

• Most new dirt riders begin on a 125. However logical this starting point to berm-bouncing may be, there are some pitfalls. Thick-wallet types who can afford the best often equate price to suitability and end up with a specialized near-racer in the Penton/Monark/Rickman family. For beginners, these bikes can be more intimidating than pleasing. The average guy will buy a Japanese enduro. He may wind up with a heavy electric-starting Yamaha that he finds cumbersome. His MT-series Honda won't have enough power and his four-stroke Honda won't go very fast. The buyer who listened to his Suzuki dealer won't be unhappy, but he might soon find lawn bowling more attractive than motorcycling. Certain bikes can dull the excitement of dirt riding for a new rider. In this critical learning period the wrong bike can turn him off. "So this is dirt riding?" yawns our neophyte, as he loads up his Capriolo 125 and heads for a pinball parlor.

It's hard to imagine that a KS-125 Kawasaki would lead any new rider to lawn bowling or pinball shooting. The KS-125

has tractable low-end power for easy learning, and the engine is peppy enough at higher revs so that the owner can grow into faster riding without outgrowing his motorcycle. Its engine and handling mix is almost good enough to keep an experienced dirt wizard from dreaming of a Penton or Can-Am.

The KS does nothing exceptionally well, but it does everything with relentless adequacy. This singular lack of faults makes the bike seem even better than it actually is. Nice as the KS feels, several specialized European dirt bikes could outdistance it on a fast trail. But then the high-priced Continentals don't have oil injection, primary starting, decent lights, or built-in spark arresters. Nor do they have near the street suitability of the Kawasaki. For the new rider or average rider, the KS-125 is an excellent choice. For the dirt expert who wants to spend equal time on pavement, the KS-125 is a necessary choice.

Kawasaki first introduced a 125 Enduro in 1971 when noise and pollution standards were almost non-existent. In keeping with their high performance image,

Kawasaki's F-6 blistered competition in the power department, but the thing belched noise and sowed hydrocarbons. So Kawasaki melted all their F-6 tooling and built the KS-125 from scratch.

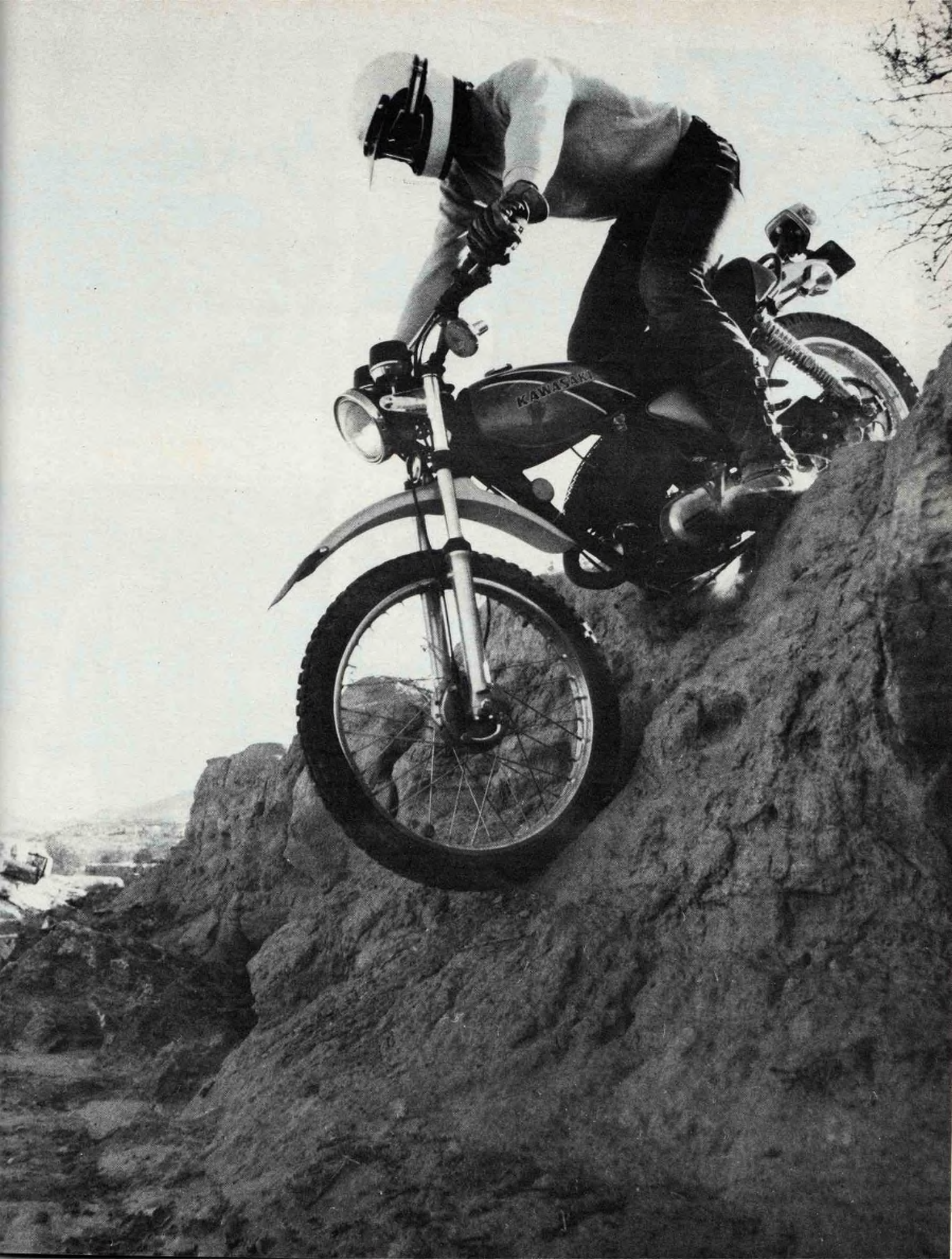
Kawasaki's stateside R & D facility in Santa Ana, Calif., handled the final prototype development of the KS. This division had just completed a similar job (with tremendous success) with the Z-1 street bike—and the American and Japanese R & D staff eagerly went to work on the 125 off-road scooter. There was a good deal of feedback to the factory, and in the end Japan put most of R & D's suggestions into production bolt for bolt.

