

"FUN (fun),—*n.* 1. That which provides mirth, merriment or enjoyment.—*adj.* 2. *Informal.* Of or pertaining to fun." Someone at Honda must have kept this in mind when guidelines were set for the new XL-series dual-purpose cycles. The 185, although a little short on steam, handles its intended purposes with amazing ease. . . .

HONDA XL185S

● PRETEND FOR A MOMENT YOU'RE RIDING down a piece of the old twisty-turny on your Moto Morini 350 or Yamaha RD400. It's a beautiful spring day and you're simply out exploring. Suddenly, out of nowhere, a gravel road intersects the pavement. It catches your attention, and you turn from the tarmac onto the dirt. You follow the road a ways, and it becomes a trail, punctuated by potholes and rocks. It's no fun plodding along on the low-slung street bike, so you turn back, daunted, wishing you were on your pure enduro.

Picture yourself on a Maico 250 Enduro mount. You're fireroading along, having a good old time. Eventually, your fireroad intersects a stretch of pavement. Boy, are you *hot*. You know there's a store down the road a piece that can offer a nice cool drink. Alas, you can't go unless you want to risk getting a ticket. If your bike were street-legal, you could jam down to the store and take care of that thirst.

Get the idea? A dual-purpose bike has the latitude to provide more than one type of riding. Traditionally, these bikes have had tradeoffs: lousy street handling in exchange for good dirt manners, or vice versa. In fact, many dual-purpose bikes have been permanently relegated to either the street or dirt. Even more bothersome than the bike with sub-par dirt or street performance is the on-off road bike that never does *anything* right—it's a liability on the street and in the dirt.

But don't worry; the dual-purpose Hondas are all pretty good, and the XL185S's

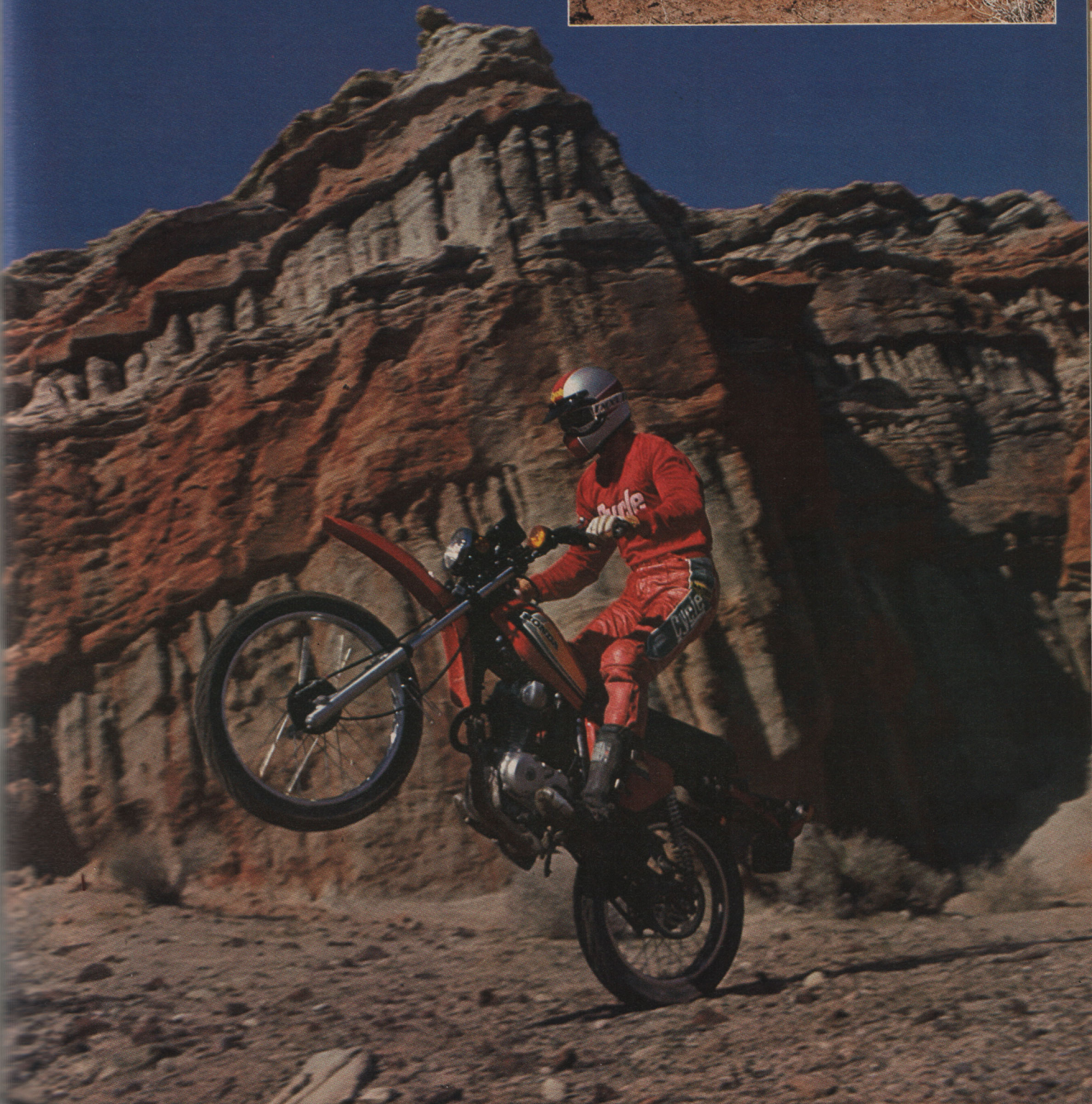


street and dirt talents are fairly well matched. It's just slightly more at home in the dirt than it is on the street. Keep in mind that this is a playbike—it doesn't have the engine of a Suzuki motocrosser or the suspension of a BMW R100RT. But its components are matched well for the casual riding Honda designed it to do.

