
DIRT
TEST

Suzuki DR370

SACRIFICING BRUTE HORSEPOWER FOR NIMBLENESS AND LIGHT WEIGHT, SUZUKI'S FIRST FOUR-STROKE SINGLE PROVIDES FORMIDABLE COMPETITION TO YAMAHA'S TT500

During the era when two-stroke technology has dominated the off-road market, who would have dreamed that the big, lustrous four-stroke singles with their thunderous exhaust notes, locomotive-type torque and simplicity of design could rise from their misty graves to once again prowl the countryside in quantity? But it's true—with the introduction of Yamaha's XT and TT500 singles in '76, the bulky dinosaurs have been awakened from a decade of peaceful sleep, and despite obvious weight and horsepower disadvantages, the public has accepted their return with open wallets.

To this point, Yamaha has enjoyed a virtual monopoly on this market—everybody knew it, especially Suzuki, who hated to be left out of a seemingly booming trend. Anxious to capture a slice of the pie before its taste sours, Suzuki has introduced the DR370, their first four-stroke single and the first offering that will challenge Yamaha's supremacy in this category. Like the Yamaha TT, the DR isn't street legal (although Suzuki also makes an SP version that is), nor is it intended to be a competitive Six-Day machine. With its knobby tires and token lights (off their Dirt Scamp model) it falls into that popular "playbike" class that will have it competing in family enduros, thumping casually down mountain trails, nonchalantly stretching miles of desert terrain, and undoubtedly scaling more hills than a mountain climber.

In a time when bigger is continually associated with better, you're probably asking yourself why only 370cc? Why not a full 500cc displacement like the Yamaha? Well first, Suzuki hesitated to follow Yamaha's act directly. They also wanted to shy away from the characteristics associated with huge singles—such as overheating, difficult starting and heaviness. Conversely, they wanted to avoid the smaller 250cc powerplant too, knowing full well it wouldn't satisfy a thumpermaniac's desires for stump-pulling torque and rock-throwing powerslides. So, in search of a more desirable power-to-weight ratio, one that would more adequately fullfill the average rider's needs, they decided on the 370 powerplant, knowing full well it wasn't as strong as the TT engine, but banking on the bike's lighter weight and nimbleness to be its major selling points.

The engine appears to mimick Yamaha's but the approach is quite different—mainly to retain simplicity, increase reliability and to reduce production costs. The DR powerplant is a wet-sump design, keeping its oil in the bottom of the cases instead of storing it in the frame backbone as in the Yamaha TT. The wet-sump method is simple and lightweight, there's less chance of oil leakage because there are no exterior lines and the initial production cost is less. The DR does have slightly taller engine cases as a result, but surprisingly the entire engine is neither taller nor wider than the TT. By utilizing this more compact engine Suzuki has chopped the DR's wet weight to 279 pounds, undercutting the Yamaha TT by 17 pounds. The DR is unquestionably lighter feeling than the TT because the center of gravity is lower and its slimmer physique instills nimbleness. All this combines to make the DR more agile when twisting along woodsy trails and less fatiguing after a full day of riding.

Realizing the abuse and neglect playriders are capable of Suzuki stuck with conventional engine technology which has proven bulletproof in the past. Like the TT, the DR dimensions are oversquare, featuring a 85 x 65.2 bore and stroke for a 369cc displacement. The crank, with its fullcircle flywheels, spins inside caged ball bearings at both ends and the rod big-end rides in case rollers. Instead of using needle bearings at the rod small-end, Suzuki impregnates the wrist pin with a special lubricant and runs it directly against the bare rod. The aluminum barrel, which Suzuki claims has as much cooling area as the larger Yamaha engine, has a cast-iron sleeve, while a cast 8.9:1 piston pushes against a hemispherical head with a centrally located spark-plug hole. Unlike the TT model which has its camshaft encased in ball bearings, the DR's cam rides directly on the cylinder head casting like Honda XLs. Remembering the seizing problems that were encountered when the XLs were hopped-up, it's questionable whether bare head bearings will be satisfactory when a hotter cam and stiffer springs are installed. However, in its original form the engine is simple and void of any trick gadgetry that might spoil reliability. Valve clearances are easily maintained especially with a new Suzuki tool that eliminates using a feeler gauge. Cam chain tension is adjusted manually instead of relying on an automatic device and the ignition is the straight forward flywheel/magneto-type with a centrifugal advancer unit that allows trailside repairs in most situations.

