

Bob Hannah, Honda's lightning bolt!

DIRT RIDER

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APRIL 1983

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BIG BLUE
BOONIE
BLASTER!**



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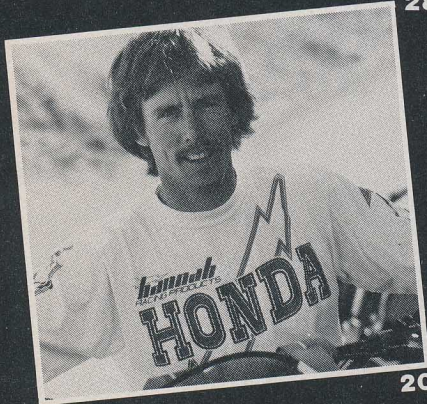
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DIRT RIDER

APRIL 1983, PUBLISHED MONTHLY, ISSUE 5



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SUZUKI SP500D

Heavy-duty hauler for street and dirt

The SP500D is Suzuki's modest attempt at capturing a small amount of the Open class dual-purpose motorcycle category. It's a modest attempt because Suzuki just flat does not sell as many Open class dual-purpose bikes as they do other sizes. Add to that the fact that Suzuki doesn't sell as many dual-purpose bikes as other companies period, and the reasons for the last couple of years become clear. Suzuki can't justify spending a lot of money developing a bike that does not sell in large numbers. Hence, the lack of Full Floater suspension and the obvious fact that Suzuki has not spent a great deal of time trying to trim pounds off of the hefty 500.

At 310 pounds without any gas in the fuel tank, the SP500D is heavy. Not so heavy that it is unbearable, but heavy enough to show up under spirited dirt riding and when trying to pick up the rear end and scoot it over. When loading the SP500 into a truck or van with a full tank of gas, it doesn't surprise you to hear that it is just slightly lighter than a Harley-Davidson XR750 flat tracker. Really.

TECH BRIEFS

The 1983 SP500D offers no new technical changes. There are, however, the traditional styling changes that we have all come to expect each year. The fuel tank stripes are different this year. The seat, while not going up onto the tank, is blue. The rear shock springs are no longer chrome, they are now painted black. The rims changed color, too, from silver to gold. A blue, water-proof tool and/or assorted junk bag was added on the rear fender just behind the seat. All the colorful additions and changes help make the bike visually more pleasing.

After admiring the sharp looks of the SP500, it's time to start the motor. This chore offers another view... the SP is a bear to get started. When we first got it, we spent nearly half an hour trying to fire it up. The SP500 is not a kickity-kick, one-right-after-the-other type of starter. Nope, it's a get-all-your-weight-on-it-and-stomp-with-all-your-might type of starter. Definitely not for the weak of heart.

The proper way to start the SP500D is to first pull in the decompression lever all the way, then let it out again. Now, push on the kickstarter a little bit until the decompression lever clicks back to its home position. When that happens, bring the kickstarter back to the top of its stroke and kick it... hard.

Once started it becomes apparent that the Suzuki is cold-blooded. Let it warm up for five to ten minutes before riding it because otherwise it will gasp and bog just when you need the power. If you must tear off instantly, leave the choke on a little bit until the bike is fully warmed up.

The bike will start in gear with the clutch in and has a five-speed transmission. The SP500D has a wet sump, with the transmission being pressure-lubricated. The oil filter is easily reached on the right side of the engine cases. A round cover with "Suzuki" stamped on it is the cover. The SP has an oil level window just in front of the kickstarter on the right side. It takes less than one quart to raise the level from the low line to the full line.

