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# Rider

MOTORCYCLING AT



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## **BLUE BLAZES!**

**BMW's Smoother,  
Faster K1100RS**



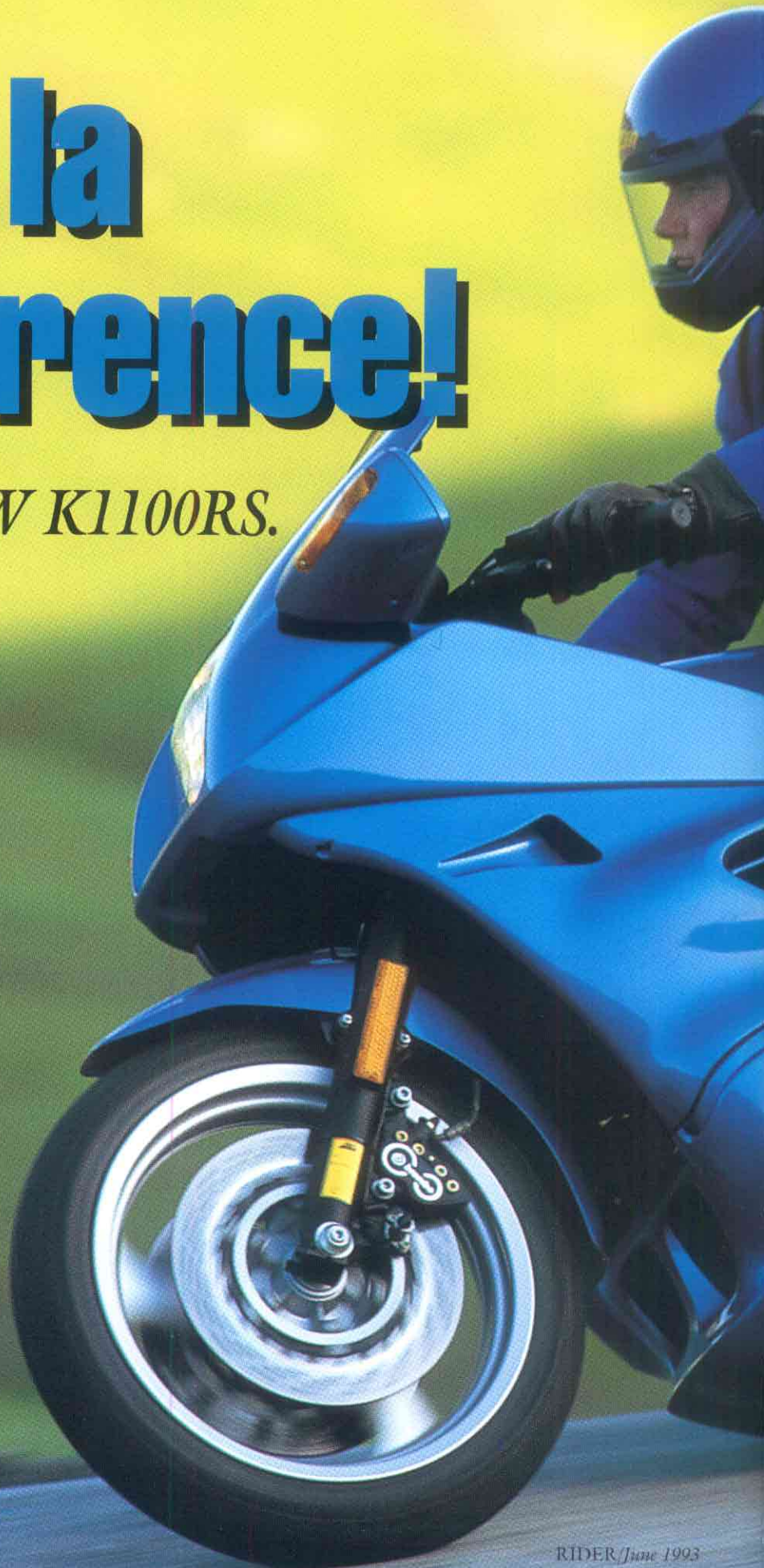
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**Another  
Sizzling  
& Sexy  
Daytona Bike Week**

