

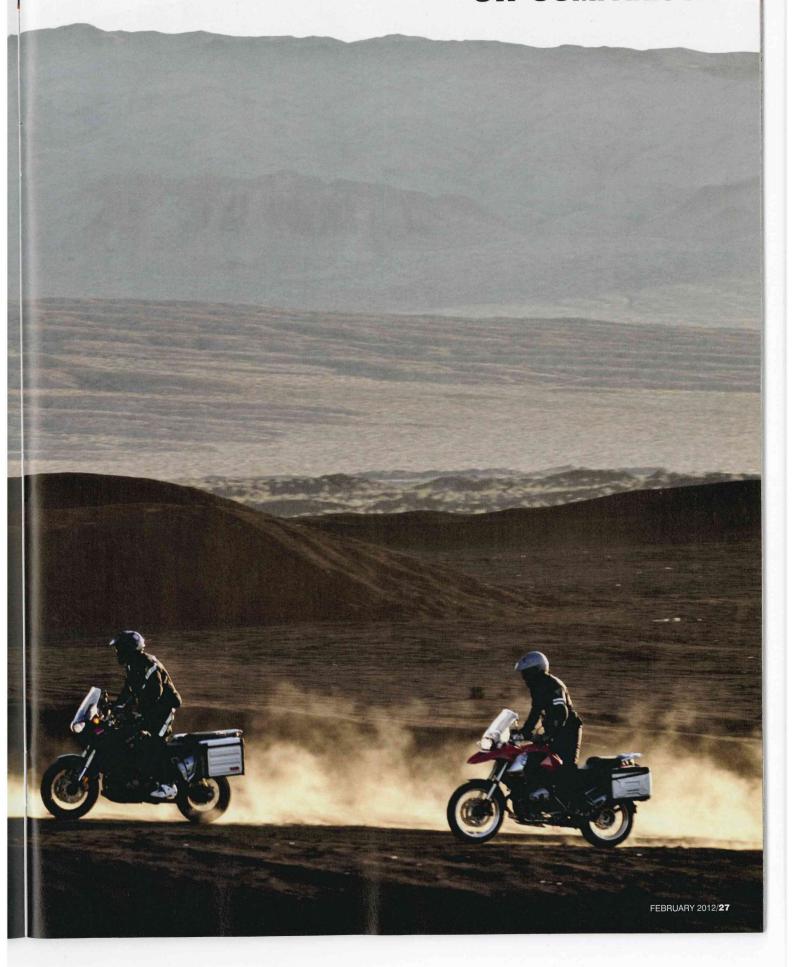
BMW R1200GS vs. KTM 990 Adventure vs. Yamaha Super Ténéré

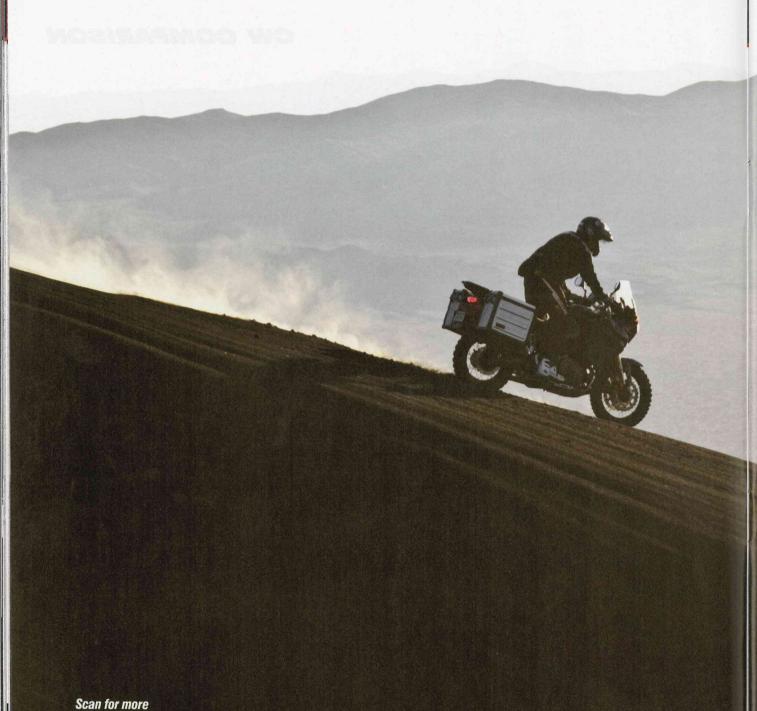
A new player in the big-bore adventure-touring segment makes things interesting