Cam chain adjustment is manual on the SP500D and must be done after the first 600 miles and at 4,000 miles. After that, it should be done every 4,000 miles. The adjustment is on the right side of the cylinder, on the back. To adjust the chain, first position the piston at top dead center on the compression stroke. Then, loosen



DIRT RIDER SPECIFICATIONS

SUZUKI SP500D

Serial number.....Frame: 202100083
 Engine: 111082
 Price\$2,098
 Number of dealers (U.S.).....1,390
 Warranty6 mos, unlimited mileage
 Customer service.....U.S. Suzuki
 3251 E. Imperial Hwy.
 Brea, CA 92621
 714/996-9540

4th 1.00 :1
 5th 0.83 :1

CHASSIS

FrameSteel
 Rake/trail29.5°/5.1 in.
 Front suspension.....Telescopic fork,
 7.3 in. travel
 (measured)
 Rear suspension.....Swingarm,
 dual shocks, 7 in. travel
 (measured)
 Brakes.....Single-leading shoe
 Wheels.....Takasago, gold anodized
 TiresFront: 3.00-21 IRC 4PR
 Rear: 4.60-18 IRC 4PR

ENGINE

Type.....Single cylinder four-stroke,
 SOHC, four-valve head, TSCC
 Displacement.....498cc
 Bore x stroke.....88mm x 82mm
 Compression ratio.....8.5:1
 Horsepower/rpm
 (measured).....28.1 @ 6,500
 Torque/rpm (measured).....23.3 @ 5,000
 Carburetion.....Mikuni BS40SS
 Exhaust.....Steel, spark arrester/silencer
 Ignition.....Suzuki PEI
 Lubrication.....Wet sump
 Air filtration.....Polyurethane foam element

DRIVE TRAIN

Transmission.....Five-speed
 Primary drive.....2.39:1 (gear)
 Final drive.....3.07:1 (chain)
 Gear ratios (internal).....1st 2.42:1
 2nd 1.63:1
 3rd 1.26:1

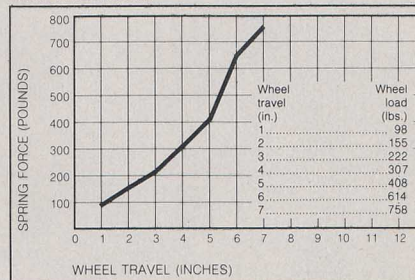
PARTS/COST

Maintenance manual.....Service manual:
 \$21.30 Supplement to
 manual: \$5.00
 Carburetor jets.....NA
 Sprockets.....Front: \$12.83
 Rear: \$27.31
 Handlebar levers.....\$7.25 ea.
 Shift lever.....\$11.02
 Piston kit (complete).....Piston Only—\$38.47
 Piston Pin—\$7.25
 Rings only.....\$21.19
 Cylinder.....\$190.57
 Head.....\$272.84
 Clutch plates.....Drive: (5) \$7.25 ea.
 Driven (5) \$3.79 ea.
 Air filter.....\$6.68
 Brake shoes.....\$4.35 ea.
 Chain.....\$77.61
 Seat.....\$88.20
 Fenders.....Front: \$33.45
 Rear: \$40.72
 Fuel tank.....\$147.42

