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ROAD WARRIOR



The myth of the perfect dual-sport bike gets one step closer to reality

By the staff of Dirt Bike

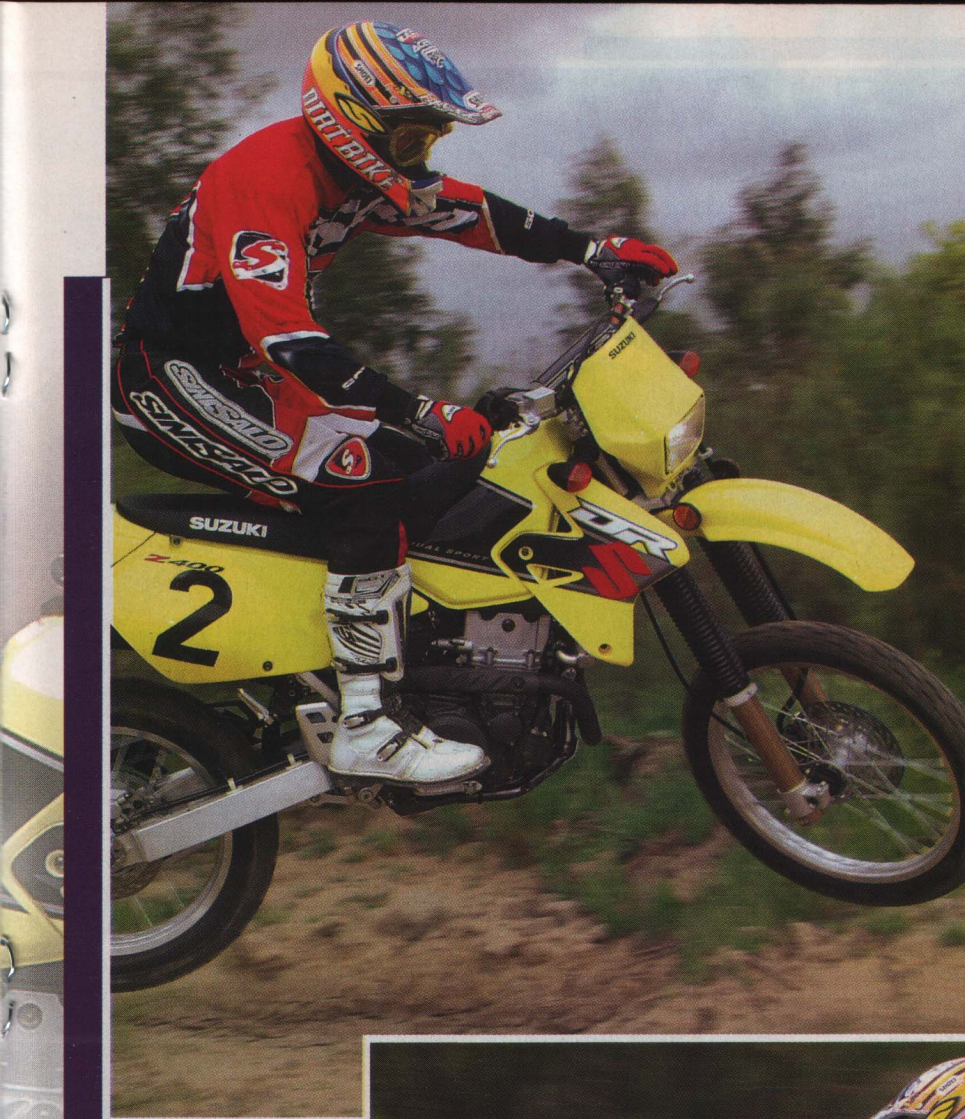
Unicorns. Two-headed Hydras. Sea serpents. Rondo's hairline. True dual-sport bikes. All of them are myths; things that exist only in the imaginations of people who want and need them. True dual-sport bikes are the most frustrating of all (well, except to Rondo). There really isn't any such thing as a motorcycle that works equally well on both pavement and dirt. There isn't even such a thing as a bike that works equally *bad* on both. There are only factory-made street bikes that look like dirt bikes or dirt bikes that have somehow gotten around the system and obtained a license tag.