BY MARC COOK



CW COMPARISON





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Yamaha Super Ténéré is ultra-comfortable on the highway and surprisingly good off-road. Its traction control is particularly effective in the dirt, allowing controlled wheelspin to assist turning.

LOSE YOUR EYES AND PLANT A FINGER ON THE MAP.
Anywhere you like. As long as it doesn't come back smelling like ocean, there's a good chance you can ride a motorcycle there. Not just any motorcycle, of course. You'll want one of these: a full-size adventure-touring bike.

Motorcycles such as the BMW R1200GS, KTM 990 Adventure and the new-to-the-U.S. Yamaha Super Ténéré earn the "adventure" label by promising a mix of on-road capability (read that as comfort, range, luggage capacity) and off-road suitability (don't read that as lining up for the start at the nearest EnduroCross). The "touring" part means you'll seek your two-wheel thrills far from home, which has in part thinned the small Singles from the herd and pushes you toward bikes that can be fitted with durable, hard-sided luggage. Plus, you'll want room for your GPS, SPOT emergency locator, satellite radio and plug-in coffee maker, for all we know.

Like sport-touring, the similarly hyphenated adventure-touring category forces tremendous compromises on the equipment, probably even more so than among STs. And, along those lines, you need to ask yourself just how much true off-roading you're likely to tackle, because the answer will help you put each of these three bikes' strengths and weaknesses into context.

For our testing, we rode all three independently over long distances, shook them out on a long day ride that included both high- and low-speed paved, twisty roads, and then brought

them all together for a two-day flog in the Southern California high desert. In truth, this is probably a higher degree of off-road riding than most owners will put them to, but we felt that we needed to challenge them to the most difficult tasks—scaling rock-strewn trails, grinding through sand washes, roosting volcanic effluvia—to see what they're really made of.

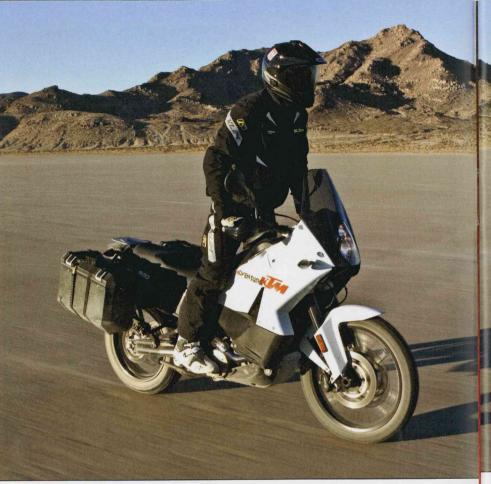
Since the model-year 1981 introduction of the R80 G/S (see sidebar, p. 38), BMW has just about owned this market segment. The current product is an amazing construct, surprisingly light for such

a large, technology-filled motorcycle, impressively powerful, feature-rich and styled to look the part. BMW borrowed the HP2's dohc cylinder heads for the 1170cc opposed-Twin engine in the GS for the 2010 model year. That freerevving motor remains a charmer, with the most peak horsepower and torque of these three (98.4 hp and 78.5 footpounds), leading the similar-displacement Yamaha by 6.2 hp/5 ft.-lb. and the 999cc KTM V-Twin by 8.1 hp and a whopping 16.5 ft.-lb. of torque. Senior Editor Blake Conner said, "The Boxer Twin is without peer in this group. At cruising speed, the engine is smooth, especially if that cruise speed is 75 to 80 mph."

