



CYCLE DIRT TEST

## HONDA XL175

● FANATICISM HAS NOT CHARACTERIZED THE typical dual-purpose motorcycle rider of the 1970s. Generally, he has asked for and received a dependable, inexpensive piece of transportation to travel short distances on the street and provide some thrills in the area beyond the asphalt. He has not demanded long travel suspension, off-the-chart dyno figures, plural cams, countless ports or any other flashy paraphernalia. Motorcycle manufacturers, moreover, have realized they could

be slow to improve their street/trail machines because not many people, other than raving motorcycle magazine editors, have insisted upon progress.

But all that's changing for many inter-related reasons. Ever-more restrictive EPA noise and emissions standards are slowly squeezing down the numbers of two-stroke street bikes—including street/trail motorcycles. But the dual-purpose bike market still exists. So to keep the market supplied with machines, many

manufacturers are introducing new-model four-stroke on- and off-road bikes. These new models, however, benefit from the last five years, and these new bikes compete against an array of older machines which were introduced more than five years ago and which have been only moderately refined.

What does all this bode for 1979 and beyond? It means that the knowledgeable buyer more and more will be choosing between sophisticated and antiquated machinery. Hints of what the future holds are already with us. Honda has always had street/trail bikes loaded with unique features; undoubtedly they will continue to produce the same. Honda has recently brought out the very advanced XL250S, and it would be naive to believe they were not going to apply this same research and development to other displacement models. Kawasaki has introduced the straight-

Basically unchanged in three years, the XL175 offers a fair amount of power, adequate suspension, an amazing degree of vibration and proven reliability. It is also the only four-stroke, small-displacement, dual-purpose bike in production, which is why it remains unchanged.







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forward KL250 and can be expected to expand their offerings. Suzuki has introduced the lightweight 370s, which have potential for very high performance. Yamaha has already monoshocked their two-stroke dual-purpose bikes, and—with their experience gained in the production of their 500s—they certainly are capable of manufacturing high-quality trail bikes. And though the only current manufacturers of street-legal trail bikes are Japanese, the proliferation of higher quality dual-purpose machines may expand the market and encourage other non-Japanese companies to join the competition, something that would work to the advantage of the consumer.

All of the major recent advances and developments regarding street/trail bikes have concerned 250cc-and-over machines. Smaller motorcycles are bound to benefit eventually from the small-scale renaissance underway, but currently progress of small machines is static. The Honda XL175 is both a good and bad example of a small bike in stasis. It is a good example because it has changed little more than cosmetically since 1976. Unfortunately, the Honda is the only four-stroke 175 now in production for the United States. If someone wants a small, four-stroke, dual-purpose bike, the XL is his one and only choice.

The XL175 carries on the tradition developed through the 1970s: functional, reliable and completely orthodox. Its last series of significant refinements came in the 1976 model year. Then, Honda fitted the 175 with a magneto ignition so that people more interested in dirt riding could detach the battery, changed the gear ratios to allow a higher cruising speed, and replaced the down-swept exhaust pipe with an up-pipe. Only paint and decals were changed on the 1977 XL; this year's model has different fork seals to help reduce stiction.

A 173cc single-cylinder engine powers the XL. Dry and with carburetor attached, the engine weighs 67.3 pounds, average for a 175. It has a single overhead camshaft which the crankshaft turns via a roller chain; the cam rides directly on aluminum journals in the cylinder head. Provided lubrication is maintained, this simple design is reliable and durable. The cam operates one intake and one exhaust valve, a setup in contrast to the four-valve systems of the XL250 and 350. Bore and stroke is oversquare at 64 x 54mm. The crankshaft rides on ball bearings and has a centrifugal oil filter mounted on its right end. Differing from the XL250 in another respect, the 175 has no separate engine counterbalancing system because it is generally and correctly presumed that engines below 250cc do not generate enough vibration to warrant counterbalancers.