Dealers began selling the first KS-125s in mid-summer of 1974. The little enduro heralded the new KS-series styling motif. More important, the 125 became the first example of the cleaner, quieter engines planned for all Kawasaki dirt bikes. The new enduro was not burdened by the F-6's more obvious faults—excessive width, excessive weight and heavy handling.

When (and if) an 80 decibel noise level becomes law, the KS's present 81.5 dB(A)

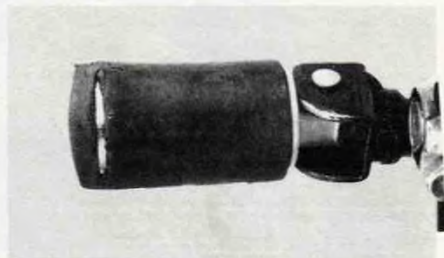
KAWASAKI KS-125







Despite a complete Mikuni carburetor behind that bulge, the engine only measures 11 inches wide.



Waffle pattern footpeg rubber, above, rotates with use and quickly wears through to bare metal, below. Pegs should be hollow cleated steel type.



exhaust note can easily be lowered to meet the standard. Only a simple muffler modification will be required although it will result in a slight power loss. In the meantime Kawasaki is allowing buyers to enjoy the greater power of an 81.5 dB(A) engine.

Judged solely by the amount of smoke curling from the exhaust pipe, the KS "clean" engine could be considered pollution-free. Not even a whisp of smoke is visible when using Klotz synthetic oil (as specified by Kawasaki) in the injection tank. Stingy metering by the Mikuni oil injection pump undoubtedly contributes to clean running. Only half-a-quart of Klotz disappeared from the oil injection tank in 561 miles of street and dirt testing. Of course unburned hydrocarbons, not smoke *per se*, are the real pollution danger. Low unburned hydrocarbon levels are the criteria for emission standards, and we have no way of measuring them.

The old F-6 had an overweight engine that measured 14 inches across. Any decent-sized rock could knock the overhanging carburetor case right off, and many carburetors did get sideswiped. The new KS engine—20 percent lighter than the F-6—is only 11 inches wide. Any rock taking a pot shot at the KS undercarriage will only dent the skidplate. As a dirt bike engine the KS is vastly more suitable externally than was the F-6.

