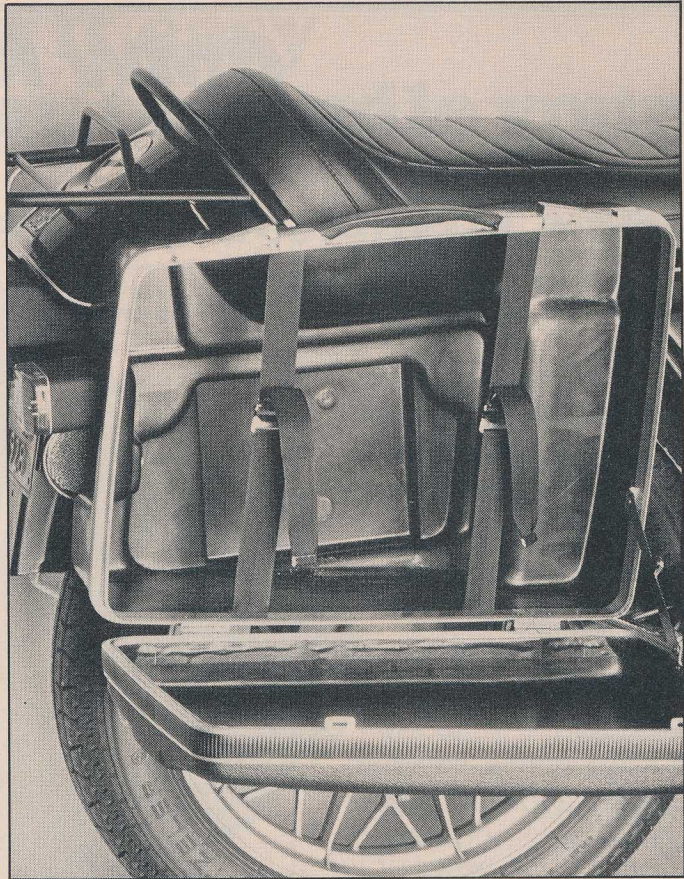
Details aside, the R100RT has some very endearing qualities. Cruising along back roads, the speedometer indicating a speed above the double nickle—way above—is where the big Beemer comes into its own. The long travel suspension sops up

large bumps and dips, keeping the bike on an even keel. Stronger fork springs help resist front-end dive and make the bike more stable at the cost of a soft freeway ride, an acceptable trade. The big Twin effortlessly pushes the BMW along as easily at 100 mph as it does at half that. The immense low-end power of the BMW is simply *there*, not making itself obvious until a rider climbs off the BMW and onto

a motorcycle that's supposed to be more powerful, yet can't jerk the rider forward with the same authority that the BMW has. It is quiet, smooth (particularly at engine speeds over 4000 rpm, or an indicated 75 mph in high gear), there is ample power for climbing hills or passing, and the 6.3 gal. gas tank provides a range of 250 mi. under normal conditions. The engine and suspension are as pleasant for over-



Long-travel front forks have 7.9 in. of travel. Dual front disc brakes are drilled, require heavy lever pressure for normal stops, but work well in the wet.



Standard Krauser saddlebags mount quickly, fit close to the bike, are spacious and attractive. They would be better if the bike's ignition key could be used to lock the saddlebags.

the-highway work as any motorcycle made.

Even the transmission is pleasant to use, shifting easily with nary a crunch to be heard. After years of BMWs which shifted like Caterpillar tractors, it's a treat to find the new BMWs improved. A spring-loaded cam-type damper in the drive shaft of all new BMWs is responsible for the improvement in shifting. Combined with the internal damper in the transmission and the new shift linkage, it leaves little to complain about, although the heavy flywheel still makes shifting a leisurely occupation.

On the debit side of the ledger are the little details: the seat that will make a man confess sins he hasn't committed, handlebars that managed to alienate all our riders, hand grips which compound problems with the handlebar bend making the posture even more uncomfortable.

