

CYCLE ROAD TEST

# SUZUKI GS-1000E

● YOU CAN'T QUARREL WITH THE ECONOMICS reflected in Suzuki's new GS-1000 variant, which carries the model-suffix "EN" and a moderately extensive accessory package. Purists may continue to call for strict adherence to the Form Follows Function ethic, but the message heard echoing back from the marketplace these days sounds more like "form is function." Purists can afford to hold themselves aloof from that grubby reality, except to deplore it as another manifestation of the trendiness of our time; motorcycle manufacturers cannot. Suzuki has to please a constituency that votes with dollars, and survive in a popularity contest currently being won more often with flash than functional virtue. People want stylish seats and trick wheels and the like, and it is economically better for all concerned to install such accessories when and where motorcycles are built.

So Suzuki's supremely virtuous though understated GS-1000 has been made to perform an amoebic division: it has yielded the GS-1000N, in which guise it sells for \$3099 and has new paint and trim but otherwise remains nearly its old self. And it also has begat the GS-1000EN,

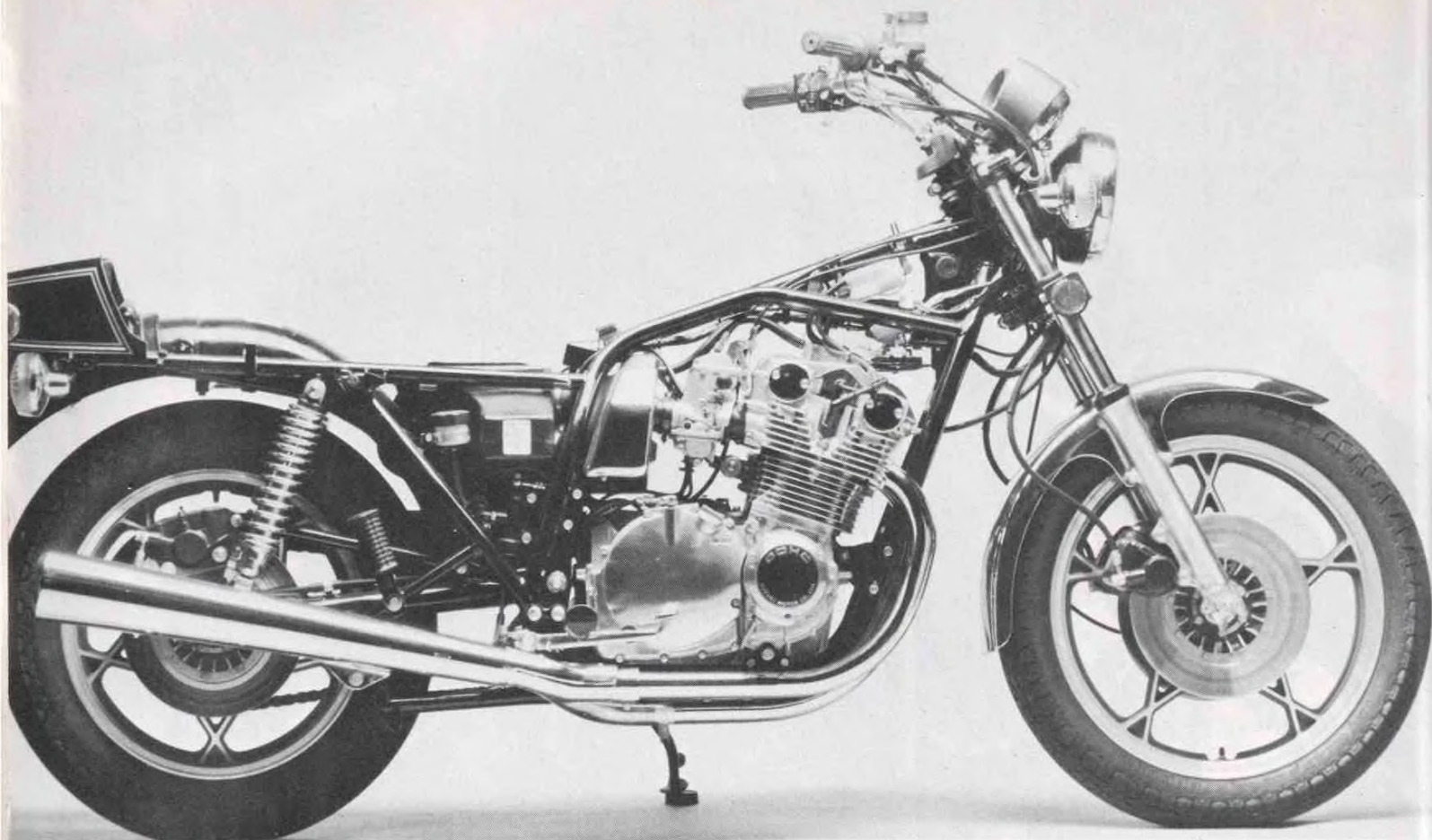
The EN version of Suzuki's fine, fast GS comes with cast aluminum wheels, a dual disc front brake, a two-level seat, a wacky fuel gauge and slathers of black-on-black paint. For \$400 extra, can form really become function?