Internally the port and ignition timing necessary for quieter running and cleaner air presumably has nicked down the KS's peak power output. Instead of making 12 horsepower as the F-6 did, the KS produces 10.59 dyno-tested horsepower at 7000 revs. Torque peaks are closer: 8.83 pounds-feet for the F-6 and 8.46 for the KS. Drag strip figures also reveal a slight performance loss: 18.33 seconds, 67.56 mph for the F-6 vs. 18.81 seconds, 66.22



Front end steers well even with a trials tire. Tough plastic fender defies rocks, bends and weather.

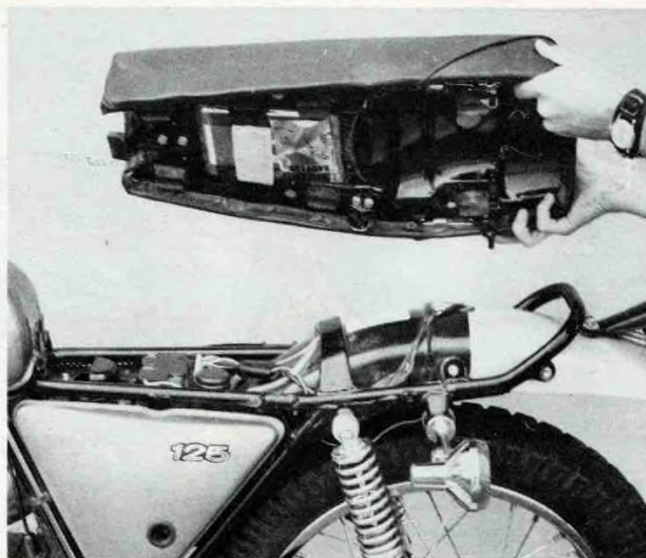
mph for the KS. Still, the KS's 18.81 quarter-mile makes it quicker than all the other Japanese 125 enduros (which average 20.5 seconds).

In part the less powerful KS can perform so well because the new bike weighs 23 pounds less than the F-6. Power-to-weight ratios are virtually the same—22.28 (KS), 21.32 (F-6). A six-speed transmission in the KS also helps it stay close to the more powerful F-6, which had a five-speed gearbox.

Out in the field it doesn't matter what the old F-6 used to do, because the KS performs phenomenally in its own right. It cruises at 55 mph on the open highway with an unstrained exhaust note and minimal vibration. Roll on the throttle and speed increases steadily until the tach needle bumps the 8000-rpm redline and

PHOTOGRAPHY: DALE BOLLER, DAVE HOLEMAN





A completely removable seat is better than a folding seat because it provides more access. Superb design makes this one go on and off in seconds.



Taillight is big and ugly because of Federal law. All four turnsignals will unbolt in ten minutes.

speedometer reaches 70 mph. Acceleration easily matches traffic flow.

Off-road the KS has its spacious powerband and healthy torque curve to give a rider something most 125s don't have—throttle control. There is enough muscle on tap to use power to help steer, to help lift the front wheel over obstacles and to creep up a hill. Any time the tach needle hovers at 4500 revs or above the KS engine will hold its own against sand, mud and most uphill. That gives it a useable power spread of 3500 revs—great for learning. The rider can concentrate on terrain rather than shifting. The engine gets a break too since it isn't always spinning a million revs a minute. If anything really sticky looms ahead, just downshift until the tach reads anywhere above six grand and 10 ft. lbs. of torque will forge the bike forward.

Cycle's test bike spent five grueling days in rocky, sand-cruised desert hill-country laying out the famous Last Chance Enduro. The KS-125 carried a 220-pound rider everywhere a 400 Maico and 360 Yamaha went, even though the Kawasaki had stock trials universal tires. Naturally there was considerable clutch slipping and paddling on some of the nastier uphill, but it's still safe to say a good rider could win an enduro on the KS-125. With most 125s, just finishing is the main concern.