# Vive la Différence!

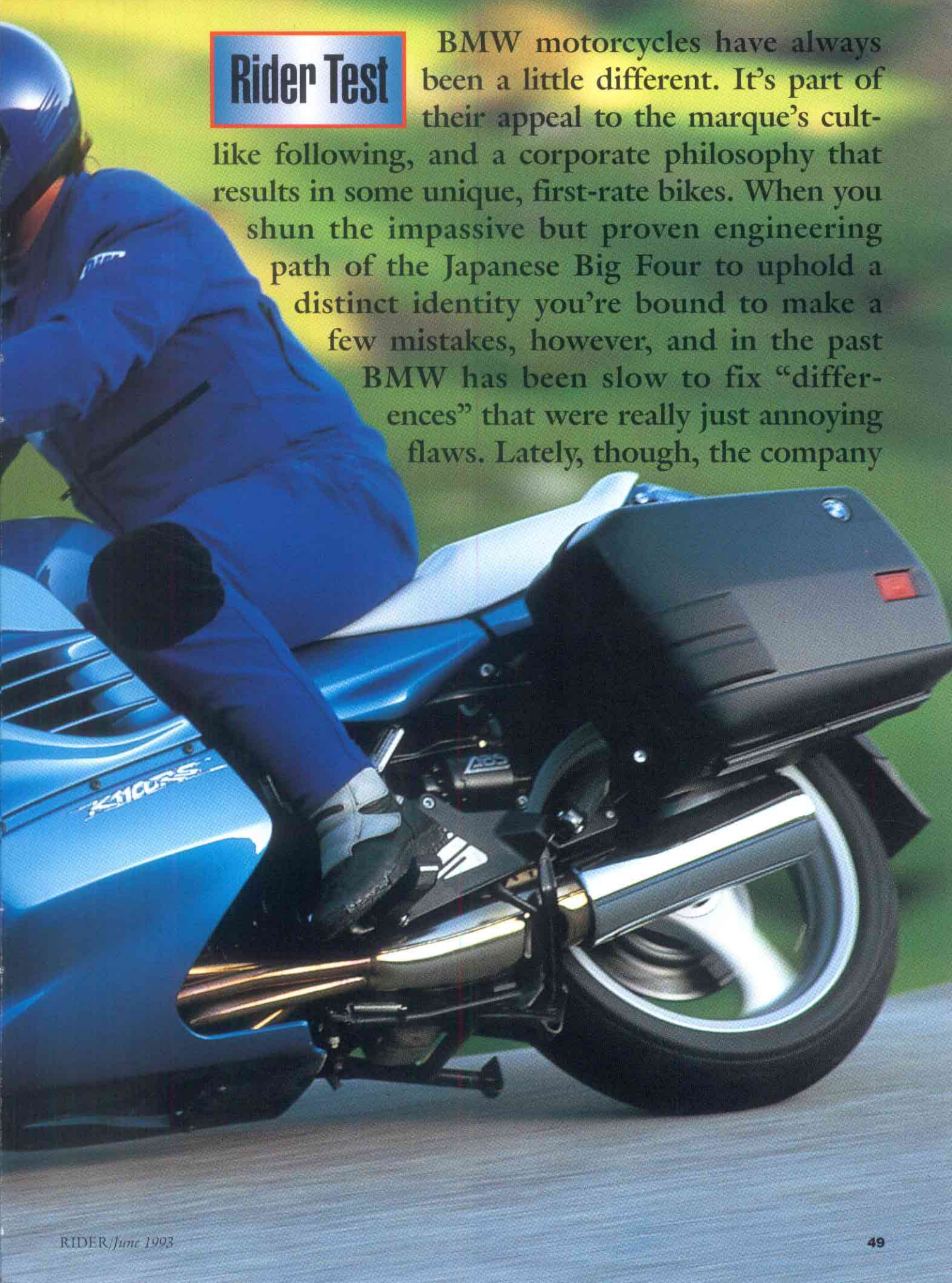
*The 1993 BMW K1100RS.*

by Mark Tuttle Jr.



