

Cycle

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Turbo Preview Honda CX500

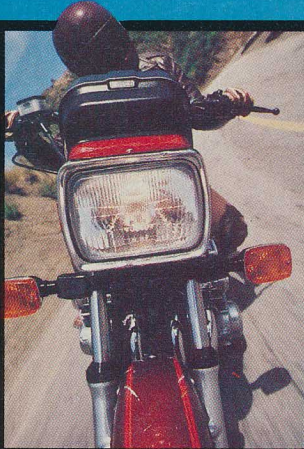
HONDA GL1100 INTERSTATE

Suzuki's 16-Valve GS750EX
Versatility Made A Virtue

Rear Suspension Techno
Single-Shock Systems

Yamaha IT465H Enduro
Off-Road Skywalker





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This Month's Cover: Although he's hidden behind the GL-crest, DDC, America's answer to Mighty Mouse, played a starring role in Robin Riggs' captivating photo of Honda's GL1100 Interstate. In order to position the giant Gold Wing emblem, Riggs nailed Daniel's shoes to the wall at the appropriate level, inserted DDC into the shoes, and epoxied the shield to his helmet top. Then, threatening DDC with a bare 220-volt line, Riggs told Daniel to stand up very straight. Presto. And click. The test begins on page 20.

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There are gas-it-up 750s, and the see-me-now kind, and those for chasing miles behind. Then there's the do-it-all EX.

SUZUKI GS750EX

● MANY OF TODAY'S NEW MOTORCYCLES result from market research, which survey riders who are somewhat distant from motorcycling's epicenter, ground zero for the high-intensity, full-speed, scrub-the-tires-to-triangles enthusiasts. Such survey work often uncovers multitudes who respond to motorcycles for reasons other than hot-licks riding: appearance, identity, ego, the scene, or whatever. If that's personally discouraging to you, don't despair. Take comfort in knowing that there are still motorcycles being manufactured for those to whom riding motorcycles is more important than being seen on them. And, functionally speaking, motorcycles that excite ninety-fifth percentile riders work splendidly for tenth, fifth or sixty-first percentile riders.

Suzuki has been building exceptional bikes for the *rider* since the introduction of the eight-valve GS750 five years ago. The 1981 GS750EX proves again that Suzuki is tuned in to enthusiasts who are function-aware and function-sensitive; the big GS-series roadsters are willing accomplices to the multi-dimensional riders, enthusiasts who spend more than every third Sunday on their bikes, who do more than ride the same roads to the same places.

Outwardly little distinguishes the 1981 GS from its 1980 predecessor. Paint,

shock adjustment collars and fork-tube air caps are the clues to model change. *Cycle* tested the 1980 GS in company with Honda's CB750F (April, 1980). While the Honda was certainly impressive, the GS outshone the F-type in enough ways so that we pronounced it the best all-around 750. Since then things have changed dramatically. Yamaha has introduced its two all-new 750s, the Seca and Virago; Kawasaki sprang its KZ750, which subsequently benefited from many detailed improvements; and Honda upgraded the CB750F.

As tested, the 1980 GS750 was a superior motorcycle that lacked only back-road *chutzpah*. On the 1981 GS, Suzuki has improved the Racer Road character by substantially upgrading suspension components. Suzuki added air caps to the fork tubes and external rebound damping adjustment to the shocks. These changes allow the rider to dial up the taut, precise feel of a sport bike and still retain the supple ride that was so much a part of the *completeness* of the 1980 ET.

In 1980, when it released the then-all-new 16-valve GS, Suzuki moved directly to soften the suspension, compared with

the old GS1000, in order to give the new bike a more compliant ride. The rear shocks, inclined at a steeper angle than the previous model, lessened the force required to compress the shock. At the same time, Suzuki gave the 16-valver a lighter spring rate. These changes joined to give the new GS a softer ride than the eight-valve version, but the comfort index increased at the expense of handling precision on mountain roads. In 1981, Suzuki has returned with new shocks and springs. The shocks, equipped with four-position rebound dampers, can be adjusted by rotating the top chrome dust covers surrounding the spring retaining collars. This standard method, introduced by Kawasaki, strikes us as the most practical for external adjustment.

