• Honda has definitely decided to do it in the dirt. After last year's tantalizing XL-250 four-valve single, the Tokyo giant has cut loose with *six* all-new dirt racers and playbikes for 1973. They've trickled in throughout the year arriving amidst raves (the motocrossers), moderate acclaim (the MT-250) and ho-hums (the MT-125). With the XL-175 and XL-350, the most incredible barrage of dirt bikes from any single motorcycle company in history is fully upon us.

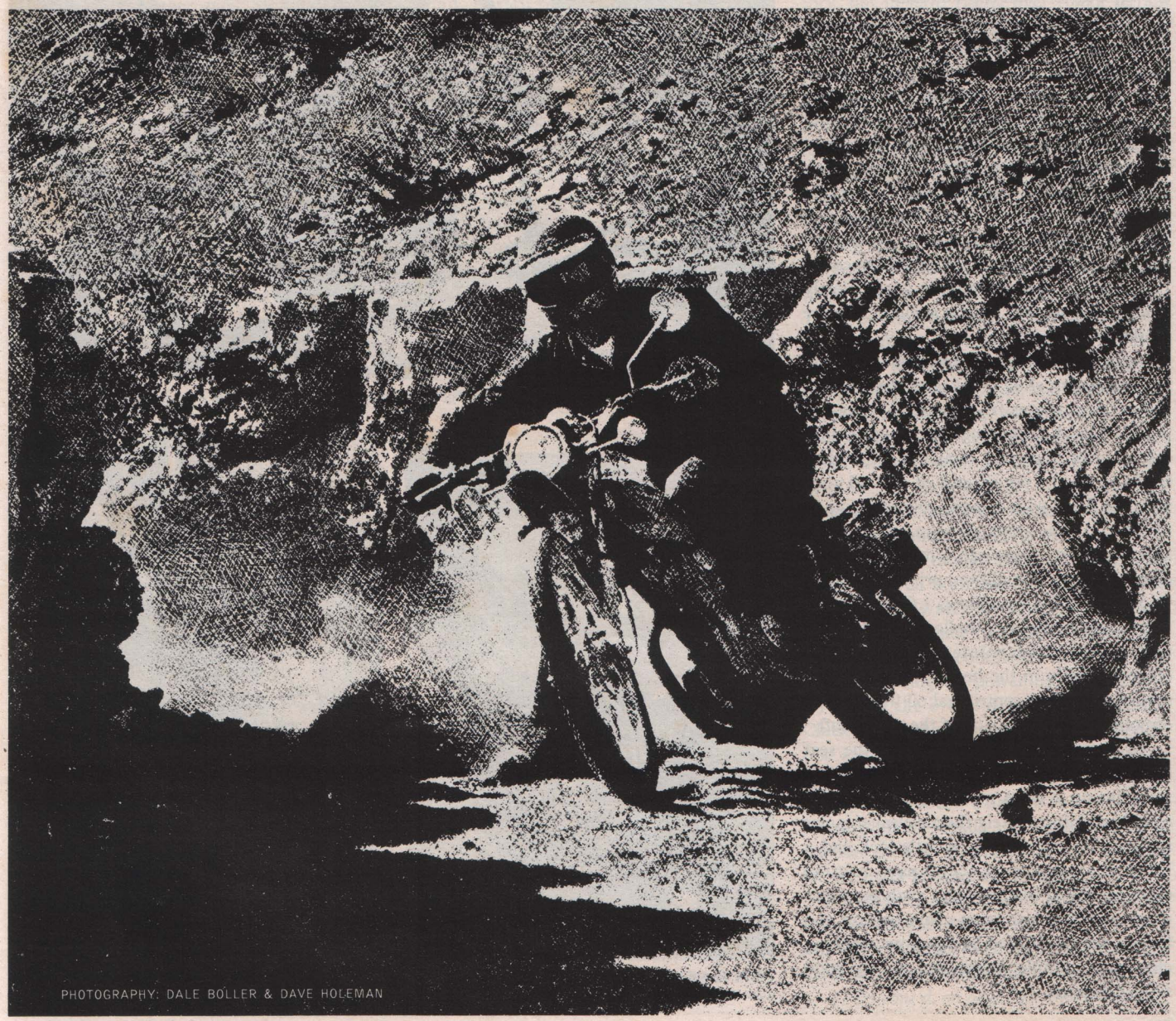
The existence and nature of the dirty half-dozen is significant for two reasons. First, with six off-road-oriented bikes, Honda is obviously assuming that land will always be available for off-road use, or else the number would have been one, or none. The huge commitment, certainly backed by expensive research, indicates that perhaps land isn't really about to be seized and closed at every turn—as many off-road users fear. Secondly, the design and performance of the four enduro-type bikes reflect Honda's definition, again based on vast research, of the typical off-road rider. He is a person who wishes to use his dirt bike on the street, and a person who will rarely ride the trails hard enough and fast enough to bring out deficiencies in the motorcycle.

