

First Test: All-New Yamaha IT175 Enduro

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MAY 1980

Kawasaki KZ550
Fastest Middleweight
In Four-Stroke History

How Harley-Davidson
Will Tackle The '80s

Cruising On Honda's
New 900 Shafty



**Countersteering:
How To Use It**

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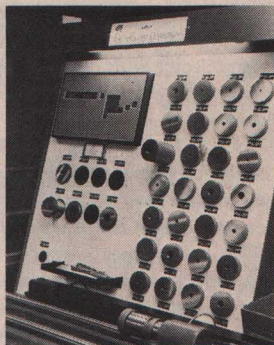
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COVER



Jeff Karr is riding the KZ550 pretty fast for this cover shot in the Malibu mountains, but not nearly as fast as he went while winning two classes at an AFM production race. He says the Kawasaki is so fast it's almost like cheating. Photo by Art Friedman.

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KAWASAKI KZ550

650's Take Cover... Here Comes
The First Small-Bore Superbike



Not since Kawasaki's Mach III, the old two-stroke triple, has there been a 500-class bike with the power and acceleration of the new KZ550 four. This new Kawasaki four-cylinder middleweight has power that 650s only dream of. It beats them all in the quarter-mile with strong top-end power, yet has midrange equal to even bigger machines.

The KZ follows in the tire prints of other Kawasaki hot rods, like the original Z-1 and the 500cc H-1. Like them, its motor sets new performance standards for its class. And like them, it has a reasonably up-to-date chassis. And in keeping with the tradition, it has a few rough edges. Luckily, none are so great as to keep the KZ from being a tremendous middleweight and one of the most exciting motorcycles we've tested in a long time.

The KZ550 A-1 is the new middleweight performance standard. Some are more comfortable, but nothing short of a 750 is quicker.





Few bikes in its class handle as well as the Kawasaki and no motorcycle of any size that can better the KZ's quarter-mile time handles as well. The 550 seems to be a near perfect combination—superbike power in a lightweight package.

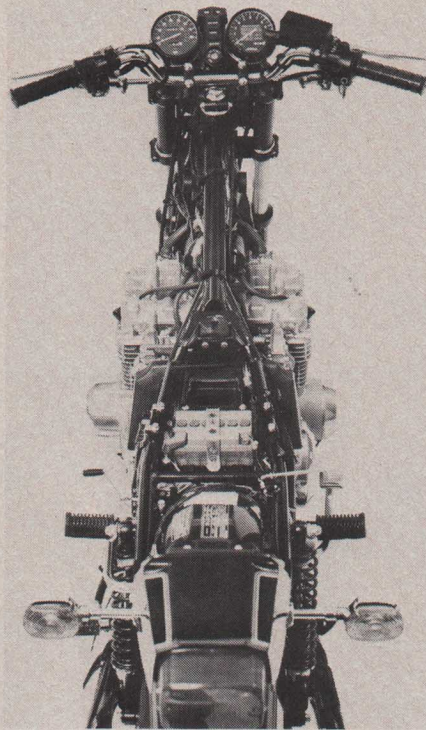
Surprisingly, Kawasaki didn't have to get particularly innovative to achieve these results. The 550 sports no four-valves-per-cylinder, CV carbs, watercooling, or tilt-a-whirl combustion chambers. Instead the bike incorporates a lot of proven engineering coupled with a few well thought-out improvements. What really makes the KZ a success are the worthwhile goals Kawasaki engineers set out to meet. High on the list of priorities were superior acceleration and light weight. Lighter bikes not only require less power to attain a certain performance goal, but they also tend to be inherently better handlers than their heavier counterparts. The end result of Kawasaki's endeavor is a bike that weighs 18 pounds less than the Suzuki GS550—the KZ's ready-made arch rival.

The major contributing factor in the KZ's weight advantage is its smaller overall size. The Kawasaki has a 1.6-inch shorter wheelbase. The KZ's oversquare engine might be expected to be slightly wider than the nearly square Suzuki, but in reality it is 1.125 inches narrower. That translates into a significant noticeable weight reduction.

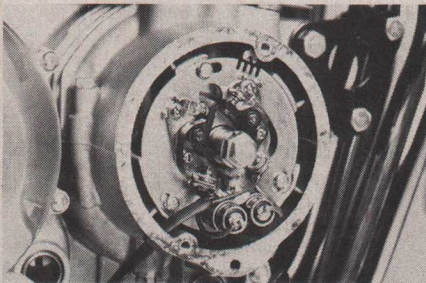
So with its lighter weight and greater power, the Kawasaki easily beats the Suzuki in the quarter-mile. The KZ's 13.15-second, 98.9-mph run is 0.5 second faster than the GS's and only feeler-gauge distance away from the 12-second bracket—the exclusive territory of 750 and bigger bikes. No 650 is as quick either.

Best of all, the 550 backs up its super strong top-end power with 750-style midrange and bottom end. Our top-gear roll-on test shows the KZ handily snuffing every bike in our middleweight comparison test last September. That includes four 650s. The 550 will stay right with most 750s up to 80 mph or thereabouts, so it's not surprising that when paired against the respectably quick GS550 in a roll-on from 50 mph, the Suzuki must be in fourth gear to keep up with the KZ in *sixth*. If you choose off a Honda CB900 for a top-gear race the results are just as incredible. With the Honda's dual-range transmission clicked into high range, the diminutive KZ simply runs away from the CB. Luckily, 900 owners can save face by shifting into low range, where the tables turn and it's the 550 that's left sucking exhaust fumes.