The self-returning sidestand can allow the motorcycle to fall over too easily, the twin front disc brakes require far more pressure for normal stops than any other motorcycle save the Harley-Davidson Sportster, and the bike comes with four different keys, now that BMW has discovered the one-key system. True, one key does operate the ignition, fairing pockets, fork lock and gas cap, but another key is needed for the locking cable and two keys are needed for the saddlebags, one to latch them closed and another to latch them onto the motorcycle. All details.

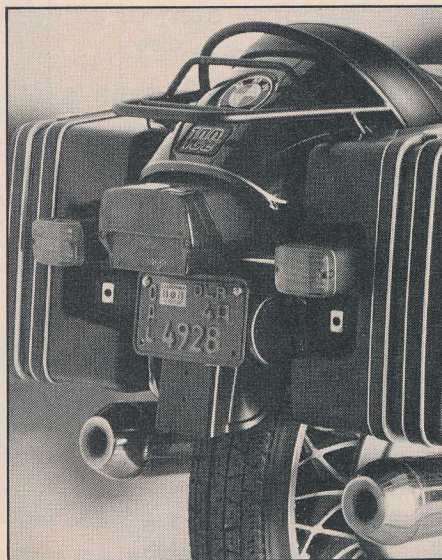
There are more serious drawbacks, too. Load capacity of the BMW is limited and there isn't room enough beside the swing arm for a larger rear tire which might be able to carry more weight. A normal size rider and passenger are a full load for the Bee Em. Handling is stable and secure, but cornering clearance is only moderate, the right rocker arm cover, footpeg and brake lever grounding on the right side, the sidestand and footpeg grounding on the left. Because the rear end of the BMW has lots of travel and drops significantly when the gas is backed off, it's easy to scrape things when cornering hard on the bike. Because of the gentlemanly nature of the big BMW, cornering clearance isn't a problem.

It's the nature of the motorcycle which saves it. As a direct competitor to other big bore bikes, it's short on speed and lacks the convenience of the latest Japanese efforts. But the person who will buy the RT won't be buying it because it's faster or more exotic in mechanical details, but because it's not like any other motorcycle.

The BMW R100RT will appeal to the traditional BMW buyer, a person who values a BMW's difference at any cost. And some because of the cost. What's important about the RT is not that it's as fast as a Japanese 500 or that it costs as much as three motorcycles of the same performance, but that it is *different*. As other bikes are getting heavier and growing cylinders and camshafts and valves, the

BMW remains relatively light and simple and it hasn't forsaken low-speed tractability and power for maximum horsepower achieved at an engine speed rarely used.

If a rider can survive the first thousand miles and become accustomed to the eccentricities of the big BMW, it becomes an enticing motorcycle. Even those who didn't enjoy riding the Beemer appreciated the influence it has, the sheer existence of a lightweight big bike with long-travel suspension and mildly tuned engine.