From the first twist of the throttle you'll notice the DR engine seems real willing to rev off idle, but doesn't produce the *brute* power of a TT. An hour's worth of dynoing at Webco confirmed our speculation when the DR pumped-out just 21 horsepower, about 7 less than a TT. The DR still portrays all the characteristics that have made big singles so popular and legendary, though the rider gets just a taste rather than a full nine-course meal of them. With its broad power curve and abundant supply of torque, the DR will still climb any hill the tires can bite, it will still powerslide and lift the front wheel on command and it will still plow through sand and mud with the aggressiveness of an attack dog. It just won't perform quite as quickly, or with as much reserve power as the more powerful TT. What the DR lacks in muscle is more than made up for in agility. The 370 is just plain easier to handle in tight situations. It's lighter, more maneuverable and has enough flywheel inertia to allow loping along at walking speeds, turning 180-degree switchback corners and negotiating tricky terrain (such as rock strewn streams) with only occasional clutch slipping. Although the DR's gearbox ratios are slightly lower numerically than the TT, the spread between gears is greater, especially from first to second, which we thought was a bit wide. For ultra-slow trails overall gearing might prove too high for some riders, but most people will feel first gear pulls plenty hard. As usual, clutch and gearbox actuation is flawless.

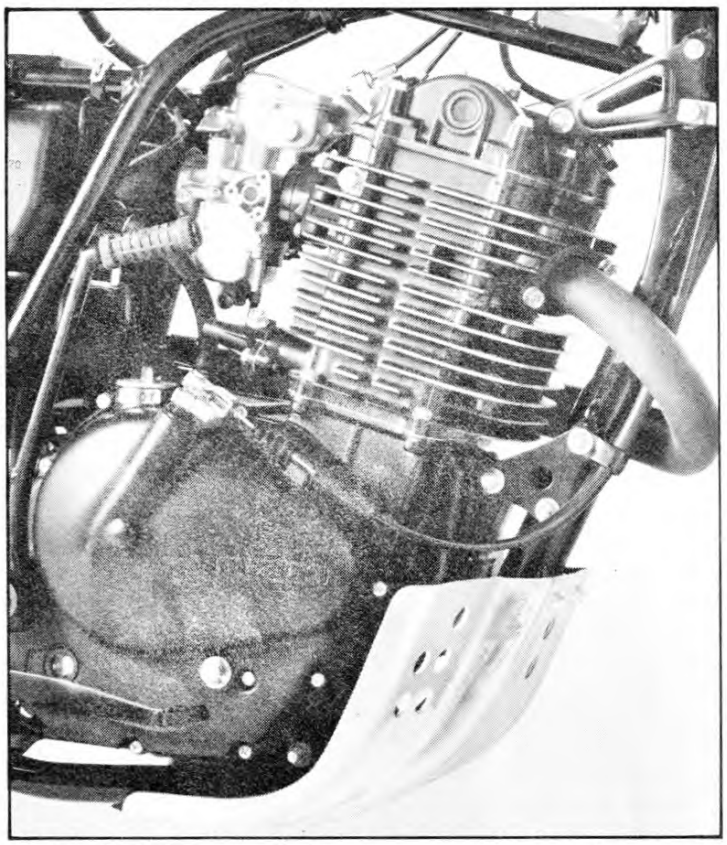
Like the TT, the DR engine has considerable hop-up potential lurking inside. With its present crank-pin location it can be easily pushed to 440cc by stroking. With additional boring it could boast almost 500cc. This makes you wonder what's up Suzuki's sleeve for years to come. In