Considering the suggested retail price of the 185 is just a breath over a thousand dollars, Honda could not be expected to install world-caliber components throughout the bike. This isn't all bad, however. In fact, the engine itself is a takeoff from the venerable SL125 powerplant, which has long had a reputation for stalwart (albeit mild) performance.

The 185 engine has a 63.0mm bore and 57.8mm stroke, and a single chain-driven overhead camshaft. Unlike the four-valve XL250S and 500S, the 185 has but two valves, and they're every bit as big as will fit into the combustion chamber. The engine's 9.2:1 compression ratio can stand unleaded, regular or premium gasoline. Fuel is atomized by a single 24mm Keihin carburetor. Its airbox and easy-to-service foam filter arrangement provide clean air and keep intake noise to a minimum while recirculating piston-ring blow-by fumes. A mechanism mounted below the carb condenses oil vapors, funneling them into a closed drain tube that can be opened periodically to allow droppings to leave the system. The remaining vapors are drawn through the carb and into the combustion chamber. All US-market street-legal motorcycles manufactured since January 1978 have had similar closed crankcase systems.

An aluminum three-ring piston compresses the mixture and the 12mm spark plug is fired by a capacitor-discharge solid state ignition system. The CDI pickup is mounted in the cylinder head, in the same location as the old singles' ignition points. For reliability and cost-effectiveness, a common centrifugal advance unit is employed. A certain gap is necessary for the magnetic triggering system to work correctly; this is set during assembly and can't be changed. Likewise, the ignition timing itself, which *is* adjustable, should never go awry unless the cam chain (also responsible for the ignition

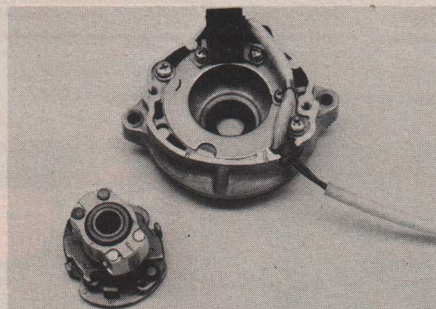


HONDA XL185S TEST

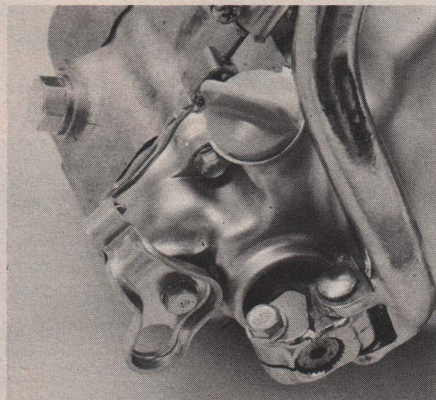
timing) should wear abnormally.

Exhaust gases leave the cylinder through a single exhaust pipe and sift through two mufflers before they get to the atmosphere. The rear-most of the two silencers is mainly a US Department of Agriculture-approved spark arrestor. The bulbous forward muffler is invisible unless the Honda's right-hand plastic side panel is removed.

The engine's cylinder bore is a steel liner, sunk in a finned aluminum die casting. Four piston oversizes are available, should they be necessary. The crankshaft follows Honda single tradition: roller big end and ball-bearing mains. One side of the crank spins the primary drive gear, hence the clutch, and the other drives an oil-bathed 108-watt alternator. The clutch is a five-driven-plate affair, and delivers torque to the five-speed transmission. The XL125S and the XR185 both have six-speed gearboxes, and so should the XL185S. Its five-speed is limited in terms of providing the XL with comfortable cruising ability. A stock XL185S probably couldn't go any faster in a straight line with a six-speed trans, but a higher final



The new and old combined: CDI rotor grafted to centrifugal advance; pulser pickup on "points" plate.

