HONDA
The Power of Dreams

2003 HORNET

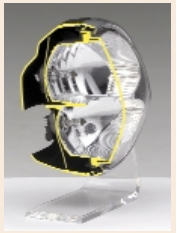
NEW Re-contoured seat relocates rider 15mm forward for enhanced riding control and greater rider positioning freedom. New, more level pillion section features raised centre hump for a more stable and comfortable ride.

NEW Totally redesigned fuel tank features more angular and aggressive lines, a 1-litre increase in fuel capacity (to 17 litres), and a new hinged flush-surface locking fuel cap.

NEW H.I.S.S. (Honda Ignition Security System) deters joy riders and bike thieves by immobilising the engine until started by the Hornet's own unique, pre-programmed key.

NEW High-accuracy, fully electronic instrument pod features modern dual-canister design, large whiteface dials and LCD readout of odometer, dual trip meters and clock displays.

NEW Brilliant dual-bulb headlight combines separate low and high beams behind a single clear round lens. New multi-reflector design offers a 60% longer and wider range of illumination combined with cooler, longer-life operation.



NEW Sharper, more sleekly designed tail cowl and side covers emphasise the Hornet's look of speed and performance, with large, bright multi-reflector taillight incorporated into underside of tail.

NEW Innovative new fuel-cut system permits carburettors to be used in combination with low-emissions catalyser system. Newly integrated Air Induction system also contributes to cleaner exhaust emissions.

NEW Front and rear suspension systems revised with stronger spring rates and new damping settings for smoother and sharper response, and more progressive and confident handling both on the road and on the track.

NEW Large-capacity stainless steel 4-2-1 exhaust system features new, aggressively angled design and newly integrated heat tubes and catalyser for cleaner emissions while enhancing the engine's impressive sound and overall performance.

Lightweight, simply designed Mono-Backbone frame provides excellent rigidity for sporty riding performance while drawing attention to the engine's impressive exterior design.

NEW Powerful, aggressively tuned 600cm³ liquid-cooled inline-4 engine features modified intake ports, new dual ignition programming maps and other refinements for smoother, stronger and more responsive power delivery coupled with improved fuel economy.

Lightweight triple-spoke wheels stopped by wide-diameter 296mm floating front disc brakes with responsive dual-piston callipers for smoothly controlled braking response.

Photo: ED type

2003
HORNET
PRESS INFORMATION

Introduction

Since its 1998 launch, Honda's slim, exciting CB600F Hornet has attracted a large and dedicated following of European riders who have fallen in love with its tough, no-nonsense looks and light, quick-handling performance. Currently produced at Honda's Atessa factory in Italy, the Hornet, or CB600F, has become especially popular in its home base, as well as in Great Britain and many other countries on the Continent. Its owners can often be seen investing in a more 'personal touch,' sometimes going to remarkable extremes to customise their mounts with bright paint and shiny bits that bring out the Hornet's wild side.

While a bit slow to catch on in its first year in production, the Hornet's popularity soon grew to see it become one of the best sellers in the mid-sized 600cc class, with over 20,000 units sold over each of its last three years. In fact, the entire mid-sized naked class has become so popular of late that sales have surpassed the Supersports to become the largest and fastest growing motorcycle category in Europe.

Much of the Hornet's sales are generated by new, young riders graduating up from smaller-displacement scooters and bikes, who are attracted by its sleek, hard-charging looks, strong performance and relatively low cost, while many older and more experienced riders have become smitten with its spare, 'back to basics' styling and crisp, light-handling performance.

Featuring a powerful inline-4 engine based on the then-current CBR600F's race-winning powerplant and tuned for stronger low-to-midrange performance, the Hornet delivers a thrilling surge of acceleration that keeps its excitement level running high. So high, in fact, that the Hornet has also become a popular choice for high-thrill/low-cost club racing, and is even featured in several series of popular one-make races throughout Europe called the Hornet Cup.

Now, after five years in production, the Hornet's development team felt that the time had come revive their original streetfighter's popularity with a fresh, new appearance and detailed performance refinements that conscientiously respond to a small list of frequently requested changes. Especially following so closely after the 2002 debut of the new Hornet 900, which has served to further boost the Hornet image with the muscle of its retuned FireBlade engine.

