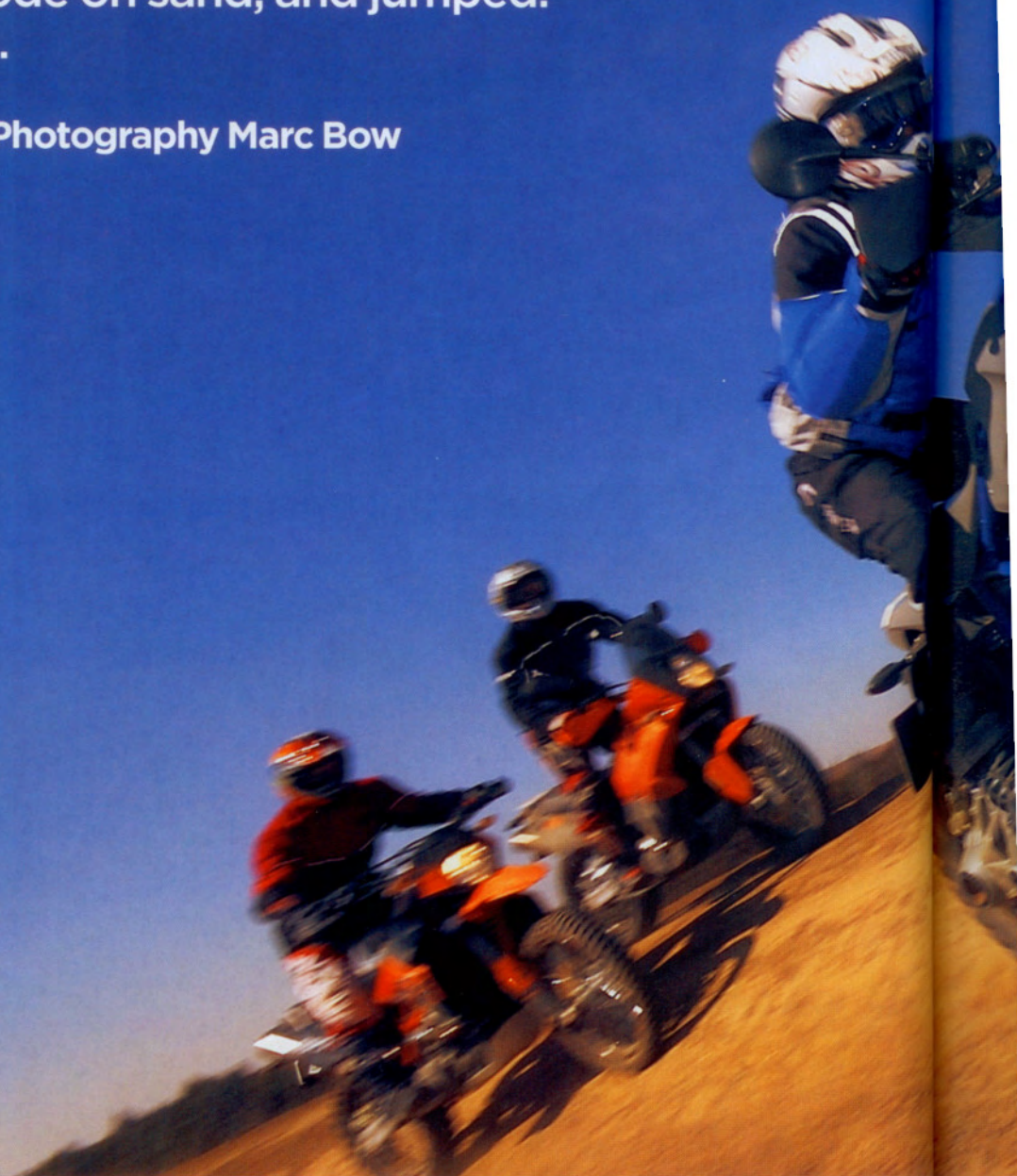


FEAR FACTOR

Congratulations! You've just fulfilled your dreams, buying one of the best big off-road machines. Now you are planning to explore remote parts of Africa with it. But do you really know what off-road bikes can do? To find out, we put our test machines through their paces. We climbed hills, rode on sand, and jumped. We even crashed ...