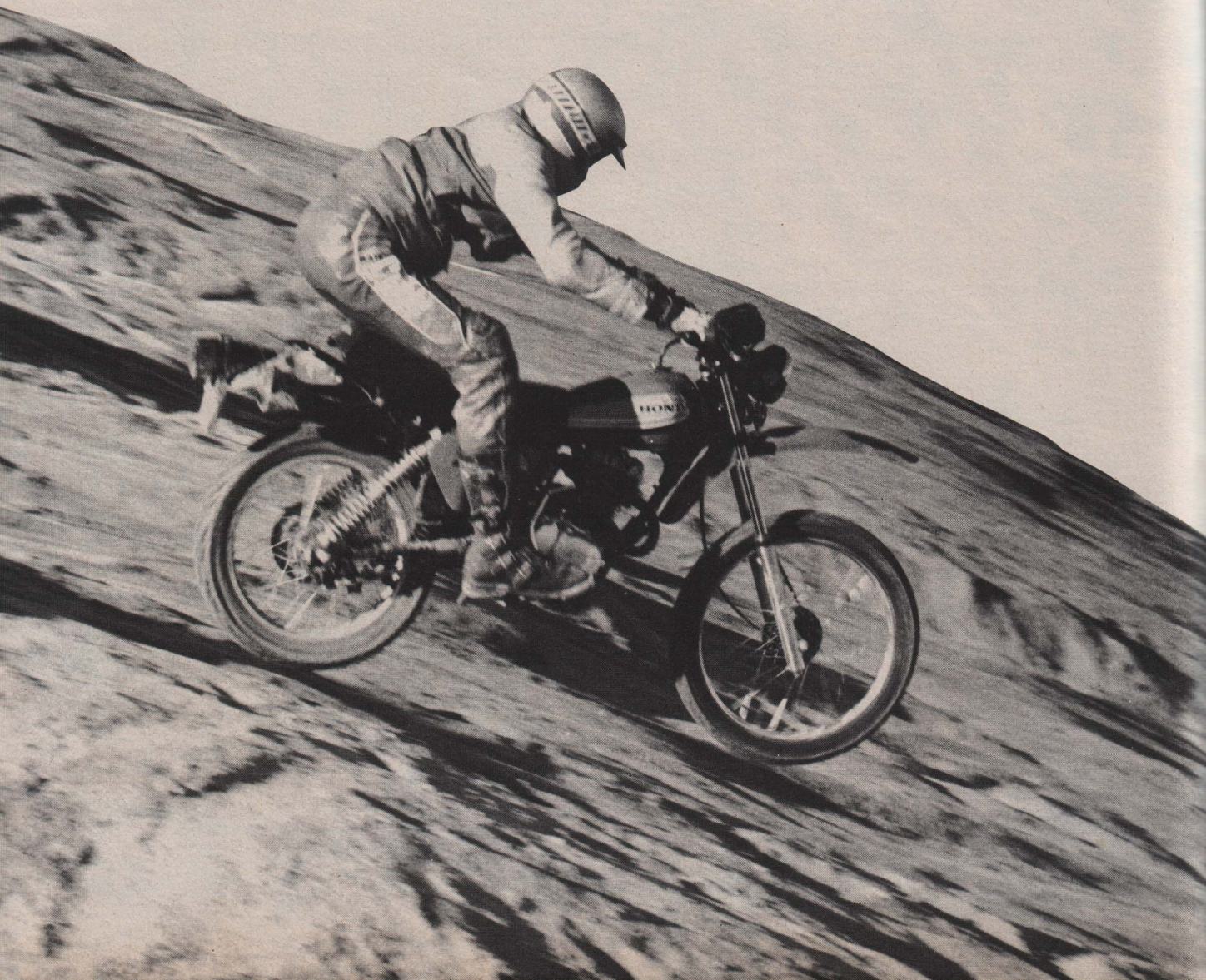


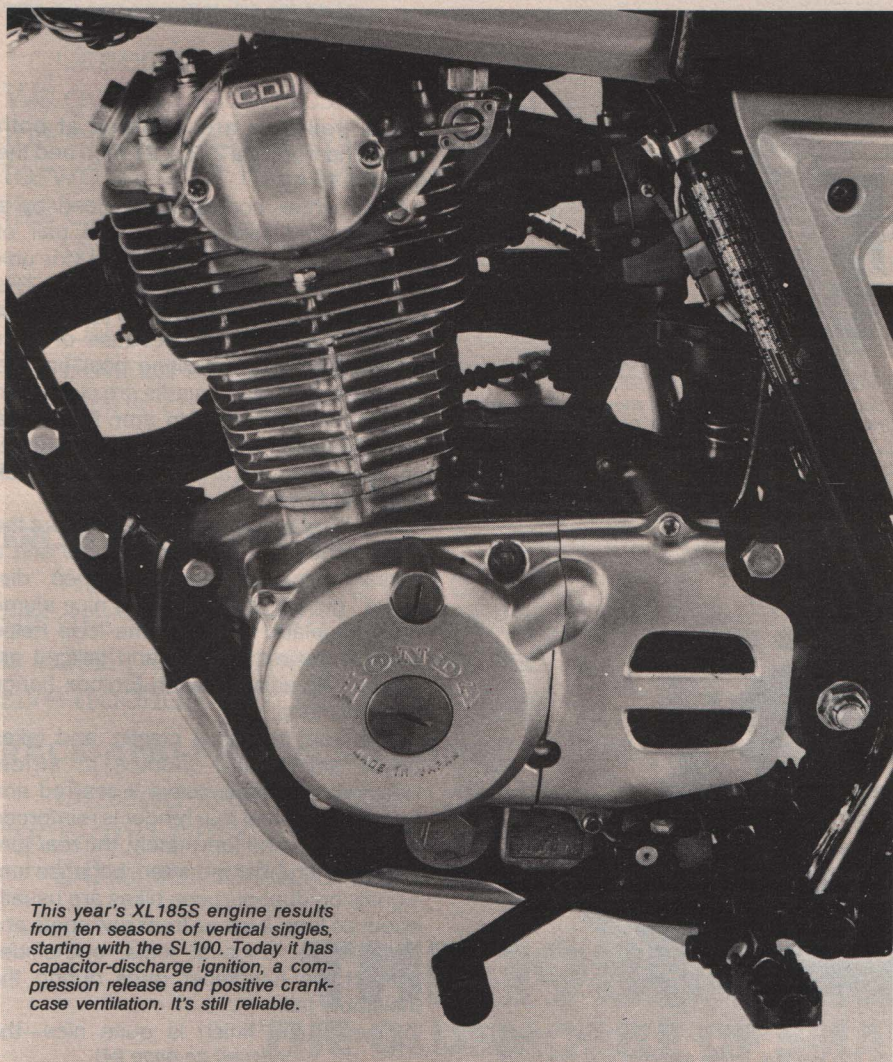
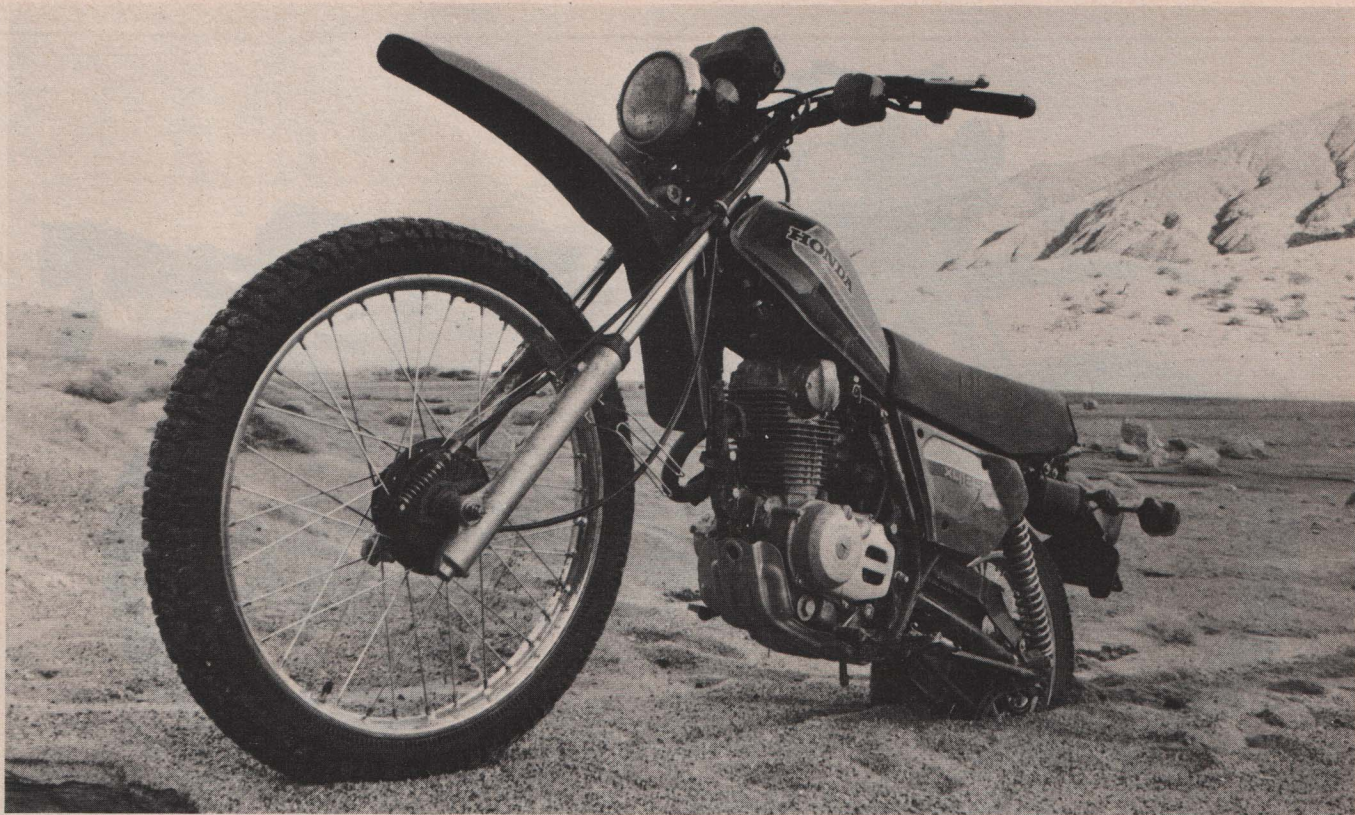
Compression release, part one, incorporates internal activating mechanism, bell crank, rod and cable.