PHOTOGRAPHY: DALE BOLLER, PAT BROLLIER AND MIKE LEVASHEFF

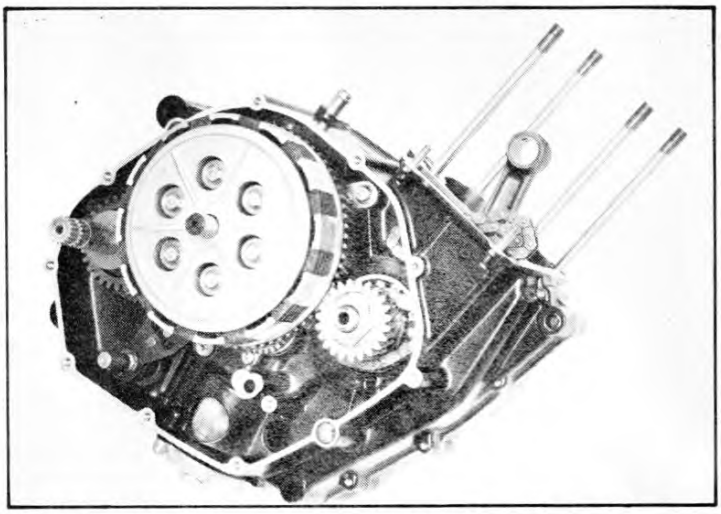
Suzuki DR370

the meantime Suzuki officials claim that adding a Mikuni 36mm carb kit (like those used for hopping-up TT's) supplies quite a performance increase. There will no doubt be numerous accessory firms supplying performance pipes and kits for the DR, so if you find it lacks power, there'll definitely be a cure available.

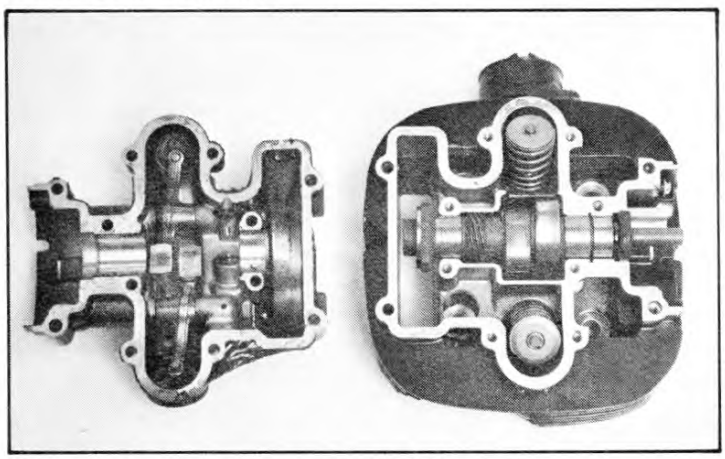
Ease of starting was undoubtedly considered when Suzuki opted for the smaller displacement engine. The 370 lies on the fine line separating it from being classified as a *big* single in need of a compression release to aid starting. Suzuki voted against supplying a compression release, both to increase simplicity and reduce cost, figuring the customer would rather adapt than pay the increased price. Their decision was right too. We found it quite eager to start in most situations, requiring just 2-3 aggressive kicks. Like the TT, the 370 features a viewing window in the cam cover that facilitates starting. When the shinny screw on the cam chain sprocket appears, it indicates the engine is just past the compression cycle and ready for starting. However, viewing the screw requires almost getting off the machine and bending your neck into a pretzel; it turns out the window was hastily added late in the production run which explains its awkward placement. If you've heard tales of cold-heartedness among the big singles, chances are they're true, but this Suzuki won't contribute to such a reputation—it's a starter hot or cold.



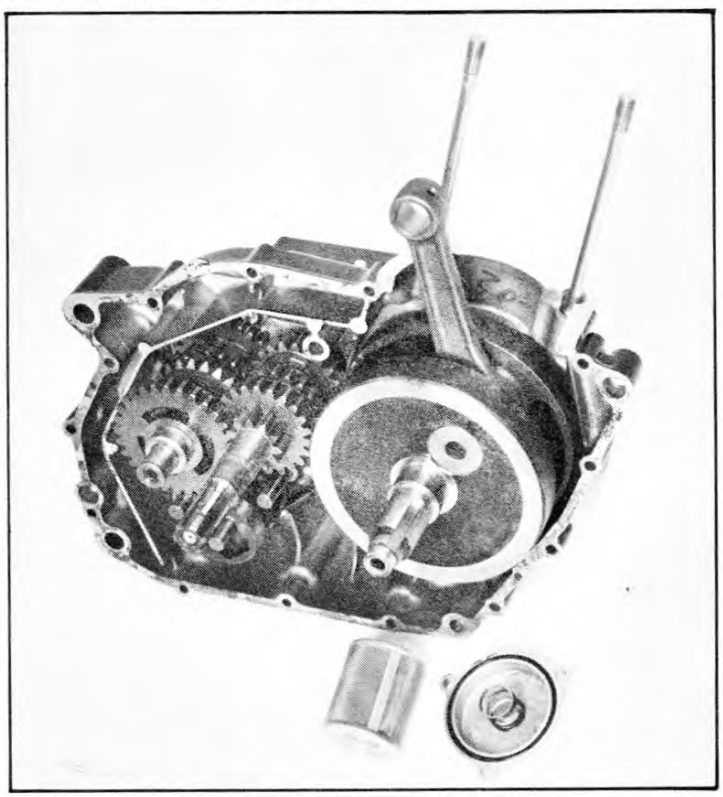
SOHC 369cc engine looks like a TT500, but it's a wet sump design. It offers gobs of torque and a wide powerband, but lacks the brute power of the 500. Big aluminum skidplate protects the DR's vitals, but bulging case cover can be irritating.



