

## HONDA CB1000 CUSTOM

*Want to be seen in the city? The Custom is a cruiser with punch. Want to see some of the country? The CB runs distance with the best.*

□ The CB900/1000 series has always been unique in Honda's lineup. In 1979 Honda introduced its new-generation 750 DOHC four-valve engine. In 1980 the company introduced a bored and stroked variant of the 750—the 902cc Custom. The 900 was Honda's first combination air-cooled/shaft-driven machine. As

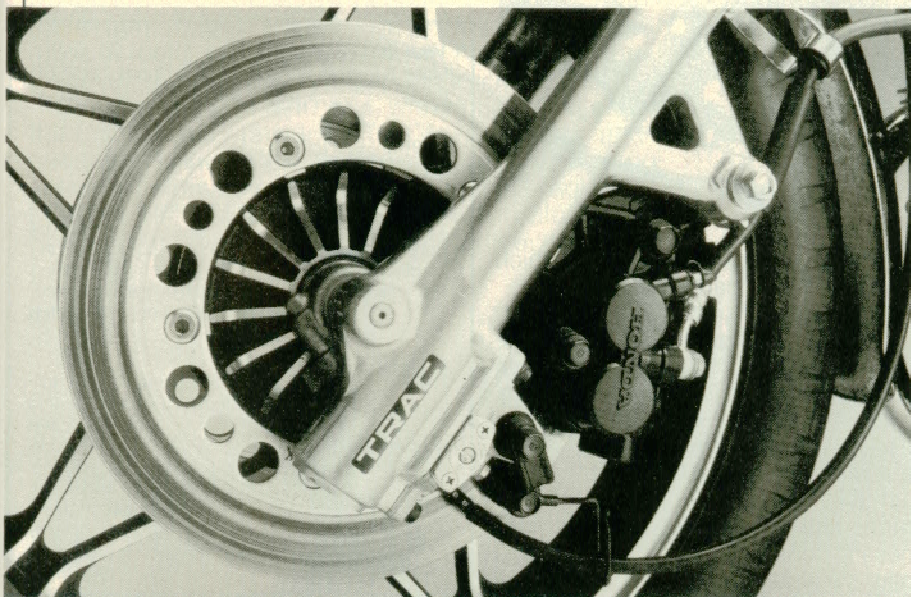
This year Honda bumped the CB's displacement by increasing the bore 2.5mm. Compression is up too, from 8.8:1 to 9.0:1, thanks to smaller combustion chambers and new pistons. The factory scrutinized much of the CB-C's engine and chassis, strengthening bits and pieces to handle the extra power. Wristpins are two milli-

1000 has ample power. Especially in the lower gears, acceleration is impressive; passing a line of cars takes only a fistful of throttle.

The dual-range gearbox requires some getting used to. Most testers worked it like a standard six-speed overdrive transmission, leaving the bike in low range until they had shifted into low fifth, and then kicking the sub-trans shift lever up into high. Overall gear ratios for low fifth/high fourth and low fourth/high third are almost identical (5.24:1 and 5.28:1 for the fifth/fourth combo, and 6.33:1 and 6.32:1 for the fourth/third). The gap between low first and high first is substantial though—12.99:1 and 10.83:1. Shifting from low to high in fifth changes the gearing from 5.24:1 to 4.37:1.

What does all this mean in on-road performance? A bike whose high first requires lots of clutch and lots of gas, but whose low first gives a solid launch. Upshifting into the highest gear ratio likewise yields a leisurely engine lope at cruising speed—a drop from 4171 rpm in low fifth at 60 mph to 3447 in high range. We'd choose the high range as a final upshift on the freeway. While the heel-toe design of the sub-trans shifter speeds upshifts, downshifts must be more deliberate.