ratio would make the bike a bit more pleasant to ride at highway speeds, because the engine would spin slower. It would act, simply, as an overdrive. The engine and gearbox share 1.1 liters (1.2 US quarts) of oil, circulated to the engine and transmission by a proven trochoidal oil pump.

The left-hand final drive is transmitted by a 5/16 x 1/2-inch (#428) drive chain and a pair of steel sprockets. The rear sprocket has a riveted-on guard to keep the chain from jamming down around the axle if it comes off the sprocket. A plastic shroud helps keep dirt away from the chain while it passes next to the tire. The non-floating, rod-operated, single-leading shoe rear brake utilizes a non-conical rear hub. A steel chain guide mounts below the swing arm. The single-leading shoe front brake has a semi-conical hub and is laced, like the rear, to a steel rim. An external coil return spring helps release the brake.

The 7.6-inch-travel leading axle front fork has aluminum sliders and 31mm steel stanchions. No air is used in this fork, although it wouldn't be a bad idea to supplement the rather soft progressively wound springs. Bridgestone claw-action

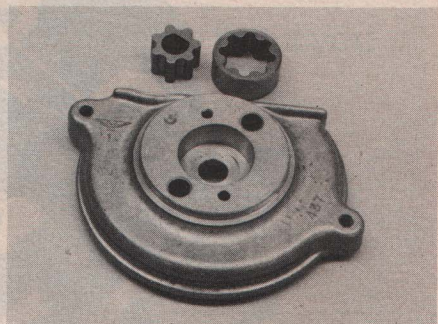




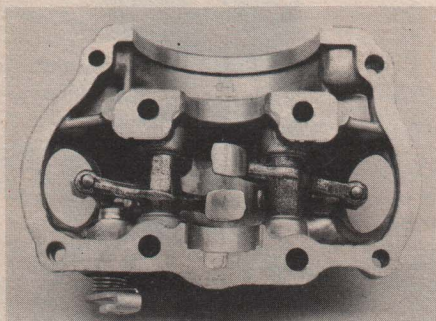
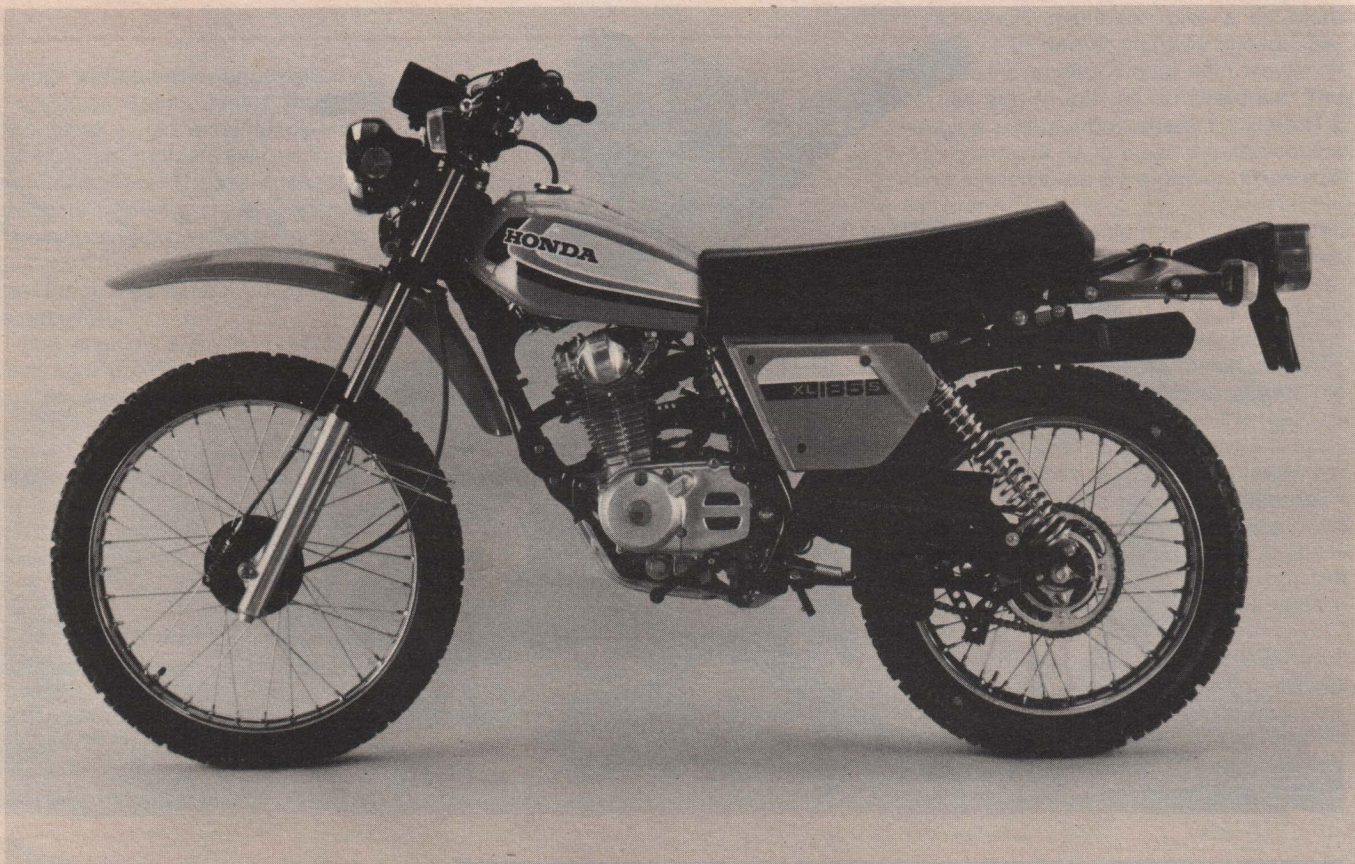
This year's XL185S engine results from ten seasons of vertical singles, starting with the SL100. Today it has capacitor-discharge ignition, a compression release and positive crankcase ventilation. It's still reliable.



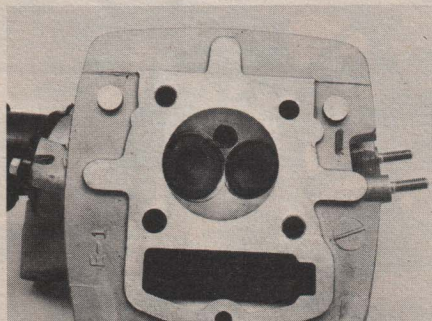
Honda 185 aluminum piston (sans compression rings) and three-piece, automotive-style oil control ring.



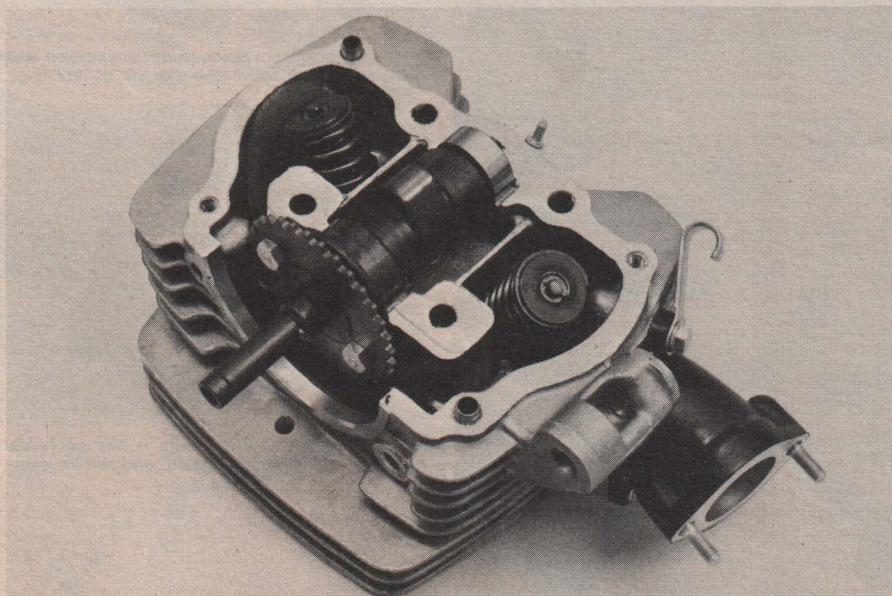
A secret to the XL's longevity is this trochoidal oil pump: one shaft, two "gears" and two housings.



Upper half of horizontally split cylinder head has rocker arms, valve adjusters and camshaft supports.



Bottom view of cylinder head shows large-as-can-be valves, offset spark plug hole, cam chain passage.



And from the top: camshaft and sprocket, valves, springs and keepers, intake manifold and head stay.

HONDA XL185S TEST

street/trail tires are mounted at both ends. The front is a 2.75 x 21-inch and the rear a 4.10 x 18.

Back wheel control is provided by a nylon-bushed swing arm and a pair of inverted, 15.4-inch gas-charged (for uniform damping control) shocks. The straight-wound-spring shocks provide 6.4 inches of axle travel. Because of their rearward bottom mounting position, the chain adjuster guide marks are placed on the bottom of the swing arm, below the axle. Five-way ramp-collar spring adjusters are positioned at the top of the shock absorber bodies.

Mild steel tubing is used throughout the frame. There's a single downtube and a partial engine cradle with stamped "diamond" gusset sections and a nice aluminum skidplate. A rear frame loop helps support the rear fender and taillight assembly. An easy-to-reach toolbox hangs from this loop.

