

The Ultimate Streetbike Magazine

June '87 £1.10

 A Link House
Publication

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Honda CBR 600

Chariot of Fibre

If pushed you could sum up Honda's CBR600 in just one word — smooth. Smooth power, smooth handling and an undoubtedly smooth shape. The CBR presents a performance package that's not just rounded — it's bloody spherical. It offers a licence shredding 140+ mph with 50mpg economy and handling sweeter than a field of candy floss. All this from a bike that has its roots firmly planted in the fields of traditional motorcycle design. No fancy engine layouts, just a basic motorcycle that has been painstakingly refined to unleash previously unrealised potential. In fact there's nothing particularly new in essence about any part of the CBR600. The engine's a conventional in-line-four, the frame's derived from the VFR 750 and the suspension could have been grafted off any one of a number of bikes. The only innovation relevant to the CBR is its unprecedented level of achievement. Every aspect of the Honda's performance is better, or at least equal to, any of its similar sized siblings — including the much vaunted GPZ600. The fact that it has taken Honda nearly two years — an eternity in Japanese motorcycling terms — to come up with a suitably superior design, says quite a lot for Kawasaki's design prowess. It also speaks volumes about the public's acceptance, and Honda's further interest, towards their V4 engine design when you consider that the big Aitch have reverted to a conventional layout in order to achieve their goal. With the arrival of the CBRs, Honda's claimed commitment to the V4 looks like it's gone down the tubes faster than a bowl of greased sushi. A race proven spin-off (though I can't remember the NR 500 ever winning any races) that has lost its momentum and will no doubt stop altogether before too long.

The reasons for this reversion to a more orthodox engine design are all-too-obvious when you look at how the V4 lump has fared in its short-lived existence. The biking public, however short-changed in the grey matter department, have memories that rival an elephant's when remembering past mechanical misdemeanours of a particular marque. Thus, although the inherent problems are now



Lifting the skirt of Honda's plastic projectile. Report by Pat Devereux

mostly-solved, if one such lump had been fitted to the CBR (apart from playing havoc with the Jap's system of model acronyms) it would have burdened the bike with a questionable pedigree and could have jeopardised their performance on the showroom floor. Once a punter's had his fingers burnt as savagely as with the early VFs, he's going to be somewhat circumspect about letting himself in for a second dose of similar problems — however remote the factory may claim the possibility to be. So it seems that the CBR has been designed to short-circuit any past memories of Honda's mechanical shortcomings and to reassure doubtful purchasers that Honda's new design is purely more of what they (the punters) already love and understand.

But however conventional the concept of the CBRs may at first appear, you can bet your bottom silver dollar that there's been some pretty unconventional hours spent poring over the design brief in order to deliver the required balance of performance and price.

Honda used two routes of development to achieve the desired GPZ-beating performance. Although the engine is in a relatively high state of tune, there must have been the temptation to tweak the lump so high it almost chirped. This situation was knocked on the head when it was realised that it could lead to an

unwanted and potentially ruinous headache of more warranty claims. So in order to achieve the consistently high level of performance they required, Honda developed a superior system of aerodynamics. Thus, however cute and cuddly the CBR's rounded edges and soft bulges may appear at first, they're not just a styling exercise, but the result of Honda's extensive research into creating the most efficient design possible within the constraints of noise, power and comfort required to produce the new class leader.

Apart from the aerodynamic angle, the all-enclosing bodywork manages to kill a couple of other problem birds with the same solitary stone. Whilst undoubtedly improving the airflow over the bike and rider, the extensive plastic also removes the costly problems of tarding up the engine for public display, and keeping noise emissions to a level acceptable to the ever-hungry government noise meter. Although it has been mooted that the CBRs weren't the first bikes to use this concept of fully enclosed engines, I reckon that Honda's need for the plastic veil is far greater than their Italian cousin's. If you take a look under the sides of a CBR and then do the same to a Paso, you'll see what I mean. Under the Honda's flanks lurks a powerplant with enough external plumbing to satisfy even the most tripped-out Heath Robinson junkie, whereas the Duke

looks almost as pretty with or without its sides in place — such is its classic design.

