

DESERT

Frank Melling tries the works BMW on which Hubert Auriol won the 6000 miles Paris-Dakar marathon.

AFTER riding BMW's factory ISDT bike last year, I did not feel that the Paris-Dakar bike could hold any terrors for me. After all, it was slower and the extra 50lbs could not make much difference. How wrong can you be!

The first problem was in getting on the bike. The saddle-height was about 38" and with virtually no suspension sag, I was left with my toes waving in the air a couple of inches from terra firma. For the first time since I was ten, I had to have someone to hold the bike whilst I clambered aboard!

The saddle height posed great psychological problems. It was a truly unnerving experience to feel the great mass of the BMW fall into a corner knowing that if anything

happened, there was no way I could take a steadying prod. Everything felt very badly out of place purely because I lacked confidence in the bike.

After a couple of hours, we were getting nowhere at all and I became so frustrated with the great lump that I began just bulldozing it along the fast gravel tracks which comprise BMW's test ground — a military area near Munich a long way from the wilderness of the Sahara!

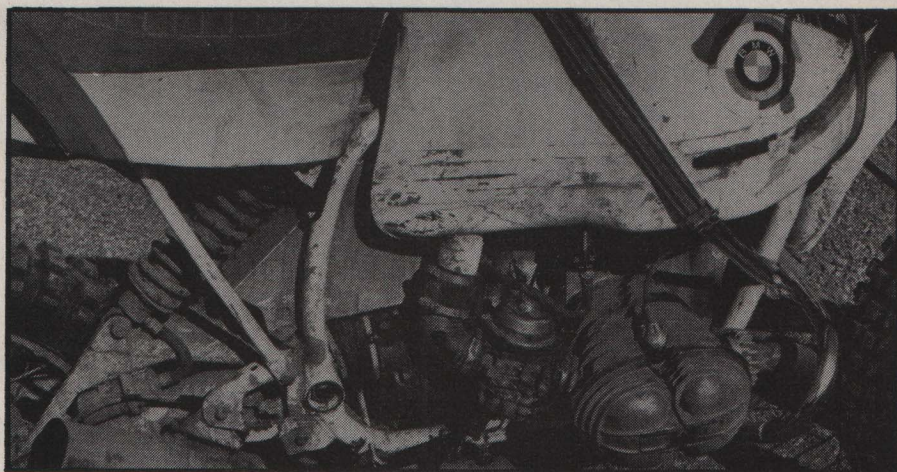
The transformation was miraculous. Treated with firmness and driven hard, the big BMW became as mild mannered and trustworthy as its ISDT brother. It was unwieldy at low speeds but once on the fast tracks — the sort of going for which it was



GIANT

Right: Not the slimline beast Dirt Bike Rider normally tests.

Below: Huge fuel tanks holds 45 litres and also houses a two-stage air-filter so essential in the desert.



designed — it was as smooth and stable as a magic carpet.

The 800cc motor was noticeably tired, but even so, it pulled from zero revs right up to its peak at 7,000rpm. All the time, the power was creamy smooth and quite effortless. Just the sort of characteristics which would help a rider make light work of a 10,000rpm race, cruising at around 90 mph with a maximum in the region of 110mph.

Because of the hardness of the springing, the Maico forks left something to be desired but the disc brakes worked very well, as did the traditional rear single leading shoe drum. Overall handling — taking the weight of the massive tank into consideration — was excellent and a great vindication of the basic R80 frame geometry.

As time goes by, BMW are gaining more experience at long distance racing. For the Baja venture, the bike will be very similar to the Paris-Dakar giants but with slightly livelier motors which produce 60bhp but again with the excellent torque and very wide power bands.

The frame will be pure R80 in geometry, complete with single tube swinging

arm this time but will be constructed from lighter 1mm chrome moly tubing. BMW race technicians are hopeful of a race weight of around 300lb, which for a bike which is awfully near to the mass produced R80GS in design, is very good indeed. Whilst no-one at the factory is over-confident, there is a quiet enthusiasm that having won their class in the ISDT and Paris-Dakar outright, they can produce a winner for America's Baja 1000 classic from South California to Mexico.