Both the DR's crank and mainshaft ride in caged ball bearings—a durable combination. Quiet helical gears drive the clutch basket and beefy 11-plate clutch. Unlike the TT, entire engine doesn't need to be removed in order to lift-off head and barrel.

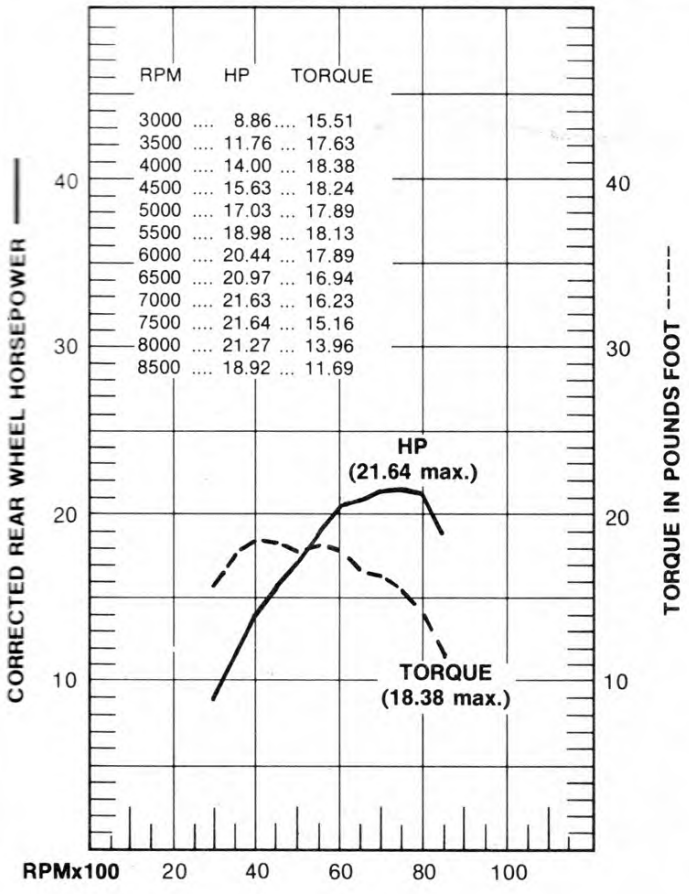


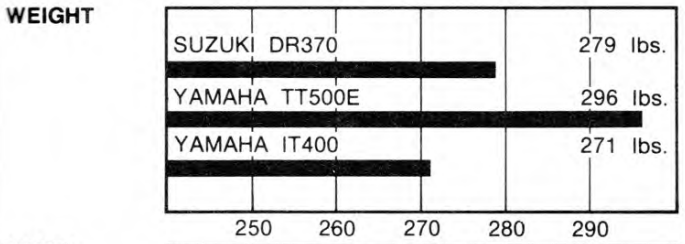
A conventional trochoid pump sends oil up a cylinder stud to pressure lube the cam supports; lobes are splash oiled. A trick plating process is also used to impregnate the rockershafts with a lubricating film. Point assembly, unlike the TT's, is driven off the cam.

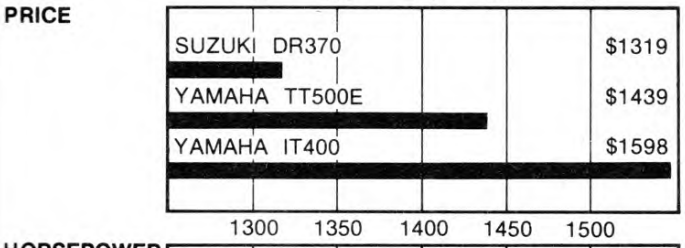


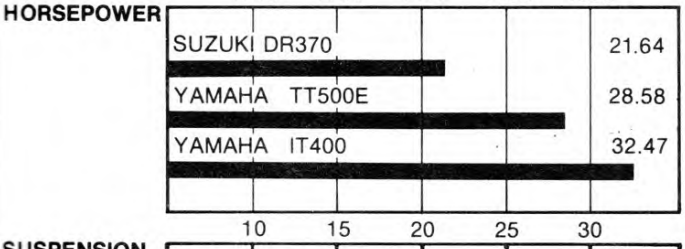
Generous full-circle flywheels give the DR an excellent chugging ability. Crank-pin location allows the 370 engine to be easily stroked for more cc's. Suzuki has eliminated standard oil filter by using a meshed screen filter in bottom of sump.

