

•3 Sporting Middleweights

Efficiency has always been a password in motorcycling. Modern engine technology has enabled manufacturers to squeeze increasing power from engines of given displacements. Two-stroke engines best illustrate this high-efficiency engineering, for a contemporary two-stroke can produce a staggering amount of power for its displacement, size, and weight.

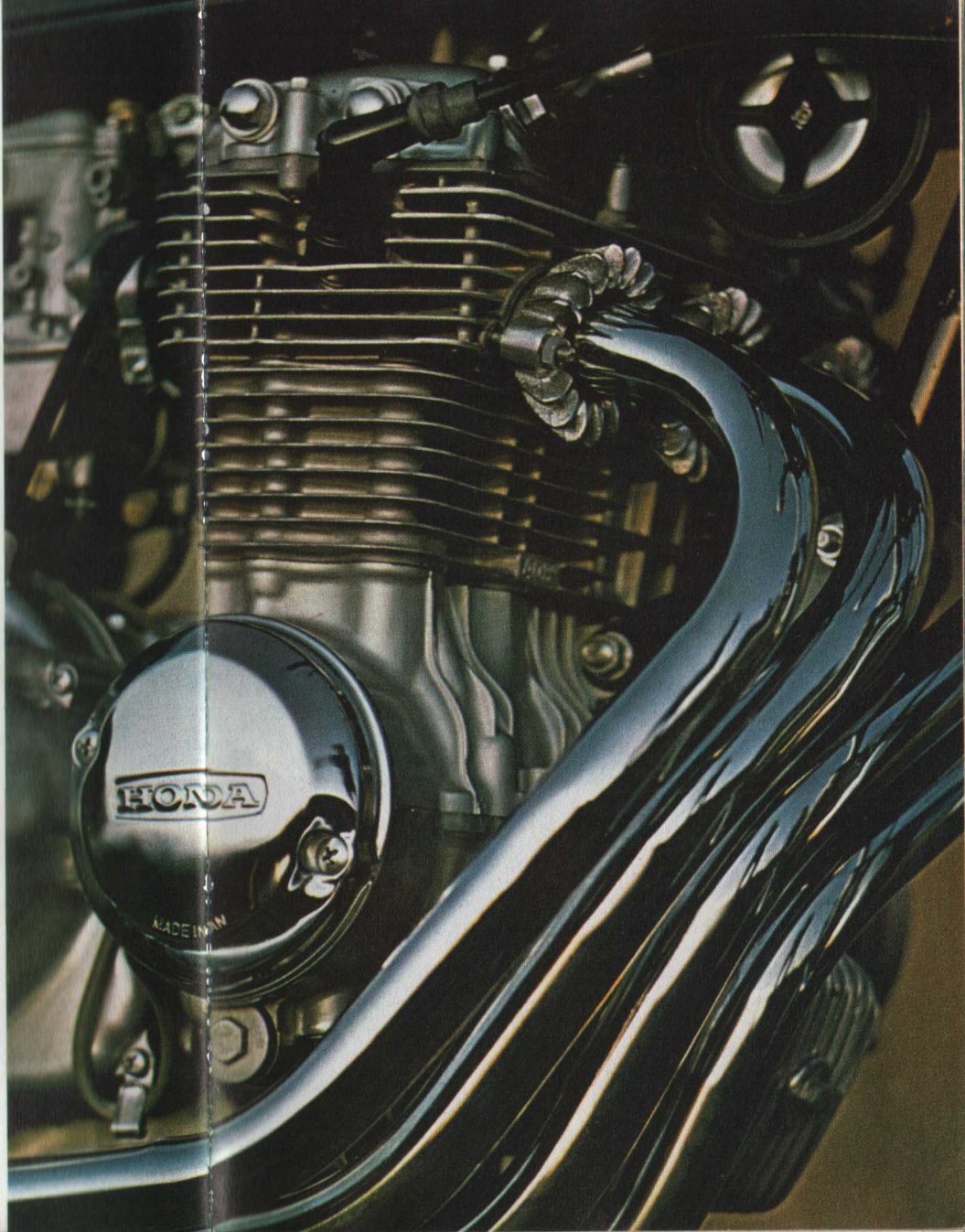
Among the principal beneficiaries of this efficiency-technology have been mid-displacement sporting roadsters. These 350cc-550cc motorcycles carry powerful, compact engines in good handling chassis. In almost every case the go-power of the engines is equaled by the stopping authority of disc brakes.

Only select middle-displacement motorcycles can qualify as sporting mounts. Other machines of similar size belong to a commuter-class of vehicle. Compared to the sporting roadsters, the commuters are dull, bland transporters, which seem soft and lethargic. The mid-sized sportsters feel lean, taut, and vital.