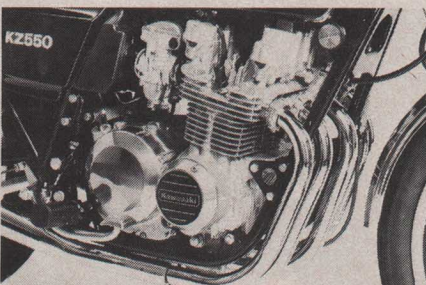
Just how the Kawasaki engine designers got such tremendously usa-



The Kawasaki is one of the narrowest four cylinder bikes available. The frame has a single backbone and is quite sturdy.



Yes, those are points. Though inexpensive initially, their maintenance costs can add up.



There's nothing particularly remarkable about the 533cc engine—except its poop.



Hefty gusset plates add strength to the steering head area to reduce flex.

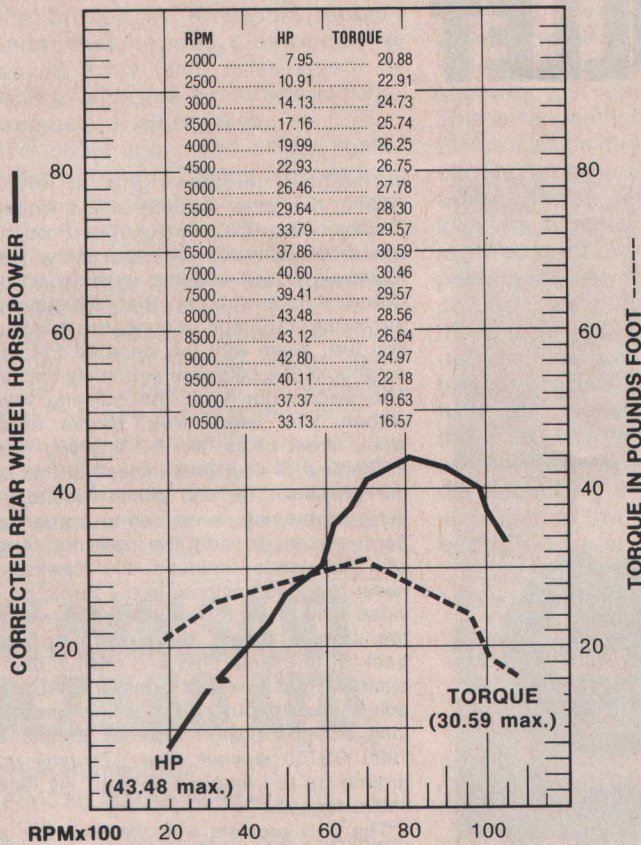
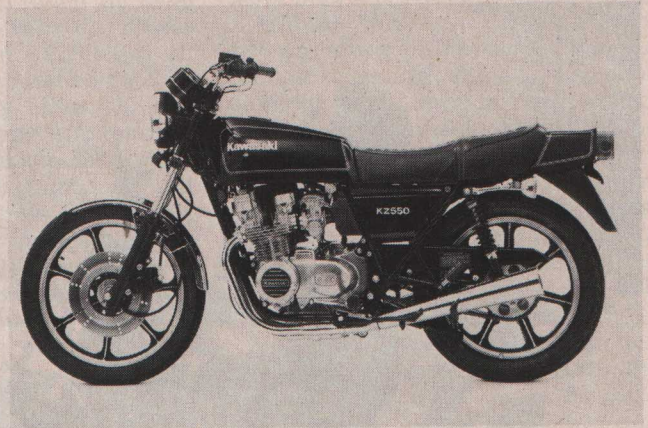
ble power out of the little 553cc powerplant isn't completely clear. In fact, a quick glance of the spec sheets had us expecting the KZ to be downright slow. First off, there are the HO-scale 22mm TK slide-needle carbs. Their throats are a whopping 10mm smaller than the CV units on the 1980 Suzuki 550. Then there's the unremarkable 9.5:1 compression ratio—Honda's CX500 has a 10:1 ratio. The 550 motor is basically a scaled-down KZ650 engine, and that's what we expected it to perform like. It came as a bit of a shock when the bike turned out to be *faster* than its bigger brother.

Like the 650, the 550 uses a plain-bearing crankshaft instead of a roller-bearing crank like the 1000cc Kawasakis. Power is fed to a jackshaft behind the crank through a link-plate chain. The jackshaft's sprocket has a rubber damper built in to soften driveline pulses, and reduce vibration and noise. The electric starter spins the jackshaft from the left, while the right end drives the clutch. As on the Suzuki, the KZ has no manual kickstarter. Clutch actuation is accomplished by a pushrod through the transmission main shaft, just as on the 650 and 1000 Kawasaki in-line fours.

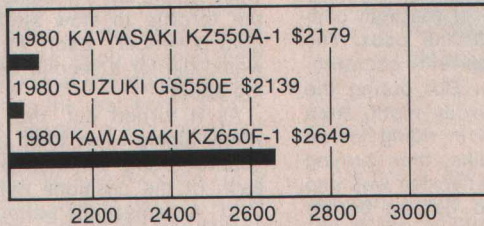
Like the 550 Suzuki, the KZ has a six-speed gearbox. The ratios in the lower gears are similar in both bikes, though the GS's cogs are spaced more closely in the higher gears. The powerful KZ has no problem bridging its wider gaps or pulling its taller sixth gear. On flat ground the Kawasaki easily spins to its 9500-rpm red-line in sixth, which translates out to an honest 115 mph. The Suzuki can't come close to this figure. The KZ also has Kawasaki's automatic neutral finder, so when at a stop in first gear, a lift on the shift lever always selects neutral; it won't shift past into second until the bike is in motion.