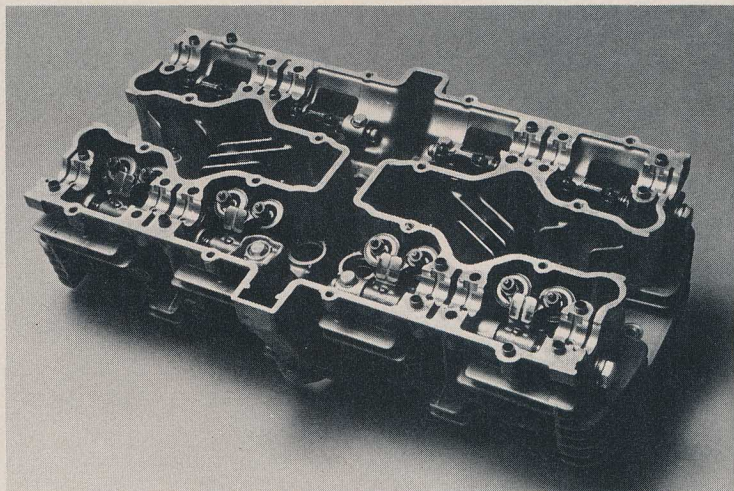
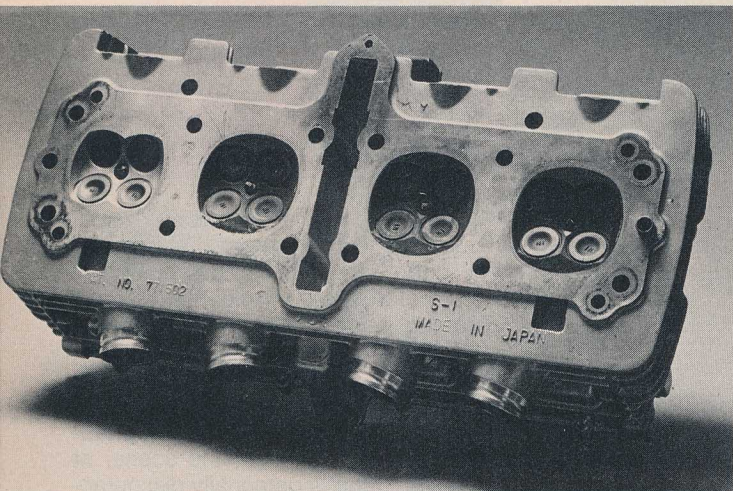
The rear springs have been upgraded from single-rate to dual-rate. The overall spring-rate is higher than before, and although the 1981 750's ride is somewhat harsher than it was last year, the change in ride quality isn't at all offensive.

To prevent teeth-jolting bottoming, Suzuki replaced the conventional rubber bump-stops at the top of the shock rods with some made of urethane foam. This is an excellent application of urethane

foam because the material has great memory characteristics. Manufactured in almost infinite resiliencies, the foam allows engineers to mix crush rates; this way the bump-stop can be fine-tuned to specific bikes.