But the Suzuki DRZ400ES is the closest thing out there to the real McCoy. Yes, as it comes from Suzuki, it is a street bike. But the actual mechanical differences between it and the dirt-only DRZ aren't that extensive. It's a dirt bike that was made into a street bike at the factory level, so it doesn't take that much to help it revert to its roots.

WHY DIRT AND STREET DON'T MIX

A legitimate factory can never make a truly dirt-worthy dual-sport bike for a variety of reasons. The biggest is the U.S. Department of Transportation. In order to get the U.S. government to bestow its blessing on a particular model, it has to be clean and quiet. It has to have a collection of bells, lights and whistles that push the weight up into the 300-pound range. And then there are some very practical reasons that dirt and pavement don't mix. There is no such thing as a real dual-purpose tire. Knobbies work poorly on the street and street tires don't work at all in the dirt. Gearing that seems reasonable in the dirt is usually buzzy and annoying on the street. And what on earth do you do with those mirrors when you go off road?

Suzuki took on the project from the right angle, though. The DRZ dirt version came first, then the engineers set about trying to make it appeal to the government. First came the problem with



emissions. The DRZ's beautiful Keihin FCR carb was ash-canned and replaced by a smaller, leaner CV carb. The pipe diameter was reduced, the ignition curve was remapped, the cam profile changed and the compression ratio dropped. For California models, the fuel tank is vented through a charcoal canister. That fuel tank is steel on the street models, not because of any government requirement, but as a liability issue (plastic doesn't stand up well to crashes on pavement). More liability issues: In the normal position, the fuel petcock only flows when the engine is running (as indicated by intake manifold vacuum) and the engine will die if it is placed in gear with the kickstand down. A fan was bolted on behind the left radiator so the bike will idle for hours without boiling over.

That just adds to an already complicated wiring harness. The dirt DRZ had a beefy battery and charging system for its electric starter, and that system is used to power a halogen headlight, blinkers, a horn and all that street stuff. With a lot of new weight hanging off the rear fender, the sub-frame had to be reinforced and extended. Then, of course, came the change in final gearing from 14/47 to 15/44 and the addition of street tires. To pay the bills for all this, Suzuki had to save money in some places—the fork and shock look similar to the dirt version's, but are actually quite a bit cheaper and lack most of the adjusters.

Just how good is the best production dual-sport bike? Pretty good—if you don't expect much. The DRZ is as good as they come, but not as good as they should be in a perfect world.

Top left page: Is the legitimate dual-sport bike an impossibility? Government regulations make it tough, but Suzuki came pretty close. You might have to finish the job.

Right: The weight issue is tough to address. Just unbolting excess reflectors and stuff can save a few pounds, but you still have a 300-pound dirt bike.



BUT HOW DOES IT WORK IN THE DIRT?