That is why the XL-175 is a near-perfect mount, up to a point; beyond that point it's a bike that needs more power, better tires, better shocks and less weight. When Honda gears up one of their computerized, automated, hygienically clean, mile-long, digital read-out assembly lines, it isn't to produce hand-made works bikes for a few hundred super-enthusiasts. Honda has to have volume, thousands of sales of each model, just to pay the light bill. So the bikes are built and priced for the largest section of the market, which is always, in any market, the average guy. In motorcycling he isn't slow, but then again he isn't really fast either.

Same with the XL-175. It won't uproot trees or shred the asphalt with acceleration, but it will provide easy, unhassled and reliable riding for everyone who doesn't want to

CYCLE ROAD TEST

HONDA XL-175 ENDURO



PHOTOGRAPHY: DALE BOLLER & DAVE HOLEMAN

mimic Roger DeCoster. To those who do, Penton, Bultaco and Puch all sell rousing 175 race-ready motocrossers for several hundred dollars above the Honda's $740 suggested retail price.

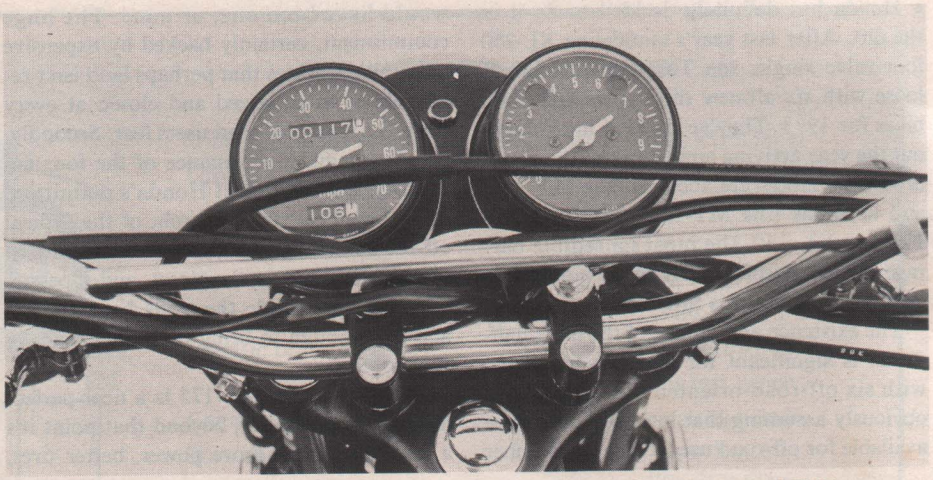
The machine, then, is to be used for leisurely-to-brisk trail riding and casual jaunts around town, not excluding an occasional twist through the mountains. It will complete these tasks with considerably more verve than the SL-125, but without the size and weight penalty of the XL-250—so as a compromise the XL-175 is brilliant.

Compared to the specifications and performance of other 175 dual-purpose bikes, the XL-175 falls squarely in the middle. Its 252-pound wet weight is lighter by 11 pounds than the Kawasaki F-7 and heavier by 20 pounds than the Suzuki 185. It knuckles under to the Kawasaki in quarter-mile ET (17.21 sec. to 18.89 sec.), quarter-mile speed (73.71 mph to 66.12 mph) and in top speed (75 mph to 68 mph). But its top speed is 2 mph faster than the Yamaha.