## Rider Test

BMW motorcycles have always been a little different. It's part of their appeal to the marque's cult-like following, and a corporate philosophy that results in some unique, first-rate bikes. When you shun the impassive but proven engineering path of the Japanese Big Four to uphold a distinct identity you're bound to make a few mistakes, however, and in the past BMW has been slow to fix "differences" that were really just annoying flaws. Lately, though, the company





**New middle and lower fairing pieces on the '93 K1100RS provide increased protection from the cold as well as engine heat.**

PHOTOGRAPHY BY RICH COX/SLIDE ACTION





has been listening carefully and responding more quickly to its customers' wishes. Improvements that used to take several years are now incorporated in one, two at the most. And the motorcycles are getting really good.

Case in point: the new K-RS sport-touring machine. Fresh from receiving

**As our first long ride after weeks of rain, I grabbed photographer Rich Cox and endeavored to hit every classic, crooked California road between L.A. and Monterey.**

ing a host of modifications for 1991—including the beefy, tubular-steel K1 space frame, a 16-valve cylinder head and Bosch Motronic fuel injection/ignition control—BMW barely caught its breath before implementing many of the same changes made to the new K1100LT. In the K-RS power train the engine has picked up a 3.5mm increase in cylinder bore,

raising the liquid-cooled, longitudinal, flat in-line four's displacement to 1,093cc from 987cc and horsepower to 100 from 95. A new closed-loop, three-phase catalytic converter cleans up emissions considerably, and as a result of BMW police-bike business the alternator output on the K1100RS and LT is up to 700 watts—more than a Honda Gold Wing—from 460.

BMW accompanied the wattage increase with a battery upgrade, giving the K1100RS and LT a low-maintenance, 19 amp-hour lead-calcium hybrid unit that it says has lower water consumption, higher voltage per cell, is less prone to discharging and can handle more total recharges. The electrical system enhancements and catalytic converter are nice additions, but hardly noticeable from the rider's seat; the increase in displacement and power stands out. Even with the optional saddlebags the K1100RS weighs little more than its closest ABS-equipped competition, and with a full 100 horsepower and

77 pounds-feet of torque it's close to closing the gap between it and other liter-class sport-tourers.

Yet BMW's changes to the K-RS go well beyond merely bumping up its output. The bike's comfort level was also enhanced in several ways, including the addition of lovely new fairing lowers and side covers that duct more engine heat away from the rider's legs and provide greater shin and foot protection. In a clear break from tradition, BMW has fit the K1100RS's brake lever with a nifty thumbwheel adjuster similar to that found on some Kawasakis. And to further reduce the four-cylinder K-bikes' characteristic vibration, when the displacement of the engine was increased to 1,093cc BMW lengthened the connecting rods six millimeters and lightened the pistons by 25 grams. The K1100RS's rubber handlebar and front engine mounts have been optimized, and cushy new grips and damping weights added to the handlebar ends.

