

CBX operation

The 550F delivers

The four cylinder Honda CBX550 is low, lean and compact. There's none of the brash bulk of its 1000cc, six cylinder namesake. Deliberately understated styling and bright, simple paintwork are reminiscent of the dinky CB400F - with a dash of street racer. Its black engine is squeezed into a double cradle frame. Exhaust pipes wind tightly round the front and sides flowing into two megaphone shaped silencers. Monoshock suspension leaves the rear wheel uncluttered and enhances the machine's nose-to-the-ground look. With Honda back on the Grand Prix scene we're getting a payoff on the production line. The CBX is hot on the heels of Kawasaki's performance ethos, but without raw edges.

There's no comparison between the CBX engine and that fitted to Honda's 1976 CB550F. It has been slimmed by mounting a chain driven generator behind the cylinder block. In technical terms it's got the lot. Double overhead cams, sixteen valves and a

9.5:1 compression ratio produce 62bhp at 10,000rpm and 34lb.ft of torque at 8500rpm. Bore and stroke are 59.2 x 52mm giving a displacement of 572cc. (Who are Honda trying to fool? Not the insurance companies. But the guy in the street might put oodles of power and flexibility down solely to clever design rather than an associated cubic capacity con).

The system of valve operation incorporates a new 'underfollower' rocker arm. Each cam depresses a single rocker arm which opens a pair of valves in the four valve heads. Honda claim a weight saving over conventional methods and therefore less valve float. Valve clearance is set by screw adjusters, dispensing with the fiddly shim method which, on other engines, is claimed to give better valve control at high rpm. The CBX red line is at 10,500rpm.

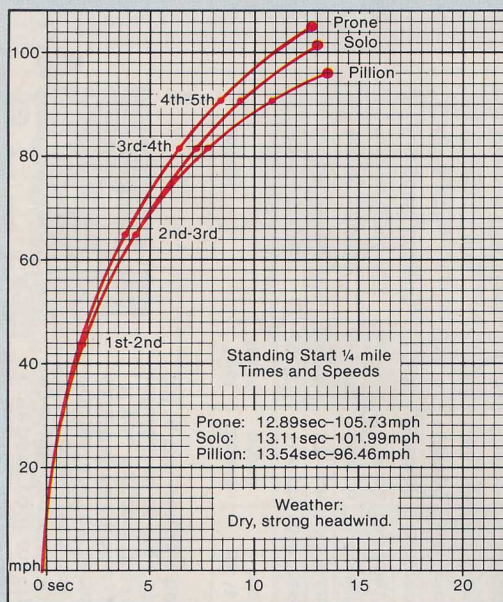
Adjustment of the Hy-vo cam chain is automatic. As the chain stretches a tensioner slipper is pressed against it by means of a sprung arm to take up slack. The slipper is held steady by a self locking rod travelling through a drilled, hinged plate.

This technical trickery adds up to an engine with smooth and plentiful power. Although vibration can be felt throughout the range, it's never a problem and leaves a

clear image in the large and well positioned mirrors. On the road the bike can be driven down to 12mph in top gear and pick up without judder or chain snatch. Opening the throttle produces instant response with no sudden power step. Roll on flexibility figures between 30-50mph and 40-60mph clearly indicate the advantage the Honda engine has over its Kawasaki GPZ550 competitor; 6.5/6.8 seconds for the CBX while the Kawasaki takes 7.1/7.3 seconds. The GPZ motor doesn't get on song 'till 6000rpm, although it then starts to fly. A best one way through the quarter mile timing lights on the CBX gave 12.87 seconds, the Kwacker did it in 12.50. We screwed 126mph from the CBX at the track - that's the fastest 550 we've ever tested. But on average the performance of the two machines is very close.