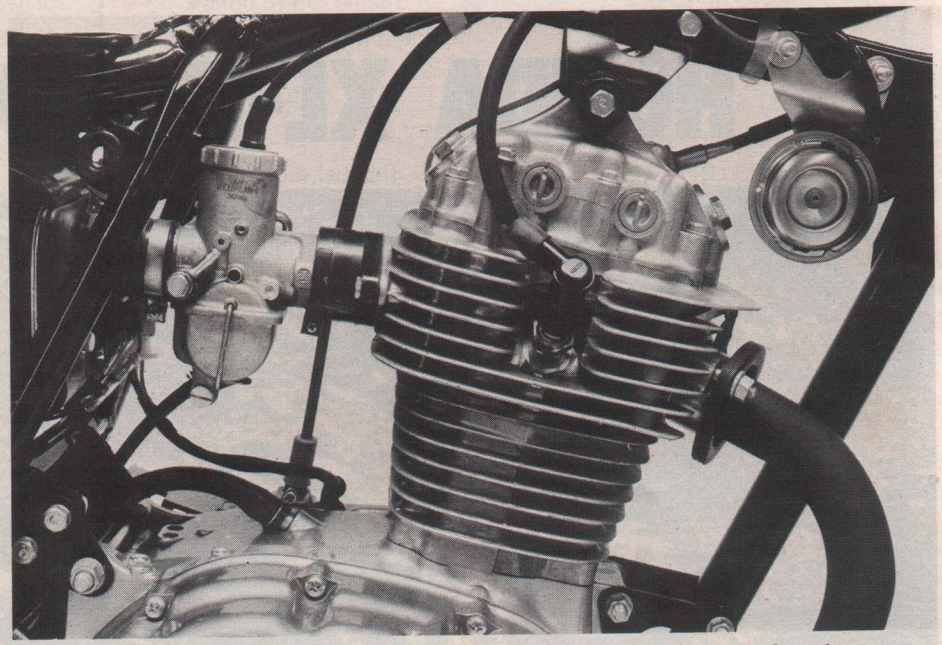
Design and execution are exactly what you'd expect from Honda. The engine is an oversquare (64 x 55mm) four-stroke single with a chain-driven overhead cam and two valves. Space limitations in engines as small as 175cc would make four valves too tiny to be more efficient than a pair of larger valves. Thus the XL-175 engine resembles the SL-125 far more than the exotic four-valve 250 and 350 XLs; however, no parts among the smaller engines are interchangeable since the 175, like any new Honda, is a completely independent design. So you shouldn't let the similar looks fool you.

Inside the motor's magnesium sidecovers and aluminum alloy crankcases there are no radical departures from designs proven in the SL-125. A three-ring piston moves in a cast-in steel liner and oscillates on a plain bushing at the small end of a steel rod, which is fitted with a caged roller bearing at its big end. The crank spins in ball bearings and transmits power to a multiplate wet clutch through straight-cut primary gears. A trochoid oil pump circulates 1.6 quarts of oil from a wet sump up a hollow cylinder stud to the cam, which rotates in journals machined directly in the head. The lubrication system includes a centrifugal oil filter driven directly off the right side of the crankshaft.

Air enters the inlet track under the seat and passes through an oiled foam filter-element inside a large molded-plastic plenum chamber. Unfortunately the air cleaner is not the easy lift-out type, so a little luck and a lot of dexterity must accompany routine cleaning. Other maintenance, such as adjustments of valve lash, cam-chain tension and timing are facilitated by spacious working clearances, simple design and a very good service manual.

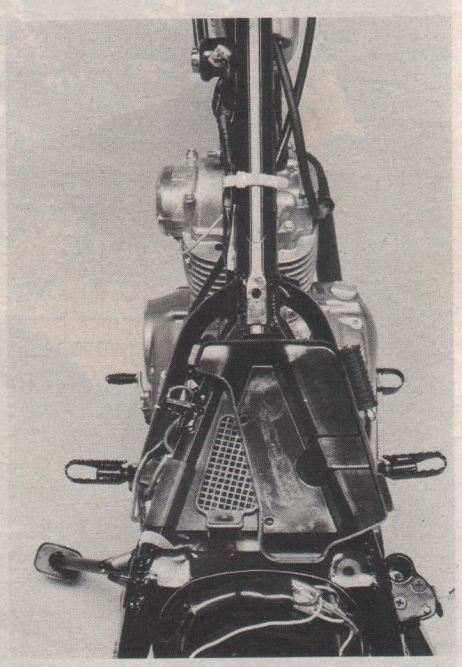


Extremely accurate speedometer indicates 30 mph at actual 28.72 and 60 mph at actual 58.06.