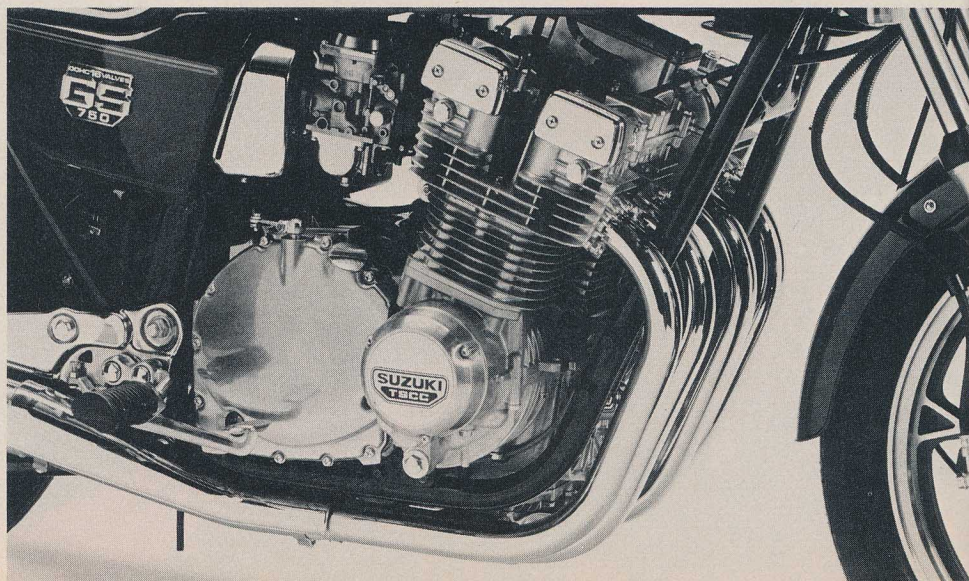
The fork, though similar in appearance to last year's, has internal changes. Since this year's bike has an air fork and since air under compression has spring properties, the 1981 Suzuki has a lighter coil spring with a two-step progression instead of three as was the case last year. Suzuki engineers modified the damping rods to slightly increase the front end damping and left the Schraeder-type air valves independent of each other; life with air forks is much easier when there's one valve and an interconnection.

Fork action is good, but we would have liked to see larger fork tubes on the GS. Although the 35mm tubes handle the job nicely, the binding that sets up in the fork from the small amount of flex present keeps the fork from being fully responsive. When encountering the cement-slab freeways common in Southern California, the fork moves front to back as much as it moves up and down. Once



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The TSCC cylinder head offers Suzuki's approach to proper combustion chamber filling, one that has proven to be successful. Valve adjustment is owner serviceable; no special tools or shims are required.



again, this is a minor problem, and the rider must pay attention to notice.

The '81 750's engine, according to Suzuki spokesmen, is unchanged from last year's. Spokesmen told us the same thing about the 1981 GS1100, and we later found that the 1100 had re-contoured intake tracts directly above the intake valve, which explains its increase in power. The '81 750 is likewise stronger, and we imagine that a similar modification is behind its increase in strength.

Despite starting at the touch of the button, our test GS suffered from the cold-running staggers/stubbornness that's plagued the GS for a couple of years. When the ambient temperature is much below 60 degrees F, the 32mm constant-vacuum Mikunis exhibit cold-running leanness for the first five minutes of operation. On warmer days, the GS will run fine in less than a minute. On hot days, the GS requires no choke. Once the engine reaches its operating temperature, throttle response is excellent—with the exception of the common CV low-speed hypersensitivity.

A welcome side effect of the carburetion leanness is increased mileage. Our 1981 GS returned an average of 51.5

mpg, up eight miles per gallon from last year's average. Granted, that's not much better than the best of the miser four-wheelers; nevertheless, the GS750 performs like a blown gas-guzzler of yesterday. And Toyota Starlets don't.