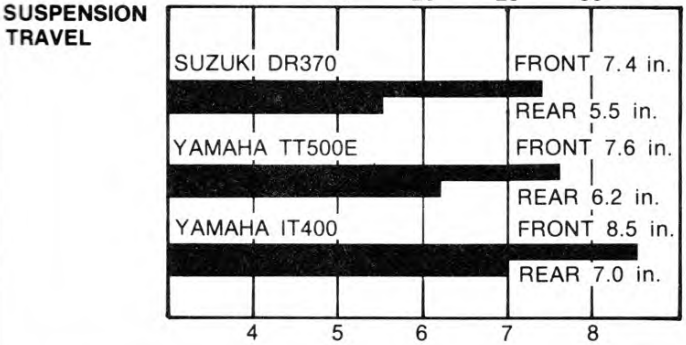
SUZUKI DR370











Suggested retail price.....$1319
Warranty.....None
Number of U.S. dealers.....1600
Cost of shop manual.....None available

ENGINE

Type.....Four-stroke SOHC single
Displacement.....369cc
Bore x stroke.....85 x 65.2mm
Compression.....8.9:1
Carburetion.....1, 32mm, Mikuni
Ignition.....Flywheel magneto
Lubrication.....Wet sump, 1.7 qts.
Lighting output.....N.A.
Battery.....None

DRIVETRAIN

Primary transmission.....Helical gear 3.045:1
Clutch.....11 plates wet
Secondary transmission.....Daido #520DS 15/42

CHASSIS

Fork.....Kayaba, 7.4-inch travel
Shocks.....Kayaba gas, 5.5-inch wheel travel
Front tire.....3.00-21 Bridgestone Motocross M11
Rear tire.....4.60-18 Bridgestone Motocross M12
Rake/trail.....31°/5.59 in. (142mm)
Wheelbase.....56 in. (1422.4mm)
Seat height.....33.5 in. (850.9mm)
Ground clearance.....10 in. (254mm)
Fuel capacity.....2.2 gal. (8.3 liters)
Wet weight.....279 lbs. (127kg)
GVWR.....N/A
Colors.....Gray
Instruments.....None

PERFORMANCE

Quarter-mile.....N/A
Power to weight ratio, unladen.....13.3 lbs./hp
Average fuel consumption.....approx. 40 mpg
Touring range.....70-90 miles
RPM @ 60 mph.....N/A
Speed in gears @ redline.....1st 25.03 mph; 2nd 37.70 mph; 3rd 50.99 mph; 4th 66.02 mph; 5th 80.70 mph.
Speedometer error.....N/A

Suzuki DR370

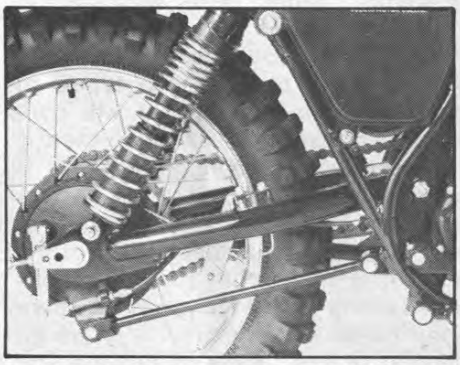
Suspension is customary for a playbike: nothing superior, but adequate for rapid trail riding and fast fireroading. Suspension travel is slightly less at both ends than the TT, but the average rider will find the 7.4-inch travel forks and 14-inch gas Kayaba shocks (giving 5.5 inches of rear wheel travel) offer a controllable ride when the bike is ridden within its limits. It's no motocrosser by any means and pushing it hard through mountainous whoops will quickly remind you of what overweight and under-suspended really means. We noticed that after an hour of hard riding the forks seemed to pump-up and reduce both travel and suppleness. We wanted to push a button somewhere to relieve built-up air pressure, or drain some fork oil, or something, to restore the original smooth action. We'd suggest experimenting with fork fluid volume and weight for better results.