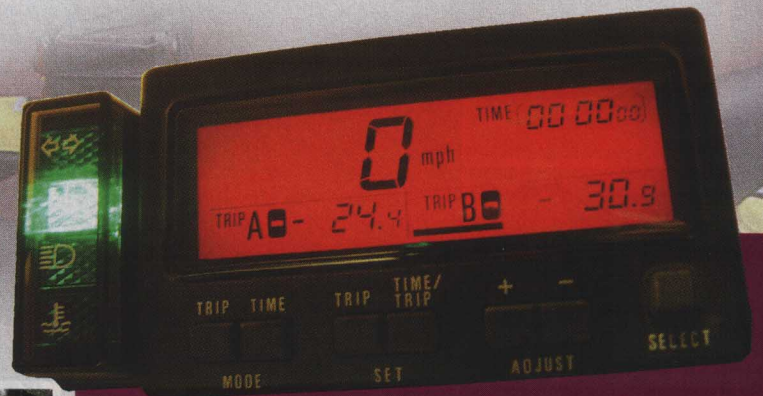
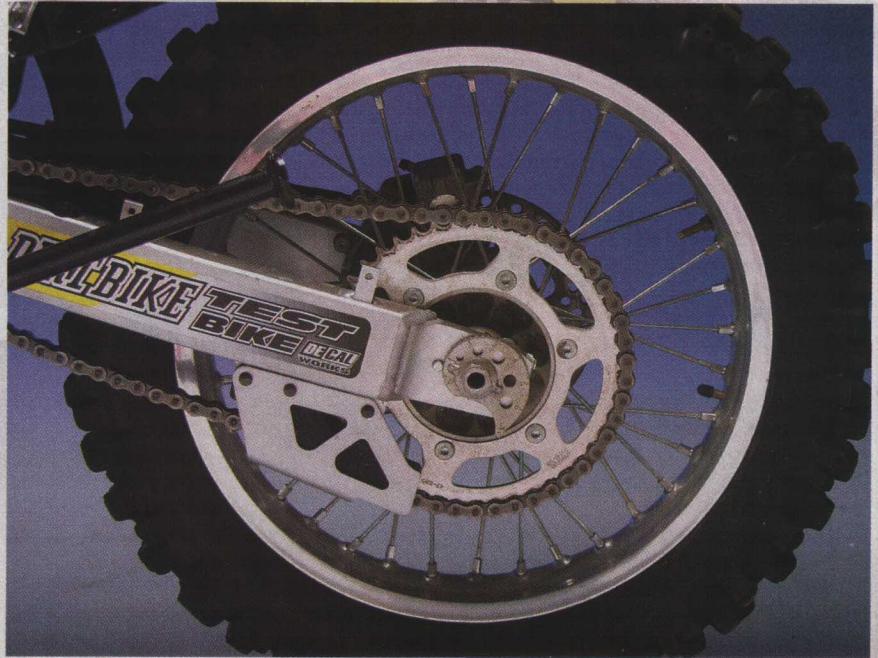
Amazingly well, for street bike. Frankly, there are two things that have to be done before you can even evaluate the bike as an off-road machine. You need to install some type of knobbies; there are DOT-approved tires with short knobs to be had from most manufacturers. Just be warned that they wear out fast on pavement. And you have to change the gearing. At the very least, install a 14-tooth countershaft sprocket. And once again, remember that anything you do to make it a better dirt bike will make it worse on the street.

With that much attention, the Suzuki becomes a real dirt bike. You can take it on almost any trail where you would take the dirt version of the bike. The DRZ has surprising power. For something so quiet and apparently strangled, it has decent bottom end snap and great roll-on. That just goes to show you what a good job Suzuki did with the motor in the first place. It seems like it can't be screwed up! In fact, a full-on, street-legal, super-quiet DRZ makes power that is comparable to a KTM 400 EXC. No kidding! And the best part is that you can ride all day long in the woods around your neighborhood and no one will hear you or even care.

The biggest shortcoming in the engine department will raise its head as soon as you hit any kind of jump. The CV carb doesn't like zero-G situations. There's a floating slide inside that bounces around and causes the engine to hesitate. And when you land, the kickstand flops partially down for a split second and the safety switch causes the engine to cut out. Fun, fun, fun.

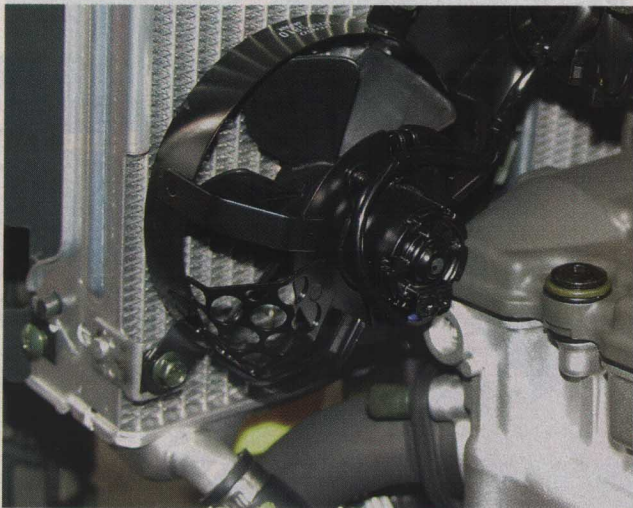
**Got knobs?
Got lower
gearing?
Good, now
you can go
dirt riding.**