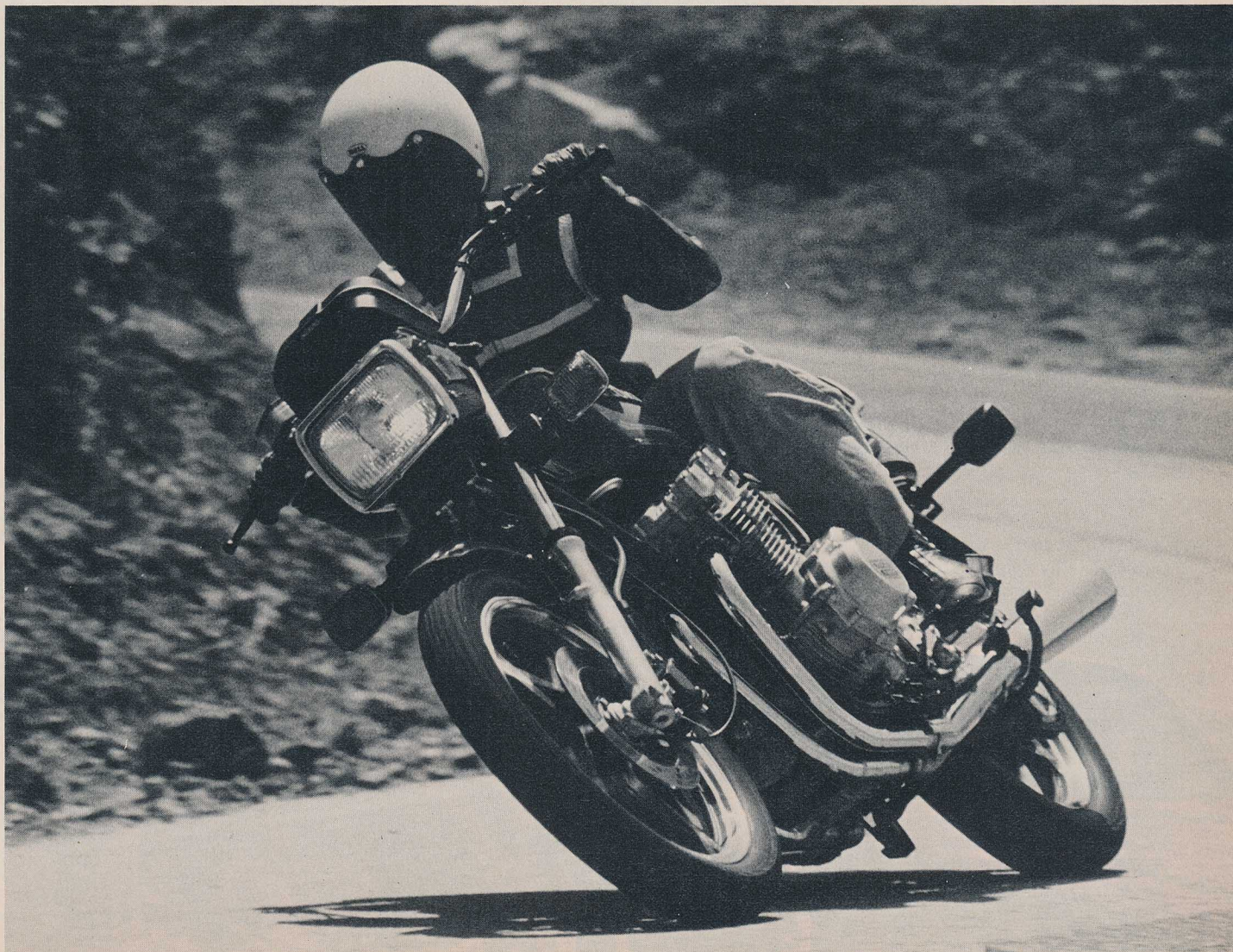
In *Cycle's* irreverent hands, the 750 TSCC engine has been a very reliable device. Our 1980 test GS750 has accumulated over 13,000 miles with no problems. Considering the thrashing (hard riding) the bike has received and an almost embarrassing lack of maintenance, the GS's service record has been doubly amazing. It's not surprising that the 750 engine remains unchanged; no need to do a major fiddle with an engine that's so fundamentally sound.

Engine vibration is almost non-existent below 6000 rpm. At highway speeds (4000 to 4500 rpm) only the passenger footpegs vibrate. Above six grand, the handlebar, tank and footrests begin to buzz the rider. The high-frequency buzz above the six-grand plateau makes reading the mirrors difficult, but it doesn't rattle the rider's feet off the pegs. Thanks to the large amount of low-end torque available, the rider rarely finds himself operating the engine above the 5000-rpm mark.

The 16-valve Suzuki's transistorized ignition performs well—although our test unit had one glitch, specifically the ignition advance curve. By specifications the unit should advance from 15 degrees BTDC at 1500 rpm to 35 degrees BTDC above 2350 rpm. The ignition advance isn't governed by electronic means; instead it utilizes a mechanical advance of the weight-and-spring type. In second through fifth gears, if our test bike had medium throttle applied in the rev range between 1500 and 2500 rpm, the engine would detonate noticeably. We tried changing fuels to no avail. Since the ignition and compression ratios are unchanged from last year, we must assume that gasoline is that much worse in 1981 or our particular 1981 GS750 had too abrupt an advance curve.