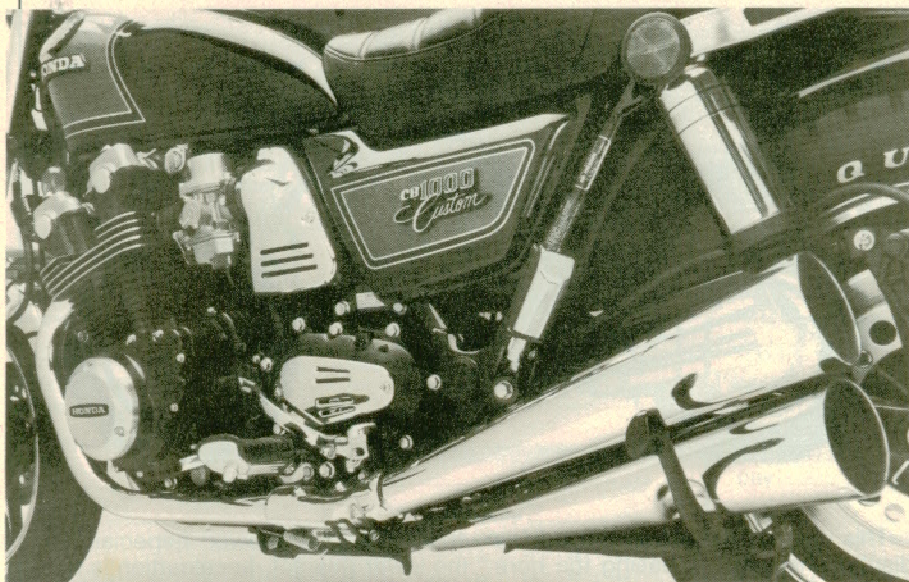
On the downside of performance, the seat, though comfortable and firm enough for extended riding, allows only one seating posture, and it gets tiring sooner than the seat's construction merits. Furthermore, the seat/bar/peg relationship cramps tall riders. This is particularly surprising considering the bike's wheelbase; the CB measures 63.5 inches axle to axle, which makes it the longest bike in Honda's lineup (only the Kawasaki Voyager and a handful of Harleys equal or surpass it). The rider's pegs



such, it presented a problem: How to mate the right-side drive shaft of the GL1000 and CX500 with the left-side output shaft of the new engine. Solution—incorporate a separate shaft behind the transmission to carry power across the back of the engine to the drive shaft on the right. Modifying the powertrain this way allowed the engineers to try something different—adding an additional set of transfer gears to the crossover shaft to create their dual-range gearbox. (The new breed of shaft-drive bikes from Honda, by the way, uses left-side drive shafts.)

meters larger in diameter, and the rods, apart from changes to accommodate the bigger pins, are heat-treated for increased strength. New clutch springs channel the power into an unchanged gearbox, but then through a rear-end gearset lowered from 11/34 (3.09:1) to 10/31 (3.10:1), the same as the current Gold Wing's.

In real-world conditions, the new full-liter engine delivers good power and lots of low-end torque while feeding little vibration to the rider. The engine revs slowly, but it leaves no flat spots or noticeable peaks in its power curve. Solo cruising or two-up, the



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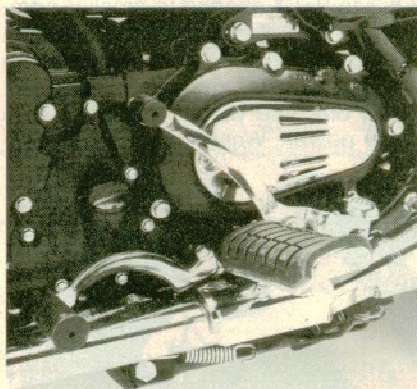
are biased forward and a touch high, and the pullback bar keeps an unfaired rider's speed down to 50–55 mph if he wants to be comfortable. A bar- or frame-mount fairing might make the bar easier to live with—without one, low-speed boulevard cruising or unhurried highway running is the call.

Handling-wise, the CB has its own peculiar character. It's big, heavy and comfortable. And more. In the past, its suspension and chassis couldn't keep pace with its weight; lean hard into a fast country-lane sweeper and the 900 would wallow and pogo its way through the turn.

Modifications to the 1000 improved stability. The Honda R&D people bumped the fork tubes' diameter from 37 to 39mm, and mounted a fork brace which connects the two legs. They increased the cast wheels' width a little too, from 2.15 and 2.50 inches, respectively, to 2.50 and 3.00. Finally, new triple clamps pivot on a steering head lengthened 50mm.