ROAD WARRIOR



Suzuki's speedo/tripmeter/chronometer is perfect for organized dual-sport events. It's almost too nice to actually ride with and risk tearing up.

This, as far as we can tell, is a handy, under-tank carrot slicer and food processor. Those Suzuki engineers are always trying to be helpful.





SUZUKI DRZ400ES

Engine type	DOHC, liquid-cooled, four-valve four-stroke
Displacement	398cc
Bore and stroke	90.0mm x 62.6mm
Carburetion	36mm CV Mikuni
Fuel tank capacity	2.6 gal. (10l)
Gearing	15/44
Lighting coil	Yes
Spark arrester	Yes
EPA legal	Yes
Running weight with no fuel	305 lb.
Wheelbase	58.5" (1485mm)
Rake/trail	27.4/4.2"
Ground clearance	11.8" (300mm)
Seat height	36.8" (935mm)
Tire size and type:	
Front	80/100-21 Bridgestone Trailwing 41
Rear	120/90-18 Bridgestone Trailwing 42
Suspension	
Front	Showa 49mm conventional, adj. preld./comp., 11.0" (280mm) travel
Rear	Showa aluminum piggyback, adj. preld./comp., 11.6" (295mm) travel
Country of origin	Japan
Suggested retail price	\$5449
Distributor/manufacturer:	
American Suzuki Motor Corp. 3251 E. Imperial Highway Brea, CA 92822-1100; (714) 996-7040	

The biggest differences between the dirt bike and the dual-sport bike are the compression ratio, the head-pipe size, the carb and the suspension components. Add 'em all up and you get about 30 extra pounds.

BIKE WRESTLING 101

There's no getting around the fact that the bike is heavy. Without fuel, it weighs in at 305 pounds. That's 29 pounds heavier than the already heavy dirt version (with electric starter). Interesting: with the street tires, the bike feels heavier than ever. Installing knobbies makes the bike much more manageable and seems to make the bike feel lighter. Most of the sensation of weight comes from your inability to stop when you need to. With knobbies, you can brake much harder.

But there's no getting around it. The bike is heavy. We can say it handles light for a 300-pounder, but it's still no featherweight. Stiffening up the suspension helps a little. The fork has a compression adjuster and a preload adjuster. Max them both out. Set the rear end with about 90mm of sag (with rider on board) and max out the compression. The bike still is pretty soft for real off-road use. Suzuki's specifications say that the rear spring is 5.48 kg/mm, but we measured it at 5.1.

If real whoops aren't on the agenda, the stock suspension isn't bad. In fact, it's pretty decent on rocks at very slow speeds. That's surprising, considering that the fork is an old-fashion damper

rod design. But at higher speeds, the bike wallows, even if there are no bumps to hit.

AS DUAL SPORT BIKES GO...

The Suzuki is at the top of the heap. Admittedly, it's a pretty small heap. KTM has gone to big Dakar-style cruisers for its dual-sport line and Honda, Kawasaki and Yamaha haven't even attempted a new model in years. The only real competition for the Suzuki is the home-grown type. If you have the time and feel spunky enough to take on the DMV, then more power to you. There are several companies, like E-Line and Baja Designs, that will be happy to sell you a kit to convert your dirt bike into something that the government will tolerate. But some states are making this more difficult every year. In California, for example, most kitted DRZ dirt versions have been rejected.

That leaves you with the other option: you can take a street version and make it more dirt worthy. And for that, it makes sense to start off with what is already the most dirt-worthy dual-sport bike.

Right now, that's the Suzuki DRZ400ES. □