The 550's power-producing parts are no more exotic than the rest of the engine. The DOHC mill uses the same basic valve set-up as the KZ650. The valve tappet clearance shims are under the buckets, so changing them to achieve the proper valve clearance requires removal of the camshafts. This makes the adjustment process more time-consuming than other arrangements but the system is very durable. Unlike other designs that have the shims on top of the buckets, the KZ can't spit out its shims if accidentally over-revved. We can attest to this fact. During one dyno run a problem in the control panel let the Kawasaki race up to approximately 12,000 revs. That's 2500 rpm into the red zone and still the KZ held together—with no discernible ill effects. The shim set-up doesn't

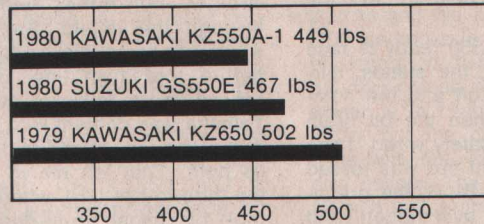
KAWASAKI KZ550



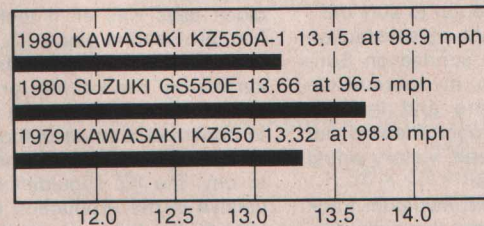
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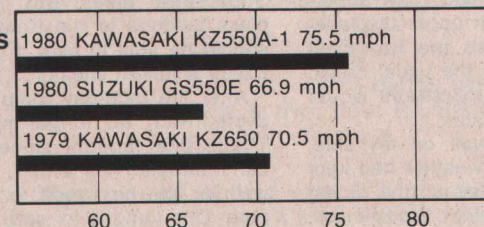
WET WEIGHT



QUARTER-MILE



TOP GEAR 50-MPH PASS TERMINAL SPEED



Suggested retail price.....\$2179
 Warranty.....6 months, 6000 miles
 Number of U.S. dealers.....1170
 Cost of shop manual.....N.A.

ENGINE

Type.....Four-stroke DOHC four
 Displacement.....553cc
 Bore x stroke.....58.0 x 52.4mm
 Compression.....9.5:1
 Carburetion.....4, 22mm TK Slide-needle
 Ignition.....Battery and points
 Lubrication.....Wet sump
 Lighting output.....210 watts
 Battery.....12V, 12AH

DRIVETRAIN

Primary transmission.....Link-plate chain, 2.94:1
 Clutch.....13 plates, wet
 Final drive.....5/8 x 3/8 (No. 530) EK chain 40/16

CHASSIS

Fork.....36mm Kayaba leading axle, 7.0 in. travel
 Shocks.....Kayaba, 4.3 in. wheel travel
 Front tire.....3.25H-19 Dunlop Gold Seal F7
 Rear tire.....3.75H-18 Dunlop Roadmaster K81 TT100
 Rake/trail.....26°/3.9 in. (98mm)
 Wheelbase.....54.9 in. (1395mm)
 Seat height.....32.0 in. (813mm)
 Ground clearance.....6.0 in. (152mm)
 Fuel capacity.....4.0 gal. (15.0 liters)
 Wet weight.....449 lbs. (204kg)
 GVWR.....793 lbs. (359kg)
 Colors.....Black
 Instruments.....Speedo, tach, resettable tripmeter, odometer, oil warning light