KTM's familiar 75-degree V-Twin doesn't have the ponies of the bigger engines, but it's smooth and extremely tractable, with a higher redline than the others (9500 rpm vs. the BMW's 8500 and the Yamaha's 7750) and a commendably flat torque curve. The KTM has noticeably less flywheel effect, giving the engine a snappier feel and, well, there are times when 90-plus horsepower is just too much for the dirt.

Yamaha's 1199cc parallel-Twin has a character all its own. Using a 270degree crank, the Yamaha's narrow engine feels more like a very large, very smooth Single. Power delivery follows suit, with a grittier personality and the ability, even with the standard traction-control system switched off, to find traction.

We love almost everything about the Yamaha but the YCCT—Yamaha Chip Controlled Throttle-ride-by-wire system. The Super T has two modes: S for Sport and T for Touring. In the S mode, initial throttle response is slightly languid but then wakes up with a bang, only to flatten out slightly. The soft-hard-soft character makes the bike



"You need to ask yourself just how much true offroading you're likely to tackle, because the answer will help you put each of these three bikes' strengths and weaknesses into context."

very difficult to ride smoothly. In the T mode, the Ténéré is much more manageable but feels dull. We'd love you to take one more stab at this one, Yamaha, especially given that your competition

needs no such electrickery to provide a seamless, predictable translation from twistgrip movement to forward thrust.

The more time we spent in the dirt, the more we came to dislike the elec-

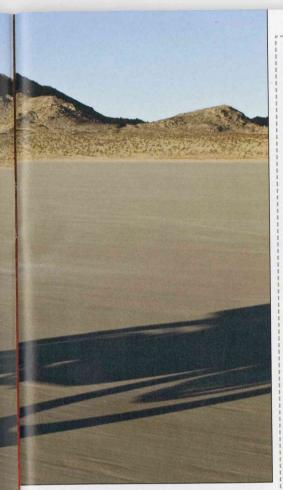
"Crash" Course

A few pointers from an expert for piloting that big adventure bike off-road

BY JIM HYDE

1. Slow down. Most novices try to use speed to maintain balance, and we teach them to use skill instead. A big adventure bike is completely different from the dirtbike you rode when you were a kid. Momentum is not necessarily your friend on a 600-pound motorcycle and is, in fact, your worst enemy once it starts off in an unintended direction.

- 2. Ride with finesse. You need to keep your weight balanced above the bike. Unlike on a lightweight enduro, sticking a leg out to regain balance on a big GS is a better way to hurt your leg than to regain control. Better to stay centered above the bike at a controllable speed and keep your hands and feet inside the ride.
- 3. Be subtle on the controls. And, particularly, learn to use the clutch. Many of our riders, who've ridden streetbikes for years, only know "in and out" when it comes to the clutch. On big D-S bikes off-road, you need to become intimately familiar with the friction zone, using it all the time to control speed, overcome obstacles and get moving again when vou're stuck.
- 4. Subtle is also key to braking. Riders accustomed to streetbikes, especially ones with ABS, are used to just grabbing a big handful. Obviously, on a loose surface, that's not going to end well. It seems basic, but getting a feel for where that delicate lock-up point is located is critical.
- 5. Try to lose the tension. Everybody who starts in off-road on a big, heavy machine like a GS has a normal (and healthy) amount of anxiety, but if you can remember to relax and breathe when the going begins to get tough, it helps tremendously. Tense shoulders and a death grip on the bars only interfere with the work the motorcycle is trying to do if only you'll relax and let it. Ride loose so you can move around on the bike and use your weight to



KTM's 990 Adventure is the closest thing you'll find to a Dakar Rally refugee in the large-displacement adventure-bike class. It's shockingly good off-road and gives up few creature comforts on the highway.

tronics fitted to the BMW and the Yamaha. Our 990 Adventure came with ABS, which can be switched off, and brakes with soft enough onset that they were immediately at home over challenging terrain. In fact, the whole

"influence" where you want to go.

6. Practice. It takes up to 5000 repetitions to create muscle memory and reach the point where the proper response occurs reflexively. In the meantime, don't be afraid to fail—and remember to do that loosely, as well.