Despite minimal finning the engine doesn't get hot enough to ping or stumble even in desert heat.

There is enough ground clearance so both the engine and your feet are out of danger.



Narrow overall width gives a comfortable stand-up riding position and extra clearance in rocks.

Honda wisely decided to attach the enriching control for cold starting directly to the carburetor, a 26mm Keihin of the slide/needle type, instead of routing a cable from the handlebar. With the lever up, two kicks will start the engine in a snowstorm, and once warm, a single poke with no attention to the lever suffices. Curiously, our particular carburetor developed an ailment uncommon to the Keihin brand—leakage. A steady misting from the float-blow gasket dampened the carburetor, which then collected dust, giving it the usual feculent appearance of a well-known British brand. Luckily crisp throttle response and even idle remain unaffected by external deposits. The carburetor also seems impervious to water since it performed perfectly while being washed in a direct deluge from a ¾-inch hose—with the engine idling indifferently all the while.

Standard transmission components include ball bearings on the clutch and output ends of the main- and lay-shafts, and needle bearings on the other ends. Shifting is by a drum and three forks. Internal gear-ratio spreads don't leave any big gaps that the powerband can't handle, but serious dirt competitors will want to lower the overall gear ratio by fitting a larger rear sprocket. The engine has nearly enough power and torque to go almost anywhere, but present gearing won't let it. Four more teeth on the rear-wheel sprocket will tighten the overall first-gear ratio from 27.78:1 to 30.73:1, a ratio much closer to that on other 175s. However, this will reduce top speed from 68 mph as recorded electronically at Irwindale Raceway to 61.5 mph—a possibly intolerable trade-off for people spending more time on-the-road than off.

Even with stock gearing the comfortable maximum cruising speed is an indicated 53 mph at 7,000 rpm. Beyond seven grand footpeg and handlebar vibration curdles enjoyment. With four more teeth on the rear, road speed in high gear at 7,000 rpm would drop to 47.9 mph. As in every dual-purpose motorcycle, gearing is a compromise which can't be made ideal for the dirt without robbing from the street. Honda's stock ratios for the XL-175 are not inadequate for average trail riding. Only the tougher hills beg grittier gearing.

It should be noted here that although the XL-175 will sail along at freeway speeds, it is not freeway legal in California or other states which have 15-horsepower minimum power requirement. If a manufacturer refuses to supply horsepower ratings, which Honda does, a buyer or law enforcement agency cannot determine whether a machine is freeway legal or not.

A look at the dyno graph will show a broad, flatish torque curve which is the strongest of the engine's several virtues. On level terrain it accelerates from a low 3,500 revs all the way to the 9,000-rpm redline. No trenches are left in the road, but speed builds fast enough to feel acceleration through the seat. Low-rev tractability makes the XL-175 an excellent selection for new riders of either sex—yet higher on the powerband an expert can still have fun and go almost anywhere. Accompanying the engine's versatility is non-leak operation, a mere whisper from the exhaust pipe, a built-in spark arrester and incredible mileage of 53 mpg off-road and 58 mpg on pavement.

Gratefully, a persistent shortcoming on most Hondas—slop and snatch in the driveline—has been remarkably reduced in the XL-175. Another unfavorable Honda characteristic, that of a narrow clutch friction point, also seems less pronounced on the new XL. Light clutch action and a wide friction point enhance first gear control, while full release aids positive shifting. Nothing of major importance can be criticized about the engine except the total amount of power it produces—there could be more.

Reliability is one Honda hallmark that remains intact. Part of *Cycle's* testing involved a two-day ride from Los Angeles over the Sierra Nevada mountains to Randsburg, a small mining town in the high desert where temperatures hit 107 degrees. Neither sun nor temperatures nor abusive riding by a 200-pounder disturbed the engine's steady beat in more than 360 miles of off-road pounding.