The sporting middleweights perform best on roads which chase over the countryside in a series of zig-zags. The engines provide lively acceleration for the nimble bikes that can slice through corners deftly. The motorcycles feel so energetic; they respond instantaneously to rider inputs. If the rider twitches in the saddle, the bike moves.

Motorcyclists love the sporting middleweights because the bikes are such willing performers. The enthusiast can sense the bike is trying hard, matching him move for move. Going quickly, a union develops between man and metal. Howling out of a corner, with the tach needle waving at the redline and a footpeg skimming the ground, the motorcyclist is one with his machine and the road below.

Midweights, which carry "big" engines in compact packages, have an outstanding balance of power, brakes, and handling.





Yamaha RD-350

The RD-350 Yamaha is a pure sporting motorcycle: phenomenal acceleration, first-class handling, and incredible braking. A well-tuned 350cc Yamaha twin can give many 650's and 750's a fit in a straight-line dash; and on snaky roads, the powerful, nimble Yamaha can out-scoot anything, save a small number of sporting roadburners. With 34 horsepower at the rear wheel, the 350-pound two-stroke rockets through a standing quarter-mile in 14.1 seconds. Geared for acceleration rather than a high top speed, the RD-350 will just miss 100 mph full chat in top (sixth) gear.

Docile and mild-mannered the Yamaha isn't. Below 4,000 rpm, the two-stroke engine spits out a syncopated tune through its mufflers. Then at 4,000 rpm—where it moves into its tuned powerband—the engine really chimes in. In several short-coupled instants, the tachometer needle sweeps to 8,000 rpm. The rider automatically firms up his grip at the bars because the front end aviates in the lower gears.

The suspension is taut as a hard-drawn string in perfect tune. The RD-350 offers no cushy perch; the rider gets quick, accurate handling, and a confident sense of stability when heeled over in a corner.

Like any fast, snappish motorcycle, the Yamaha twin brooks no fools. Erratic, ham-fisted cowboys will unseat themselves on the potent two-stroke. The acceleration which the seven-port, reed-valve twin can generate and the deceleration that the disc brake can provide (beyond one G!) marks the RD-350 as a high-intensity, full-attention vehicle. So excellent is the Yamaha as a sporting device, only riders with skill and finesse can fully master this brilliant machine.



Parked silently at roadside, the Yamaha RD-350 cools off after lacing up a tortuous mountain road.

Kawasaki 400 S-3

Kawasaki built its American empire on performance motorcycles. Enthusiasts are not likely to forget the first-generation 500cc and 750cc Kawasaki three-cylinder two-strokes, which had absolutely boggling straight-line acceleration. But these noisy, vibrating, gas-guzzling two-strokes aged gracefully. They were to be experienced, and then sold.

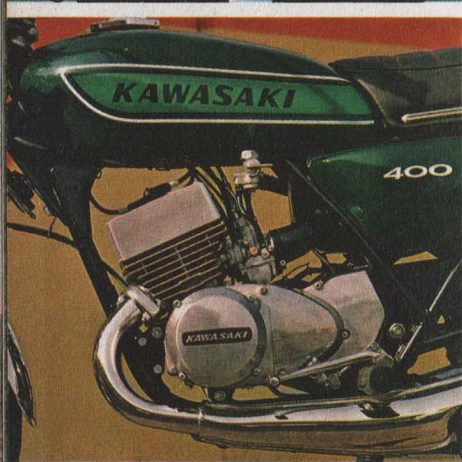
The 903 Z-1 Kawasaki lifted the mantle of super-performance from the H2. Meanwhile, though Kawasaki detuned the 500cc triple, the company never succeeded in making the H1 a well-balanced sporting roadster. Filling that slot was the Kawasaki S-3 400cc two-stroke triple, a motorcycle which had grown out of a smaller 350cc version.

Enjoying the blessings of a strong, willing engine, the 400cc Kawasaki offers vivid acceleration. That's in keeping with Kawasaki

heritage. Indeed, only the 350 Yamaha twin can best the triple through the standing quarter-mile.

With the muscular engine comes a peaky power curve. The 400 feels uninspired until the tachometer needle has covered the first 4,500 rpm; after that point, forward progress becomes quite rapid.

The disc brake up front will yank the S-3 Kawasaki to a halt should exigencies demand clamping down hard on the brake lever. Yet sporting roadsters encourage their riders to be smooth. Like other fast middleweights, the Kawasaki triple is basically agile and stable, but limited shock-absorber damping lets the triple rock on its suspension when cornering hard. Bump-strewn corners will require the Kawasaki rider to click down his pace; otherwise, he and his two-stroke triple can happily lace their way along a back-country road.



Sporting midweights, like the S-3, carry full instrumentation; Kawasaki-style two-stroke power makes the 400 very quick.