Jim Hyde has a decade's worth of experience watching people succeed in becoming better off-road riders with his company,

RawHyde Adventures. For more information on rider training and guided tours, visit www.rawhyde-offroad.com.

Be Prepared

You crashed. Your bike broke down. You ran out of gas. You're miles from anywhere and you're going nowhere: 13 tips on how to survive in the wilderness when things go wrong.

BY MARK LINDEMANN

listening to the tick-tick-tick of the cooling engine, stuck in the middle of nowhere and with sunset an hour off. Latest little adventure-touring expedition provide you with a little more adventure than you bargained for? Not to worry—as long as you have a plan and a few resources.

Close to home, your best off-road survival kit may be nothing more than a cell phone and a thermos of margaritas to enjoy while your brother-in-law arrives with the pickup truck. But if the situation is a little more challenging, you need to set some priorities, and do it fast. First-aid needs aside (your best prep for that one is training), The Rule Of Threes tells you how long you can expect to survive:

Three minutes without air.

Three hours without shelter.

Three days without water.

Three weeks without food.

Unless you've crashed at the bottom of a lake, air should be no problem, so on to shelter. The worse the weather, the more important shelter becomes, so your immediate survival needs are going to center around that. Shelter and fire also provide very real psychological benefits. And a few key items can turn your crash site into a Hobo Hilton.

Three Ways to Make Fire

Matches are a no-brainer, and the best are the sealed, weatherproof lifeboat matches available at a good backpacking shop. I prefer the NATO 9920-99-996-9432 Wind/ Water Matches. These suckers burn so long and hot you could probably use them to weld up a cracked crankcase. Second, a disposable butane lighter. Third, a ferrocium or flint/ magnesium sparker tool like the well-known Doan or Light My Fire. Don't be shy about using the gasoline from your bike as an accelerant. Or set fire to a piece of inner-tube rubber to coax wet wood into flame; ditto for



the glue from your tire-patch kit. Alternative: Be warmed by the righteous indignation smoldering deep in your gut that comes from spending \$22,000 on a state-of-the-art machine stopped cold because a fifty-cent part failed.

Knife

"Where there's a knife, there's a life." And you don't need some big Rambo pig sticker here—you're not going to be disarticulating a moose. At minimum, the blade in a good



multitool will do. A Swiss Army Knife with a locking blade is a great choice (personal fave, the Victorinox Outrider model); you probably have a pair of pliers in your bike's toolkit. With the addition

of a sturdy fixed-blade knife (four- or five-inch blade), I'd be farting through silk. A woodsaw blade in the Swiss Army Knife or the Multitool is a nice bonus, as is a metal file.

Trash Bags

Your wilderness get-out-of-jail-free cards. They're a poncho or ground cloth. Stuffed with leaves or pine needles, they're a quilt/mattress. Slit them open to make a poorman's tarp. Crawl into a big one and it's a short-term sleeping bag. The best are the 4- or 6-mil contractor-grade heavy-duty 55-gallon drum liners. The tough, red bags marked "Biohazard" are the best and thickest of all, but the authorities really freak out when they see you crawl out of one.

Rope

You should already have some tow rope with you (25 feet of one-inch flat nylon strap from the backpacking shop works the best). But 50 or 100 feet of nylon parachute cord (aka 550-cord) takes up little space and gives you a ton of shelter-construction options. Also good for lashing that \$1000 aluminum pannier back on after you've scraped it off, or for securing that live goat you bought at the local souk so you can bring it back for dinner.



Tarp

A tarp gets you out of the sun and protects you from the rain. You can wrap yourself up in it or spread it out. The best are ripstop or



"Light (by the class standards), agile, predictable and confidence-inspiring, the Adventure tackles all but the most technical terrain without causing the rider to have a what-the-hell-am-I-doing? moment."

KTM felt like it was born to be spewing chunks of *terra firma* from the back tire.