Clutch operation is good, although we found clutch pull on our bike to be a little stiffer than that of other Japanese 750s. Generous lubrication helped somewhat. Except for the slightly heavy lever pull and first-gear engagement racket, clutch operation and feel were fine.

The 750's excellent quartz-halogen light does well poking holes in the night. Both low and high beams have a good

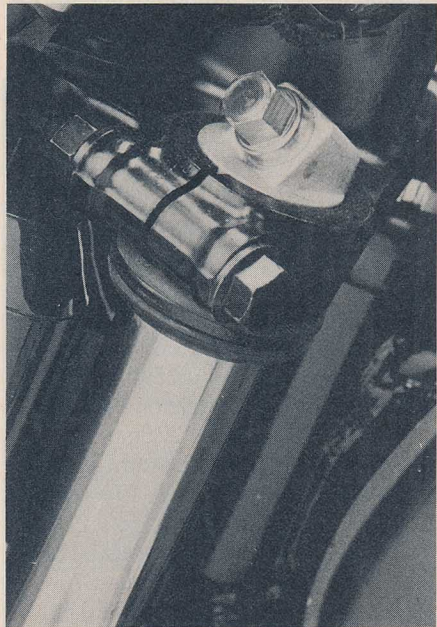


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beam pattern, providing the rider with a good peripheral view of the road.

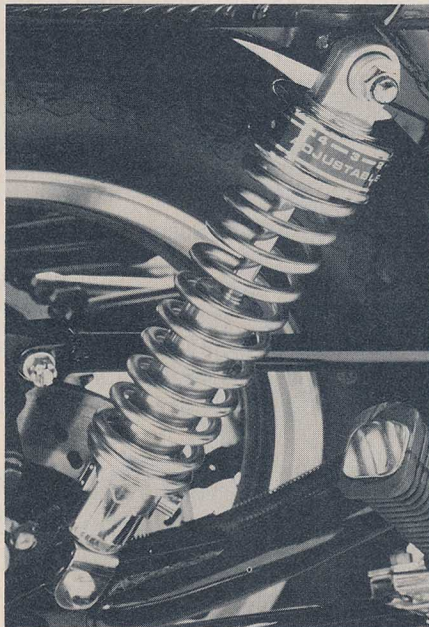
The instruments light with a soft red glow that doesn't disturb your night vision and makes the dial faces easy to read. On the other hand, at high noon the instrument glasses aren't prone to reflect sunlight and obscure the dials.