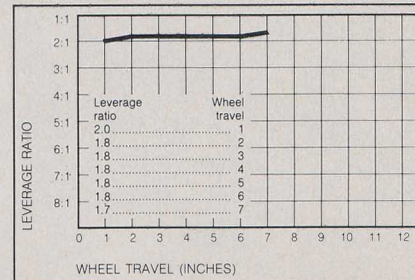
OPTIONS

None

REAR WHEEL LOAD



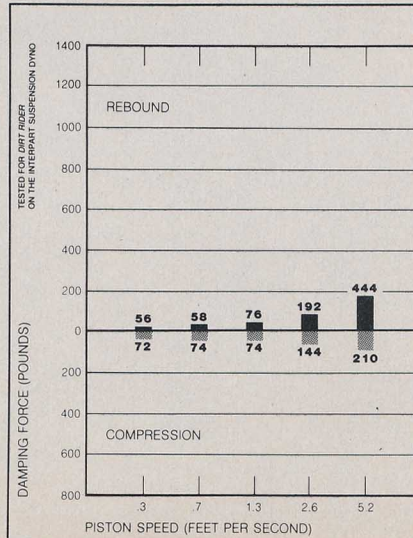
REAR WHEEL LINKAGE



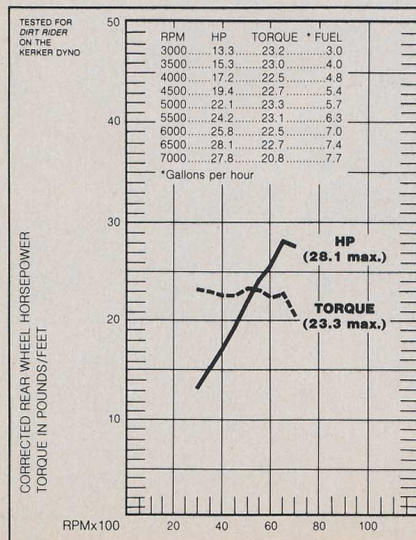
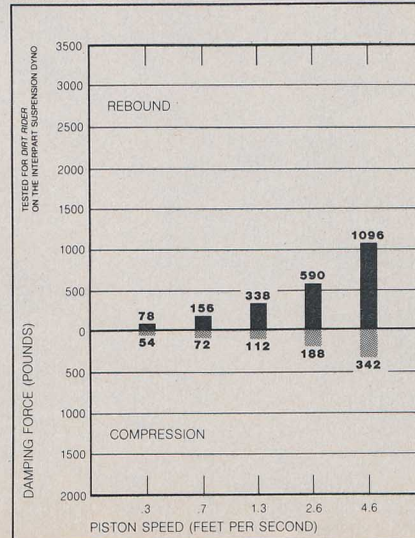
MEASUREMENTS

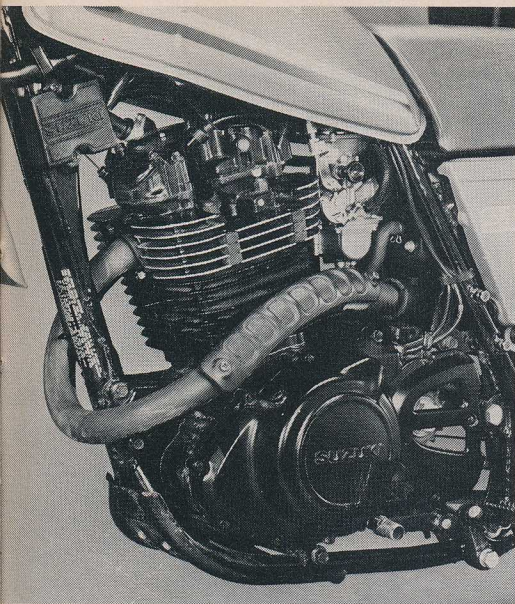
Weight (wet, no fuel).....310 lbs.
 Weight (wet, tank full).....320 lbs.
 Weight distribution.....136/174 lbs.
 (44/56%) (Fr/rr, wet, no fuel)
 Weight distribution.....142/178 lbs.
 (44/56%) (Fr/rr, wet, tank full)
 Wheelbase.....57.3 in.
 Fuel capacity.....1.8 gals.
 Reserve capacity.....0.5 gals.
 Sound test......91 dbA
 Ground clearance.....10.4 in.
 Seat height.....34 in.
 Swingarm length.....21 in.
 Swingarm pivot
 to center of countershaft.....4 in.