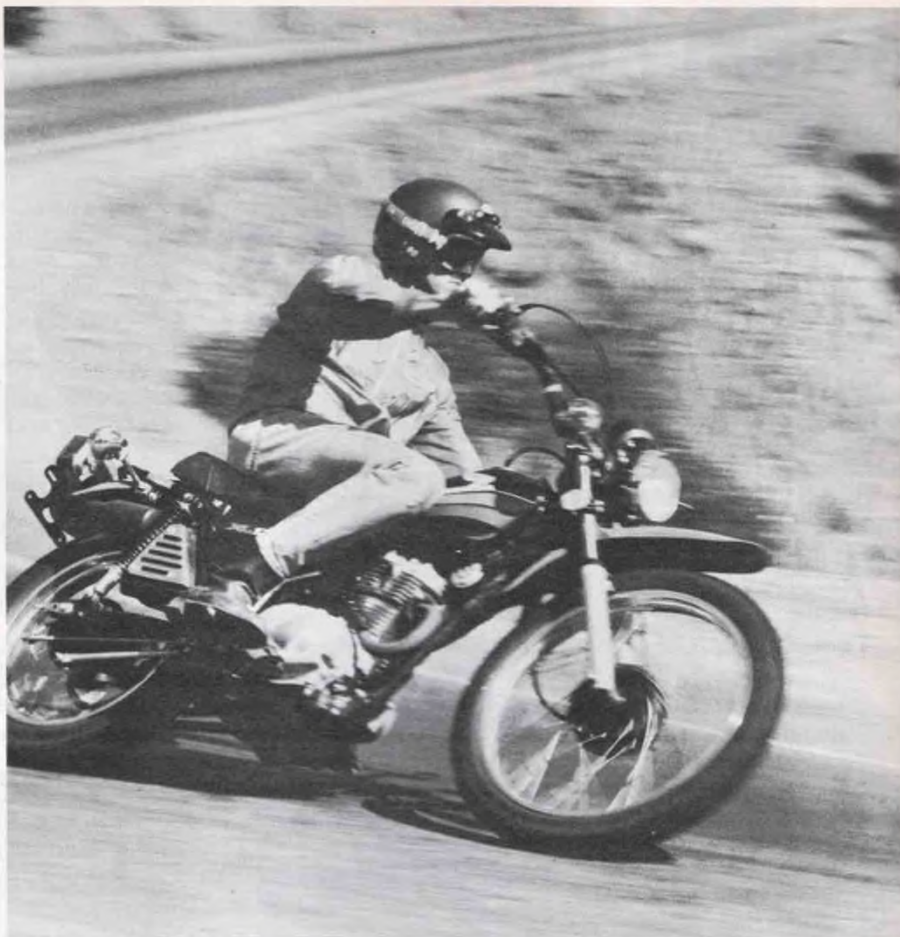
Equally straightforward in design is the drivetrain. A wet, 10-plate clutch is driven by a straight-cut primary gear. The high primary gear ratio, 3.700:1, results in the use of a 14-tooth countershaft sprocket mated to a 42-tooth rear sprocket which produce a low 3.00:1 final drive ratio. A hefty 520 chain transfers the XL's power, and it is unusual and good for a stock small-displacement dual-purpose bike to have a chain of adequate strength. Both the mainshaft and the countershaft are pressure-lubricated, increasing reliability and longevity. Lightweight magnesium cases house the transmission and lower end.

All other aspects of the powerplant are also standard. Air passes through an oiled foam air cleaner to the 26mm Keihin carburetor. A heavily muffled exhaust pipe completes the induction-exhaust cycle. Since the ignition is magneto-powered, in order to be street legal the XL175 has a six-volt battery and alternating-current generator powering the lights. The Honda doesn't have pointless ignition; the breaker points are mounted on the camshaft, and this system has proven to be reliable with minimal need for points adjustment.

A single-downtube frame cradles the engine and has a large skid plate attached to protect the cases. Chassis dimensions produce a bike which feels comfortable, especially to smaller people. The steering head angle (29.5 degrees) is slightly under neutral, but the trail (5.2 inches) is longer than average. Wheelbase is a standard 53 inches. With a seat height of 32 inches, the XL is low, but the cost for this convenience is reduced ground clearance (eight inches) which could pose problems in rocky terrain. Weighing 254 pounds full of gas, the Honda is heavy for a 175cc bike, but because the entire machine is short the weight is carried low and the bike does not feel this heavy. The seating position is comfortable, though the seat is definitely firm. The small 1.8-gallon tank is unobtrusive, and the rider can go 90 miles between stops on the 50-mpg 175.