With this in mind, the Hornet 600's development team sought to build on these successes with a new look and feel that more effectively demonstrate the close 'bloodline' coursing through the two Hornets, yet still maintain the most popular attributes of this superb midsized riding machine. Thus, the team set out to make more 'evolutionary' changes and improvements, with extensive attention paid to refining the details that make such a great bike even better.

Development Concept

The Hornet has won a lasting reputation for light, responsive handling, powerful engine performance, a compact but sharply distinctive design, and an inherent feeling of quality and ease of use that impressively complement its relatively low entry price. Its only changes so far have come in the form of a larger 17" front wheel to replace its original 16" rim, along with other detailed improvements adopted on the 2000 model in line with the introduction of the half-faired Hornet-S.

Interviews with riders over the years turned up a concise ‘wish list’ of personal desires, which varied depending on each rider’s priorities. For those with more of a competitive streak, and especially those actually going racing with their Hornets, there was a strong wish for stiffer suspension settings to stand up to the extremes of braking and cornering forces. For those whose riding preferences extend to farther horizons, a longer riding range on a tank of fuel rated the top priority. Another priority for the development team members themselves was an even sharper, more aggressive form that boldly expresses the Hornet’s road-burning streetfighter performance even when standing still.

All these desires and more were carefully studied, weighed against each other and integrated into the initial design phase, then carefully matched for the best overall balance of form and function to realise a sharper jolt of performance that gives a potent punch to the new Hornet’s ‘street cred,’ while winning fast friends with its even smoother and easier operation, and delivering a firm response to modern concerns for environmental protection.

In their quest for an impressive new design, the Hornet’s development team set out to create some unique and unmistakable marks of distinction to set the new Hornet apart from every other naked bike in its class, starting with a new ‘Edged Sexy Form,’ and sharper, more responsive handling overall. The team even concentrated on design touches that are more often than not considered to be a

necessary but not particularly interesting afterthought, like the headlight and indicators, to give the new machine more of that indefinable ‘little extra’ that spells the difference between a merely good motorcycle and a great one.

Styling

The dynamic design of the new CB600F Hornet advances its original Performance Naked concept with an even stronger, more aggressive look which bears a distinct familial resemblance to the recently introduced 2002 Hornet 900. Showing the impressive results of the development team's main design goal of creating an 'Edged Sexy Form,' the new 2003 Hornet is easily distinguished from its earlier iteration by its sharper and wider new fuel tank and seat cowl designs, as well as its new headlight and instruments, new exhaust silencer and even new side covers, which suggest the powerful lines of a twin-spar frame in their design. Joining together to create an impressive new look of high performance, these changes boldly serve to reassert the new Hornet's position as the leader of the mid-displacement Naked class.

New, More Sharply Styled Fuel Tank

Attracting attention with its more angular and aggressive, downward sloped lines, the Hornet's new fuel tank features a one-litre increase in capacity, taking it up to 17 litres, which combines with other performance improvements to realise nearly a 10% increase in its overall average touring range on a charge of fuel. This new fuel tank is also equipped with a new hinged, flush-surface fuel cap which greatly facilitates topping-up operations and, riders will be pleased to know, is a tad more difficult to leave behind at the pumps.

New, More Comfortably Contoured Seat

The new Hornet's seat cowl also features a slimmer, more aggressive side profile, with a longer new seat that shifts the rider approximately 15mm forward of its current design for greater rider positioning freedom, as well as more centralised mass for quicker, more effortless changes of direction. The pillion section of the seat

has also been totally redesigned, replacing the more pronounced forward tilt of the current model with a wider, more level perch that offers a greater feeling of solid security and comfort on longer rides. A new raised hump at the front centre of the seat helps keep passengers from sliding forward into the rider under hard braking, while the aluminium grab rail behind the seat is basically the same piece used on the current model, and provides a firm and comfortable grip. More space has also been made under the seat for carrying larger sizes of U-locks.

Newly Developed Round Twin-Bulb Headlight

Another highlight of the Hornet's new design is its unique new headlight. Even at first glance, this new 'face' stands out from the crowd as dramatically different from all other typical, round motorcycle headlights, its unique new 'ridged' convex lens providing a strong visual accent on its distinctively innovative design. Closer inspection through the clear lens reveals not one but two bulbs installed within the headlight's large, dual-section reflector.