FRONT SUSPENSION DAMPING

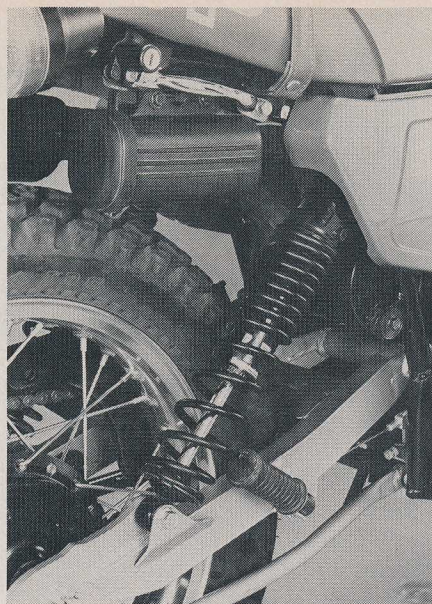


REAR SUSPENSION DAMPING

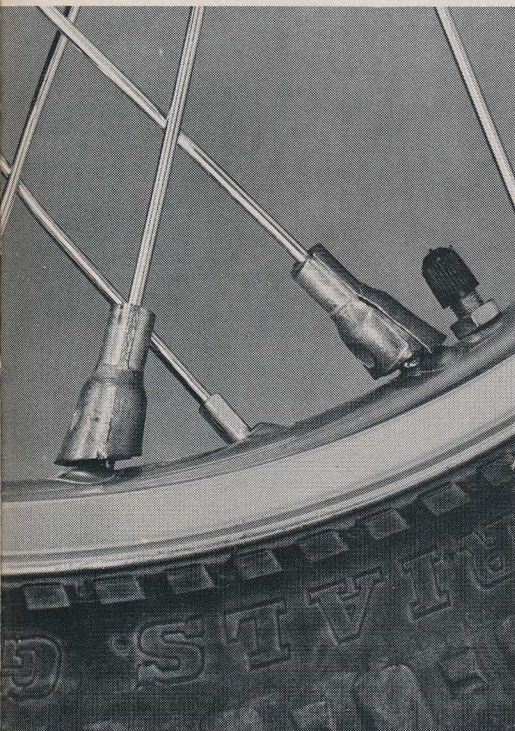




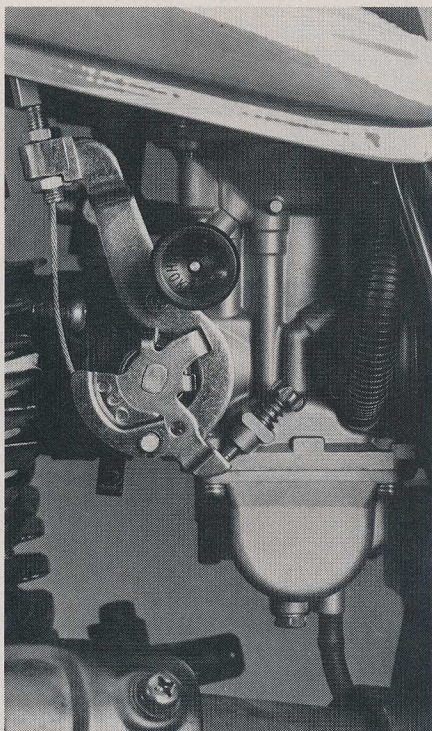
In a moderately detuned stage, the SP500 motor is still very powerful.



The rear suspension didn't win any votes. The tool box did. It is spacious and waterproof.



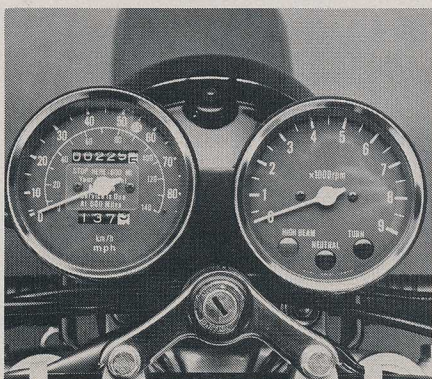
The front wheel has weights on the spokes to counterbalance the rim lock on the other side.



One of the reasons for using the vacuum slide is to prevent over-carburetion. It works.



The exhaust system on the SP500 is very quiet. It makes long rides more comfortable.



The instruments and ignition switch look old. Suzuki provides a tachometer, too.

the lock nut on the chain adjuster and back off the adjusting screw. Then adjust the screw so that there is proper tension and retighten the locking nut.