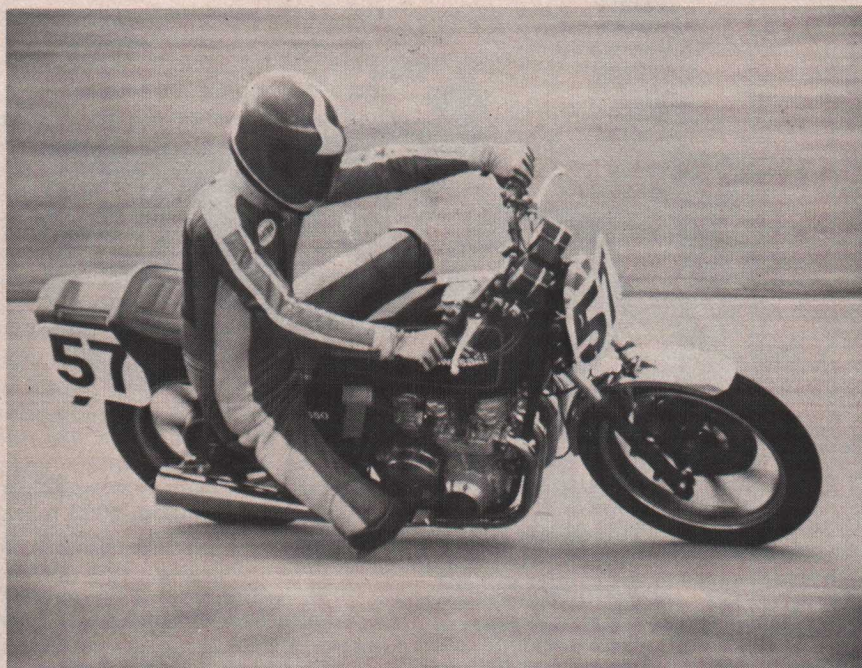
PERFORMANCE

Power to weight ratio, unladen.....10.32 lbs./hp
 Fuel consumption.....45 mpg, average
 Average touring range.....180 miles
 Quarter-mile.....13.15 sec. at 98.9 mph
 Top-gear 50-mph pass terminal speed.....75.5 mph
 RPM at 60 mph in top gear.....4948
 Speed in gears at (redline).....(9500) 1st 38.04 mph;
 2nd 54.85 mph; 3rd 70.85 mph;
 4th 86.53 mph; 5th 101.85 mph;
 6th 115.17 mph
 Speedometer error.....30 mph, actual 30
 60 mph, actual 60

BOX-STOCK BULLET

The KZ550 Is So Fast It's Almost Like Cheating

By Jeff Karr



I had a problem. We had an unbelievably quick KZ550 test bike that was a Sure Thing to win the 430-600cc Box Stock road racing class. My problem was that I wasn't the guy who was supposed to ride it. Before anyone on the staff had even seen the KZ, Rich Cox and I had sent in our entries for an AFM club race at Ontario Motor Speedway. The 430-600cc Box Stock class seemed like it offered the maximum fun for the minimum cash, so I chose a fast and nimble Suzuki GS450S test bike. At that time the KZ550 was still an unknown quantity. In fact, I figured that it would be a bit on the slowish side. So I wasn't worried when Rich signed up with the Kawasaki. I reckoned that the little Suzuki would lay waste to that big lunker of a 550.

Naturally, I reckoned wrong. Six-tenths-of-a-second-in-the-quarter-mile-wrong. As the race weekend neared, things were not going well for me. It was clear that Rich would not only beat me, he just might lap me too. He knew it and I knew it. Naturally, I refused to publicly admit that I was already beaten and maintained a barage of grandiose boasts about easily making up any lost ground in the straights with pure skill and more than a little daring. Rich wasn't worried. Nor was he above idle threats. Almost hourly he'd stand in my office door and leer at me sadiistically. All the while spouting half truths and outright lies about a certain GS450 rider who was going to suffer tremendous physical discomfort come race day. Into the Armco at full speed, up and over the banking he claimed, next stop, Honolulu.

But Mother Nature was on my side. Ten solid days of monsoon-style rain soon had Rich convinced that Ontario

was now at the bottom of an inland ocean, and on the eve of the final confrontation, he went with the odds. The weather reports called for only occasional showers on Sunday. But during the raging torrent on Saturday night, Rich wasn't much interested in riding for an hour to pick up the bike, then turning wrenches and busting knuckles well into the night so he could get up before dawn, ride an hour in a crowded van filled with gas fumes, only to find the track might be closed.

I was. Getting the KZ550 ready to race was fairly simple. First, the stands, mirrors and signals came off and the number plates went on. Then the oil drain bolts were drilled and safety wired. Then the pleasure-ribbed front tire was tossed in favor of a Dunlop K-81 R, the grippiest street-legal tire I've ever ridden (and raced) on. The KZ's standard K-81 rear tire was plenty good enough to stay on.

I derived a great deal of satisfaction from the brilliant, clear sunrise on Sunday morning. Through my persuasive powers the night before and through blind luck, I had aced poor Richard out of his ride. And as a result, victory would almost certainly be mine.

In hopes of getting the maximum track time and giggles, I entered three classes; Box Stock, Production, and Light Superstreet. All three have an upper displacement limit of 600cc, so the Kawasaki would be legal, though the usual crowd in Production and Superstreet would likely be substantially faster.

But Mother Nature was on my side. Again. The threatening weather had kept a lot of the regulars away, so the racing was wide open. In the Box Stock class, the KZ simply ran away from a small as-

sortment of middleweights. It left a GS550, two other KZ550s and a variety of other bikes in its wake. The Production race was much the same story. The Kawasaki pulled red-line in sixth down Ontario's long straight, then maintained the same 115 mph around the banked first turn. Even with the standard El-Limpo shocks the bike was extremely stable. The swoop down off the banking was smooth and wiggle-free. Unlike most stock street bikes, the KZ lets you ride at the limit of your tires instead of that of the chassis. The 550 never tried anything frightening, even during cornering hard enough to drift the rear tire. And with its stands removed, the Kawasaki never dragged anything in the turns, provided I hung off to the inside. In two of the classes bigger bikes were on the track at the same time and the KZ demonstrated just how fast it really is. At one point I pulled out of the infield onto a long straight a short distance behind a 1980 GS750 stocker. The KZ made up ground on it. I laughed so hard my face shield fogged.

The only problem with the bike was a high-speed hesitation in the carburetion. Once each lap I'd close, then re-open the throttle to slow slightly for a fifth gear sweeper. Each time the engine would die for a second before accelerating again.