Suzuki GT-380 Sebring

Suzuki pioneered the six-speed gearbox in modern lightweight production motorcycles. Its 250cc X-6, introduced in 1965, first underscored the advantages of six-speed gearboxes. Today, six-speed transmissions are becoming the rule in 350cc-400cc road/sports bikes. The Suzuki 380 Sebring, the Honda CB-400 Super Sport, and the Yamaha RD-350 all go forward with six speeds; only the Kawasaki 400cc triple lacks the number-six cog.

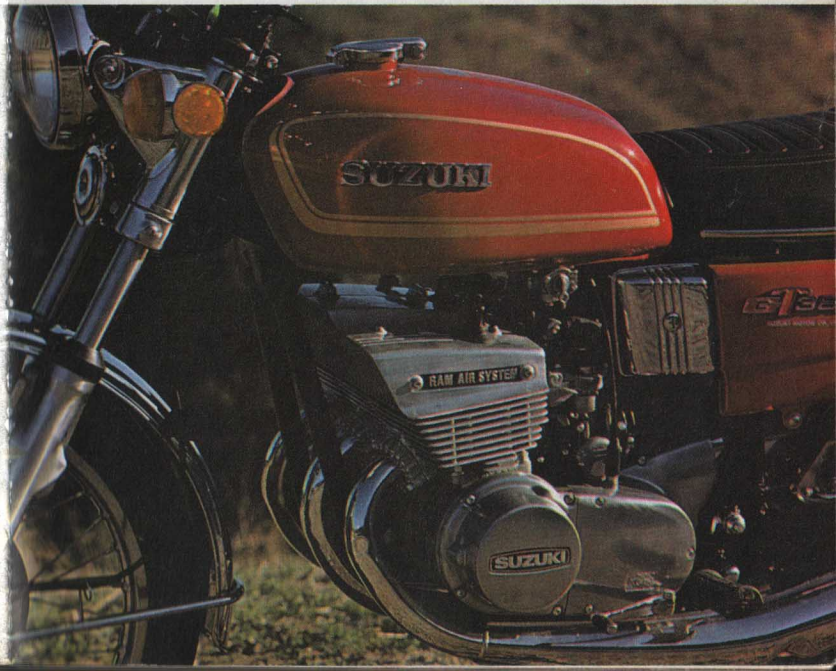
Traditionally manufacturers have used six-speed transmissions in conjunction with peaky engines that are tuned for maximum horsepower in a narrow, elevated powerband. Here the GT-380 Suzuki presents a surprise. The three-cylinder, two-stroke engine has been engineered for a very wide spread of power. Willing to pull with determination from 3,000 rpm, the power characteristics pose a question: why should Suzuki bother with both a broad powerband and an elaborate transmission?

Suzuki has designed the six-speed transmission as a substitute for more horsepower. The transmission permits the Sebring to make maximum use of its mildly tuned engine. Since the 30-horsepower GT-380 outweighs all its 350/400 counterparts, the six-speed gearbox reduces the practical effect of the Suzuki's inferior power-to-weight ratio.

Much of the Sebring's weight relates to its size and luxury. Physically the GT-380 is built on a larger scale than other 350/400cc motorcycles. For example, the Suzuki 380 has a wheelbase 3 inches longer than Yamaha's RD-350 (52 vs. 55 inches).

The six-speed gearbox coupled to the mild-mannered engine gives the cyclist a wide choice in his riding. If he wishes to cruise pleasantly at a low hum, the engine will lug along happily. On the other hand, the rider may make full use of the six-speed transmission, summon the engine to its strongest high-rpm range, rely on the GT-380's first-string handling and braking, and flail away on roads that dart and swing through the countryside.

The Suzuki GT-380's exhaust plumbing is tucked up and in nicely; the pipes won't contact the ground during spirited riding.



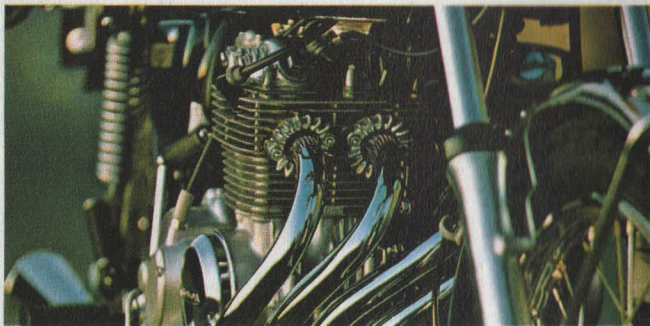
Honda CB-400 Super Sport

Some motorcycles have a watch-like quality, and Honda's CB-400 Super Sport radiates the same *machine-ness* as an intricate watch with jeweled movements. Perhaps one could believe that Honda designed and built the 350/400 series just as a technical exercise—to demonstrate that Honda could produce such a small four-cylinder machine. But more likely Honda believed that an audience existed for a watch-like motorcycle. It did.