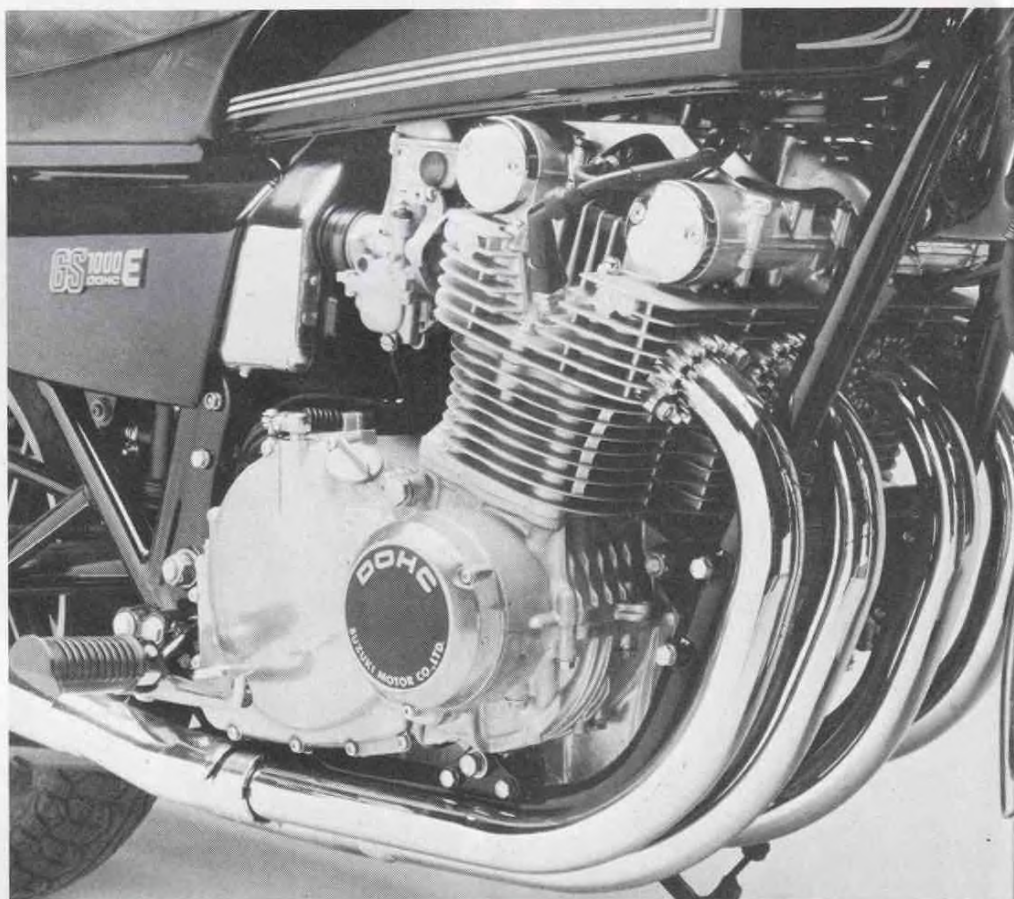


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Suzuki's oddly restrained entry in the Great American Crypto-Custom Sweepstakes. The EN's asking price is \$3499, and that extra \$400 buys a bunch of appearance-group accessories . . . and a contradiction. You can get the standard N-model in red or blue, your choice, but the GS-1000EN is available only in black. Lots of black, with just a subtle touch of blue and gold striping on the tank. If they'd black-anodized the engine, too, the total effect would have been very striking. They left it brightly polished, and the EN emerges as that rarest and most contradictory of creatures: a muted flash bike.