By Philippe Guillaume Photography Marc Bow







I've always wondered: Why buy a big-capacity off-road machine when I already have difficulty handling a 250 cc MX bike on firmly packed terrain, as exemplified by our below-par ride on the Sun City MX track (see **TOPBIKE**, September 2006). But, of course, South Africa is full of fast, straight gravel roads, where the power of these 950 cc-plus machines can be exploited without restraint. In other words, a Suzuki Hayabusa with knobbles should also make a decent off-road bike! But there is a difference between South Africa and the European market: here, a substantial portion of trail-bike owners are using them off-road, and here you can encounter rough terrain with rocks, sand and scary mountain passes, during your next holiday or on any adventure trip.

It's with the specifics of the South African environment in mind that we organised this review.

Our set of tests, which were conducted both at low and high speed, sought to provide the answers to two questions. The first was to figure out the dynamic limits of each of these bikes. What are their real capabilities?

The second aimed to find the point at which a Hard Enduro bike, such as the BMW HP2 or the KTM 950 Super Enduro, becomes necessary once their bigger siblings, the 990 Adventure and R1200 GS Adventure have reached their limits. They are certainly much lighter, but they are still big, intimidating, 73 kW (100 hp) off-road bikes.

Obviously, our aim is not a direct comparison between bikes as different as the KTM 950 Super Enduro and the BMW R1200 GS. It's to determine the level of competencies of these two growing families - the big Adventures and the big Enduros - to figure out what unites them, and what separates them.

TEST 1: LOW-SPEED HANDLING BETWEEN CONES

This test is not, per se, the hardest off-road discipline to accomplish, but all off-road instructors will tell you that before going fast in rough terrain, you need to be able to go slowly. Riding around trees in a dense forest, or going down the Fish River Canyon along a goat path (see **TOPBIKE**, July 2006), will require these skills.

The cone test reveals the overall balance of the machine, the smoothness and response of the throttle and clutch. The steering angle and centre of gravity also play an important role, as well as a comfortable upright riding position, in which the body can be used to add more balance. During the test, the cones are placed closer to each other, to make the test increasingly difficult.

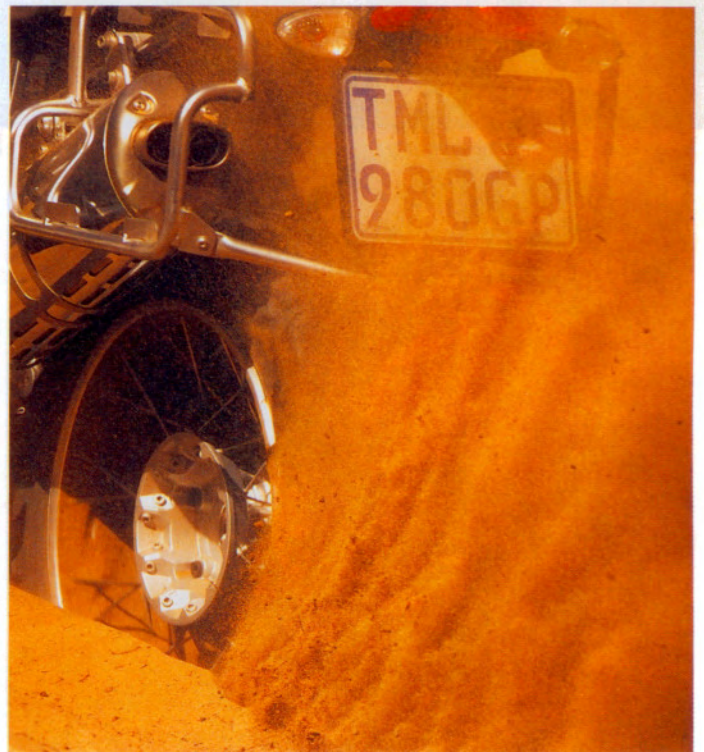
Adventure

For such big bikes, the gymkhana party does not seem natural. The BMW R1200 GS Adventure still impresses, in spite of its overall size and dimension, and its 225 kg dry weight. The steering angle is very good and the flat twin lends good, natural balance. For such a big mama, the BMW Adventure is surprisingly agile.