The selection of each of the six gears is

PERFORMANCE CHART



MAXIMUM SPEEDS and SPEED RANGES

Gear		mph max	mph min	mph 1000rpm
1	solo	47	4.71	4.3
2	solo	69	6.38	6.3
3	solo	86	7.99	8.1
4	solo	95	9.63	10.2
5	solo	107.14	10.67	11.7
	pillion	105.19	"	"
6	prone	113.29	"	"
	solo	105.57	12.35	13.3
	pillion	100.57	"	"
	prone	120.22	"	"

Best one way speed: 125.94mph

SPEEDO

ind	true
30	29
40	39
50	48
60	58
70	67
80	77
90	86

BRAKES(both)

mph	solo ft	pillion ft
30	29	31
40	66	71
50	103	113
60	140	155
70	172	192

MPG

Best	52
Worst	34
Overall	45

Milometer

Accurate

Performance figures obtained at: M.I.R.A.
Test Track, Nr. Atherstone, Warks.
Test Riders: Neil Millen, Tony Dennis.

FLEXIBILITY IN TOP GEAR(sec)

mph	30-50	40-60	50-70	60-80	70-90	80-100
solo	6.53	6.83	7.96	8.69	9.97	-

Oil used

None

COMPARISONS

*performance for GPZ550D1
**adverse weather conditions

Make	Speed prone	SS 1/4 mile prone	Dry weight	Claimed bhp	mpg	Price on road
Honda CBX550F	120mph	12.87sec/106mph	405lb	62 @ 10,000rpm	45	£1720
Kawasaki GPZ550H1	118mph*	12.50sec/104mph*	424lb	61 @ 9500rpm	58	£1799
Yamaha XJ550	107mph**	13.72sec/95mph**	410lb	56 @ 9500rpm	48	£1845
Suzuki Katana 550	109mph	14.26sec/94mph	452lb	54 @ 9400rpm	52	£1565
Ducati Pantah 500	112mph	13.72sec/93mph	397lb	52 @ 9500rpm	58	£2799
Honda CX500 Turbo	126mph	13.28sec/103mph	527lb	82 @ 8000rpm	31	£3350

what the six promised

Test by Tim Rumball.

light and precise. Neutral is easy to find and spacing of the ratios matches well with engine power. With a passenger the machine struggles in top gear when fighting a headwind, but selection of fifth quickly redresses the imbalance. On the CBX Honda have dispensed with tortuous linkage systems. The gearlever is mounted directly to the selector shaft and faces back towards the lefthand footrest. The side stand, tucked in tight beneath the left footpeg, fouls a big-footed rider's instep and heel. It never caused trouble, but was always noticeable.

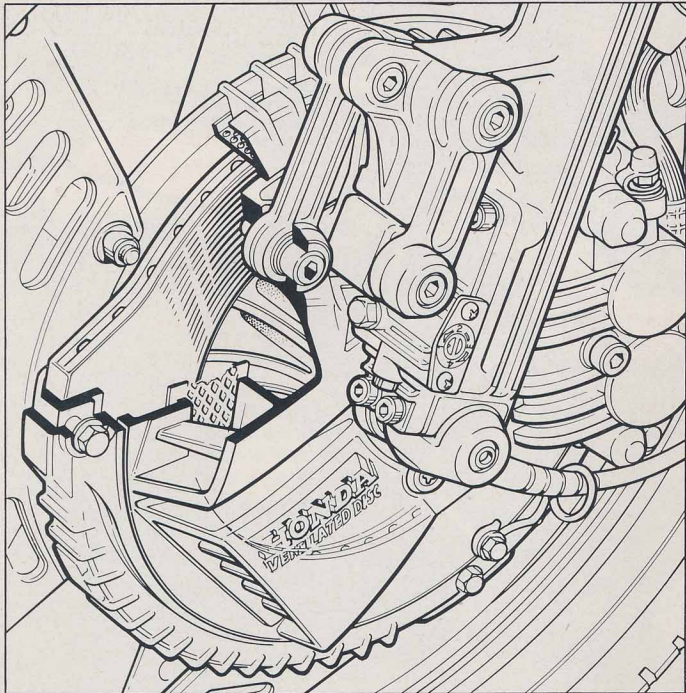
Fortunately Honda got their act together on the chassis. The CBX Pro-Link rear suspension uses a single, air-assisted coil shock absorber bolted at the top to the double cradle frame and at the bottom to a cast alloy swinging fork through a linkage system.