Replacing the current Hornet's conventional steel reflector and glass lens is a lightweight new polycarbonate lens bulging prominently out in front of a larger-diameter (up from ø169 up to ø180mm) die-cast aluminium reflector body which has been specially moulded for a precisely optimised area of illumination. Its upper single-filament 55W H11 low beam bulb projects a broad range of brilliant illumination that covers fully 70% more area than a comparable round single-beam headlight with the same rated output. The lower high beam's identical single-filament 55W H11 bulb further extends the headlight's illumination area by another 60% for a 20m longer throw of bright, high-visibility lighting than the same conventional high beam, and a remarkably brilliant view of the night-time road ahead.

Thanks to its computer-designed, free-form multi-reflector interior surface, this new headlight more efficiently uses every lux of the bulbs' output to illuminate the road ahead. Its new design also requires no light-blocking baffles—save for the very

tips of the bulbs themselves—to reduce annoying glare for oncoming traffic by obstructing the bulbs' output.

The headlight's two new H11 single-filament bulbs also achieve a 400% longer average bulb life compared to conventional H4 dual-filament bulbs. The new aluminium reflector and polycarbonate lens also more effectively wick away interior heat for cooler operation, thus making possible a more compact headlight design.

Even the headlight's chrome-plated free-form pressed steel rim has been specially constructed to conform to the unique curves of the lens, enhancing its look while effectively sealing out wet and weather for assured operation. And to top-off its striking new look, the new headlight is held in place by a set of cast aluminium stays like those used on the Hornet 900, which hold the headlight in close proximity to the instrument pod for a more solidly integrated look.

Like the Hornet 900, the new Hornet's taillight is cleanly integrated into the underside of its sleek, new knife-edge tail cowl. Its set of compact, angular multi-reflector indicators produce a brilliant output that belies their compact size, and provide an aggressive 'trick' look that really complements the new machine's lines.

Of course, modifications were not only made to the Hornet's looks, but also to its inherent feel of quality. These small but significant changes include such unseen improvements as larger rubber grommets and patches under the fuel tank to damp out noise, and rubber mounts under the seat to minimise buzzy vibration. Weight modifications to the dynamic dampers installed behind the Hornet's sleek aluminium step holders help minimise the transfer of mechanical vibration to both rider and passenger.

Colouring Concept

The new 2003 Hornet will be released in four colour variations that provide a strong accent on its sharp and lively performance. Leading the way is a darker new shade of the candy blue that graced the original Hornet. Following this is mean-looking all-black version that will surely have wide appeal, looking poised to tear up the streets. Next up is an all-new matte finish metallic silver that further extends the Hornet's look of raw metal and gritty performance while offering a unique attraction. Finally, a new pearlescent white provides a brilliant contrast with the Hornet's darker engine, seat and wheels.

On its two darker coloured versions, the Hornet's larger new sidecovers are coated in the same neutral, matte-finish metallic grey used on the engine to unify its look of quality and performance. The lighter coloured pair feature a sultry matte finish dark grey that perfectly complements the black seat and wheels while providing an eye-catching contrast to the flashier body parts.

The Hornet's attractive triple-spoke wheels on all versions are coated in a lustrous dark metallic grey that complements the Hornet's wide tyres to express a look of high-velocity performance.

Colours

- Candy Xenon Blue
- Black
- Matte Plutonium Silver Metallic
- Pearl Cool White

Engine

The new Hornet's engine is essentially the same unit powering the current model, itself a variant of the popular 1998 CBR600F's engine, but featuring a host of modifications big and small that result in improvements in both performance and reliability, while bringing it up-to-date with the latest advances in environmentally friendly pollution control.

Much of this work was concentrated on the engine's intake and exhaust flow to gain improvements in both combustion efficiency—and its related performance gains—and pollution control. Intake ports, for instance, feature a new, slightly narrower shape that greatly improves transient linearity for smoother and more responsive power characteristics.

The Hornet's digital computerised ignition system was also modified with two separate map settings for the outer cylinders (1 and 4) and inner cylinders (2 and 3) that best match the changes in the engine's intake and exhaust systems for smoother, more responsive performance at all speeds and throttle angles. While valve timing and lift remain unchanged from the current model, refined cam profiles realise a sharper feel of speed and acceleration.

Even the aircleaner was changed, with a new dry paper element replacing the current viscous unit, and a larger aircleaner duct providing ample flow of cool, stable air to the carburettors.