Just as the exterior of the CBR's engine is rather unsightly, the inside is mechanically beautiful. Large, unrestricted spaces are apparent on either side of the forward-inclined engine, all engineered to offer the least resistance to air flowing into and out from the 12,000rpm redlined engine, and assist in the engine's overall efficiency. These internal aerodynamic refinements are joined by a plethora of mechanical revisions, which together create one of the sweetest mills on the market. In order to reduce the engine's power loss from internal friction and inertia, Honda have studied every component, shaving each one down to give the finest balance of performance and reliability. Nowhere is this development more apparent than when you look at the width of compression rings on the CBR's lightened pistons — at just 0.8mm wide they could hardly be called wasteful. Other changes include individual rocker arms and waisted valve stems running in lighter valve springs, which it has been possible to use as a result of the substantially lightened valve train.

The decision to return to an in-line-four powerplant must have heralded a massive sigh of relief from Honda's frame designers. As, although the V4 was an efficient design in isolation, its top heavy weight biasing — a result of having two separate heads and valve gear — caused all kinds of weight distribution problems for them to try to cover up. The CBR's conventional, compact, short-stroking engine has allowed the frame designers to mount the engine very low in the diamond frame, without restricting ground clearance. This in turn has kept the bike's overall height as low as possible which has had various beneficial knock-on effects. The first of these is that the rider can now sit "in" rather than "on" the bike's seat, thereby keeping as much of his/her anatomy tucked in out of the wind and maintaining the high level of aerodynamic efficiency. The other benefit of the low-slung engine is that it has lowered the CBR's overall centre of gravity, thereby creating a very compact and quick-handling machine.



Riding the CBR crystallises Honda's homework into a statement of performance and efficiency that underscores their commitment to building the ultimate road sports bike. In the light of the extreme demands placed upon the CBR you could be forgiven for expecting a bike with a racer-hard ride and an engine with merely a trace of low end power. It's the very fact that the CBR hasn't either of these traits that makes it so exceptionally attractive to any size and style of rider. The handling, power and general civility contrive to inspire confidence and tempt you to explore its almost unlimited fun capacity.

The bike's user friendly appeal starts from the moment you hit the starter switch — the plumbing humming into life with all the drama of a cancelled opera. This civility continues up to around 5000rpm, whereupon the exhaust emits a very satisfying howl (reminiscent of the 400-4's) as the engine's stable door is smashed open and 83 very well-fed horses make a dash for freedom via the four-into-one's single orifice. You're really going to have to plead provocation if you get stopped on this one. With over 140mph on tap and a fairing that makes cruising at highly reprehensible speeds seem quite normal, you're going to get plenty of practice explaining the joys of motorcycling to the jam sarnie brigade if you tempt fate too often.

Apart from helping the engine push the CBR up to an oversuited, chin-on-tank, speedo-indicated 145mph, the bike's efficient aerodynamics endow the Honda with the ability to return truly astounding fuel consumption figures. Just under 50mpg was the lowest figure we recorded in the whole two weeks of thrashing the CBR senseless to, from and on the test track. Truly impressive figures for any bike, let alone a hyper sports 600. Rider protection afforded by the bodywork was also good considering the sporting orientation of the CBR. Even the rider's hands and feet are relatively well protected — a luxury not available on some bikes marketed as tourers.

Despite the CBR's light weight, it has been fitted with three of the best disc brakes to be found on virtually any make of bike — Nissin four piston calipers biting onto three heavily drilled discs. This set-up allows the 600 to stop almost as fast as it accelerates. It was this trait in particular that I was deeply grateful for when I was confronted with slow thinking, quick talking Mrs Myopia pulling out of a side junction on the way back from the test track. Avoiding tactics were out of the question, so all I could do was slam on the brakes and hope for the best. The bin turned out to be a small dent in the CBR's lustrous plasticwork, not



a scratch on yours truly, but a large amount of grief for the attempted murderess in her metallic box. I'm sure that if I'd been riding almost any other bike I'd still be walking with the aid of crutches. The brakes are so powerful and controllable you can keep them on the brink of a full lock-up situation and still not lose control of the bike.

The CBR's streamlining has even extended as far as the rear view mirrors which, whilst having all the attraction of a pair of melted wellies, are quite superb in informing the rider of other banzai pilot's attempts to pass the Honda's slippery flanks — something few bikes can achieve due to the unerring neutrality of the Honda's handling. This agility and stability are another result of the CBR's thorough refinement programme. Via the use of heavily drilled discs and light weight

wheels, Honda have been able to keep the CBR's unsprung mass to an absolute minimum, thereby creating what is without a doubt one of the best handling production bikes ever to have made it to our murky shores. The only criticism in the chassis department was that the forks felt slightly overdamped in normal road use. This foible could no doubt be ironed out by showing the CBR to a racetrack, but for everyday usage a modicum of air and/or oil changes should sort the forks out once and for all. Apart from this small glitch, the Honda negotiated everything I could throw at it with nary a squirm from the fat Dunlops mounted on the CBR's S-section spoke 17in wheels.