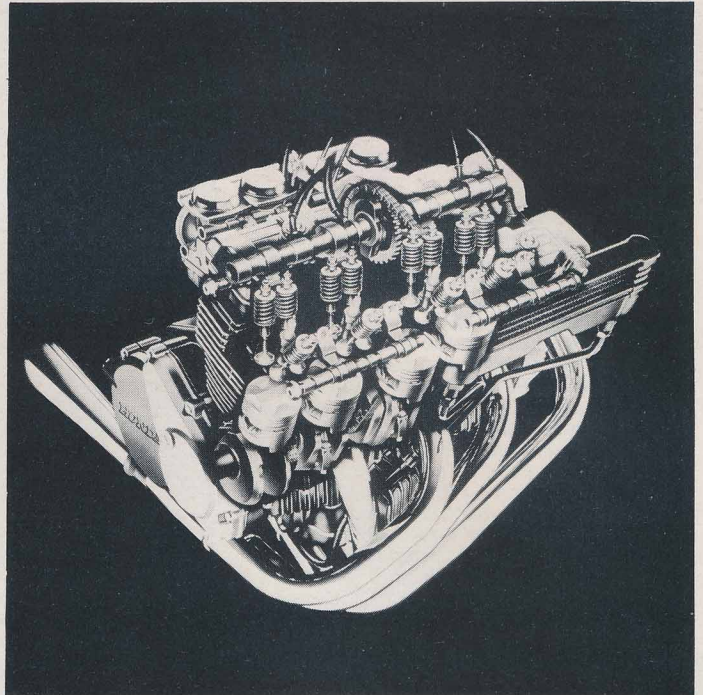
Photography by Andy Mills.



Steve (Marco) Downton takes the CBX for a scratch. It performed and cornered like a GP racer.



Enclosed, ventilated disc brake with inverted caliper is weatherproof but gets very hot. Brake torque triggers excellent anti-dive.



Each cam and underfollower rocker open a pair of valves in the four-valve heads to save weight and allow high rev limit.

The front forks are telescopic, oil damped and coil sprung with balanced air assistance. It's easy to fit an air line to the right hand fork valve for adjustment and pressure measurement. That's not the case with the rear unit which has a valve tucked behind a tangle of frame tubing on the righthand side of the bike. There's an anti-dive system fitted to the left front fork leg which has a range of four settings and a cast alloy brace between the two legs immediately above the front mudguard.

The sum total of this lot gives an apparently wide range of suspension tuning, although there is no alternative damping setting on the rear unit. But more or less air in the front or rear makes little difference to the bike's handling. The damping is ample, soaking up the worst that can be offered by our potholed cart tracks which pass for roads. With 10psi in the front forks and 20psi in the rear shocker the test machine felt taut with a degree of feel for the road through handlebars and seat which made a mockery of soggy Dreams and Vague and Floppy 750s. The tyres only got out of touch with tarmac when I forgot to shut off on the approach to a hump-backed bridge.

There was no wallowing through fast, bumpy bends and the steering was dead accurate. Line up for a bend, crank the bike over 'till footrest steel makes sparks and you begin to appreciate the balance of power and stability.

The tyres are low profile, tubeless Jap Dunlops, 3.60 H18 front and 4.10 H18 rear. They never white lined or registered road ridges and seams, and clung on tight out to the edge of the tread. They're good, but sensitive to pressure inaccuracy. A couple of pounds lower than the recommended 32psi in the front tyre was immediately apparent and took the shine off the fine steering until I pinpointed the problem.

The ride position was good for the lower half of my lanky frame. Footrests are tucked back and the scalloped seat and sculpted tank waist offer a semi-crouched stance. But the bike is so minutely proportioned that I towered above the handlebars and instruments, leaving my head out in the wind. Cruising at 90-100mph, a speed the bike seemed happy to hold for hours, induced neck ache. Handlebars a couple of inches lower than the CB900 style fitted

would cure the problem.

Another source of discomfort was the thinly padded driver's seat. Passengers fared better with more padding, plenty of room and a good position. There's a big, handy grab rail in black painted alloy on the tail section, and guard loops for the footpegs to prevent accidental amputation by the scything rear wheel. The added weight of a passenger compressing the suspension can cause the centre stand to ground easily on righthand bends. An extra 10psi in the rear strut cures the problem.