Though these changes aided stability, don't misunderstand: the CB is a 621-pound motorcycle designed for open-road cushiness. In a certain sense, the CB is a Custom version of the Gold Wing, different engine configurations notwithstanding. The CB, like the Gold Wing, rewards a leisurely pace with excellent ride quality.

Other miscellaneous chassis updates? Honda added TRAC to the left fork slider, and reduced the front wheel size from 19 to 18 inches to lighten and quicken the CB's steering. At the same time, a wider rear tire, a 140/90, replaced the old 130/90 x 16. New flat brake rotors, front and



rear, bolt to the new wheels, which feature integral carriers.

The brakes, like last year's, are excellent. The 900 got Honda's twin-piston calipers in '82, and they give solid, fade-free linear performance with light use or while hauling down from high speed. The rear stops without chatter. The TRAC system, even set full-hard, seems soft relative to other anti-dive fronts, but this softness is consistent with the rest of the bike's suspension.

More about the suspension. Honda decidedly went the touring/cruiser route, giving the bike a pillowy, marshmallow ride. In the mood for a slower jaunt on the freeway or interstate? No sweat—the 1000 glides right along. The stiction-free fork smoothes out even large bumps, and the suspension almost always isolates the rider from unpleasantness. The dampers, fore and aft, are not without quirks though. At the front, low-speed sharp-edged bumps (like the step between a driveway and the street) send a sharp jolt through the fork. The fork isn't bottoming, but it feels as if it is, or as if the front tire is

low on air and the rim is hitting the edge of the irregularity. More air in the fork doesn't help, less doesn't help. Annoying.

More than annoying is the shaft reaction at the rear. The engine's torque, the bike's short swing arm, moderate rear suspension rebound damping and all the lash built into the powertrain (a chain primary drive, two transmission shafts, a sub-transmission output shaft and a drive shaft with two sets of bevel gears) combine to allow a pronounced up/down movement which grows bothersome in traffic and disheartening during cornering. Except for these shortcomings, though, the bike is glider-smooth on the highway, where it is, after all, in its element.

Honda offers a full range of touring accessories for the Custom—fairings, trunks, saddlebags—all color-matched. The 1000's custom/touring design will make sense for many riders, and be affordable to most. Its combination of style and function gives the pavement ace flexibility at the cost of little compromise. ■

### Vital Statistics

Make & model ..... Honda CB1000C  
Price ..... \$3648

### Engine

Type ..... Four-stroke, transverse four; air-cooled with two chain-driven overhead camshafts; four valves per cylinder  
Bore & stroke ..... .67.0 x 69.0mm (2.64 x 2.72 in.)  
Displacement ..... 973cc (59.4 cu. in.)  
Transmission ..... Dual-range five-speed, constant-mesh, wet-clutch

### Chassis

Type ..... Double-downtube, full-cradle frame; tube/box-section steel swing arm  
Suspension, front ..... Leading-axe, air-adjustable fork with 39mm tubes, anti-dive valving, and 6.3 in. (160mm) of travel  
rear ..... (2) air-adjustable shock absorbers producing 3.8 in. (99mm) of rear-wheel travel  
Brake, front ..... Hydraulic, dual-disc with twin-piston calipers  
rear ..... Hydraulic, single-disc with twin-piston caliper  
Tire, front ..... 110/90-18 Dunlop Qualifier F11  
rear ..... 140/90-16 Dunlop Qualifier K127C  
Fuel capacity (main/reserve) ..... 3.6/0.8 gals. (13.5/3.0 l)  
Weight (w/ full tank) ..... 621.7 lbs. (282.0 kg)

### Performance

Standing start ¼ mile ..... 12.41 sec. @ 107.27 mph  
Engine rpm @ 60 mph, top gear ..... 3447  
Average fuel consumption rate ..... 43.1 mpg (18.3 km/l)  
Cruising range (main/reserve) ..... 155/34 mi. (249/55 km)  
Load capacity (GVWR less wet wt.) ..... 473.3 lbs. (214.7 kg)