As it turned out, the only wheel-to-wheel dicing I had taken place in the Superstreet race. Once each lap I'd occupy each of the positions between first and third. An amazingly battered RD350 had about a 15-mph advantage down the straight, but rather round-about lines through the infield. Each lap the KZ would nip past him a couple of turns before the finish line, only to be re-passed on the following straight. Another Yamaha was content with third place until the last lap, at which point he passed us both. That left me in third, entering the third-to-last turn, where the 350 rider took his usual go-in-deeper-come-out-slower line. A flick of the bars and a block pass was all it took to ease past him into second place.

As a result of my efforts and the KZ's surprising road racing prowess, I was awarded enough particle-board plaques to construct a small outhouse. Given the normal turn-out of machinery on a sunnier day, the KZ shouldn't really be competitive in the Production class, and well back in the field against the much faster Superstreet bikes. But the Box Stock class belongs to the Kawasaki. Nothing should be able to beat it except another KZ, or a full-on cheater.

After the race-day romp on his motorcycle, Rich no longer speaks to me. That's fine though, since it means he can't threaten me either. We'll have to wait for the next race to settle the dispute. One thing is for sure, I'm not going to let him ride my KZ550.

require excessive maintenance either. Once broken in, Kawasaki recommends that tappet clearance be checked every 3000 miles—about in keeping with the maintenance requirements of other bikes.

The 550's upper end differs somewhat from the KZ650's. Instead of using a roller chain to drive the cams as the bigger bike does, the 550 uses a link-plate chain, like Honda's CBX and four-valve fours. Kawasaki employs this chain mainly in the interest of reduced noise. It rides against Teflon-coated slipper-type guides. The upper end includes Kawasaki's Clean Air System, which reduces exhaust emissions by continuing to burn the charge in the header pipe after normal combustion is over. The system relies on low-pressure pulses in the exhaust system to draw

the extra air through a set of one-way reed valves mounted in the cam cover. The air is pulled into each cylinder's exhaust port through a passageway just above the valve seat. This arrangement lets the bike meet EPA emission regulations without the ultra-lean carburetion found on most other brands, and with no power loss. As a result the KZ550 has almost none of the carburetion glitches present on so many other '80 machines. The slide-type chokes and reasonable jetting let the bike warm up fast and pull smoothly without hesitation or flat spots. The carbs have no accelerator pumps, but for the most part they aren't really needed. Sure, there's the usual slide-needle stumble if the throttle is yanked way open at low rpm, but this is easy enough to acclimate yourself to.

There's also a momentary lag if the throttle is closed, then re-opened when the engine is spinning near redline. An accelerator pump would likely cure this. Even with these two flaws, the Kawasaki still is worlds smoother in the carburetor department than most other middleweights.

Though this new bantam-weight powerplant is brilliantly engineered for the most part, there is one area suffering from obvious cost cutting. Kawasaki saved a few yen and bolted on a points ignition when a modern motorcycle should have a maintenance-free electronic ignition. Kawasaki should have their corporate wrists slapped for this little omission—particularly when the LTD version has a pointless unit.

The KZ's chassis is saddled with a few bargain basement pieces too, but

KAWASAKI KZ550 LTD

High Horsepower For The Macho-Minded

To a lot of riders there are considerations just as important (if not more) as full-on performance figures. Realistically, it's a rare occasion on the street when you can use all the poop a good bike has to offer. Maybe at the dragstrip, but not on the road. In the real world, a couple tenths of a second aren't important and there's plenty of room for more aesthetic considerations. The KZ550 LTD is designed with this idea in mind. It's the low-ridin' profiler version of Kawasaki's new four-cylinder four-stroke.

The changes made in the metamorphosis from sport bike to LTD are actually fairly extensive. Naturally, there are the usual cosmetic differences—high pullback bars, smaller peanut tank and stepped seat. But you get more than just a few different styling items for the extra \$120 investment. The KZ550 LTD is more than just another pretty face on Burger Boulevard.



It's got a few hi-tech items that the standard model doesn't have. Most notable is the pointless electronic ignition. Then there's the damping-adjustable shocks and the air-spring front fork. The LTD leading-axle front fork is considerably longer to give the bike a more radical chopperesque appearance. The front wheel is a 19-incher like the standard 550's, but the hub area is different to mate with the rakish forks and different disc caliper. The rear wheel is a stubby 16-inch unit wrapped with a Dunlop Gold Seal K127 to complement the matching

front tire. Both tires have long-wearing rubber, but are still sticky enough for brisk corner-carving. The back end's low-slung look is completed with short Showa shocks. They're far superior to the boingers on the other 550 and make it easy to tune the action to suit your riding style.

The LTD treatment makes the bike less comfortable, but the 550's basic personality still shines through. The main culprit in the comfort department is the high-stepped seat. Within about 50 miles of highway cruising it had us squirming and the one-position design made it difficult to find relief. The buckhorn bars are a might extreme for our tastes too, and amplify engine vibration to give your hands a noticeable tingling.

The 550's amazing power is still present and at nearly full strength. Though slower than the standard model, the LTD will still outrun any bike in its class. And even with its juggled suspension and wheel dimensions, Kawasaki has kept the same steering geometry, so the handling remains crisp.

The 550LTD is for riders who want a taste of the standard KZ's, giant-killer performance—but with a little Main Street Style built in. If that's what you're looking for, the Kawasaki won't disappoint you.