The front fender is plastic, and takes minor sky-ground thumps in stride. Heavy-duty crashes leave it scarred and twisted. The steel rear fender is reinforced underneath. And fortunately, the rear turn signals are rubber mounted, because turn signals on dual-purpose bikes are usually about as long-lived as front row spots at a dollar drop. Unusual metal end-pieces protect the handlebar grips during the inevitable fall.

Overall, the finish is quite nice—the (Continued on page 94)



HONDA XL185S TEST

painted steel gas tank and plastic parts match well, and the decals are impervious to all abuse. The gas tank holds just 1.8 gallons, including reserve. This isn't a great deal of gas, but since our test bike averaged 56 miles per gallon, the XL will go over a hundred miles before it's time to push. Even this isn't too hard, since minus fuel, the XL weighs 239 pounds.

Honda lists the XL185S as an "operator only" vehicle and doesn't provide passenger pegs, because they feel real compromises would have to be made in the seat, shocks and brakes. Up front is a quickly detachable instrument/headlight nacelle. The only instrument, per se, is the speedometer, which includes an odometer

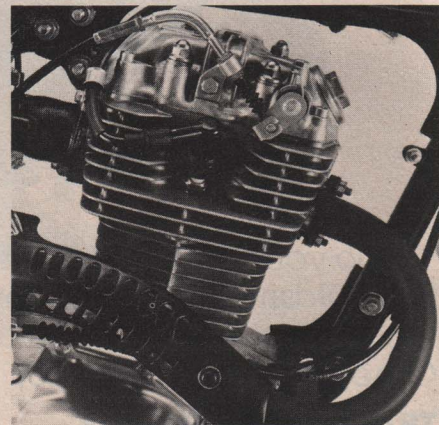
and (resettable in tenths) tripmeter. Also included are three warning lamps: one for turn signals, one for neutral, one for high beam. The speedometer reads out in both kilometers and miles per hour, although the odometers read out in miles only. At night, the speedo and odo numbers are easy to see.

The dual-filament headlamp works only when the engine's running, even though the rest of the electrical components function when the engine's off. (Some states require that a motorcycle's brake light must work even after its engine is turned off.) The headlight itself is marginal for street use (at its best when supplemented by street lights) and of questionable value in fast nighttime trail-riding

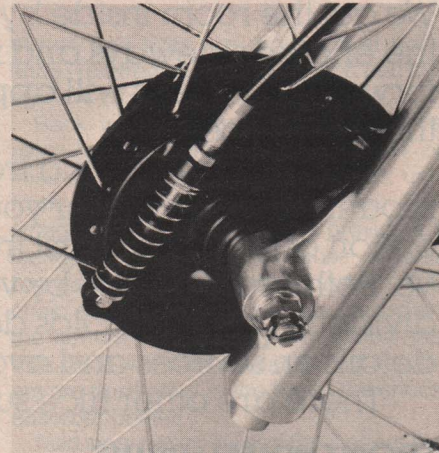
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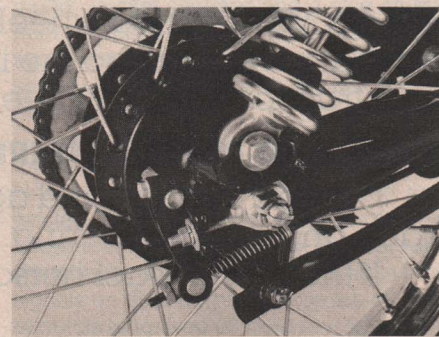
This shoe box instrument pod houses the speedo and odometer, ignition lock and three warning lights.



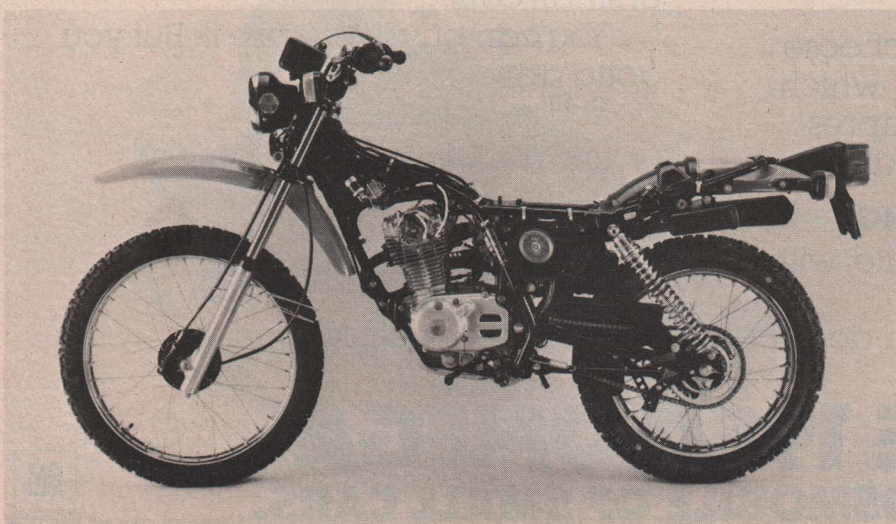
Compression release, part two, incorporates cable and adjuster, return spring and inside lever arm.

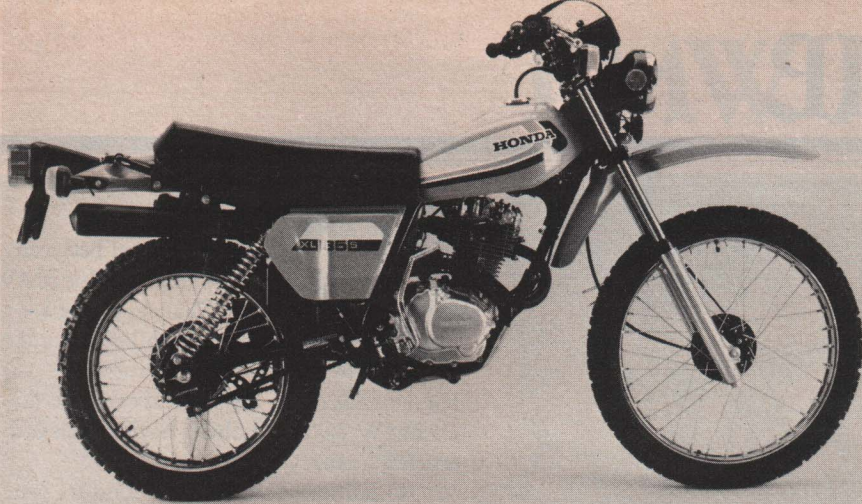


Small-but-powerful front brake allows quick stops on or off the street, but fades with repeated use.