Assessing the value of anti-dive systems on motorcycle front forks is difficult because they can't be removed for comparison. That on the CBX is much softer in operation than the Yamaha unit on their XJ750. Under heavy braking the XJ system allows a couple of inches of fork compression, then the damping suddenly gets really firm. The CBX set up is more progressive. On its softest setting the forks dive and the headlight dips at night, but not enough to cause trouble. Handling on the test bike did not appear to suffer. Three higher settings progressively stiffen the fork compression action, but there's no sudden stop, just more controlled movement.

Inboard disc brakes enclosed in ventilated drums on the CBX seem a complicated answer to a problem which no longer exists. The CBX set up has a pair of enclosed discs in the front wheel and one in the rear. The calipers operate on the inner surface of the discs, which are cast iron, and air is funnelled over them by two scoops on each outer drum plate. For normal road use they're really good, with bags of feel. The front wheel can be held squealing, on the point of locking. The rear is much softer in action, and balances well with the front. At the MIRA test track a problem arose. With continuous heavy braking more and more pressure was needed on the front brake lever, to the point where the lever had to be jammed against the handlebar grip. The only explanation we came up with was that ventilation is inadequate within the surrounding brake drum, and a build up of heat caused the brakes to fade. The stopping distances on the test sheet are poor by the standards of other bikes.

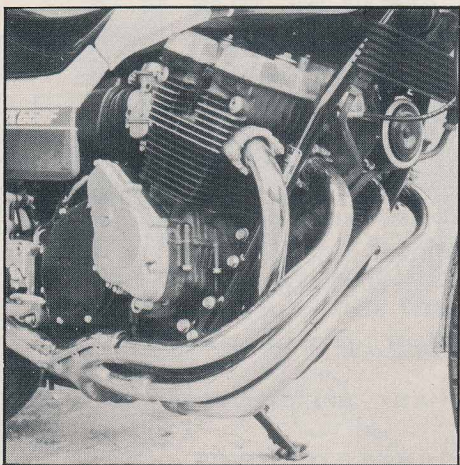
As might be expected from such a high performance machine, fuel consumption



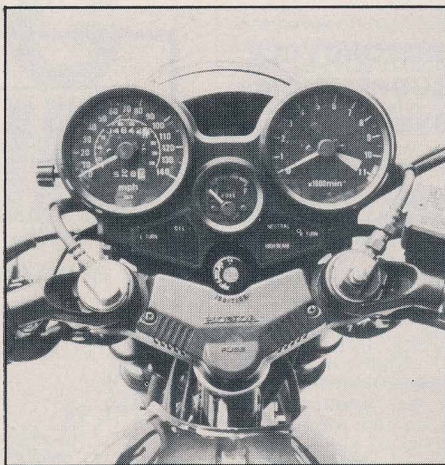
Pro-Link suspension's rising rate action gives excellent rear wheel control. Air-assisted coil is easily adjusted.

was high. An average of 45mpg reflects the manner in which this bike demands to be ridden. The 3.7 gallon fuel tank gives a useful range of 166 miles including 0.75 gallon reserve. The test bike used no oil in over 1000 miles, but checking the level with the short dipstick is fiddly. A window in the crankcase would be easier.

The headlight, keen to please with its penetrating, searchlight main beam unfortunately fails to light the sides of the road. It is hopelessly narrow beamed, and when the bike turns corners the beam behaves like a fairing mounting unit, following the rider through rather than illuminating his intended line. Dipped beam is excellent, with a low but wide cut off and plenty of kick up the near side of the road. Instruments are straight from big daddy CBX1000. They're simple and old fashioned



Pipebender's artwork pulls low-down punch from the slim four-cylinder motor.



Uncluttered, no-gimmick instruments sit above the balanced fork air caps.

but clear and effective. The speedo is about eight percent enthusiastic. Idiot lights are sparse comprising neutral, main beam, indicators and oil pressure warnings. A fuel gauge with constant and accurate indication of the fuel level is mounted between speedo and tachometer. Tall riders tower above the dials and have to make a conscious effort to look down and read them.