Suggested retail price.....\$2299

ENGINE

Type.....Four-stroke DOHC four
Displacement.....553cc
Bore x stroke.....58 x 52.4mm
Compression.....9.5:1
Carburetion.....4, 22mm TK slide-needle
Ignition.....Pointless electronic

DRIVETRAIN

Clutch.....13 plates, wet
Final drive..... $\frac{5}{8}$ x $\frac{3}{8}$ (No. 530) EK SH-O

CHASSIS

Fork.....36mm Showa leading axle, 6.3 in. travel
Shocks.....4.5 in. wheel travel
Front tire.....3.25-19 Dunlop Gold Seal F8

Rear tire.....130/90-16 67S Dunlop Gold Seal K127
Rake/trail.....27.5° 4.3 in. (110mm)
Wheelbase.....55.9 in. (1420mm)
Seat height.....31.5 in. (800mm)
Ground clearance.....7.0 in. (178mm)
Fuel capacity.....3.3 gal. (12.4 liters)
Wet weight.....452 lbs. (205kg)
Colors.....Maroon
Instruments.....Speedo, tach, odometer, resettable
tripmeter, oil warning light

PERFORMANCE

Fuel consumption.....37 mpg average
RPM at 60 mph in top gear.....4919
Speed in gears at (redline).....(9500) 1st 38.24 mph;
2nd 55.22 mph; 3rd 71.23 mph;
4th 86.99 mph; 5th 102.39 mph;
6th 115.79 mph

luckily they do little to hamper the bike's performance. First, there are loose-ball steering-head bearings which are less durable than tapered rollers. And unlike its more expensive LTD brother, the A-1 lacks an air-spring front fork and shocks with adjustable damping. Thankfully, the progressively sprung leading-axle fork works well as delivered. The 19-inch cast wheel strokes a whopping seven inches, so only the biggest chuckholes make the fork bottom noticeably. The spring and damping rates work nicely together to keep front-end dive under control during hard braking and give the A-1's nose a solid feel during fast cornering, but you pay for this firmness with a somewhat harsh ride on superslab highways. There's a little too much stiction in the Kayaba fork to let it ride as smoothly as the straight-leg Kayaba unit on the Suzuki GS550.

The front end stays comparatively flex-free, thanks to sturdy 36mm-fork tubes and beefy triple clamps. The lower clamp is steel and grips the tubes with two pinch bolts on each side. The aluminum upper clamp employs single pinch bolts. The chromed steel front fender bracket adds strength also—as both fork brace and fender mount.

The Kayaba shocks are adequate, though uninspired. The straight-rate springs have the customary five preload settings, but no damping adjustment. They could definitely use it at times, though. The damping is limp, so the shocks bottom fairly easily and the back end of the bike pogs slightly during fast cornering. If not for the chassis' inherent strength, the KZ would move around a good deal more in the corners. The shocks are no prize on the open road either. They're unresponsive to expansion

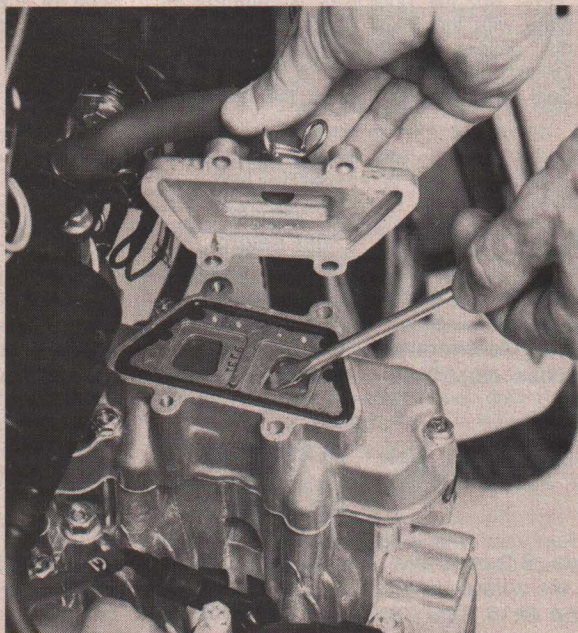
joints and pavement seams, so the ride is harsher than that of the best middleweights.

The rest of the chassis pieces are quality items. There are caged needle bearings in the swingarm pivot to keep the handling solid as the miles roll by. The steering head is heavily gusseted with sheet metal reinforcements that tie the converging frame tubes together into a rigid unit. Both cast aluminum wheels are wrapped with Dunlop rubber. The back tire is a venerable 18-inch K-81—an excellent tire for hard cornering. Though made in Japan, the 3.75's rubber compound is identical to the American-made K81s. Up front Kawasaki opted for long wear instead of maximum adhesion and slid on a ribbed Gold Seal F7. The tire feels a little unfriendly at extreme lean angles—hinting that it will let go before the sticky K-81 in the back does.

Braking is handled by a single hydraulic disc in front and a drum in the rear. The drilled disc's irregularly spaced holes reduce fade and weight, eliminate squeak, and improve wet-weather braking. A strong two-fingered squeeze will bring the wheel to the point of lock-up on dry pavement, but there is enough sensitivity to help you keep it under control on rain-slickened streets. The rear binder is just as controllable and with its cast-in drum is powerful enough to lock the wheel, but rarely does so accidentally. And unlike most disc brakes, the drum is unaffected by rain.

Detail-wise, the 550 is decked out in the usual Kawasaki street hardware. The 85-mph speedometer is dead on. The bike lacks the quartz headlight and self-canceling turnsignals found on some of the bigger KZs but features extra covers on im-

These little reed valves are part of Kawasaki's Clean Air System which cuts emissions without ultra-lean carburetion settings.