Cast wheels have become the *sine qua non* of jazzed-up motorcycles, and the new GS-1000EN has them. The EN's wheels are the same as those on the GS850: a 19 x 1.85 (rim diameter and width, in inches) up front and a 17 x 2.15 at the rear. And it has tires the same size as the 850's, but the EN's are V-rated, which is appropriate to its speed potential. What isn't so appropriate is the wheels' weight, which accounts for most of the 17-pound increase between the first-edition GS-1000 and the new EN. The wheels do look spiffy, and won't ever develop the service problems encountered with wire-spoked wheels, but they are heavy. All of the present crop of cast-aluminum wheels are rather heavy, but the others aren't combined with the GS-1000's finely-tuned suspension. Therein lies a difference, of which more will be told later.

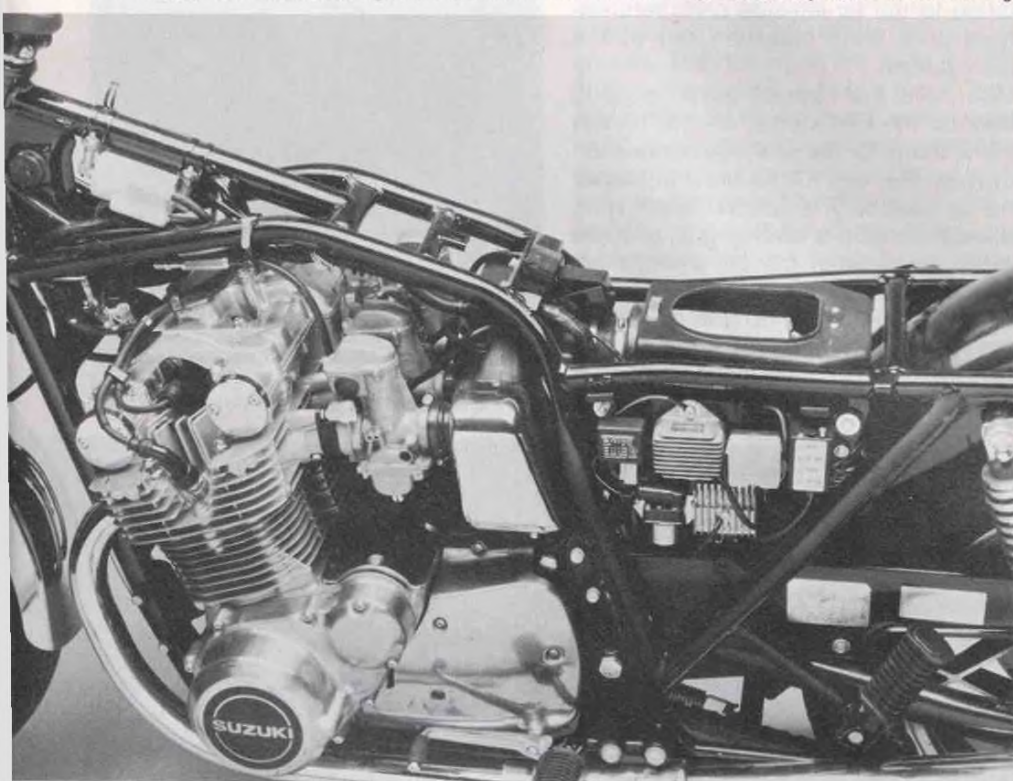
Dual disc front brake assemblies have



Suzuki's twin cam engine is smooth, oil-tight and has excellent power delivery over a very broad speed range.



The late-model "EPA" carburetors give the GS-1000 better fuel economy, and a chilly nature in the morning.



These poorly-calibrated instruments overstated speed, and underestimated the amount of gas left in the tank.

lent other motorcycles that last, irresistible tug of showroom magnetism, so naturally the GS-1000EN has one of those too. It's not the same brake Suzuki uses on the GS-850, or the earlier 1000. The 850's dual disc front brake has different calipers, and one-piece rotors instead of the riveted hub/disc assemblies found on the EN. The new N-model 1000 may be fitted with the same caliper, and if so it may also have the same slight but annoying sponginess in its front brake action.