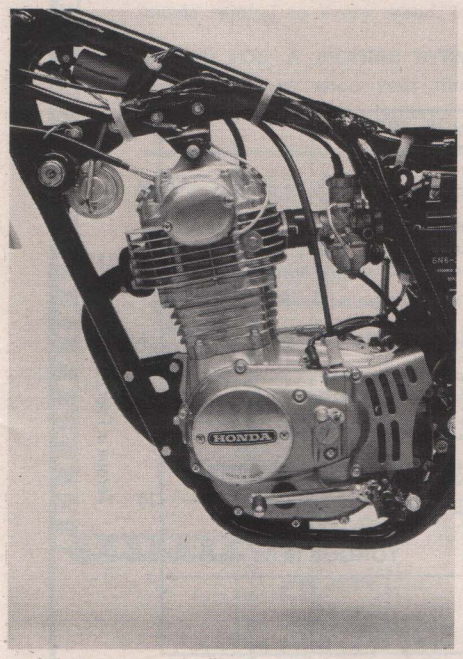
Steadiness is not the case with high-speed handling. Again, for average-to-brisk trailing speeds, chassis components are satisfactory, but in hard riding over rough terrain the fork springs become too soft and the shocks develop a noticeable amount of compression damping. Thus each wheel reacts to a bump in an opposite way—the front tries to swallow it and the back tries to flip over it. Goodbye handling. Since steering is accurate on pavement and at slower dirt speeds, suspension, not geometry, is most certainly the culprit.

Even more evil at high speeds than the suspension are the Nitto trials universal tires. They hobble the XL-175's potential. The tires don't bite well in turns because the overly stiff outer tread blocks won't fold or flex when loaded. The bike will lean to the point where the knobs end, and beyond that, whoosh—it slides out. Additionally, street performance and braking traction in dirt would improve with a wider 3.00 front tire in place of the stock 2.75. Lighter and stronger aluminum rims would also be superior to the standard steel hoops.

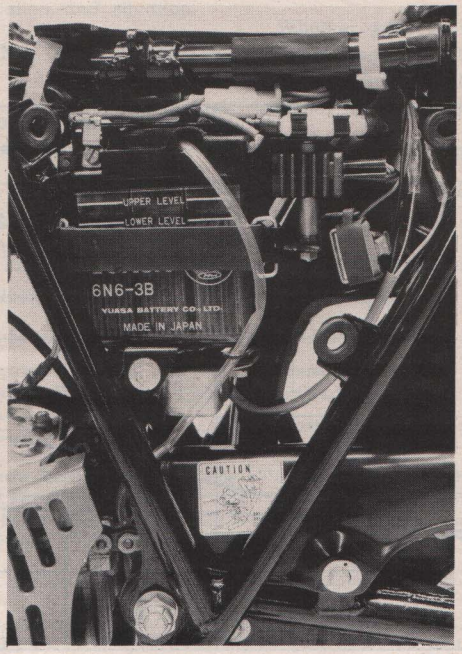
Both brakes, though small and light, work extremely well both on- and off-road when dry. Enough water splashed into the rear hub (from less than 100 yards of riding in a shallow river) to completely soak the rear brake, reducing its power by 50 per cent. Dragging the brake dried it out quickly. Clatter from the rear brake during application at high speeds on rough terrain isn't as aggravating as on most bikes even though the XL-175 doesn't have a fully-floating backing plate. Honda's cable activation as opposed to a solid, unflexible rod accounts for the extra braking smoothness.