The DR has unique integrated styling for a dirt bike, but it hampers its function in several respects: (1) Tank styling is pleasing and slim, but its capacity (2.2 gallons) is too small. The DR only has a range of about 90 miles, and that's when it's ridden easy—rapid trailing can easily drop this to just 70 miles. (2) We know instruments are bulky looking, but the DR really needs an odometer so you can calculate gas stops and trip distances. (3) The seat is adequate, but caters more to styling than function since it's excessively wide in the rear (to blend with the steel fender)

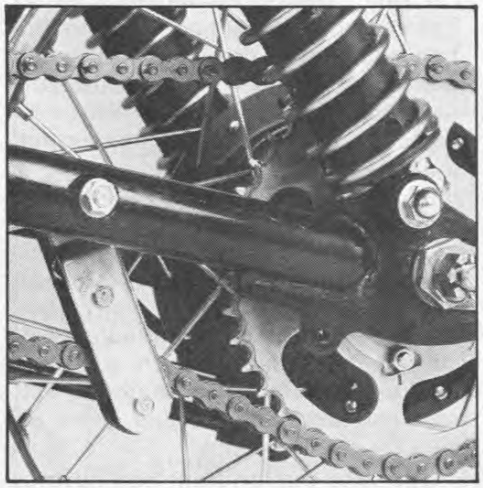
and a little shortchanged in padding. The tiny strip panels around the seat-base snap off for access to the seat bolts—another example of styling in lieu of easy accessibility. (4) The DR really needs some sort of grab handle on the rear for dragging it out of ditches, mudholes and gullies—and it will definitely be subjected to these predicaments in the hands of the average rider having fun.

Suzuki has attempted to give the buyer his money's worth in features, and good ones at that. A full-floating rear brake is almost unheard-of on a playbike, but the DR is equipped with one, and it works beautifully. With its superior action and the four-stroke's compression braking it's nearly impossible to lock the wheel or get it to hop violently when braking. Then too, there's a needle bearing swing arm pivot, alloy rims, a generous alloy skidplate, fancy fork gatters, a simple but effective chain tensioner, and Bridgestone tires that work pretty darn good.

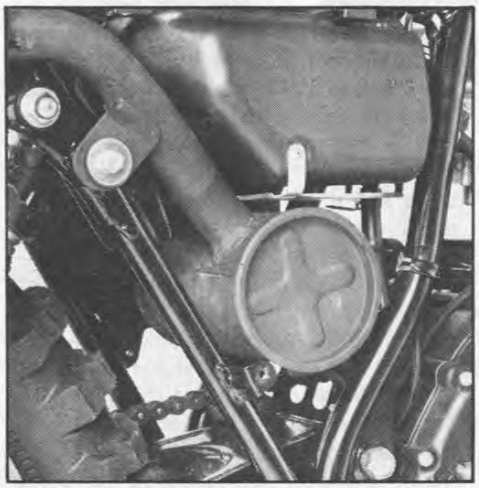
Suzuki has produced a winner for the playbike market in their first try. It's obviously not a pure ISDT/National enduro racer because it's big and doesn't have the power or nimbleness of a Husky or KTM, and because it will wear you out if you ride it fast. It does have nice, easy-going power, a forgiving chassis, reliability and cost a playrider can afford. There's room for just enough fiddling with noticeable results (shocks, air forks, tires, big tank, pipe, etc.) that a playrider can satisfy his natural tendency to tinker and be pleased with his improvements. It's Japanese in feeling and performance all the way, but also in reliability and cost. The bottom line is that everyone who rode the DR felt it was the best of the Japanese four-strokes. *M*



A full-floating rear brake indicates Suzuki's seriousness in the playbike class. Although the brake cable doesn't transmit impulses as a rod would, it's easily stretched beyond its limits if the brake pedal gets bent.



Chain tensioner is simple and effective, but vulnerable to damage as there is no tensioner guard. The lack of an aluminum swing arm and those precious magnesium pieces keep the DR's weight rather high, but its cost below that of the competition.



Behind right side cover lies this "coffee can" silencer, part of DR's quiet muffling/spark arrester system. Tiny heat shield protects airbox above, and once seat is removed the oiled foam filter element lifts out easily.

While still overweight, its slimness around the tank/seat junction, comfortable riding position and low center of gravity keep the DR respectable. Replacing the steel fender with a Petty IT will be difficult due to the wide styling of stock seat and fender.