For safety off-road and fairness in the comparison, all three wore Continental TKC 80 street-rated knobby tires. The KTM has a traditional 21/18-inch combination, while the other two sport compromise 19/17-inch wheel sizes. To some degree, the BMW and Yamaha disliked the Contis' profiles (the BMW quite a lot, actually), but the KTM could well have been delivered on these tires—

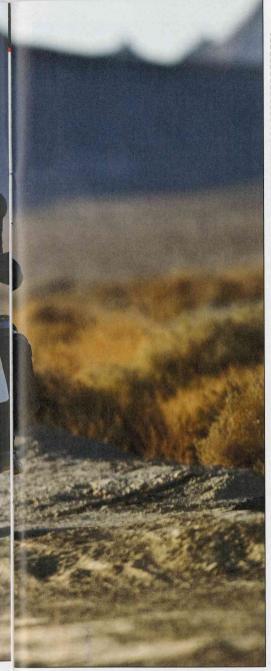
it felt that natural.

Electronics, then? Yes, the BMW's two-stage traction control can be turned off, as can its linked ABS, but doing so takes a series of button presses and a thorough understanding of the icons on the LCD panel. Yamaha allows you to select one of two TC levels as well as Off, but you can't easily disable ABS. Here's the deal, dear manufacturers: If you really want these bikes to go off road, you need to make it easier to con-

figure them for that purpose.

We know from thousands of miles in the saddle that the BMW R1200GS is a superlative all-around streetbike and a more-than-passable tourer. Our recent experience on the Ténéré suggests much of the same, with the added benefit of powerful, quirk-free brakes, a sufficiently stout engine, great fuel range (like the BMW) and good weather protection. The KTM falls behind in the comfort category but not by much, mainly at the hands of cockpit turbulence at highway speeds. Understand that the spread here isn't huge, with the Yamaha barking right up the BMW's tailpipe and the Adventure just a few lengths back. Any of us would hop on any of these three for a weeklong tour.

Expectations and results invert when



Twins? Yes and no. All three machines feature a pair of cylinders, but each bike's set of jugs is arranged differently. Power character is, not surprisingly, quite similar among all three, with ample controllable torque and linear power. But the BMW wins the hot-rod award for providing the most performance headroom.

tarmac gives way to nature's highway. Light (by the class standards), agile, predictable and confidence-inspiring, the Adventure tackles all but the most technical terrain without causing the rider to have a *what-the-hell-am-I-doing?* moment. Yamaha's beast, the heaviest in the test by 47 lb. (591 lb. wet compared to 544 for the BMW and

silcoat nylon, again available at a camping shop. Eight-by-10 feet is a decent size; 10-by-12 real luxury. If you're trying to do this on the cheap, a sheet of Tyvek or a painter's plastic drop cloth from the local hardware store is a fine alternate. Two mil is about the thinnest you can go.

Whistle

Hook it to the zipper on your riding jacket. Get a nice loud one like Coach Herman's in gym class. And remember that a fire and your bike's horn and headlight are good audio/visual signaling tools.

Water Purification

You should always have water with you, but you can only carry so much. Regardless, you need to be able to purify whatever you find. Rather than carry an elaborate filter, just get some iodine-based water-purification tablets and follow the directions on the label.

Compass

Survival is about using caveman technology when modern technology (like your GPS) fails. Keep the compass on a cord around your neck and tucked into your riding jacket—the more accessible it is, the more inclined you'll be to use it. And know how to use it, too—Björn Kjellström's Be Expert with Map and Compass is a classic reference on the subject. And take a paper map!



One-Pound Coffee Can

Don't get me started on how a one-pound coffee can only holds 12 or 13 ounces now. You can use it as an improvised digging tool, to transfer gas from one bike to another, or to slosh parts in that gas to clean them. But most of all, it's a great impromptu cooking pot for boiling water or making soup over a campfire. Pre-punch a couple of holes near the top and bend a piece of coat-hanger wire to make a bail to lift it when hot.

Food

You're not going to starve to death unless you're stuck out there for three weeks, but getting a little chow in your belly does wonders to improve your outlook and help you think straight. You don't need much—3000 calories will seem like a feast and will see you through a couple of days or give you enough energy to walk out. Get a double

handful of Clif bars and something to make a warm drink, like some bouillon cubes or instant cocoa. A small bottle of Tabasco can make that snake you just caught taste just like chicken. Or at least like spicy snake.