An amazing collection of street and dirt features abound on the XL-175. Pavement attention includes turn signals, horn, fork lock, tachometer and a mirror. Specialty off-

(Text cont'd. on page 101; charts overleaf)

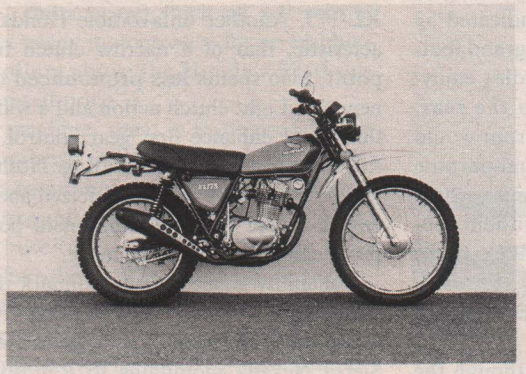


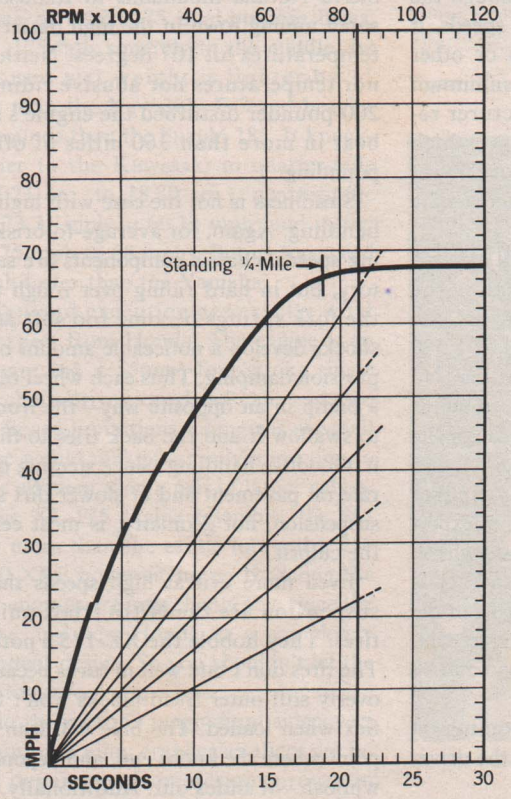
Mild steel frame wraps engine in a single cradle. Both crankcase sidecovers are made of magnesium.



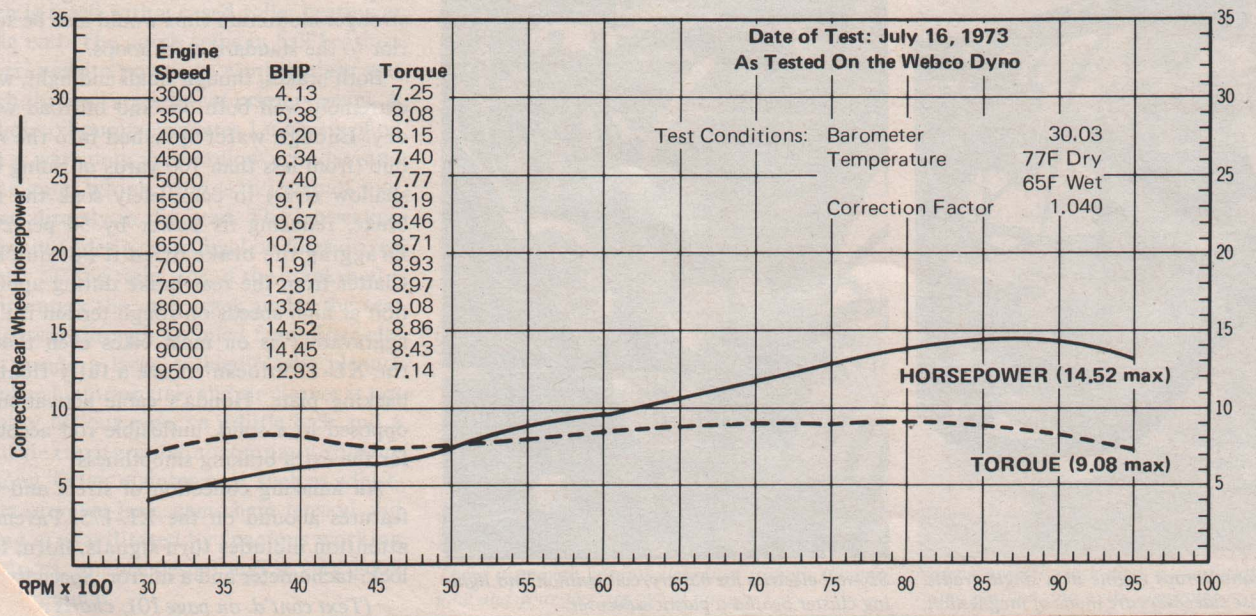
Six-volt electrics for battery/coil ignition and lighting cluster behind a plastic sidecover.