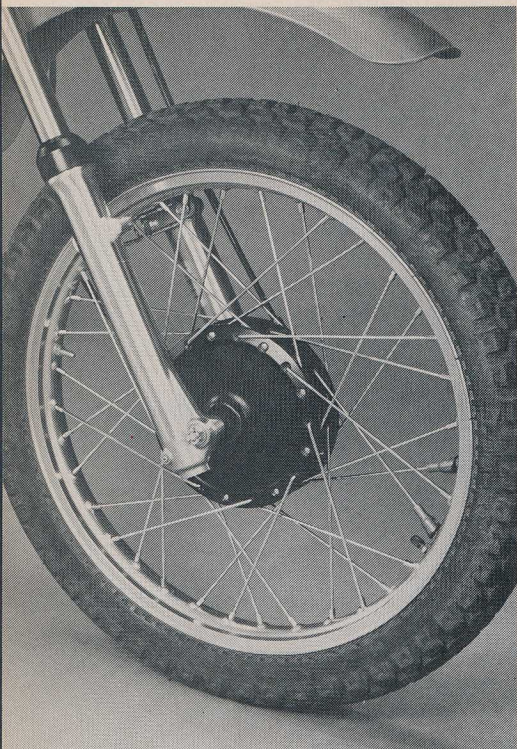
The first SP motor was a 370. Suzuki's first try at a four-stroke single was not overly successful. The 370 proved to be down on power, so it was increased to a 400. The 400 wasn't all that much better, so now we have the 500. While with only 28.1 horsepower at 6,500 rpm the SP500D isn't winning any horsepower races, it still feels strong when riding it. Actually the power of the engine is the strongest point of the bike. The highest torque of 23.3 came at 5,000 rpm. What possibly makes the 500 feel so strong is the fact that the torque never varies more than 2.4 pounds/feet. It starts out at 3,000 rpm with 23.2 (only one one tenth less than the maximum torque). From 3,000 rpm to 6,500 rpm, the SP500 only varies by .73 pounds/feet. At 7,000 rpm it drops to 20.8.

All this torque at low rpm makes the SP500D feel like a fire-breathing all-out racer during low-speed turns and on gut-wrenching uphill. The only thing that stops the Suzuki's charge up dirt hills is the poor grip qualities of the rear tire. The 4.60-18 IRC dual-purpose tire didn't win any rave reviews from our testers. The rear end of the bike did too much slipping and sliding for our taste. Of course, it could be blamed on the heavy rear end of the bike itself. With the fuel tank empty, 56.1 percent of the weight is on the rear wheel. That figures out to 174 pounds and a lot of weight. Most dirt bikes are around 52 percent in the rear with some going to 53 percent.

The 500 motor is much improved over the 370 and 400 which were previously offered by Suzuki. The new motor uses their Twin Swirl Combustion Chamber system that is supposed to create a more efficient flow pattern. The fuel mixture burns better and can be run leaner, both for emissions reasons and for economy. The bike has a four-valve cylinder head and screw-type valve adjusters.

Suzuki says the design gives excellent anti-detonation qualities and allows them to run higher compression ratios. The SP500D has two chain-driven counter balancers for smoothness and a Suzuki Pointless Electronic Ignition for simplicity.

The carburetor setup is similar to Suzuki's street bikes, and they say the decision to use it was another attempt at making the SP500D, a smooth, easy to ride bike. The carb system is a constant velocity setup that works on vacuum. There is a butterfly close to the manifold in front of the carburetor. Behind that is a slide that is operated by vacuum as the rider opens the throttle. What happens is the stronger vacuum is bled through a passageway on top of a diaphragm. The vacuum pulls the diaphragm up and the diaphragm pulls the slide up along with it. Because the slide can only rise as fast as the vacuum will let it, Suzuki says, the



None of our testers really like the IRC dual-purpose tires. The brakes weren't favorites.

bike can not be overcarbureted if the rider suddenly snaps the throttle wide open.

Jets are not available for the SP500D because the carburetion is part of the emissions control system. In fact, the manual says, "most states have passed legislation providing civil fines for customers tampering with emission control related adjustments and components."

The rear suspension has two DeCarbon shocks, no external reservoirs, with progressive springs. They range from 76 lbs./in. to 167 lbs./in. The swingarm is box-section steel painted silver. The rear brake is full floating.

The Suzuki SP500 comes equipped with a small, yet very effective, skid plate. The bike also comes with rubber-mounted turn signals, both front and back.