Yes, the GS-1000EN has a two-level seat. We mention that because the seat is

only very slightly stepped, and you might miss it unless we included it in our listing of the EN's accessories. You'd almost certainly miss the reshaping of the fuel tank, which no longer has the broad, shallow grooves that were pressed in the original's sides. This change was made in part because the grooves created a focus for engine vibration right where it would be felt by the rider's knees. The new GS-1000 has fatter, square-section foot pegs for passengers and that, too, is an anti-vibration measure. Both the standard and deluxe versions get the new tank and

pegs; only the EN comes with self-cancelling turn indicators (the N-model has one of those nagging beepers) and a fuel gauge.

Our test bike was a genuine GS-1000EN, and had the fuel gauge—which kept trying to convince us that the Suzuki's fuel tank capacity couldn't be more than a couple of gallons. We'd fill the tank, ride 75 miles, and the gauge's needle would be buried in the red zone between 1/4-full and empty. We resolved the question that raised by ignoring the gauge and running until the tank valve had to be switched to reserve. That happened after riding 175 miles, and at that point the gauge's needle was right on the empty mark. Further observation told us that the gauge was hopelessly non-linear: three-fourths of the needle's movement occurred while the first quarter-tank of fuel was being consumed. And it meant that the gauge was effectively useless, as it gave no reliable information about remaining fuel below the one-third-full level, and that's where most riders begin to wonder how soon they should start looking for a service station.

Fortunately, the Suzuki also has the usual reset odometer, or trip-meter, and once we'd done a few fuel consumption-rate checks the odometer told us when the tank needed refilling. The Suzuki doesn't require frequent gas stops. Its tank holds five gallons of fuel, give or take a few ounces, and the average consumption rate for all the test miles we rode was 42.8 miles per gallon. That figure includes fuel used in a number of drag-strip runs and miles of hammering along mountain roads. Fast constant-speed cruising stretched the mileage to 45 mpg, so it's very likely that a double-nickel touring pace would bring it up to 50 mpg and extend the Suzuki's main-supply range to 200 miles. In fact, our test bike might have done even better if we'd run it at an indicated 55 mph, as that would have been a true road speed of only 47 mph. Its speedometer was wildly optimistic, giving readings 16 per cent higher than true speed.

The new GS-1000EN showed us better fuel economy than the first-edition bike we tested in 1978 (which averaged 39.8 mpg), but did not do as well at the drag strip. The original GS-1000 did an 11.89-second, 113.35-mph quarter-mile sprint; the EN was almost five mph slower at the finish, and needed another half-second to get there. Nobody with a sense of perspective would argue that the EN is slow, but it surely isn't as fast as its parent despite being very little heavier and having a shorter rear tire—which effectively tightens its gearing just a fraction. There has, as far as we can determine, been no change in the engine or exhaust system; even the intake-air box and ducts are the



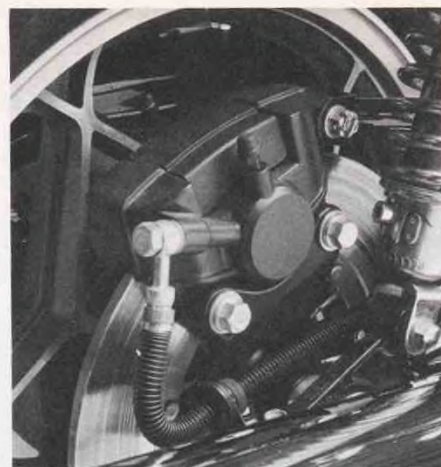
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same. But the carburetors have been fiddled extensively for emission-control reasons (the people at Suzuki refer to them as "EPA carbs") and that, together with a brisk quartering wind at the drag strip, probably accounts for the loss of speed.

Along with the new carburetors the Suzuki has acquired a handy, panel-mounted choke control. It's a good thing, because the EPA carbs deliver an exceedingly lean air/fuel mixture and the engine won't run steadily without choking until it comes up to full operating temperature. Full choke is required for starting, even on relatively mild mornings, and some choke is still needed when the

Suzuki is five miles from home. It has to be nursed along with the choke, and the nursing would be a vexing proposition if the choke control was still a lever attached to the far-left-side carburetor instead of a knob standing out of the steering stem.