The problem which faces BMW is one which must occur regularly in the board rooms of the smaller motorcycle companies. In the simplest terms, the question is, "How do we go racing and yet still keep costs to a tolerable level?"

Racing has many advantages. To the marketing people, it can be a very effective aid to sales, whilst it provides a spur to the development staff which can only benefit the production machines. However, since most forms of racing require astronomical budgets, both these advantages are outweighed by the sheer costs involved, particularly when it is very easy to spend a lot of money and

still not win anything. BMW's answer to this conundrum has been to enter the classic off-road endurance races.

The factory has always had a semi-official interest in big-time enduros but as a boost to the launch of the R80GS, a full works team earned its keep by dominating the unlimited class of the 1979 ISDT, and also the European enduro championships. But the writing was on the wall for the big BMW's. As the now renamed ISDE becomes increasingly closer to motocross events, so the BMW's stand at a disadvantage, particularly since big bore two-strokes become more manageable and competitive every year.

Accordingly, the factory has turned to races in which utter reliability is of paramount importance. If these events require bikes which are at least superficially similar to production machines, then so much the better.

Thus, on January 1 1981, three factory BMW's lined up for the start of the 10,000km race from Paris to Dakar. All three bikes were surprisingly near to the standard R80GS trail bikes because, above all else, the Paris-Dakar rally is a bike breaker and no place for a

lightweight ISDT machine.

The difference in intent is reflected in the weight of the bikes. The 870cc ISDT machine weighed only 307lbs., ready to race, whilst the 800cc Paris-Dakar bike was 330lbs., dry. With the addition of tools, spare parts and 45 litres of petrol carried in a huge steel tank, winner Hubert Auriol was faced with a racing motorcycle weighing a little under 400lbs. — a formidable beast by any standards.

Auriol was educated in Ethiopia and gained that intangible insight into African conditions which is essential to do well in this marathon event. His nickname in the BMW team was "The African". It was his vast local knowledge which BMW incorporated in the very special R80GS which I rode at BMW's Munich test rack exclusively for Dirt Bike Rider.

Beneath the huge 45 litre petrol tank is an almost standard R80GS frame. The swinging arm mounts are different since the Paris-Dakar bike employs the twin-arm swinging arm from the ISDT bike. This is needed since, when the bikes were built, BMW had still not solved the problem of mounting a 5.00 section

tyre in a single arm system.

Because the event is so arduous, the motor remains almost standard R80. The 870cc ISDT motor is noticeably more rapid but although this unit is bullet-proof in six days of competition, the Paris-Dakar event is so tough that the big motor could not stand the pace.

The main modifications to the engine lay in the cylinder heads, which are borrowed from the R65, because of the quality of the smaller motor's combustion chambers. The R65 valve stems are beefed up by 1mm, again to ensure bullet-proof reliability.

To reduce the amount of spare parts carried on the bike, the rocker box is split into two parts so that half of either box can be changed quickly in the event of damage or a crash.

The gearbox and clutch are basically standard but the internal ratios come from the ISDT bike whilst the overall ratios are changed depending on the type of going during the event. The ignition system comes straight from the 1981 BMW range and has proved to be absolutely faultless.

Maico forks, complete with BMW R80 disc brake, are employed at the front of the bike whilst a Bilstein damper with external

reservoir looks after the rear. This damper proved to be rather puny for African racing and Auriol bent a number during the course of the race.

There were also some very special touches which mark out the bike as a true endurance racer. The 45 litre tank (about 9 gallons) is the most obvious and the reason for this huge capacity is so that the riders could race all day without refuelling. Hand pumped petrol was available at bowers located throughout the desert but the less fortunate riders had to queue for supplies, whilst Auriol and his BMW teammates pressed on.