Busy, busy, busy: gas-charged shock bottom, light-duty axle-adjuster, brake lever, rod and torque arm.





HONDA XL185S TEST

circumstances. For the casual nighttime ride, it's okay. The main problem with the six-volt lamp is it doesn't draw enough power to spread a brilliant light over a broad area. Instead, it spreads a bright light over a spotlight-like area. A small four amp-hour battery for the horn and other lights is located below the upper-right shock mount.

A 180cc engine was deemed a big enough nuisance for the average rider to start, so Honda went to the effort to incorporate an automatic compression release into the kick-start mechanism. This mech-

(Continued on page 188)

Make and model Honda XL185S
Price, suggested retail \$1065

ENGINE

Type Four-stroke single, air-cooled
with two-valve, single camshaft cylinder head
and roller-chain timing drive
Bore and stroke 63.0 x 57.8mm (2.48 x 2.28 in.)
Piston displacement 180cc (11.0 cu. in.)
Compression ratio 9.2:1
Carburetion (1) 24mm slide-throttle Keihin
Exhaust system Upswept exhaust with
silencer and spark arrestor
Ignition Magneto, capacitor discharge
Air filtration Oiled foam
Oil filtration Metal screen and centrifugal filter
Oil capacity 1.1 liters (1.2 qts.)
Bhp @ rpm 12.89 @ 8500
Torque @ rpm 9.35 @ 6500 and 7000

TRANSMISSION

Type Five-speed, constant-mesh wet-plate clutch
Primary drive Straight-cut gear, 21/70, 3.33:1
Final drive 5/16 x 1/2 in. chain, 14/50
sprockets, 3.57:1
Gear ratios (at transmission) (1) 9.23, (2) 5.74,
(3) 4.24, (4) 3.33, (5) 2.59

CHASSIS

Type Single-downtube, partial cradle,
mild steel with stamped-steel gussets
Suspension, front Leading-axle fork
rear Swing arm with (2) gas shocks
Wheelbase 1310mm (51.6 in.)
Rake/trail 28°/122mm (4.8 in.)
Brake, front Cable-actuated, 110 x 25mm
(4.33 x 0.98 in.) drum, single-leading shoe
rear Rod-actuated, 110 x 25mm
(4.33 x 0.98 in.) drum, single-leading shoe
Wheel, front Wire, 36-spoke, steel, 1.40 x 21 in.,
no rim locks
rear Wire, 36-spoke, steel, 1.85 x 18 in.,
one rim lock
Tire, front 2.75 x 21 Bridgestone Trail Wing
rear 4.10 x 18 Bridgestone Trail Wing
Seat height 832mm (32.8 in.)
Ground clearance 264mm (10.4 in.)
Fuel capacity 7.0 liters (1.9 gal.)
with 1.5 liter (.4 gal.) reserve
Curb weight, full tank 113.2 kg (250 lbs.)

Test weight 188.0 kg (415 lbs.)

ELECTRICAL

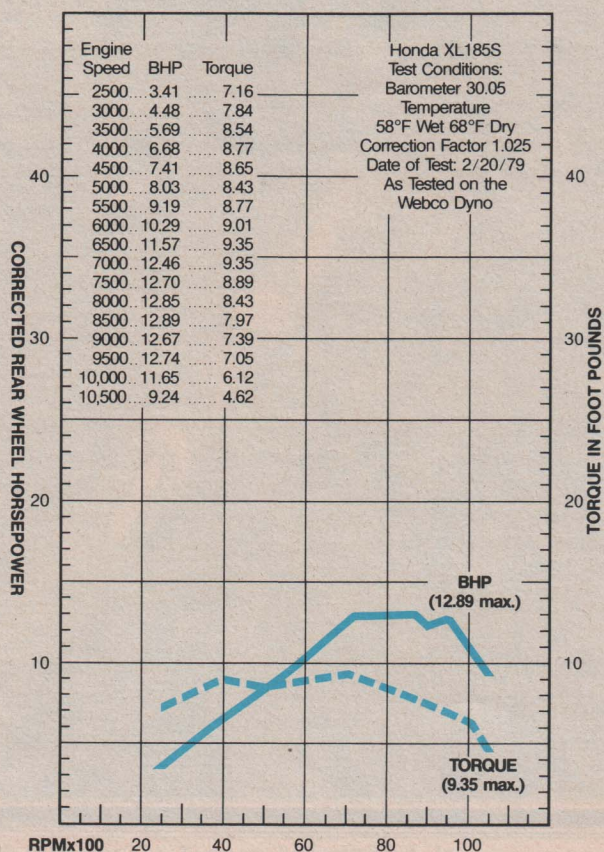
Power source Alternator, 108 watts
Headlight beams, high/low 35/36.5 watts
Tail/stop lights 5.3/25 watts
Battery 6V 4AH

INSTRUMENTS

Includes 90 mph speedometer,
odometer, tripmeter resettable in tenths.
Indicator lights for turn signals, neutral and high beam

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Honda 185S *Continued from page 98*

anism is also found on the XR185 and larger XL and XR models. When the primary-kickstart lever is folded down, it engages a ratchet for turning the engine over, and also engages a mechanism which holds the exhaust valve open. This drops the cylinder pressure enough so the kickstart arm can be easily worked.

To keep the Federal Air Resources Board happy and deliver excellent fuel mileage, the Honda is jetted lean. This does two things. When cold, it takes some running with the choke on before it's warm enough to accept running with the "normal" metering. And it makes the engine hard to start after it's stalled. Since the low-speed jetting is so lean, once the engine's stalled, it occasionally needs the choke to start right up again.