The instruments on our test bike were

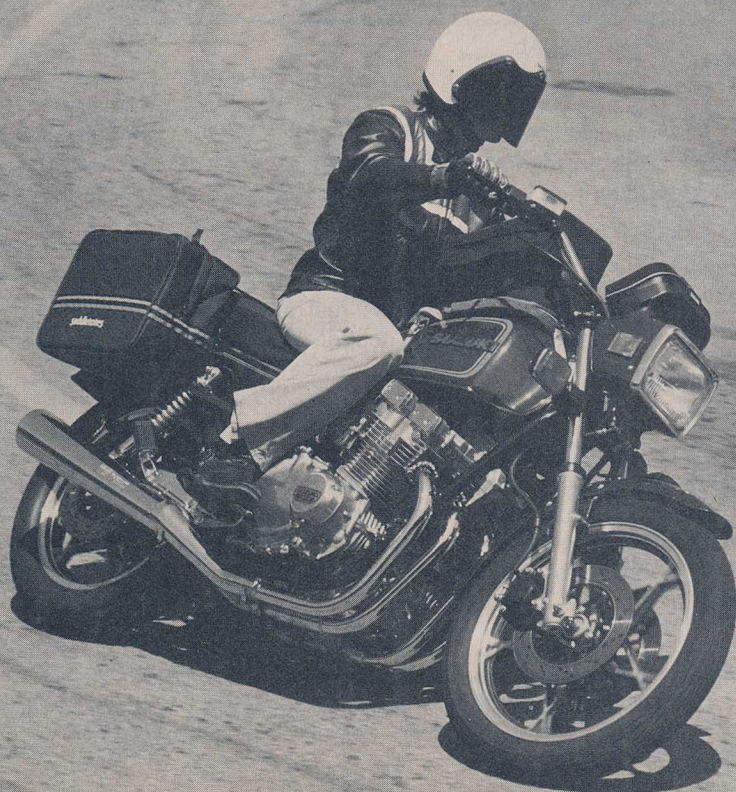


quite accurate. In the case of the speedometer, its accuracy is the *only* blessing of the federally mandated 80-mph instrument. Most impressive was the fuel gauge: the red area on the instrument face corresponded exactly to the point at which the bike ran onto reserve. At last, a trustworthy gauge!

We'd still like to see Suzuki rethink the handlebar and footpeg location. On the open road, the combination of a footpeg position that's too far forward and a han-



These two solitary changes give the Suzuki GS750 a boost right where it needed it—in the suspension. The air fork and four-way adjustable rebound damping shocks work together to improve suspension performance.



dlebar that sweeps back excessively causes mid-sized people to ride with their backs in a slouch, bringing pain to the lumbar area. If the rider makes a conscious effort to sit straight, he won't be bothered, but who can do that all day? The GS's seat is one of the best in motorcycling; we think it is compromised by the handlebar and footpeg locations.

The most substantial and the most welcome of the 1981 changes are the suspension modifications. Add a little air, change a spring rate there, slip in some tunability and, *presto!*, you have a bike that can hold its own in the twisties against any Japanese multi. Our reservations concerning the handling characteristics of the 1980 GS750 can now be laid to rest. Both cornering clearance and bumpy road stability have been dramatically improved. With 24 psi air pressure in each fork tube, the rear springs on full preload, and the shock rebound damping set on three, the GS-EX can be ridden right up to the limits of tire adhesion without chattering the rider's stomach. With this suspension setup and a 150-pound rider aboard, the GS must be moving around on its tires before anything more substantial than a folding footpeg touches. The centerstand will drag in sharp left-handers, but generally a bump must compress the suspension before the stand will touch down. On the right, the centerstand foot and the pad of the brake pedal will touch. The brake pedal is way up there, so you can imagine the lean angles possible.

Although Suzuki has changed the suspension components considerably, the GS retains its light, precise, enjoyable feel. The steering has a light touch and requires little effort to initiate a change in direction, but it doesn't suffer from any high-speed twitchiness. The GS misbehaves (if you can call it that) only in very slight bends above 80 miles per hour, and only when the front wheel is relatively unweighted. Under those circumstances it will wag its head a bit. Only 99th-percentile riders will notice this phenomenon; you really have to have the gas on to get the GS750 to do it.

Aiding the GS in the Backroad Corral are excellent brakes and very readable tires. Even though the OEM Bridgestones don't offer the sheer adhesion of many of today's high-performance aftermarket tires, the Bridgestones are very predictable when the riding gets fast and furious; they give the rider plenty of warning when it is time to curb enthusiasm and preserve metal, plastic and skin.

Our unit's triple disc brakes showed no signs of fading throughout the test. The front brake gives a very linear response in relation to the draw force applied at the brake lever. The rear brake functions similarly, but the great leverage advantage supplied by the brake pedal may provoke a touch of lockup in panic stops. It should be noted, however, that the GS

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rear disc has about double the feel of a conventional drum brake.

Overall, the fit and finish on the GS are excellent. We encountered only one failure on our test bike: the high beam indicator light went on vacation at the 2200-mile mark. Other than that, the 1981 Suzuki remained trouble-free for an unusually long test period.

For the weekend rider, the GS750 offers the versatility of a broad-spectrum 750, a motorcycle nimble around town

and strong on the open road. For tourers, the Suzuki provides a large comfortable seat, practically no vibration at cruising speeds, adjustable suspension and excellent gas mileage.