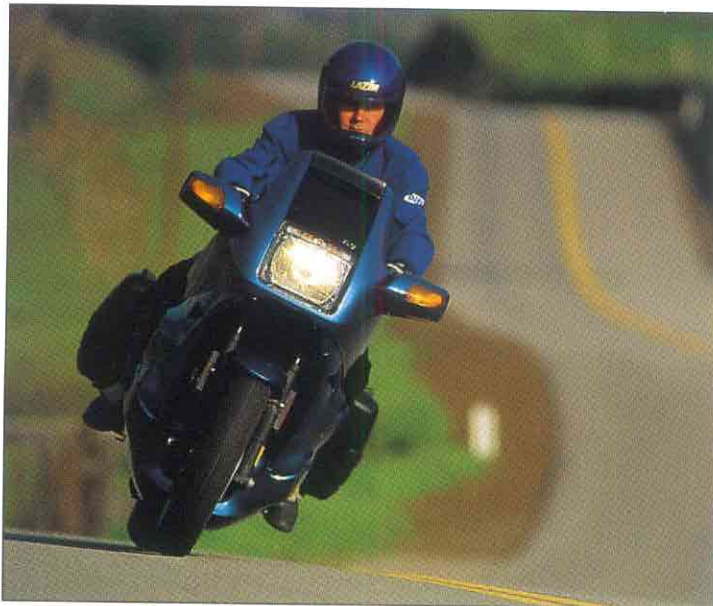
Perhaps the most interesting comfort enhancement is the new footpeg mounting system, which comes from BMW K1100LTs made after September of last year. The aluminum-alloy footpeg plates on each side of the bike are solidly connected to one another with tubular-steel cross members, but are completely isolated from the engine and frame with rubber, enough that you can raise the left footpeg slightly by pushing down hard on the right and vice versa. In addition to the rider's pegs, the plates also carry the passenger pegs, brake pedal and bulky ABS modulators on each side, giving the assembly more mass with which to damp out vibration. I can't remember this ingenious engineering ploy having been used before, but it works well.

BMW's focus on reducing vibration has paid off; the only place the rider detects any buzziness in the K1100RS is in its seat, and then only when the engine is revved high. At these engine speeds your tingling thighs just remind that you should be paying more attention to the scenery rushing toward you than your personal comfort. Although BMW didn't say it had been changed, the seat on our test bike was a lot cushier this year, too, as if the designer had lost some weight. Or...never mind.

Flip the high-idle control on the left handlebar to full and our K1100RS test bike never failed to start right up.



It could always be ridden away immediately and the high idle turned off after a mile or so. When BMW decides it's time to increase power in one of its motorcycles, it consistently takes a balanced approach instead of going for maximum horsepower. An aggressive rider will notice the K1100RS's additional top-end power the first time he goes hunting corners or twists the loud handle to the stop on a long, lonely straightaway. The engine revs more quickly, and getting a good



drive out of turn two no longer means planning for it back at turn one. Although it still brings up the rear of the Kawasaki ZX-11, Honda CBR-1000F and Yamaha FJ1200 power pack, the new K1100RS can finally hold its head up among these bikes.

More importantly, the K1100RS will please the touring-sport-touring rider immensely with the broadness of its power band. With real grunt available from as low as 2,500 rpm up to the 8,500-rpm redline, you have a choice between gentle, smooth acceleration and little shifting—sightseeing mode—or kicking down a gear and riding hard without feeling like some wannabe about to throw away an expensive touring bike. This balance of power is the strength of the K-bike line, and makes them well-suited to many kinds of fully loaded, two-up or solo riding.

BMW has accompanied the K-RS's power massage with a half dozen handling enhancements, starting with an additional backbone frame tube and subframe strut that increase frame rigidity. The rear strut does double duty as the centerstand grab handle, replacing the flip-out handle which will no longer work with the redesigned side covers. A serious Marzocchi cartridge-type fork graces the front end this year, and a Showa shock with adjustable rebound damping, spring preload and a progressively wound spring controls the Paralever shaft final drive. Bridgestone Battlax radials—also Honda's choice for the awesome CBR900RR sportbike—spin on the beautiful cast alloy wheels originally from the BMW K1, and the



**Footpeg mounting system is vibration isolated from frame and engine. BMW by Showa shock has progressively wound spring, adjustable rebound damping.**

K1100RS's triple disc brakes come standard with ABS.

We received our K1100RS for testing shortly after the record winter rains that devastated much of the Southwest but left it shining emerald green. As our first long ride after weeks of rain, I grabbed photographer Rich Cox and endeavored to hit every classic, crooked California road between L.A. and Monterey.