Switch gear on the left handlebar is for lights main beam, indicators and horn. On the right bar are the lights master switch, start button and kill switch. Two gripes. First the indicator switch has a low profile and was awkward to operate with thick gloves. Second the emergency stop switch is too easily knocked into the kill mode.

The toolkit is housed in the seat tail unit, accessible from beneath the seat. It's just sufficient for minor maintenance jobs but

includes a useful extra, a padlock and plastic coated chain. With £1720 invested in the CBX550, most owners are gonna wanna keep light fingers at bay.

On the CBX550 every i has been dotted, every t crossed. There're no gimmicks, just motorcycle heart and soul. There is some dissension in the office as to which was the better bike, the CBX or Kawasaki's GPZ550. Try to pin down why one liked what the other didn't and a lot of vague answers came back. For myself the CBX wins. It has the power of the GPZ but more flexibility. It's as eye-catching, better finished and it goes like stink. If Honda can shed the bland, boring bike image they have cultivated over the last few years, with a few notable exceptions like the CB100R, and give us more like the CBX550 . . . But then they wouldn't be Honda, would they. ■

SPECIFICATIONS

ENGINE

Type: Air-cooled, four-cylinder, DOHC, 16-valve four stroke. Bore x stroke: 59.2 x 52.0mm. Displacement: 572cc. Compression ratio: 9.5:1. Carburettors: Four 30mm CV type. Lubrication: Wet sump. Max bhp: 62bhp @ 10,000rpm. Max torque: 34lb.ft @ 8500rpm.

TRANSMISSION

Overall gear ratios: 1st 21.31, 2nd 14.24, 3rd 11.37, 4th 10.93, 5th 8.26, 6th (top) 7.16:1. Clutch: Wet multiplate. Final drive: Chain.

FRAME and FORKS

Frame: Tubular steel double cradle. Front suspension: Coil sprung, air assisted telescopic forks with hydraulic damping and anti-dive. Air pressure adjustable. Rear suspension: Swinging forks with single coil sprung, air-assisted hydraulic damper via Pro-Link pivoted rising-rate system. Air pressure adjustable. Front travel: 5.5in. Rear travel: 4.0in. Trail length: 3.8in. Castor angle: 64 degrees.

WHEELS and BRAKES

Front tyre: Dunlop Gold Seal F11 3.60 H18 tubeless. Rear tyre: Dunlop K527 4.10 H18 tubeless. Front brake: Twin hydraulic discs enclosed in ventilated drums. Rear brake: Single hydraulic disc enclosed in ventilated drum.

ELECTRICS

Ignition: Transistorised. Battery: 12V 12Ah. Generator: 230W @ 5000rpm. Headlight: 60/55W halogen. Tail/stop lamp: 5/21W. Indicators: 21W. Warning lights: Main beam, turn, neutral, oil pressure 3.4W.

DIMENSIONS

Seat height: 30.7in. Length: 82.6in. Width: 29.1in. Height: 42.9in. Wheelbase: 54.5in. Ground clearance: 5.9in. Dry weight: 405lb. Fuel tank: 3.7 gal inc. 0.75 gal reserve.

£328^{.21}

MZ ALPINE STANDARD
DELIVERY £15.80 incl. VAT

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The MZ 125^{CC} Alpine

This great little first bike is exceptional value for money. Tough, dependable and very economical, the MZ 125cc 'Alpine' will match any 125cc model on performance and handling at a really affordable price.

Its single-cylinder engine is ultra-reliable and simple to maintain. There's a fully enclosed chain and the bike comes complete with full toolkit, pump, puncture outfit and spare chain link to save

you even more money on maintenance costs. All models have prop stand, lockable steering and lockable toolbox, and there's a matching rev counter and speedometer on the deluxe version.

The MZ 125 is good-looking too, with chrome tank panels on the de luxe, aluminium rims and a choice of 7 paint colours — regal red, royal blue, ebony black, silver sheen, olympic blue, spruce green and flame red.

See the MZ 125 Alpine at your nearest MZ dealer now, and get off to a great start.

Also available, the MZ TS 150 Eagle, acclaimed in Motor Cycle News as 'exceptional value for money . . . exceptional little bikes in their own right'.



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Wiff Green Ltd., MZ House, New St.,
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