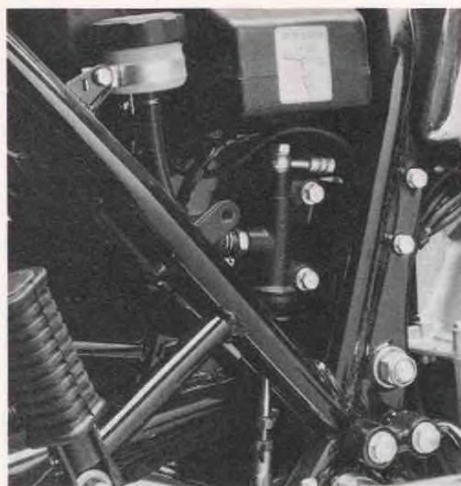
We have the Federal government to thank for the EPA carbs; we don't know *who* to thank for the new interconnection between the GS-1000's electric starter and its clutch. The starter won't work unless the clutch is disengaged, so there will be times when the EN owner's left hand will be busily leaping back and forth between the choke knob and the clutch lever. It's aggravating, but worth it if the interlock keeps some curious urchin—or even you—from punching the starter but-



A very tidy rear brake installation, complete with an anti-kink / anti-scuff plastic coil around the brake hose.







The rear brake's master cylinder has a remote-mounted plastic fluid reservoir. Linkage is adjustable.

Suzuki's GS1000 isn't the fastest Superbike; it is the best-handling thing in its class, and also one of the most comfortable motorcycles ever made.

ton when the bike is in gear and sending it flopping off its side stand.

Suzuki's carburetion engineers have done quite a good job of meeting the EPA clean-air requirements without creating hitches in the GS-1000's throttle response. They've made the 1979 model a cold-blooded devil, a trait it has in common with most of this year's motorcycles, but it does respond well to throttle once it's warm. And it hasn't lost much of its old mid-range punch. The Suzuki will still let you do with throttle some things that require a downshift in other biggish fours. EPA carbs notwithstanding, the GS-1000 does have more than adequate muscle. It isn't the king of Superbikes, never was, but it will get you where you're going with all the dispatch a prudent rider can stand.

The Suzuki GS-1000's best feature was, and is, its near-perfect roadability. The first-edition bike was superb even on a fast race course, the mere sight of which usually is enough to send lesser motorcycles into a wobbling fit. Nor did the GS-1000 acquire its high speed cornering manners at the expense of ride quality. The bike lacked, and still does not have, the silky fork compliance of Yamaha's Eleven, but it is far from harsh and both its front and rear suspensions are exquisitely controlled. And they are appended to a chassis that has both strength and balance.

Be advised that the new GS-1000 still has all its original chassis features, including the fully adjustable suspension. The rear shocks have the usual cam-ring adjusters for cranking more or less preload into the coil springs; they also have an adjustment for rebound damping. Just below each upper shock mounting eye, under a rubber dust cover, there's a small knurled knob with detent notches and numbers for the four damper settings. It's not merely a gimmick; the damper action really does stiffen considerably as you turn the knobs from position-one to position-four. But to make the system work really well it's necessary to coordinate the

damper setting with spring preload, raising and lowering them together. Combine the minimum preload with position-one damping and you get a soft, touring ride; run the cam rings up for maximum preload, move the knobs to "four," and the rear suspension assumes its race track mode.

The front fork neither has nor needs a damping adjustment. It does have adjustable springing. There's a soft coil spring inside each fork tube, and its action does not vary. The overall spring stiffness does, however, greatly depend on the pressure of the air inside the tubes and that can be changed. The recommended fork pressure is 0.8-kilogram per square centimeter, or about 11 pounds per square inch. Raise that pressure to 15 psi and you're



The dual-disc front brake is powerful, but puts a lot of weight where it isn't needed. Wheel doesn't help either.



You can adjust the Suzuki's rear shocks for twenty different combinations of damping and preload.



With this air pressure gauge, and a lot of luck, the GS1000's fork stiffness can be adjusted just right.



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ready to ride harder than you should; drop it back to 7 psi and the ride softens perceptibly. This is a nice feature . . . if you can figure a way to get the pressure you want, which isn't easy.