Packing the K1100RS for a trip is all the more pleasant with the addition of the \$598 saddlebags and their \$87.88 brackets. Although they still don't swallow a helmet easily, the detachable bags are fairly roomy and

have good latches. There's a little additional storage space under the locking seat for the excellent BMW tool and flat repair kits, and all of the locks on the bike use the same key now.

En route, the BMW K1100RS proved a comfortable companion for hours of highway droning, primarily due to the lack of vibration. As I said, the seat is quite pleasant now, and the seating position sporty but relaxed. There is still a fair reach to the bars, which places some weight on your hands,

but it's not so long a stretch that you can't shift your weight back and forth in the seat and relieve the pressure points. The upper half of the K-RS fairing is unchanged, and it does a good job of protecting the rider's upper body and hands from the cold. Originally designed for the high speeds of the *autobahn*, the wind spilling over the top catches the law-abiding American rider square in the face, but wearing a quiet, aerodynamic, full-face helmet keeps the buffeting and noise to a minimum. Rain is never allowed to build up on your shield as well, and you can fine-tune this effect with the adjustable louver at the top of the windscreen.

Earlier K-RS riders should be happy to hear that the new fairing lowers will retrofit their bikes, because, in addition to looking great, they provide some additional protection for the rider's lower legs and feet. Heat build-up is negligible as well, thanks to the giant Ferrari Testarossa-like NACA ducts in the lowers. With the photographer on a Honda Gold Wing, we were able to ride fill-up to fill-up without stops or discomfort. Passengers I carried later had no complaints about the K1100RS accommodations, other than that they slid forward a little under braking.

Once we reached the twisties I left the lensman behind, taking advantage of the bike's new abilities. Though it has fairly quick steering geometry, the K1100RS is still a long machine with a nearly 62-inch wheelbase, and prefers to be ridden smoothly and fast rather than to be quickly tossed about. The Paralever design eliminates any



**K1100RS frame rigidity is enhanced by a pair of backbone struts in place of the single strut in last year's frame.**

shaft-drive input into the rear suspension, helping the rider adapt a smooth style through corners and forgiving abrupt changes in throttle. Though it can be run pretty quickly through the tight stuff, where its high-performance radials can show off with super-stickiness and very smooth, predictable turning behavior, the K1100RS shines at sucking up long sections of high-speed sweepers in a hurry.

Up front the cartridge fork is a big improvement, and seems to be sprung and damped well under all conditions without any flex or a lot of dive during braking. The rear suspension is another story, however. Last year's shock was already undersprung, and the progressive rate on this year's unit is even lower in the first two-thirds of its travel. It's nice for solo riding on the freeway, but not much else. I had the shock rebound damping cranked up to maximum within a few miles of canyon road, too, and wished for more the rest of the trip. BMW had to use harsh spring and damping rates to keep its pre-Paralever shaft drives under control—now that problem is gone and it seems to be celebrating with super-soft shocks. Ah, well, the Paralever's great, and the aftermarket can supply a performance shock to those who need one. Have a party, guys.

Braking on the K1100RS is a serious matter, with four-piston opposed calipers and fully floating rotors on the dual discs in front. The front calipers have angular wear compensation built in as well—in English, that's leading pistons smaller than trailing so the pads wear evenly. In back a two-piston opposed caliper pinches a standard rotor. The brakes are hellishly strong and haul the bike down from speed *mach schnell*, and BMW's ABS prevents them from locking for all but an instant when you're riding straight up and down on any surface. The front brake has a slightly spongy feel, proba-