AND IN THE OTHER CORNER:

SUZUKI GS550E

The old champ may not be as quick, but it hasn't been knocked out, either.

Kawasaki's new KZ550 faces stiff competition, even though there's only one other 550 currently available. Suzuki's very similar twin-cam GS550 four has been one of the best street bikes you could buy since 1977 and changes for the 1980 model make it better than ever. This year the GS550 is available only in one standard-styling model, the E version with cast aluminum wheels and disc brakes at both ends. The less expensive wire-wheel model with its more waterproof drum rear brake is no longer being sold.

One long-awaited change for 1980 is a set-it-and-forget-it electronic ignition, which reportedly delivers a stronger spark than the old points ignition. The GS550 has been relieved of its unnecessary kickstarting mechanism and that's the primary reason that the 1980 model was four pounds lighter than our 1979 wire-wheel machine. The new bike has also been fitted with the more expensive, less troublesome tapered-roller steering-head bearings; the bike's swingarm has always pivoted on needle bearings. Other 1980 chassis improvements include black dog-leg handlebar levers, a single throttle cable, a new front master cylinder and slightly different brake calipers.

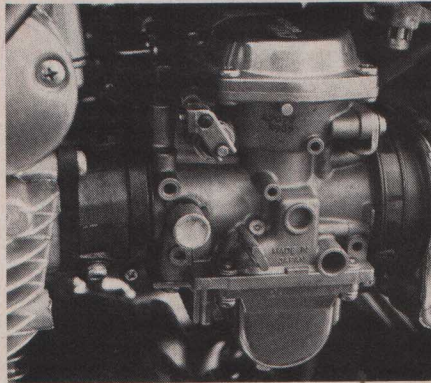
New carburetors are the most significant change for 1980. Since it was introduced in 1977, the GS550 has had four 22mm slide/needle Mikunis, but this year they have been exchanged for comparatively huge 32mm constant-velocity instruments. Suzuki says that the switch to CV carbs was made to maintain rideability with the leaner fuel mixtures required in 1980 models by the EPA. Our GS550 responded to throttle about as willingly as previous models except for a flat spot just above idle. You must use a little extra rpm to overcome this weak spot when pulling away from a stop. The GS also had the typical abrupt throttle response of lean-mixture CV carbs and the usual extended warm-up period.

The carburetors' biggest contribution is a large dose of extra power. The bigger carbs give the already-strong GS550 a boost in power from 3500 rpm to the 9500-rpm redline. However, the increase is the greatest at high rpm, where the bigger carb venturis make the most difference. At all other

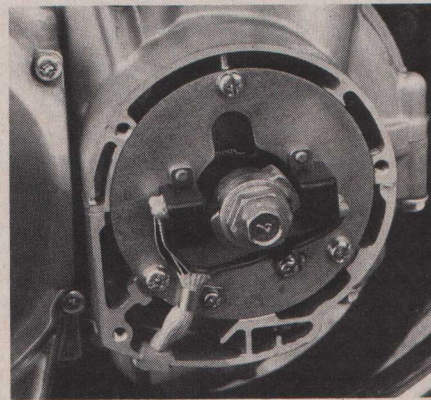
speeds, the GS is significantly weaker than the KZ. Last year's GS550 ran the quarter-mile in 14.50 seconds at 91.1 mph. This year's sprinted through in 13.66 seconds with a terminal speed of 96.5 mph. That's quick enough to threaten any 650—but not as quick as the Kawasaki. Even though the GS550 is much faster than before, its mileage is still very good, perhaps even improved by the lean mixtures. We averaged 51.8 mpg with a high of 58 mpg.

The Suzuki 550 does all this with no change to its conventional two-valve combustion chambers. The GS550 hasn't been equipped with Suzuki's "Twin Swirl Combustion Chamber" four-valve heads which the company claims made the new 750 stronger than the old two-valver. However, after our experience with this 550, we're inclined to believe that any power increase which the 750 enjoyed came not from its fancy valve gear nearly as much as from (like the 550) its bigger carbs—and possibly from a better ignition system. The GS550 valve clearances aren't as easy to adjust as the 750's rocker-arm operated TSCC system, but since shim-type valve trains like the GS550's are almost certain to require less frequent adjustment and since there are less valves to adjust and less moving parts, we tend to prefer this system (even though you must purchase shims and a special tool to make adjustments yourself) to the TSCC design.

The GS550 adds its new-found power to its many existing strengths. It handles exceptionally well with terrific



The switch to bigger 32mm CV carburetors has given the GS550 more power but also causes more abrupt throttle response.



Electronic ignition is a long-awaited feature on the GS series and will reduce maintenance. It will fit older 550 models as well.

precision and stability during aggressive cornering, and it's still very nimble at low speeds. The IRC tires on our bike stuck tenaciously and contributed to the bike's tight feel. Combined with powerful, controllable brakes, the tires helped make the 550 a superb stopper. Some much larger touring bikes would be improved by a saddle and a ride as comfortable as the GS550's. In fact, some mild vibration above 7000 rpm (about 80 mph in sixth gear) is the only possible complaint a tourer could find about the GS550's comfort. The Suzuki's six-speed gearbox (monitored by a digital gear indicator) worked flawlessly throughout 1600 miles of testing. In fact, everything about this GS550 confirmed the bike's enviable reputation for reliability.