The flaw in Suzuki's otherwise grand air-fork scheme is that no means is provided for fine pressure adjustments. The fork tubes' internal volume is so small that the slightest hit with a service station's air hose sends their pressure too high (high enough to blow the seals, if you aren't careful), and then the slightest tap on the filler valve stems produces a substantial drop in the reading. In fact, just taking the reading with the gauge they provide lowers the pressure a couple of pounds. What the bike needs is the special fork pressurizing tools we thought it was going to have: a hand pump and combination gauge and pressure-bleed valve. These tools were developed for the Suzuki motocrosser air forks, and they are essential when you're trying to make fine adjustments on the GS-1000. They are available through Suzuki dealers. The pump is part number 09921-00004 and costs \$5.32; the combination gauge and valve carries the number 09940-44110 and a price of \$41.05. That's a \$46.37 total, which will buy a lot of chain lube and spark plugs; it's what you'll have to spend to take the aggravation and inaccuracies



out of the fork adjustment procedure.

Here's a way you can emerge from the GS-1000 suspension-tuning fight with a positive differential of \$353.63 and the fork pressurizing kit: don't pay the extra money for the EN version of the bike; buy the standard model. That's a piece of advice that applies the other way around, too. If you opt for the EN you won't be needing the pressure tools, because it has a small suspension problem that can't be corrected with air pressure. The problem? It's the EN's heavier wheels and the weight of that second disc and caliper up front. Suzuki may have succeeded in

making the GS-1000 look better by fitting it with cast wheels; they also succeeded in getting its suspension out of kilter.

Everybody who gets interested in suspensions and does a little reading soon learns that there is a relationship between ride quality and the ratio of sprung to unsprung weights. That is, any vehicle with light wheels and a lot of weight above its springs will tend to take bumps without much fuss. Conversely, heavy wheels under a light vehicle are apt to dance around. The GS-1000 is relatively light, the lightest of all the Superbikes, and it

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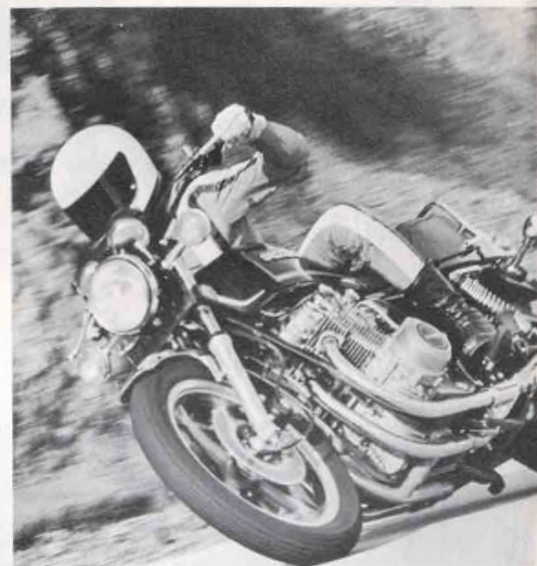
has not taken kindly to the extra 17 pounds of unsprung mass. Specifically, it has been made rather sensitive to road surfaces, and that is true of both its ride and cornering behavior. The EN simply doesn't keep its wheels under control and its tires against the pavement as firmly as it should. So the bike's ride is not quite as good as that provided by the wire-wheel model, and it won't carve around corners with quite the same aplomb.

The GS-1000EN does still have the fine balance and steering of the original, and it does handle beautifully on smooth roads. The rear wheel may be an inch smaller than the one on the standard model but it wears a fatter tire, and that combination works exceedingly well. Apart from the slight weight-related wheel hop already noted, the EN's only road-going deficiency is in its front brake. The brake is powerful and the IRC tire certainly is capable of transferring braking torque to the road, but it doesn't have either the solid feel or precise response of the GS-850 dual-disc brake. The lever feels springy and there's a non-progressive gain in braking effectiveness as more

pressure is applied.