## 1993 BMW K1100RS

RETAIL PRICE	\$14,676 (AS TESTED)
WARRANTY	3 YRS., UNLMTD. MILES
SERVICE INTERVAL	600, THEN EVERY 4,000 MILES

### ENGINE

TYPE	LIQUID-COOLED, LONGITUDINAL FLAT IN-LINE FOUR
DISPLACEMENT	1,093cc
BORE & STROKE	70.5x70.0mm
COMPRESSION RATIO	11.0:1
VALVE TRAIN	DOHC, 4 VALVES PER CYL.
CARBURETION	BOSCH MOTRONIC-CONTROLLED FUEL INJECTION
LUBRICATION SYSTEM	WET SUMP, 4-QT. CAP.
TRANSMISSION	5-SPEED, DRY CLUTCH
FINAL DRIVE	SHAFT, 2.82:1

### ELECTRICAL

IGNITION	BOSCH MOTRONIC-CONTROLLED
CHARGING OUTPUT	700 WATTS MAX.
BATTERY	12V 19AH

### CHASSIS

FRAME	TUBULAR-STEEL SPACE FRAME W/ ENGINE AS STRESSED MEMBER
WHEELBASE	61.6 IN.
RAKE/TRAIL	26 DEGREES/3.74 IN.
SEAT HEIGHT	31.5 IN.
SUSPENSION, FRONT	CARTRIDGE-TYPE FORK W/ 41.7mm STANCHIONS
REAR	SINGLE SHOCK, ADJ. FOR SPRING PRELOAD AND REBOUND DAMPING
BRAKES, FRONT	DUAL DISCS W/ 4-PISTON OPPOSED CALIPERS & ABS
REAR	SINGLE DISC W/ 2-PISTON OPPOSED CALIPER & ABS
WHEELS, FRONT	CAST, 3.50x17 IN.
REAR	CAST, 4.50x18 IN.
TIRES, FRONT	120/70-VR17
REAR	160/60-VR18
WET WEIGHT	635 LBS. (AS TESTED)
LOAD CAPACITY	434 LBS.
GVWR	1,069 LBS.

### TOURING PERFORMANCE

FUEL CAPACITY (MAIN/RES.)	5.2/NA GALS.
AVERAGE MPG	43.7
RANGE	227 MILES
INDICATED RPM AT 60 MPH	3,525

bly attributable to routing its hydraulic fluid through an ABS modulator clear down by the left footpeg. But the brakes never fade and are always linear and predictable, and the fully floating mounts in front should prevent the rotors from hot warping.

Ridden in sightseeing mode, the Motronic-controlled K1100RS gets phenomenal gas mileage. I had one tank return 47.6 mpg, and that would have been higher if we weren't in such a hurry to get to a mountain



**Softer grips, bar-end weights to damp out vibration and a thumbwheel adjuster on the brake lever are new for '93.**

playground. On average, the K1100RS went 43.7 miles per gallon of go juice, for a safe range from the 5.2-gallon tank of well over 200 miles. The good fuel gauge in the fairing makes the annoying, extra-early red warning light in the console even more superfluous, though, and if it were my bike I'd snuff out the light's miserable life once and for all.

A full complement of practical instruments greets the K1100RS rider, including a coolant temperature gauge in the side of the fairing opposite the fuel gauge, and a clock in the console. The ergonomically designed handlebar controls feel awkward at first, but quickly reveal their many advantages, and BMW caved in two years ago and gave the four-cylinder K-bikes normal sidestands and ignition-integrated steering locks. I'd still like to see more tipover protection built into the expensive fairing, but should the unthinkable happen the mirrors pop off breakaway mounts. Finally, BMW has recognized the cold-weather rider by equipping all of its motorcycles with an external electrical outlet for an electric vest.

One can't help but wonder about the timing of the latest K-RS's introduction, considering a lighter, equally powerful and comparably priced version of the BMW Boxer twin is due at BMW dealerships any day now. Our initial impression of a preproduction R1100RS Boxer has it surpassing the big K1100RS, particularly with the twin's all-new ABS, Telelever front suspension and ergonomic adjustability. But that's probably okay with BMW—if its new customers choose the R1100RS Boxer, it still wins. And despite the lack of second-generation ABS it can count on the honor and loyalty among veteran K-bike owners, who probably can't wait to own the best and most righteously beautiful BMW K-RS ever built. ■