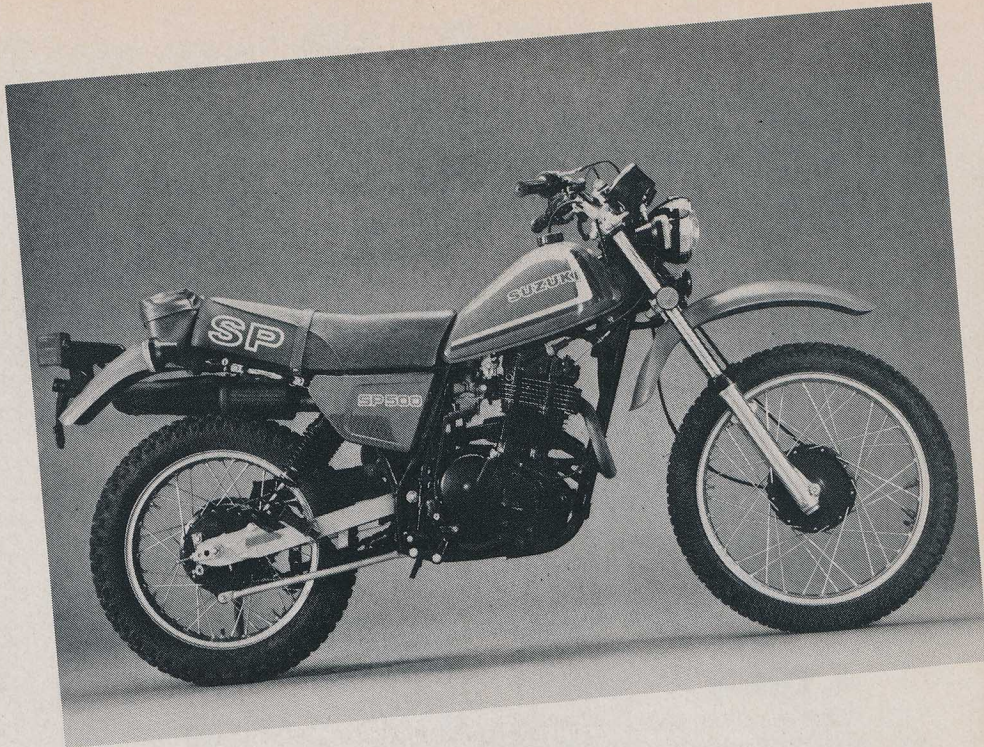
A polyurethane foam air cleaner element is used on the Suzuki. To get to it, the seat bolts (four of them) must be taken off and the air box cover (one bolt) must be removed.

TESTS/IMPRESSIONS

Like we said earlier, the SP500 is not easy to start. It's hard enough to make you think about it each time. You can't just jump on, crank it over and go riding. Passengers have to wait patiently by the side of the bike while you put all your energy into getting the SP500 to come thumping to life.

The big 500cc motor has plenty of power and torque to go just about anywhere you could want to take it. If you're inclined, the SP can even handle taking a passenger along for the ride.

The SP500 is at home on the highway. The bike is comfortable to ride on the street and it is predictable. We didn't find



any handling quirks on the pavement. The brakes worked well; they weren't mushy, and they didn't want to lock up.

Overall body positioning on the Suzuki was comfortable, too. The steel, serrated pegs were fine and the handlebars properly placed. Speaking of the handlebars, take a look at the pictures...they don't have a crossbar. We didn't suffer any problems with bending or flexing.

The instruments are old-style. They are separate and round and look like leftovers from Suzuki's older models. The ignition key holder looks old, too. One obviously old part is the headlight on/off switch. Since street bikes these days can not run with the headlight off, the old-style switch has been fixed so that it can't be moved to the off position.

When we got the bike, the left grip was loose. Although it had some kind of sub-

stance on it that was supposed to make it sticky, it didn't. We used safety wire to cinch the grip to the bars, but it never really stayed very tight. The handlebars are chrome-plated.

Once out in the dirt, we found we weren't as comfortable as we were on the street. The heavy weight shows up right away. The Suzuki really doesn't want to do what you want it to. Oh, it's fine for slow to moderate trail riding, but we're talking semi-serious, pushing-the-bike-a-little type riding.