Around town, the XL's broad powerband is its most notable characteristic. The rider can shift quickly up to third or fourth and use these gears for speeds from 10 to 40 mph. However, vibration through the footpegs plagues the XL rider when he's on the street. While not especially irritating below 35 mph in fifth gear, every additional mile per hour above 35 increases the vibration terribly. At 55 mph in top gear, the buzzing dances the rider's feet all over the footpegs. This is a direct and predictable result of the footpeg mount doubling as the rear motor mount. Other than manufacturing convenience and economy, there is no reason for this design, and a new mounting position is in order.

Other than the electric footpeg, the XL functioned acceptably well as a street



Completely orthodox technical features include a center-axle fork, two-valve head and five-speed transmission.



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bike. Clutch action was very smooth; though shifts were a bit clunky, none were missed, and the clunkiness did not translate into any driveline snatch. Carburetion was clean, and the engine built revs smoothly throughout the powerband.

In low-speed riding, the fairly soft suspension soaked up all the small bumps pocking city streets. At higher speeds, the center-axle fork and five-way adjustable shocks still worked well, but the short chassis produced a general feeling of instability; coupled with the bike's high-

speed vibration, this characteristic effectively discouraged anything but short intricacy jaunts. In tight traffic, the XL was a comparatively lightweight street bike, and the rider could flick the nimble 175 around.

On the trail, the XL went through a curious transformation: irritating characteristics became acceptable and certain items which performed well on the street deteriorated in function. Specifically, the rider could not notice the footpeg vibration when he wore boots. Consequently, the XL's power was especially pleasing; the Honda developed more horsepower, for example, than a Yamaha DT175, and

the XL175 could carry the rider over any trail the tires could stick to. Moreover, the small chassis, which was accountable for a lack of high-speed stability on the street, was acceptably stable in the dirt. This change was simply a result of the XL's inability to go more than 40 mph over rough ground. When the 175 could be coaxed to higher speeds over nasty terrain, the instability returned.

The suspension also inhibited the XL's dirt capabilities.

The six inches of fork travel were quickly taken up in rocks or over whoops, and the 4.5-inch-travel shocks faded quickly and nearly locked up in any ex-

Make and model ..... Honda XL175  
Price, suggested retail ..... \$918

## ENGINE

Type ..... Four-stroke, single-cylinder, two-valve, single overhead camshaft  
Bore and stroke ..... 64.0 x 54.0mm (2.52 x 2.12 in.)  
Piston displacement ..... 173cc (10.6 cu. in.)  
Compression ratio ..... 9.3:1 (full stroke)  
Carburetion ..... (1) 26mm slide-throttle Keihin  
Exhaust system ..... Upswept pipe with silencer/spark arrestor  
Ignition ..... Inductive, breaker-points, battery-powered  
Air filtration ..... Washable, oiled foam  
Oil filtration ..... Wire strainer  
Oil capacity ..... 1.5 lit. (1.6 qt.)  
Bhp @ rpm ..... 14.06 @ 9500  
Torque @ rpm ..... 8.62 @ 8000

## TRANSMISSION

Type ..... Five-speed, constant-mesh, wet-plate clutch  
Primary drive ..... Gear, 3.700:1  
Final drive ..... 520 chain, 14/42 sprockets, 3.00:1  
Gear ratios, overall ..... (1) 2.769 (2) 1.882 (3) 1.450  
..... (4) 1.173 (5) 0.884

## CHASSIS

Type ..... Single-downtube, full-cradle frame; center-axle fork, swing-arm suspension  
Wheelbase ..... 1360mm (53.5 in.)  
Rake/Trail ..... 29.5°/132mm (5.2 in.)  
Brake, front ..... Cable-actuated, double-shoe drum  
rear ..... Rod-actuated, double-shoe drum  
Wheel, front ..... D.I.D. 1.60 x 21-inch steel rim; no rim locks  
rear ..... D.I.D. 1.85 x 18-inch steel rim; no rim locks  
Tire, front ..... 2.75 x 21 Nitto Trials, 4 pr  
rear ..... 3.50 x 18 Nitto Trials, 4 pr  
Seat height ..... 800mm (31.5 in.)  
Ground clearance ..... 190mm (7.5 in.)  
Fuel capacity, main/reserve ..... 7.0 lit. (1.8 gal.)/2.0 lit. (0.5 gal.)  
Curb weight, full tank ..... 120 kg (264 lbs.)  
Test weight ..... 197 kg (434 lbs.)