When you lose your balance, the bike is quite easy to pull back, despite the wide tank, thanks to the lower seat. Throttle control is soft, but the dry clutch is not the easiest to handle. The front brakes are too brutal, though.

Thinner and lighter, the KTM 990 Adventure should be more at ease in these conditions. Unfortunately, that's not the case. The steering angle appears to be quite limited and loss of balance

ADVENTURE-ENDURO TEST



happens more quickly than on the BMW. The higher centre of gravity also makes it more difficult to pull back. Both throttle and clutch offer good control.

Hard Enduro

Saving a lot of weight (with a full tank: 20 kg for the KTM, 60 kg for the BMW!) compared to the bigger siblings can't hurt.

It is here that we find that the overall balance of these machines can be traced back to genetics; the HP2 being very well balanced and having soft controls (except the clutch). The KTM 950 is tall but thin,

and much easier to control than the 990, despite the same high centre of gravity. The turning circle is also sharper. Controls are soft, but the throttle is very responsive at low revs, too much so for this specific test.

TEST 2: CLEARING OBSTACLES AT LOW SPEED

Imagine that you're riding your favourite off-road track when suddenly you discover that a recent storm has caused a big hole to appear in your path. If you can't take evasive action, your front wheel and forks will go into it and you will definitely experience some





acrobatic manoeuvres. For this test, you need good throttle response, and good shocks are a bonus. Mastering the necessary technique will also help you to handle any unexpected obstacles that you may encounter, such as logs, rocks, green mambas, or an angry mother-in-law ... So you need good throttle response, good torque at low revs to lift the front end, and good suspension, which is the final ingredient.

Adventure

In theory, as the ideal bike will be light and responsive, the BMW R1200GS Adventure does not look best suited to hole hopping.

And, in practice, it isn't. Of course, it gets the job done, but not as smoothly as the other competitors. The bike is heavy and the throttle response too muted for this specific exercise. The KTM 990 Adventure feels lighter and more responsive. WP shocks allow a relatively comfortable landing.

Hard Enduro

It's easier, of course, with the enduro bikes. The KTM wins, as it feels lighter and more responsive too. The shocks also feel softer when landing. With the HP2, due to the inertia produced by the combination of the prop shaft and the flat-twin engine, the rider needs to be much more aggressive to achieve the same result.

Be careful, though, while doing the very same test with rocks: the 950 Super Enduro has a very small protection plate under the engine, so serious damage could be just a twist of the throttle away.

TEST 3: UP AND DOWN STEEP HILLS

In this specific environment, you need good traction and progressive acceleration to get the right momentum when climbing. When going



down, you need good and easily controlled brakes, as well as responsive engine braking.

Adventure

The KTM does not have a very good front brake. Its efficiency is okay, but none of the riders experienced good feedback, so it's difficult to know where the front wheel's lock-up point is. The engine braking of the V-twin engine is also not as good as that of the flat-twin engine. So, while it feels impressive to stop right in the middle of a steep hill with the R1200GS Adventure, it's relatively easy because the big BeeEm does it very well.

Hard Enduro

The KTM 950 has better brakes than the 990 and performs the exercise very well, but the HP2 is simply perfect: good engine braking, good feedback from the front brake, soft throttle response at low revs, helping to achieve the right momentum.

TEST 4: RIDING ON SAND

An essential part of any off-road trip, it's the kind of thing you'll never forget if you're not an off-road ace. Riding on sand will take you straight to the fourth dimension. For this discipline, the perfect bike is stable, light and responsive.

Adventure

The 990 Adventure feels lighter and, therefore, easier to manage.

But, once again, the centre of gravity is higher, so the bike is more difficult to catch when something goes wrong. The BMW feels heavier, but eventually more stable. On our way to Lake Sibaya (see



TOPBIKE, September 06), we found much more technical sand sections to ride than those available at the Country Trax facility. There, the BMW R1200 GS appeared to be the most difficult bike to control, as it was far too heavy.