Assuming that the new standard model-N GS-1000's front brake is roughly the equal of the first-edition bike's brake, there is no function-related reason for buying the many-splendored GS-1000EN. To do so amounts to paying \$400 for a slight case of wheel-hop. The standard model has the same smooth, reliable twin-cam engine and sturdy, if slightly stiff-shifting, transmission. It will handle at least as well on smooth roads, better on rough surfaces, and it may even be a bit faster. The standard model will give you a smoother ride, the same fuel economy and everything else except for one-piece wheels, a fuel gauge, and a few bits of trim. If there is one item Suzuki's special-version GS-1000 has that is better than the equivalent standard part, it would have to be the seat. We know the EN's stepped seat is very comfortable; we don't know what the new standard seat is like after two hours of being perched on it.

Despite everything we've said, a lot of you will pay the extra \$400 for the EN; you won't get hurt in the deal, because the GS1000EN—slight wheel hop and all—is an extremely good motorcycle. It's just not possible to seriously foul up a ma-



chine as fine as Suzuki's big four with a few pounds of unsprung mass. The bike is nicely finished, smooth-running, a comfortable fit for all but the extremely large or small rider, and we liked it a lot. We'd have liked it even better if there never had been another, more elemental, GS-1000 to show us what the EN has suffered in the name of style. ●

Make and model ..... Suzuki GS-1000EN  
Price, suggested retail ..... \$3499

### PERFORMANCE

Standing start 1/4-mile ..... 12.44 sec. @ 108.43 mph  
Engine rpm @ 60 mph, top gear ..... 3802 rpm  
Average fuel consumption rate ..... 42.8 mpg  
Cruising range, main/reserve ..... 173.3/44.9 mi.  
Load capacity (GVWR less curb weight) ..... 182.8 kg  
(405 lbs.)  
Maximum speed in gears @ engine redline ..... (1) 51.5,  
(2) 72.5, (3) 93.4, (4) 114.6, (5) 134.1

### ENGINE

Type ..... Four-stroke in-line four,  
air-cooled, DOHC with roller chain cam drive  
Bore and stroke ..... 70.0 x 64.8mm (2.76 x 2.55 in.)  
Piston displacement ..... 997cc (60.83 cu. in.)  
Compression ratio ..... 9.2:1 (full stroke)  
Carburetion ..... (4) 26mm Mikuni VM26SS  
Exhaust system ..... Four-into-two  
Ignition ..... Battery-powered, inductive,  
mechanically switched  
Air filtration ..... Paper element, disposable  
Oil filtration ..... Paper element, disposable  
Oil capacity ..... 3.4 liters (3.6 qts.)

### TRANSMISSION

Type ..... Five speed, constant-mesh, wet-clutch  
Primary drive ..... Helical spur gears, 1.775:1  
Final drive ..... # 630 roller chain, 2.80:1  
Gear ratios, overall ..... (1) 12.43 (2) 8.83 (3) 6.86  
(4) 5.59 (5) 4.78

### CHASSIS

Type ..... Tubular full-cradle frame, telescopic  
air/coil spring front fork, adjustable rear dampers  
Wheelbase ..... 1505mm (59.3 in.)

Rake/trail ..... 28°/116mm (4.57 in.)  
Brake, front ..... Hydraulic, dual disc, 275mm rotor  
rear ..... Hydraulic, single disc, 275mm rotor  
Wheel, front ..... Cast aluminum, 19 x 1.85  
rear ..... Cast aluminum, 17 x 2.15  
Tire, front ..... 3.50 V19-4PR IRC Grand High  
Speed GS 11 AW  
rear ..... 4.50 V17-4PR IRC Grand High  
Speed GS 11 AW  
Seat height ..... 758mm (29.8 in.)  
Ground clearance ..... 155mm (6.1 in.)  
Fuel capacity, main/reserve ..... 15.0/4.0 liters  
(4.1/1.1 gal.)  
Curb weight, full tank ..... 256.2 kg (565 lbs.)  
Test weight ..... 331.1 kg (730 lbs.)

### ELECTRICAL

Power source ..... Permanent field, three-phase alternator  
Charge control ..... Voltage-limit shunt  
Headlight beams, high/low ..... 50W/40W  
Tail/stop lights ..... 8W/23W  
Battery ..... 12V 17AH

### INSTRUMENTS

Includes ..... Speedometer, tachometer, odometer,  
tripmeter, fuel gauge, oil-brake-signal-  
high beam warning lights  
Speedometer error, 30 mph indicated actually ..... 25.83  
60 mph indicated actually ..... 51.48

### CUSTOMER SERVICE CONTACT

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