Flashlight

Personal choice: A Petzl Zipka headlight. About the size of a golf ball, it lets you work hands-free for bike repairs or shelter building, since you'll inevitably crash right as the sun is setting. Your bike's battery and a taillight or turnsignal bulb (they draw less than the headlamp) work in a pinch.



Walking Shoes

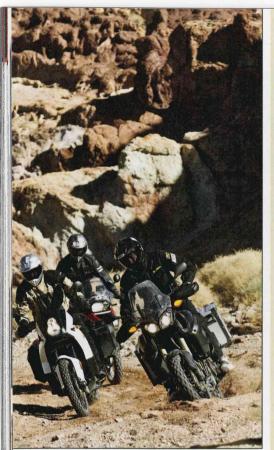
It's almost always better to stay near your bike, but when all else fails, or if you know you're close to a well-traveled road or a town, then maybe the best plan is to suck it up and hoof it out. Walking six miles in MX boots might cripple you, but in decent footwear, I can run that same distance before breakfast. Man is a peripatetic beast. Throw in a pair of clean hiking socks. too.

PMA

PMA stands for Positive Mental Attitude, and it's probably the most important tool you can

have in your survival kit. I can't tell you how many buff linebackers I've seen collapse in survival classes while a 115-pound secretary has walked away from three or four days in the bush with a smile on her face. You can do it, too. With enough toilet paper, it's all in how you look at it. Get your mind right. Man up. They call it ADVENTURE touring for a reason.

Mark Lindemann was an Associate Editor at the late, great <u>Cycle</u> magazine between 1982 and 1987, and has been in the motorcycle industry ever since. He also worked with noted Wilderness Survival expert Ron Hood as an instructor, ran guided survival trips in the Sierra Nevada, has climbed on three continents and has worked with various Search and Rescue teams, including the Nordic Ski Patrol. He holds a Wilderness First Responder certification and rides about as fast as an advancing tectonic plate.



519 for the KTM), causes some initial concern. Says Off-Road Editor Ryan Dudek, "Compared to the others, the weight of the Ténéré is most apparent, giving the impression that it is hardest to handle." But it turns out to be surprisingly adept, tracking through sand reasonably well and steering predictably once you've switched off TC. The BMW was everyone's least favorite off road, with the experienced guys fairly sanguine about its weight and the front end's propensity to dance, skitter and generally fail to redirect the Beemer's mass. The one tester with little recent time off-road hated it. As for Dudek, the guy who *lives* off-road: "You have to build a certain confidence in the GS, as well as with the others, before challenging a steep climb or sandy hill. But put out the spoiler alert: The KTM is obviously best for off-road work. Its riding position is closest to that of an actual dirtbike, from its aggressive handlebar to its slim chassis. It gives the rider more control over the bike.'

Conner helps put the BMW in perspective: "The GS's bar is too wide to be comfortable when standing. Mechanically, the BMW is capable offroad, but is anyone really going to take the GS off-road just to ride off-road? No way."

BMW wasn't through earning Blake's ire. He managed to break both Vario sidecases, one of them after it had been completely emptied. First, the small

Must-Have Accessories

Plan on riding your adventure bike off-road?

WILDERNESS SURVIVAL TIPS ARE GREAT (SEE P. 31), BUT IT'S BETTER IF YOU NEVER HAVE TO USE THEM in the first place. So, to give yourself the best chance of not getting stranded out there, you should take steps to keep your motorcycle's key components from being damaged. And to help you with this task, we identified a bike's three most critical-to-protect areas—engine underside; side fairings/shrouds (or even cylinder heads in the case of the BMW); and hand controls (clutch and brake levers)—then selected a few products for each bike that are most likely to help you reach your destination. Ride on!