The choke has two "on" positions and is cable-operated near the speedometer for easy access. Pull the knob up one or two notches for cold starting. A couple of kicks will bring the 185 to life. It idles

with your boot can do it too.

The XL's street and dirt acceleration borders on disappointing. Our dyno figures reveal 12.89 bhp at 8500 rpm, and 9.35 pounds-feet of torque at 6500/7000. Even considering the Honda meets all 1979 noise and pollution standards, these figures do not compare favorably with ones obtained from the Can-Am 175 T'NT enduro *Cycle* tested in 1973. The Can-Am produced 22.42 bhp at 9000 rpm and 13.74 pounds/feet at 7500.

Otherwise, on the street, the XL is just fine. Its front brake is all you could ask for in the way of stopping power once or twice, but it will fade with repeated applications. The rear brake is good, but doesn't provide the same nice feel as the front. The Honda does have long suspension travel for a street bike, and it's pretty soft. Consequently, the bike takes a nose dive when the front brake is firmly applied.

On pavement, the claw-action tires skid sooner than will good pure-street skins. This is not particularly disconcerting be-



readily and puts out, happily, little intake and exhaust noise.

The XL has the federally-mandated left-side, down-for-low shift pattern. Shifting is nice and smooth, with no major glitches in the gear ratio gaps. The gap between first and second gear is just a little bit broad for the engine's pulling ability on really steep dirt hills. On occasion, first gear may seem too low, and second too high. The clutch lacks a significant amount of progression: it's either engaged or disengaged. In situations where slipping the clutch is necessary, you're at a disadvantage, especially if you are a beginner.

There is a good deal of gear-dog lash in the transmission, indicating that Honda has done work to make the bike shift smoothly: it does, at some cost once in gear. If you roll on and off the throttle quickly, the lash is evident. The gearbox's only other fault is a weak shift-drum detent mechanism. It's extremely easy to knock the Honda from first to neutral when riding slowly through high weeds or sticks, and tapping the lever accidentally

cause you can hear them howl before they lose traction in a big way.

Vibration is somewhat of a bother on the street. At high engine speeds, every place you touch, except the rubber-mounted, cleated footrests, is buzzy. But the XL does have enough power to keep you ahead of ordinary traffic, although you must tweak the throttle to get that last bit of speed out.

Off the road, the Honda assumes a personality not unlike serious dirt bikes. It's undersprung, although the suspension travel in sheer linear movement should be enough for anything short of WFO riding. The Honda delivers a smooth, comfortable ride and allows the rider good control until it's pushed past its limits. These come in two areas: suspension and tires. Since the suspension has fairly benign springing, it becomes less than an asset when really rough terrain is encountered. Both ends bottom when abrupt bumps or depressions are found at high speeds.

(Continued on page 191)

Honda 185S *Continued from page 188*

In all fairness, the Honda has a fine set of suspenders for a playbike. If you're not bent on going full-tilt all the time, they will hold you in good stead. They're a good combination for casual trail or fireroad riding, but they begin to feel mushy as soon as a series of big bumps or whoops is encountered.

The second of the Honda's limiting features is its tires. Let's face it: dual-purpose claw-action or universal trials tires are a compromise. To be good on the street, they have to have fairly shallow tread (for "block" stability) and close-together knobs (for maximum surface area). These features immediately rule them out as viable dirt tires because dirt requires deep knobs with wide spacing.

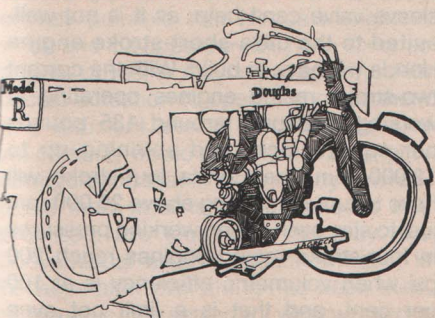
As on-off road tires, the claws are suitable. One saving grace is the rear claw-action has as little traction potential as the engine has torque. Therefore, the rear tire slips about at the point where the engine's about to quit.

Joyfully, the front brake does not prove to be too sensitive in the dirt. It can be dialed in to provide the exact amount of stopping power necessary. The rear brake is a non-floating assembly and chatters the rear wheel on bumpy downhills. In these instances, it's best to let the engine do the rear-wheel braking.

Overall steering in the dirt is precise, except for on hard-packed surfaces, where the tires just don't do enough gripping. Either wheel will wash out if the bike is pushed too hard. The tires are not wide enough to support the 185 well in sandwashes or mud. And in sandwashes, the bike weaves from side to side. In one minor crash we bent the frame's fork-stop tab and tore off the toolbox cap hinge.

As a combination street and dirt motorcycle, the XL185S has many virtues. It is reasonably light, handles well in most situations, has comfortable, compliant suspension if not ridden too hard, is quiet and gets good gas mileage.

On the negative side, the Honda isn't terribly fast or torquey, won't carry two people and has (necessarily) compromised tires. But examine the qualities a dual-purpose bike should have: reliability, ability to function well in two terrains, suitability to the casual rider and moderate cost. With these requisites in mind, the XL is almost perfect. Give it another gear, more punch and a smoother clutch and all the bases will be covered. ●



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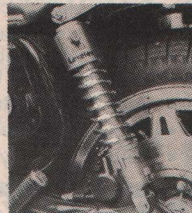
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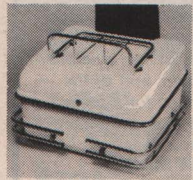
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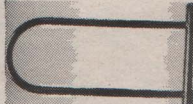
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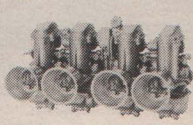
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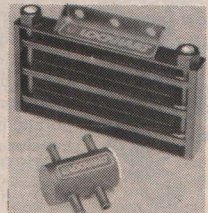
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