The saddle and suspension were solid! When I queried this firmness, it was explained that Auriol just simply never shut off once he was really motoring and if he came to a pot-hole, or dried-up river bed, he carried on regardless and crash-landed on the other side. Hence the need for rock-solid suspension and a saddle which would not compress down to the frame, no matter how hard the rider hits it.

When one considers all these diverse elements, it becomes clear as to why the BMW's are so well-suited to this sort of racing. Their very low centre of

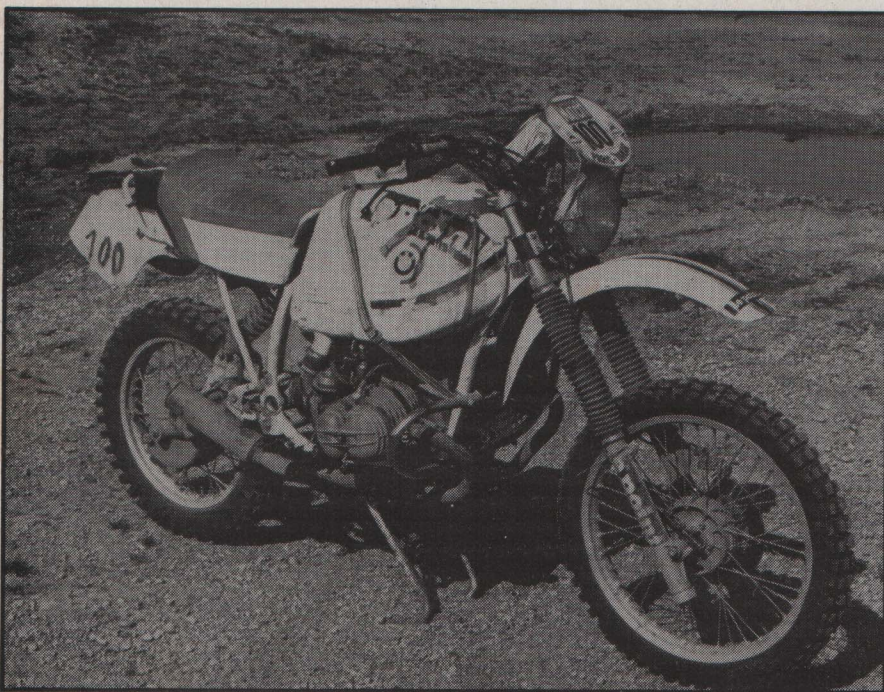


Single Bilstein damper controls the twin tube swinging arm. Under the severe stresses of the race, the damper rods gave up and frequent replacements were necessary.

gravity makes the huge petrol tank at least manageable, if not comfortable, and the flat topped crankcase of the boxer engine even provides a large area on which the copious, and essential, spares kit can be carried.

Significantly, the works

BMW's will not compete in the biggest capacity class of this years international Six Days Enduro on the Island of Elba. Although two factory mechanics will compete on traditional flat twins, second gear terrain is no longer the realm of the high-speed desert giants.



Technical Specifications

Engine Twin cylinder, horizontally opposed four stroke
Bore and Stroke 84.8 × 70.6mm (798cc)
Compression ratio 9.5:1
Carburation 32mm constant vacuum Bing
Claimed bhp 57 @ 7,000 rpm
ignition Bosch electronic driven from flywheel generator.
Gearbox 5 speed with ISDT ratios
Clutch Lightweight Fitchel and Sachs
Special features: Lightweight cylinder barrels. Modified R65 cylinder heads with 2-piece rocker boxes and heavy duty valves.
Frame R80GS full cradle main frame with lightweight twin tube swinging arm from ISDT bikes.
Front suspension Maico forks with balancing tube giving 270mm of travel.
Rear suspension Single Bilstein damper giving 240mm of travel
Wheelbase 62½"
Weight 330lb dry.
Fuel tank capacity 45 litres (9.9 galls)

And now for something completely different!