Although they seem very similar, the KZ550 and the GS550 become significantly different when you ride them. The Kawasaki is much faster, but it also has a much harder seat, vibrates more, rides a bit less smoothly and isn't as roomy as the Suzuki. Both bikes are at home carving precise lines through tricky corners and slicing through congested traffic. The Kawasaki comes across as a feisty little hot rod. The plusher Suzuki out-shines it as a long-haul open-road tourer. Though different, the two bikes are now, each in its own way, the strongest contenders for the Best Middleweight title. For people who are as concerned about practicality as they are about excitement, being the best middleweight means being the best all-around street motorcycle.

Suggested retail price.....\$2139
Warranty.....12 months, unlimited miles

ENGINE

Type.....Four-stroke DOHC four
Displacement.....549.7cc
Bore x stroke.....56 x 55.8mm
Compression.....8.6:1
Carburetion.....4, 32mm Keihin CV
Ignition.....Transistorized pointless

DRIVETRAIN

Primary transmission.....Helical gears, 1.977 ratio
Final drive..... $\frac{5}{8}$ x $\frac{3}{8}$ (No. 530) D.I.D. chain, 50/15

CHASSIS

Fork.....35mm Kayaba, 5.5 in. travel
Shocks.....Kayaba, 3.9 in. wheel travel
Front tire.....3.25H19 IRC GS-11AW
Rear tire.....3.75H18 IRC GS-11AW
Rake/trail.....29° / 4.75 in. (120mm)
Wheelbase.....56.5 in. (1435mm)
Seat height.....32.1 in. (815mm)
Fuel capacity.....4.2 gal. (16 liters)
Wet weight.....467 lbs. (250kg)

PERFORMANCE

Fuel consumption.....45 to 58 mpg, 51.8 mpg average
Top gear 50-mph pass terminal speed.....66.9 mph
Quarter-mile.....13.66 sec. at 96.5 mph
RPM at 60 mph in top gear.....5050



Although 18 pounds heavier than the Kawasaki, the GS handles just as precisely and steadily but has less cornering clearance. If you buy, get one with the good IRC tires, not Bridgestones.

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portant electrical components to complicate hot-wiring. The locking seat flips up to expose the keyless helmet lock release, battery, toolkit, air box and a small storage box in the tailpiece. The 4.0-gallon steel gas tank can be removed without tools once the seat is open. With an average of 45 miles per gallon, the tank will take the 550 about 180 miles before running dry.

The KZ gets its best gas mileage at a constant cruising speed. However long-distance touring is what the bike is least equipped to handle. The Kawasaki isn't an uncomfortable motorcycle, but it is less accommodating than Honda's CX500 or the GS550. The Kawasaki's smaller size makes the riding position a bit more cramped than the GS's. The KZ seat is narrower and even its dual-density foam padding can't quite make up for being half-an-inch thinner than the Suzuki's. The Kawasaki's less compliant suspension hampers it too.

Still, the KZ has its good points for long-haul use. The vibration level is unobtrusive and there's plenty of power available to keep you happy. As the fastest middleweight it's also the best equipped to carry the extra weight of a passenger or a lot of baggage.

But loading the Kawasaki down like a miniature Winnebago would be a waste of the bike's real talents. Its nimble handling can be best appreciated around town or on a winding road. In traffic the little 550 is a rocket. It can lunge away from a stoplight and cross an intersection before most car drivers realize the light has changed. And it does it quietly and unobtrusively without a lot of revving or clutch slipping. With its

750-style power, you can short-shift and still have all the acceleration you're likely to need.

Peak power fanatics won't be disappointed either. A full throttle run through the gears will have you blazing along at 100 mph in just over 13 seconds. A few seconds more and you'll be doubling the national speed limit. The 43.48 dyno-tested horsepower is spirited enough to get the bike's front end very light in first gear. Only a slight tug on the bars is needed to pop a beautiful wheelie.

The A-1 is capable of producing equal excitement on a curvy road too. Excellent steering geometry makes the bike nimble and precise in all types of turns. Though it is small-

er and lighter than the Suzuki, its arch enemy, it can't fully realize these advantages during ultra-hard cornering with its standard shocks and front tire. Even with the limp dampers, the KZ stays quite stable at speed, refusing to break into a full-fledged wobble. It feels somewhat loose and mushy in the rear but it never threatens to get out of hand. The stands and exhaust system are well tucked in so there's plenty of ground clearance. When pitched over with a vengeance the stands and folding footpegs drag almost simultaneously. At sane speeds the Kawasaki is beautifully behaved in swervery. The clutch and gearbox operate smoothly and combine with predictable throttle response to make the bike smooth and relatively lurch-free. The KZ has a normal amount of driveline lash, but it's made less noticeable by the no-surprises carburetion.

That the KZ550 is one of the best street bikes we've tested is no surprise. It's not an Interstate cruiser, but it wasn't designed to be. It was intended to be a sporting bike and it is an excellent one. The little KZ is nearly as fast as the bigger, heavier superbikes. And because it isn't burdened with their extra weight, it'll run circles around them on a tight road.

This ability to run with the big superbikes in the straights and pass them in the turns makes the Kawasaki unique. So besides being the smallest superbike you can buy, at \$2179 it is also the least expensive. You can pay more for a bigger and faster bike, but no matter how much you pay, you won't get a significantly better all-around sporting motorcycle than the Kawasaki KZ550. **M**

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