## ELECTRICAL

Power source ..... Flywheel magneto  
Charge control ..... Regulator

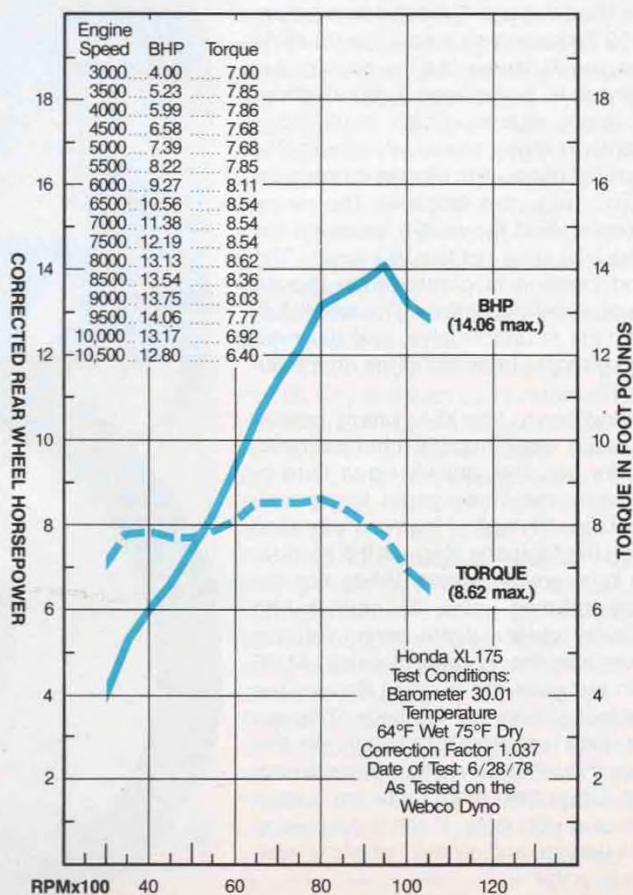
Headlight beams, high/low ..... 25W/35W  
Tail/stop lights ..... 3cp/32cp  
Battery ..... 6V 6AH

## INSTRUMENTS

Includes ..... 70 mph/110 kph speedometer; odometer; trip meter; neutral light indicator; turn signal indicator; high beam indicator

## CUSTOMER SERVICE CONTACT

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tended harsh use. Finally, where a 254-pound street bike is relatively light, an equal-weight 175cc dirt bike is on the cumbersome side.

The steel rims held their spoke adjustment; however, neither front nor rear had a rim lock, and for any but casual dirt use locks are necessary. The 2.75 x 21-inch and 3.50 x 18-inch Nitto trials tires demanded cautious riding over wet as-

phalt and spent a fair amount of time sliding about in the dirt. But this latter trait is actually quite useful and entertaining on a 175cc bike, which often cannot power up steep sections when given perfect traction.

Stylistically, the XL175 is indisputably a success. Everyone from staff members to local gas station attendants, thought the bike was trim- and good-looking. The orange fenders complement the orange

and red tank decals, and the black tank and side panels offset the color.

All the Honda XLs have similar histories. From the 100 to the 350, these bikes have been big sellers. With the exception of the 250, none has changed radically through the years or offered state-of-the-art technology. Above all, each model in the XL series has an extraordinary record for reliability. The XL175 test bike accumulated nearly 1000 street and trail miles through the exertions of several generally abusive riders, and it required only a chain adjustment. At the end of the test, first-kick starting was still the norm; also the XL250 held its state of tune, and other mechanical details, such as clutch actuation, kept on working much better than those of other small-displacement, dual-purpose bikes.

Despite its very noticeable flaw—vibration in street use—the XL175 ranks high on the list of available street/trail motorcycles. It is hardly for dirt demons, but it is dependable and fun. Small four-strokes from other manufacturers are due; and when they arrive, the competition will certainly force Honda to refine its product. Until then, if you're in the market for a small, dual-purpose thumper, the XL175 is the *only* choice—and, happily, an acceptably good one at that.

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