As you might have ascertained by now, I was very impressed with Honda's new entry for the middleweight crown — a claim I

think it justly deserves. The only possible doubt that can be cast over its plastic livery, is just how long the CBR will be able to retain this heady status? Early reports of the cheaper FZ600 have shown that it excels in the handling department, but lacks the engine refinement of either the CBR or GPZ. Whilst these rough edges won't bother the dark visor and taped knee brigade — it could ultimately detract from the FZ's marketability — something the CBR excels at. As, although it's unquestionably a sportsbike, first and foremost, the Honda is far more domesticated than the Yamaha, and thus, warranty claims allowing, may have a wider appeal. Whether or not this will prove to be the case is something I'm looking forward to finding out in the near future. But until then don't hold your breath — the CBR is one beaut of a bike that should give any other 600 a good, if not better, run for your hard earned ackers. PD

HONDA CBR600F £3299 including car tax and VAT

PERFORMANCE

Maximum speed —
145mph (indicated)
Fuel Consumption —
Hard Riding — 50mpg
Cruising — 58mpg

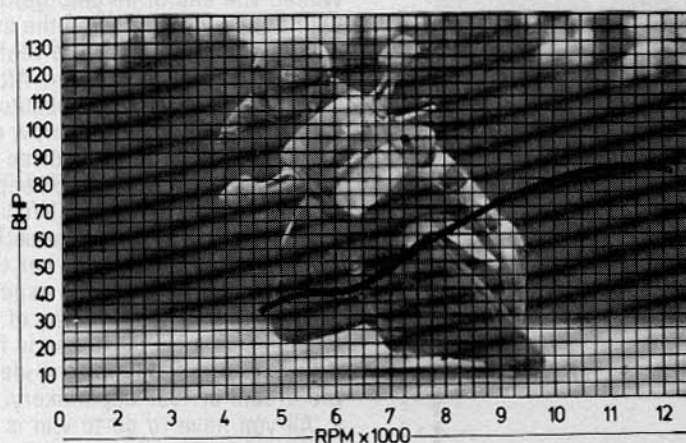
POWERTRAIN

DOHC, 16-valve, liquid-cooled, in-line four: 598cc. Bore x Stroke 63x48mm. Compression ratio 11.0:1. Maximum claimed power 85bhp@ 11,000rpm. Tested rear wheel output 83.75bhp@ 11,590rpm. Maximum claimed torque 44.1 ft/lb@ 9,500rpm. Carbs: four x 32mm CV. Four-into-one exhaust. Six-speed, constant mesh gearbox. Wet multiplate clutch, cable operated. Wet sump lubrication. Primary drive by gear. Final drive by roller chain

ROLLING CHASSIS

Box-section diamond type frame. Front suspension by air-assisted 37mm straight-axle fork with TRAC antidive. Rear suspension by Pro-Link with preload adjustable gas-charged damper. Wheelbase 55.1in. Ground clearance 5.5in. Seat height 30.9in. Dry weight 40lb — Fuel tank capacity 3.6gal. Triple disc brakes with dual-piston calipers — 10.8in front and rear. Tyres: Dunlop V240 110/80 17 front and V240 130/80 17 rear

HONDA CBR600 Max bhp 83.7 @ 11,590 rpm



PARTS BIN all prices include VAT

Fairing (including mirrors) £570; complete indicator assembly £16.51; indicator lens £3.13; forks (complete assembly) £228; mudguard £37.50; wheel (front) £178.50; tank £159; seat £119; silencer £99.50; gearlever £23.00; brake pedal £22.50; footpeg £24.50; headlight assembly £79.00; brake/clutch lever £7.95/£4.89; sidepanel £55.00; alternator cover £52.00; piston £18.68; conrod £50.00; head gasket £13.00; crankshaft £485.00; clutch £180; ignition unit £155.00; drive chain £70.00; sprockets (front and rear) £14.08/£28.16; oil filter £6.75; battery £39.54.