—Blake Conner

BMW R1200GS

Weak links in the four-valve GS Boxer Twin are the cylinder heads, which have valve covers secured by just two bolts. The covers are prone to damage if they hit something, which can cause the cover to rotate and dislodge the gasket. AltRider's (www.altrider.com) 1-inch stainless-steel crashbars (silver, \$424; black or white, \$436) wrap around the head. AltRider's 4.75mm-thick, heavy-duty anodized aluminum skidplate (black or silver, \$286) protects the engine, exhaust headers and cross pipe, and the oil filter. Handguards on any bike as big and heavy as these need to be tough, which is why we recommend an aluminum-reinforced type like Barkbusters' VPS (\$155) available from Twisted Throttle (www.twistedthrottle.com). Put them on your KTM (\$96) or Yamaha (\$155), too.







KTM 990 Adventure

Ironically, the most off-road-capable machine of the trio features very few stock impact-protection parts. Touratech's (*www.touratech-usa.com*) electropolished stainless steel crashbars (\$342) provide protection for the fairings and fuel tanks. The company's 4mm-thick aluminum skidplate (\$347) is backed by a tubular-steel structure and offers full under-engine coverage and some side-case protection.





Yamaha Super Ténéré

Yamaha's big adventure bike just arrived in the U.S. this past fall, but it was available in Europe in 2010, so Twisted Throttle already has a long list of aftermarket products available for it. R&G Adventure crashbars (\$297) have three mounting points to evenly distribute impact forces and reduce damage to the fairings (and left-side-mounted radiator). The 3mmthick aluminum SW-Motech engine guard/skidplate (\$229) provides impact protection underneath while also shielding the header pipes and vulnerable oil filter.











BMW R1200GS

Ups

- Superb long-distance hauler and real-world sporty bike
- Electronic suspension: taut to cushy in an instant
- ▲ Latest dohc Boxer rips

Downs

- ▼ Least adept in technical off-road situations
- ▼ Vario side cases too fragile
- Expensive with all the options

plastic tang behind the locking support broke, followed by the one where that bracket clamps onto the frame tube. At that point, the bags are free to depart the bike, which both did at least once. Put bluntly, the expensive Vario bags aren't suitable for true off-road work or even for bumpy dirt roads, for that matter.

In contrast, the KTM accessory bags and Yamaha's optional panniers (both top loading, our preferred method) proved

KTM 990 Adventure

Ups

- ▲ Shamelessly stands as the true dirtbike
- ▲ Still really competent on the street
- ▲ Best wheel sizes for off-road rubber

Downs

- ▼ Edged in comfort/convenience
- ▼ Two fuel fillers?
- ▼ Please simplify ABS-defeat menu logic

durable. In fact, we had *no* problems with the Ténéré's bags at all and only managed to pop some rivets on the KTM's set after jumping the bike for photos with them in place (but the bags stayed on).

We're not suggesting that luggage sets the finishing order, but by unanimous vote, we call the Yamaha Super Ténéré the best of the three when the overarching concern is a traditional adventure/ touring compromise. If your dirt/street ratio will be no more than, oh, 30/70, the Yamaha will do the job and do it

Yamaha Super Ténéré



- ▲ Grunty engine, loads of character
- ▲ Surprisingly adept off road
- ▲ Value leader here

Downs

- Extra weight does it no favors
- ▼ ABS off switch, please
- Ride-by-wire response too hasty or too lazy, never perfect

extremely well. Reports Conner, "I was rather surprised by the Super Ténéré when the dust settled. It really proved to be the jack of all trades; it is a really good streetbike with many features that touring riders are looking for." Slide that preference pointer over to, um, 50/50 dirt/street, and we say go orange (or, in our case, white) with the KTM. It's close enough in the comfort/touring categories that neither the BMW nor the Yamaha gets away, and then it soundly trounces



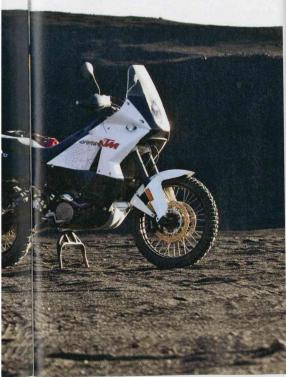


both of them once off the beaten path.