HONDA XL-175 ENDURO





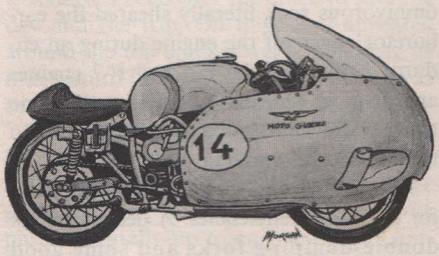
Price, suggested retail	West Coast, POE $740
Tire, front	2.75 in. x 21 in. Nitto Universal
rear	3.50 in. x 18 in. Nitto Universal
Brake, front	5.5 in. x 1 in.
rear	4.7 in. x 1.2 in.
Brake swept area	34.97 sq. in.
Specific brake loading	12.93 lb/sq. in., at test weight
Engine type	Four-stroke OHC single
Bore and stroke	2.52 in. x 2.13 in., 64mm x 54mm
Piston displacement	10.61 cu. in., 174cc
Compression ratio	9:1
Carburetion	1; 26mm; Keihin
Air filtration	Oiled polyurethane foam
Ignition	Battery and Coil
Bhp @ rpm (actual)	14.52 @ 8,500 rpm
Mph/1000 rpm, top gear	7.61
Rake/Trail	29.5°/5.2 in.
Fuel capacity	1.8 gal.
Oil capacity	3.2 pints
Lighting	6v, 55 watts
Battery	6v, 6 ah
Gear ratios, overall	(1) 27.78 (2) 18.86 (3) 14.54 (4) 11.77 (5) 9.63
Wheelbase	53.7 in.
Seat height	28.75 in., with rider
Ground clearance	7.5 in., with rider
Curb weight	252.5 lbs., with full tank of gas
Test weight	452.5 lbs., with rider
Instruments	Speedometer, Odometer, Tachometer
Sound level, Calif. Std.	81.2 dB(A)
Standing start ¼ mile	18.89 seconds 66.12 mph
Top speed	68 mph



XL-175 *Continued from page 62*

road items are excellent serrated folding pegs, a skid plate, high front fender, primary starting, dust covers on the cables and a nice pancake on the sidestand so it won't sink in soft dirt or sand. Spacious seating and accessible controls make riding comfortable and easy as well as fun.

Perhaps the most enlightening aspect of testing a relatively docile but completely efficient little Honda is that it proves slower riding can be just as much fun as berserking on a 400 Husky. Ambling along quiet trails on a silent, reliable bike takes away the danger, the effort, the fright and the idea that maximum indulgence is always necessary for enjoyment. Our trail ride to the high desert never involved speeds over 50 mph and not once did the Honda tear around a turn in a slide—yet the rider completely enjoyed the motorcycle, the trails, the day and the people along the way. It's the kind of bike that will give an average rider a good time, every time. ◉



BOOMER *Continued from page 100*

two hours of hard racing, by means of a 12-volt automobile battery and jumper cables with a plug-in adaptor. The inner fender acts as a mount for the electronics package and is extended forward to prevent dirt from entering the air box.

Ultra-lightweight sidecovers are mounted with Dzus fasteners for quick positive access without the danger of losing the screws in the dirt. Three quick turns of the screwdriver pop the sidecovers off, exposing the air cleaner and batteries. Over it all and under the seat is a naugahyde rectangle glued to two pieces of light tubing, completing an air box which is virtually dust-free and readily accessible, making it easy to check the batteries—which must be done constantly during practice and between motos.

Although the aluminum engine is not as light as the BSA works engine which has been entered in competition in the past, it is still light enough to be competitive. Meanwhile research is being conducted on a new magnesium engine which will trim 12 pounds off the current model's weight.

John Banks now has five Cheney BSAs, four of which he will ride on the circuit this season, and his Carlsbad bike, which will remain in the U.S.A. until he returns for the winter series here. ◉