A rotary-valve single with relatively mild specifications gives the KS its punch. Air enters the side-mounted 24mm Mikuni carburetor through a huge-diameter duct running to the air box under the seat. An easily-cleaned, double-layer wet-foam air cleaner filters out dust perfectly. During five days in the desert not one dust speck penetrated the top layer of foam, let alone the critical area on the inside of the second layer.

When the rotary valve opens the intake port, pressure differentials force the mixture into the crankcase. The rotary valve closes after maximum charging of the crankcase occurs; in piston-port engines the closing timing must be symmetrical to BDC. Rotary valves have two main advantages which can lead to increased power and fuel economy. First, the intake port can be closed when circumstances are ideal. Second, positive crankcase sealing by the valve prevents any loss of charge back through the carburetor. Kawasaki's expertise with discs is reflected in the magnitude and spread of the KS torque band. That know-how also produces excellent gas mileage (35 mpg off-road and up to 40 mpg on pavement).

Mixture in the crankcase passes to the combustion chamber through two close-spaced transfers on either side of the cyl-

inder and through one large transfer in the back. A single unbridged port directs the exhaust through the 81.5 dB(A) muffler and built-in spark arrester. Ports in the nicely cast cylinder exactly match those in the pressed-in steel liner.

The piston carries two standard steel rings and a needle bearing on its wrist pin. Full-circle flywheels, ball-bearing mains and a needle bearing big-end on the one-piece rod comprise the lower end. An output gear on the crankshaft meshes directly with the clutch hub.

One of the most impressive individual components on the KS is its rugged clutch. Any small trail bike falls victim to situations in which the revs fall off in first gear. Only unmerciful clutch slipping (usually with the engine screaming at its power peak) can maintain forward progress. The KS clutch can take such abuse without losing its adjustment and its wide friction point. A rack-and-pinion release mechanism operates five bonded friction plates (cork and bakelite), four steel plates, and five steel rings (to improve disengagement). Rubber dampers inside help reduce shock loadings on the gearbox. Light lever feel and creamy engagement aid smooth starts; conversely, complete disengagement eliminates all the tricky foot-rowing for neutral.

Gearbox ratios work beautifully on the street, but certain dirt situations reveal a slight staging problem. A wide gap between first and second gear (29:1-19:1) sometimes generates wheelspin when downshifting to first under power. And sometimes engine revs can drop too much when shifting from first to second. Also, the rather high overall ratio in first gear (29.15:1) precludes ultra-slow-speed plonking. The slowest effective bottom-end speed for off-road is about 8 mph,

Our 220-pound tester rarely bottomed the shocks with the spring-preload cam on the middle position of five notches. Two separate springs on each shock deliver two-rate action. Sustained high speeds over rough ground saps damping a lot less than expected with Japanese shocks. Average riding doesn't disturb shock absorber function at all.

Several small shortcomings, a couple of minor failures and one major failure dull the KS glitter somewhat.

Shortcomings: the gas cap leaks; the footpeg rubbers rotate and quickly wear through to bare metal; the rubber plug sealing the idle adjustment access hole in the left side-cover keeps popping out, thus exposing the carburetor intake to dust; and the front wheel needs a rimlock.

Minor failures: both left turnsignals ceased to function and both instrument lights blew out twice. In each case the engine was revving at the redline in sixth gear. Vibration, combined with maximum charging output from the lighting coil, probably fractured the filaments.

Major failure: piston seizure. After 520

miles of rigorous testing, the KS suddenly tied up while bouncing up a sandwash. Since the bike had already endured so much punishment without trouble, and since the bike had been through the same sandwash several times previously, we assumed the oil pump had failed and dumped a few ounces of oil from the injection tank into the gas. The bike re-fired and ran another 40 tough miles back to basecamp. But the oil pump checked out positive. So the seizure could have been caused by any number of things. Foreign matter could have been sucked through the transfers. An oil failure might explain the seizure. A plugged oil line could have been responsible. Low temperatures in the desert might have thickened the oil and diminished its flow through the oil lines.

Failure in a bad motorcycle isn't too surprising. When a good bike breaks mysteriously it's probably a fluke. Don't let an isolated seizure in *Cycle's* KS-125 stop you from buying one. It's guaranteed to keep you away from lawnbowling and pinball. ●



The side mounted Mikuni has an external main jet replacement cap-bolt in the float bowl.