Hard Enduro

The 950 Super Enduro also feels lighter but suffers from the same problem as the 990: a higher centre of gravity.

The immediate power delivery and strong acceleration, however, help to break the sand. The HP2 is also good, feels heavier but is more stable.

TEST 5: ACCELERATION, TRACTION

This test is designed to measure the traction potential of the bike. If you have a lot of power, you need to be able to put it down effectively.

Power delivery, the transition between torque and power, the balance of the chain transmission/rear suspension and the weight are part of the deal.

How did we do it?

Simple: the rider (always the same one for this test) has to negotiate a banking in third gear, with no throttle; at the exit, he finds a cone from which he needs to accelerate as fast as he can, up to a second cone – situated 50 metres away – while remaining in third gear.

Adventure

The KTM achieved 3,2 sec, which is not bad considering it features less-adequate tyres as standard for off-road purposes.

The KTM comes with versatile Pirelli Scorpion rubber, while the BMW R1200 GS Adventure comes Continental TCK 80 shod. But the



BMW is heavier and the KTM, with fuel-injection, delivers consistent, yet sparkling, acceleration. In this exercise, the BMW clocks 3,4 sec. Over a distance of 80 metres, the difference remains the same: 4,4 for the KTM, 4,6 for the BMW.

Hard Enduro

Less weight, more power, good off-road tyres (Metzeler Karoo on the HP2, Michelin Baja on the KTM); that made for a dead heat: 3,1 sec. for the 50-metre test, but the KTM struggled more in terms of traction.

Repeating the test over an 80-metre distance brought the HP2 to 4,3 sec., whilst the KTM 950 Super Enduro clocked the best result: 4,1 sec.!

TEST 6: THE BIG JUMPS

It's one of the bigger joys of off-road riding: flying into the sky, feeling the air and the absolute freedom.

I promise, next time we will try the back-flip with the R1200 GS Adventure! [*You're on your own, Philippe*].

In this exercise, you need responsive acceleration to jump, good balance to fly, and good suspension to land ... Sounds easy.

Adventure

The R1200 GS Adventure can jump, but the weight and the dimensions leave you feeling short of pace. The KTM is lighter, has excellent suspension, and the LC8 V-twin is very responsive. Orange victory, then.

Hard Enduro

Same considerations, same victory. Of course, the HP2 is much easier



than the R 1200 GS Adventure for jumps, but the combination of a more responsive engine at low revs, excellent shocks, and a feeling of lightness, make the 950 Super Enduro the ultimate toy for jumps.

TEST 7: HIGH-SPEED STABILITY AND OVAL SPEED TRACK

Off-road can go with speed sometimes. With these bikes, you can cruise at 160 km/h on the average gravel road, but can you feel safe? Can you avoid big rocks or game if necessary? These are the questions.

ADVENTURE

At high speed on corrugated gravel, the KTM 990 feels less stable than the R 1200 GS, despite the optional steering damper that has been fitted. Due to the whole chain of driving cams (crankshaft, head cams, counter-balancer, water pump and so on) of the V-twin engine, the KTM obviously has more longitudinal inertia, where the mechanical forces of the flat-twin work better. In spite of its size, the R 1200 GS is surprisingly efficient for fast corners.

Hard Enduro

Same mechanical theory, same result. The HP2 feels sharper for quick corners at high speed. But despite a precise suspension set-up, the HP2 never gave us confidence at high speed (over 120 km/h) on



FEATURE



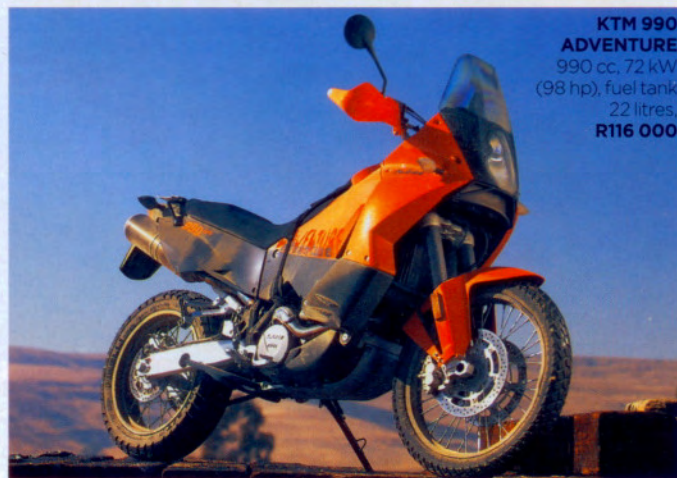
KTM 950 SUPER ENDURO
950 cc, 72 kW (98 hp), fuel tank 13 litres, R115 000