The Super Sport is an updated version of the CB-350 Four. The 1975 face-lift gave the bike its trim café-racer looks, pushed the engine displacement to 408cc's, and put a number-six gear in the transmission.

Everywhere the little four-cylinder machine gives the rider a sense of substance. The solid powerplant will rev to its 10,000-rpm redline with muted fury, thanks to the four-into-one exhaust system. Lots of revs, little noise—this combination gives the rider a solid feeling about the bike. The Honda never does anything unexpected and displays no cammy, high-strung nature. The engine seems content to hum docilely at 4,000 rpm, but an energetic rider has the six-speed gearbox to keep the engine boiling near its redline for maximum performance. The Super Sport will mirror the inclination of the rider. The Yamaha RD-350 encourages full-blooded riding at all times. The Honda makes no demands whatever on its rider.

The CB-400's soft suspension lets the bike hobby-horse a bit as cornering speeds increase, but the rocking doesn't undercut the basic feeling of security. Gentle bobbing won't discourage hot passages in following corners. Breakneck schedules aside, the bike has a full-enjoyment speed on highways which thread through the hills; a quick and lively pace permits the rider to hear the engine notes rise and fall, and to sense the mechanism of a very enchanting watch.



The CB-400 has a liquid kind of power ample to 7,000, and strong to 10,000, rpm. The Honda Four can really fly.



Suzuki GT-550 Indy

Suzuki GT-550: the GT prefix stands for Grand Touring, and the Indy 550 fits the class perfectly. The 550cc three-cylinder two-stroke hasn't the brute power of heavy-caliber grand-touring machines, such as the Guzzi Sport or Kawasaki Z-1, but the Suzuki's silence, luxury, road holding, and braking mark the bike as a true GT mount.

The fierceness displayed by the Yamaha RD-350 does not infect the Suzuki triple. Indeed, the Indy produces less horsepower than the Yamaha 350—and the Suzuki's extra weight (100 pounds) takes the hard sting out of GT-550's straight-line performance. Nonetheless, the Indy quickly responds to throttle inputs; the engine pulls with determination from the lower portions of its rpm range. There's no waiting for

Though it looks like an enlarged Suzuki GT-380, the 550 Indy is a completely separate bike—larger and more powerful.

4,000 rpm to build up on the clock before the scenery begins to flash past. The Indy feels decidedly more brisk than Honda's four-stroke CB-550, which replies more softly to low-rpm throttle openings.

The briskness and precision with which the Suzuki moves makes the bike a pleasure. Exploiting the 550's exceptional handling, the enthusiastic rider can arc along a winding road without slit-eyed concentration. Sufficient power is available through the rev range, so the rider never feels that he's working hard—or flogging the bike.

Its evenness explains the Indy's success. So marvelously balanced and civilized, yet so responsive to its rider, the half-litre Suzuki can wheel along—swiftly, safely, effortlessly—without producing a chain of harried moments.



Honda CB-550

Some machines have a natural harmony, and the Honda CB-550 is one such machine. Perhaps more by happy accident than willful design, all the individual elements of some motorcycles converge in perfect rhythm. The frame and running gear, using a factory's standard-formula calculations, work astoundingly well in particular cases. The powerplant, again built according to the constructor's handbook, emerges far better than logic might suggest.

Consider the Honda CB-550 Four. That this unit is smoother than Honda's larger 750 Four would come as no surprise. That's exactly what one might guess given the 550's smaller and lighter reciprocating parts. Then consider that the CB-550 runs more smoothly and easily than the Honda 350/400 Four series. That's unexpected. What explains the unlikely difference? Doubtless the answers are hidden in many small



engineering numbers, but most riders instinctively feel the answer when they try a CB-550. The entire machine is a case of natural harmony.

The intermediate four-cylinder bike resists hard categorization. Thousands of 550's have toured the United States in every direction. For the suburban rider who likes to hop around town, the 550 whisks through traffic, never raising a disturbance.

Honda's half-litre bike has a sporting nature. The 10,000-rpm four-banger yowling in anger toward its limit is enough to excite most enthusiasts. The basic running stock isn't overtaxed by the engine's output, and that's a snag which mars many larger Japanese machines. Performance-minded riders favor the CB-550, which can be tweaked reliably for more horsepower and better handling.

When someone asks why Honda has been so successful in motorcycling, he shouldn't search for the answer in advertising copy or television commercials. He need only ride a CB-550.

Honda's 550 has a velvet smoothness to it; even when rushing along at a pretty fair rate, the bike never feels pressed.