The sporting rider can get his licks and kicks in too. Good tires and the best power spread in its class combine with excellent brakes and cornering clearance to make the GS750EX equal to any other Japanese 750 for flogging through the canyons.

Ultimately the GS750EX comes closer to being a bike for all persons than anything else in its displacement class. You

could think of it as a "compromise" bike; not as sporting as the 750F Honda, nor as light and lightning as the Kawasaki KZ750, nor as feature laden as the shaft-drive, anti-dive, scanner-check Seca 750 Yamaha. But with the GS750, compromise shouldn't imply a motorcycle with soft spots in its capabilities—indeed its seamless strength and consistency in all areas make its versatility so impressive. Think of the Suzuki GS750EX as the Magic Johnson of motorcycles: quick enough for guard, strong enough for forward, big enough for center, and smart enough to coach. ●

Cycle **Test Specifications** **SUZUKI GS750EX**

Make and model Suzuki GS750EX
Price, suggested retail (as of 7/08/81) \$2999

PERFORMANCE

Standing start ¼-mile 12.42 @ 108.43 mph
Engine rpm @ 60 mph, top gear 4492
Average fuel consumption rate 51.5 mpg
Cruising range 257.5 mi.
Load capacity (GVWR less curb weight) 210.9 kg
(465.0 lbs)
Maximum speed in gears @ engine redline (1) 47.5
(2) 68.6 (3) 88.4 (4) 108.4 (5) 126.9

ENGINE

Type Four-stroke transverse four-cylinder with dual overhead camshafts, chain-driven and four-valve head
Bore and stroke 67.0 x 53.0mm (2.64 x 2.09 in.)
Piston displacement 747cc (45.6 cu. in.)
Compression ratio 9.4:1
Carburetion (4) Mikuni 32mm constant-vacuum
Exhaust system Four into two
Ignition Battery-powered, inductive, magnetically triggered
Air filtration Paper element, disposable
Oil filtration Paper element, disposable
Oil capacity 3.2 liters (3.4 qts.)
Bhp @ rpm N.A.
Torque @ rpm N.A.

TRANSMISSION

Type Five-speed, constant-mesh, wet-clutch
Primary drive Straight-cut gear; 2.16:1
Final drive #630 DID chain, 2.73:1
Gear ratios overall (1) 15.19 (2) 10.50 (3) 8.15
(4) 6.65 (5) 5.68

CHASSIS

Type Twin downtube, full cradle frame

Suspension, front Leading-axle coil/air-spring fork
rear Swing arm with (2) four-way adjustable damping shocks
Wheelbase 1530mm (60.2 in.)
Rake/trail 28.0° / 103mm (4.1 in.)
Brake, front Hydraulic, dual-disc 275mm rotors (10.83 in.), with single-piston calipers
rear Hydraulic, single-disc 275mm rotor (10.83 in.), with single-piston caliper
Wheel, front Cast, 19 x 1.85
rear Cast, 18 x 2.15
Tire, front 3.25 H 19 Bridgestone Mag Mopus-L303
rear 4.00 H 18 Bridgestone Mag Mopus-S7 14
Seat height 813mm (32.0 in.)
Ground clearance 152mm (6.0 in.)
Fuel capacity 19.0 liters (5.0 gal.)
Curb weight, full tank 246.8 kg (543.0 lbs.)
Test weight 314.3 kg (693 lbs.)

ELECTRICAL

Power source Three-phase AC generator
Charge control Voltage limit shunt
Headlight beams, high/low 60/55 watts
Tail/stop lights 8/23 watts
Battery 12V 14AH

INSTRUMENTS

Includes .. Speedometer, odometer, tripmeter, tachometer with 9500-rpm redline, fuel gauge. Indicators for high beam, turn signals, neutral, oil pressure, gear position
Speedometer error, 30 mph indicated, actual 29.43
60 mph indicated, actual 57.91

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Cycle's Schenk dynamometer, long residing at Webco, Inc., in Venice, California, is in the process of being moved and re-installed at a new location. Consequently, this motorcycle could not be dyno-tested at this time. Figures for this motorcycle will appear in Cycle in an upcoming issue.