BMW HP2
1170 cc, 78 kW (105 hp), fuel tank 13 litres, R139 000



BMW R 1200 GS ADVENTURE
1170 cc, 74 kW (99 hp), fuel tank 33 litres, R125 900



KTM 990 ADVENTURE
990 cc, 72 kW (98 hp), fuel tank 22 litres, R116 000

FUEL CONSUMPTION	BMW R 1200 GS ADVENTURE	KTM 990 ADVENTURE	BMW HP2	KTM 950 SUPER ENDURO
Average cons.	6.34	6.82	5.78	5.67
Min/max. cons	5.85 / 7.64	5.84 / 8.71	5.53 / 6.01	5.2 / 6.11
Average range	520 km	322 km	224 km	229 km

corrugated surfaces, and provided a few scary tank-slaps.

In these conditions, the 950 Super Enduro feels more stable.

The oval speed track is more a kind of playground for the enduro bikes: it's difficult to issue a verdict here because they are quite similar.

The HP2 has more low-down torque, making it easy to slide, but the KTM 950 gets more violent at higher revs, and the aggressive type of rider will enjoy doing some freestyle with it.

TEST 8: ON THE ROAD

This is an off-road test, but you may need to ride stretches of tarred road in order to reach your favourite location or playground.

Adventure

On the road, the R 1200 GS is king.

Excellent protection (head, legs), great comfort (heated grips,

excellent seat), very long fuel range, you feel as if you could hit the road and ride for days.

The KTM can't offer the same comfort in terms of wind protection, or for the pillion, but the 990 Adventure definitely has more of a fun factor, with its lighter front end and its sparkling LC8 power plant.

Hard Enduro

Well, they can do it, but don't expect any miracles in terms of comfort. The HP2 is a bit better, though, while the 950 Super Enduro feels more extreme (suspension, riding position, handling).

And over longer distances on asphalt you're going to suffer quite dramatically. We found that even over the short distance we travelled on tarred roads, the knobbies took quite a severe hammering.

It's a small price to pay for the enjoyment that they deliver off-road, though, but only if you've got money to burn.

ADVENTURE-ENDURO TEST



Evaluation synthesis (individual scores out of 10)		Adventure		Hard Enduro	
		BMW R 1200 GS Adventure	KTM 990 Adventure	BMW HP2	KTM 950 Super Enduro
Test 1	Balance	8	6	9	7
	Turning circle	7	4	8	7
	Smoothness of controls	7	8	7	8
Test 2	Throttle response	6	8	7	9
	Lightness of front end	5	7	7	9
	Suspension	7	8	8	9
Test 3	Brakes	8	5	9	8
	Engine braking	8	5	9	6
	Smoothness of traction	9	7	8	7
Test 4	Balance	8	6	9	7
	Stability	6	7	7	9
	Response / traction	6	7	8	9
Test 5	Overall efficiency	6	7	8	9
Test 6	Throttle response	5	7	8	9
	Balance	5	7	9	9
	Suspension	7	8	7	9
Test 7	Suspension	7	6	7	9
	Handling	8	6	8	7
Test 8	Comfort	10	7	4	3
	Pillion	9	6	1	1
	Fun factor	6	9	7	8
Price	Price	7	8	5	8
	Value for money	9	7	7	9
Total	Overall rating	164	156	167	176

Thanks to the BMW Off-road bike, with genuine countryside four-star accommodation. The quality of the tutoring will equip you to face a wide variety of off-road situations and all makes of bikes are welcome to attend the weekend schools. Contact: (017) 753 17 20 or ctrax@lantic.net