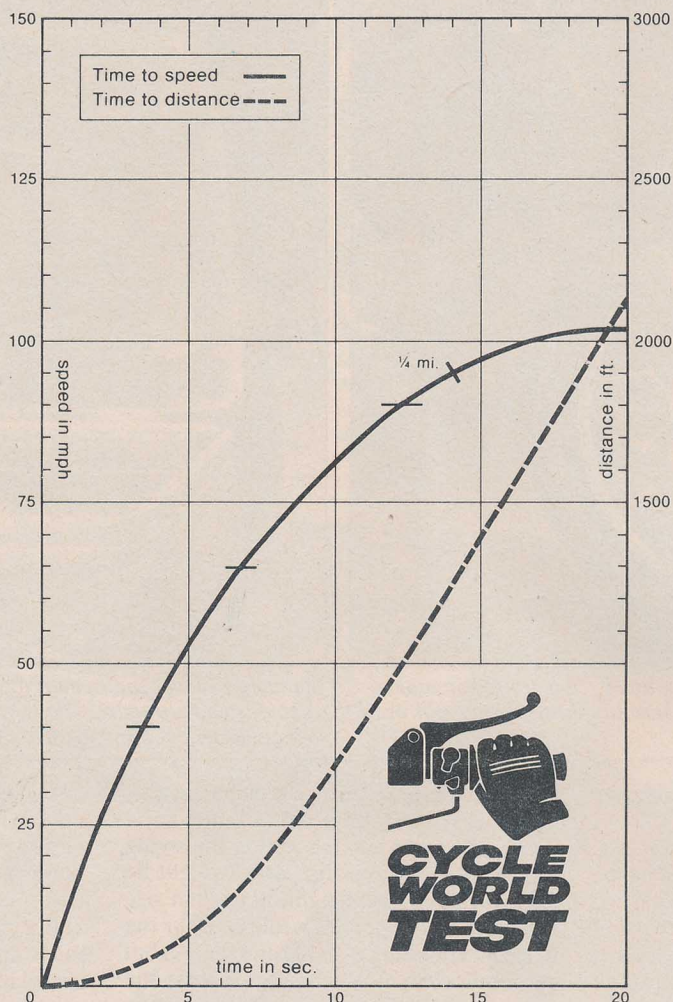


BMW R100RT

SPECIFICATIONS

List price\$6345
 Engine ..ohv opposed Twin
 Bore x stroke...94 x 70.6mm
 Displacement.....980cc
 Compression ratio.....9.5:1
 Carburetion.....(2) 40mm
 Bing CV
 Air filtration ..treated paper
 Ignition.....battery/points
 Claimed power.....65 bhp
 @ 6600 rpm
 Claimed torque.....55.7 ft.
 lb. @ 6500 rpm
 Lubrication
 system.....wet sump
 Oil capacity.....2.4 qt.
 Fuel capacity.....6.3 gal.
 Recommended
 fuel.....premium
 Starter.....electric
 Alternator.....12v, 250w
 Headlight.....60/55w
 halogen
 Clutch.....single disc,dry
 Primary drive.....none
 Final drive.....shaft,
 bevel gear
 Gear ratios, overall:1
 5th.....4.50
 4th.....5.01
 3rd.....6.21
 2nd.....8.58
 1st.....13.20
 Suspension,
 front.....telescopic fork
 travel.....7.9 in.
 Suspension,
 rear.....swing arm
 travel.....4.9 in.
 Tire,
 front...3.25H-19 Metzeler
 Tire,
 rear...4.00H-18 Metzeler
 Brake, front.....dual 10.1 in.
 disc
 Brake, rear.....10.1 in.
 disc
 Total brake swept
 area.....231 sq. in.
 Brake loading (160-lb.
 rider).....3.1 lb./sq.in.
 Wheelbase.....57.8 in.
 Fork rake angle.....28°
 Trail.....3.7 in.
 Handlebar width.....27.5 in.
 Seat height.....32.5 in.
 Seat width.....11 in.
 Footpeg height.....10.8 in.
 Ground clearance.....7 in.
 Test weight (w/ half-tank
 fuel).....550 lb.
 Weight bias, front/rear,
 percent.....46.4/53.6
 Gross vehicle weight
 rating.....877 lb.
 Load capacity.....327 lb.

ACCELERATION



PERFORMANCE

Engine speed
 @ 60 mph3394 rpm
 Power/weight ratio (160-lb.
 rider).....10.9 lb./bhp
 Fuel
 consumption ..43.2 mpg
 Speedometer error:
 30 mph ind.26.4 mph
 60 mph ind.55.0 mph
 Braking distance
 from 30 mph31 ft.
 from 60 mph156 ft.
 Standing start
 1/4-mile.....13.97 sec.
 @ 94.04 mph
 Speed after
 1/2 mile102 mph
 Maximum speed in gears
 1st42 mph
 2nd.....65 mph
 3rd90 mph
 4th112 mph
 5th124 mph
 Acceleration
 0-302.09 sec.
 0-403.18 sec.
 0-504.33 sec.
 0-606.04 sec.
 0-707.15 sec.
 0-809.21 sec.
 0-9012.20 sec.
 0-10017.62 sec.