The bike wants you to steer it from the rear. You want to turn left? Swing the rear end out to the right. You want to turn right? Well, just swing the rear end out to the left. You end up doing a lot of fishtailing and trying to keep the bike from sliding completely out from under you when you are trailriding the SP500D.



Although the torque makes it easy to slide, it would be a lot simpler if the bike had a little more weight bias on the front. Another thing that made it easy to slide was the tires. They tend to slide more than they grip. That's fine when you are turning a bike by rearend slide, but it is not good at all when you are trying to climb a hill...say an off-camber one at that. The SP500D just isn't able to get all of its power to the ground in the dirt.

In the dirt, the brakes were still mushy. The skid plate saw heavy use and came through with flying colors. It was crunched many times and hardly even shows any abuse. Likewise, the alloy gold rims stayed straight and true.

The bike, however, didn't always want to stay straight and true. Although it was adequate on regular trails, we encountered some muscle-puckering rear end swap on steep, bumpy downhills. The SP doesn't have the suspension to handle a fast, rough downhill. Add to that the heavy rear end and it's hold-on time.

Some people have said that using a diaphragm in the carburetor would cause problems because of all the bouncing around. We never experienced any problems whatsoever. The motor put out steady power constantly. It never varied or blubbered because of rough ground.

The gearbox ratios were well thought out and provided something for any kind of riding. Low was plenty low enough when combined with the SP's torque and fifth gear was faster than we ever cared to find out on city streets and highways.

While the Suzuki SP500D is not the best-handling dual-purpose bike we've ridden and is a tad heavy, it still was a solid bike on the street. If you want a bike that will get you places with a minimum amount of fuss and don't need an ultra-light flashy bike for the dirt, the Suzuki SP500 might just be for you. **DR**

OPINION

The Suzuki SP500 is not the bike for me. When it comes to a dual-purpose bike, I'm more concerned with how it rides and handles in the dirt. As far as the pavement goes, I really don't care. Just so it gets me there and back. I'm not an asphalt connoisseur.

The problem is that the Suzuki works great on the street and not so great on the dirt. It's too heavy. I sure don't want to throw 320 pounds (full of gas) around. It's hard to make mid-air corrections on the SP. Once it has decided that the rear end is going to swing out to the right or left, well, it's going to do it no matter what you try to do. Off of jumps, the rear end stays low and the front end climbs. You have to plan ahead for all jumps.

The tires prevented me from climbing some hills that I am positive the SP could have gone up. Basically, they kept me from having as much fun as I could have. They seemed to work okay on the street, they just wouldn't be my choice to put on a dual-purpose bike.

The motor, though, is really nice. It pulls strongly and cleanly throughout the powerband. The SP500 was plenty fast for my taste. The motor was completely reliable throughout our testing, too. I guess the whole bike is bullet-proof.

I guess if it doesn't handle all that well on the dirt, it's at least comforting to know that it isn't going to break. —Bob Carpenter

Age/Ht./Wt.: 22/5'9"/185 lbs.
Motorcycle(s) currently owned: None
Riding ability: Intermediate motocrosser

Suzuki's SP500D did nothing to really make me wish I had one. It's a handsome enough bike, but it falls short in comparison to some of its trick-looking competition.

And if you think about going much faster than a simple putt in the dirt, think again before you hurt yourself. The SP's inadequate off-road suspension and a flexible swingarm lead to exciting moments in short order.

One thing the SP has going for it is a nice motor. It'll get the bike going as fast as you need to go on the street. Chugging around with it was no problem, either; it seemingly would do that all day without complaint. However, you had to get the engine started in the first place, often a breath-taking task since it apparently defied us as we tried to figure out The Correct Drill.

Another thing Suzuki needs to work on is the brakes. Maybe the ones on our test bike were just poor examples that slipped through Quality Assurance because I know Suzuki makes better brakes than that. I couldn't get the front brake to come close to locking, and the rear wasn't much better.

—Mark Kariya

Age/Ht./Wt.: 26/5'10"/160 lbs.
Motorcycle(s) currently owned:
Husqvarna 360 Cross, Jawa DT500,
Kawasaki KX250B1, Yamaha RD350H
Riding ability: Intermediate motocrosser