Do we suddenly dislike the GS, a long-time staff fave? Not at all. The BMW remains an incredible, flexible streetbike, one of the quickest ways down a cobbled mountain road and a vehicle built with obvious care. It should be, considering that our fully equipped (ABS, Enduro Electric Suspension Adjustment, traction control, heated grips, wire-spoke wheels) GS put the sticker just shy of \$20,000. Grab a Ténéré, base price of \$14,500, add luggage and heated grips and you're still a whisker under \$16K.

Close your eyes and pick a point on the map, and the Yamaha Super Ténéré will take you there in comfort, with enough off-highway competence to keep you from spending the night in places you'd rather not be.

Even footing: Semi-knobby Continental TKC 80 tires were fitted to all three bikes. Traction and durabilty were excellent both on- and offroad.



PECIFICATIONS	BMW R1200GS #	CTM 990 ADVENTURE	YAMAHA SUPER Ténéré
ENERAL	TARREST TARREST		
st price	\$14,990 (\$19,864 as tested) \$		\$14,500 (\$15,590 as tested
/arranty	36 mo./36,000 miles	24 mo./24,000 miles	12 mo./unlimited mileag
NGINE & DRIVETRAIN			limited and lead four atrole
ngine	air-cooled, four-stroke opposed-Twin	liquid-cooled, four-stroke V-Twin	liquid-cooled, four-strok parallel-Twi
ore & stroke	101.0 x 73.0mm	101.0 x 62.4mm	98.0 x 79.5mr
isplacement	1170cc	999cc	11990
ompression ratio	12.0:1	11.5:1	11.0:
alve train	dohc, four valves per cylinder, shim adjustment	dohc, four valves per cylinder, shim adjustment	dohc, four valves pe cylinder, shim adjustme
alve adjust intervals	6000 mi.	9300 mi.	26,600 m
nduction	(2) 50mm throttle bodies	(2) 48mm throttle bodies	(2) 46mm throttle bodie
lectric power	720w	450w	600
HASSIS			
Veight:			550.1
Tank empty	511 lb.	486 lb.	553
Tank full	544 lb.	519 lb.	591 I 6.0 g
uel capacity	5.3 gal.	5.3 gal. 62.0 in.	60.6
Vheelbase	59.2 in.	26.6°/na in.	28.0°/5.0
Rake/trail	25.7°/4.0 in. 34.0 in.	20.0 /ila ili. 34.3 in.	33.2
Seat height SVWR	970 lb.	948 lb.	1036
oad capacity (tank full)	426 lb.	429 lb.	445
HODENGION & TIRES			
SUSPENSION & TIRES Front suspension:			
Claimed wheel travel	7.5 in.	8.3 in.	7.5
Adjustments	Enduro ESA	compression and rebound damping, spring preload	compression and rebou damping, spring prelo
Rear suspension:	70:-	8.3 in.	7.5
Claimed wheel travel	7.9 in. Enduro ESA	high- and low-speed	rebound dampii
Adjustments	Enduro ESA	compression and rebound damping, spring preload	spring prelo
Tires			
Front	110/80R19 Metzeler Tourance EXP	90/90-21 Pirell Scorpion MT 90 A/T	
Rear	150/70R17 Metzeler Tourance EXP	150/70-18 Pirell Scorpion MT 90 A/7	
PERFORMANCE			
1/4-mile	11.39 sec. @ 117.25 mph	11.42 sec. @ 114.34 mph	11.69 sec. @ 109.99 m
0-30 mph	1.39 sec. @ 117.25 mpn		
0-60 mph	3.4 sec.	3.2 sec	. 3.4 s
0-90 mph	6.6 sec.		
0-100 mph	8.2 sec.	8.6 sec	9.4 s
Top gear time to speed:			
40-60 mph	3.5 sec.		
60-80 mph	3.7 sec.		
Measured top speed	133 mph		
Horsepower Torque	98.4 @ 7615 rpm 78.5 ftlb. @ 6160 rpm	"	The same of the sa
Fuel mileage:	40/26/37 mpg	37/27/33 mp	a 36/23/33 r
High/low/average Avg. range inc. reserve	100		
Droking distance:			
Braking distance:	33 ft	34 f	t. 33
Braking distance: From 30 mph From 60 mph	33 ft 130 ft		