Innovative New Fuel-Cut System

The most significant change made to the new Hornet's engine is in its fuel delivery system, which permits the addition of a low-emissions metal catalyser while retaining the current Hornet's carburettor induction system instead of making the more complicated jump to programmed fuel injection. Catalysers are, of course, currently the most effective means of removing such emissions as carbon monoxide,

hydrocarbons and nitrous oxides from an engine's exhaust, but in order to successfully complete this operation they must first be heated to extremely high temperatures of over 300°C.

Another critical imperative in this design is that no raw fuel must ever come in contact with the super-heated element, as the resulting combustion heat would quickly corrode and severely damage the element itself, leading to degraded performance and eventually to expensive repair bills. Conventional carburetted systems can allow fuel to flow into and through the combustion chambers without being ignited and burned if for any reason the ignition is cut—as might occur when the rev limiter kicks in or if the ignition were switched off while the engine is revving—with potentially disastrous results.

In a new modification to the Hornet's current high-performance carburettor system, the air entering the float chambers is controlled by a switching solenoid valve that reacts instantly to ignition status. During normal operation, air from a sub-aircleaner is fed to the float chambers to maintain their inner air pockets at ambient air pressure. The lower pressure resulting from air rushing through the intake ports then draws fuel up into the ports to feed the combustion chambers. All standard procedure for carburettor designs going back many generations.

What sets the new Hornet's carburettor system apart from all the rest is—in the case of a loss of electrical charge to the ignition and, by extension, the spark plugs—the above solenoid instantaneously switches the air source to the float chambers over from the sub-aircleaner to the interior of the intake ports themselves, equalising the air pressure of the ports and float chambers, and thereby instantly stopping fuel from entering the combustion chambers.

This simple yet highly effective new system thus permits a catalyser to be safely and effectively used with a carburetted motorcycle, with no worries of the catalyser being damaged by the combustion and chemical reaction that would result from contact with raw fuel.

New Integrated Air Induction System

The new Hornet's engine also features a revised internal Air Induction system, which feeds that fresh air directly from the aircleaner to the engine's exhaust ports, extending the combustion of any partially burned exhaust gases into the exhaust port and thereby making a significant contribution to further reduced emissions. This updated design features air lines drilled directly through the head, as is the case with most of Honda's more modern engines, and eliminates the need for the sub-aircleaner assembly and related hardware currently taking up space above the Hornet's engine, for a cleaner, less cluttered and more impressive engine look.

New Low-Emissions Exhaust

Accentuating the new Hornet's bold look of performance is a new stainless steel 4-into-2-into-1 exhaust system and silencer, which is now angled higher to more closely follow the lines of the slim new seat cowl. This new, large-capacity silencer also features a slick, new slash-cut end with the exit hole of its large pressed stainless steel end cap pointing straight back to project a more aggressively attractive machine image. The beautifully polished stainless steel finish of the long, canister-style silencer underlines the tail's speedy looks with an impressive shine.

Inside, the system features a pair of catalytic heat tubes installed just behind the joints joining together the four headers. These heat tubes perform the second step in emissions reduction, following after the newly integrated AI system, by scrubbing the exhaust and quickly raising the temperature inside the exhaust system to allow the 300-cell catalyser element (installed in last section of tubing extending up to the silencer) to reach its optimum operating temperature. This catalyser element then performs the final scrub of the exiting exhaust gases to reduce emissions of carbon monoxide, nitrous oxide and hydrocarbons to well below mandated EURO-2 levels for cleaner output that still maintains the Hornet's superbly strong performance.

The Hornet's distinctive silencer also features a 3-pass internal configuration that reduces internal pressure build-up to produce a stronger, more satisfying exhaust sound—as well as stronger performance—which will no doubt be regularly enjoyed with the quicker, more aggressive new Hornet.

Another important factor in achieving lower exhaust emissions is maintaining well-controlled engine temperatures. Therefore, in order to increase the Hornet's overall cooling efficiency, its radiator was widened by 20mm to 380mm for a significant contribution to stable operating temperatures in the interests of lower emissions.

Chassis

The fundamentals of the Hornet's frame and chassis remain essentially unchanged from its debut. However, a host of detailed modifications add up to major improvements in its handling and control. Built on the same slim, rigid and lightweight Mono-Backbone frame configuration with which it first debuted, the Hornet's large, rectangular-section steel backbone and seat rail provide excellent support in a remarkably simple design for sure, highly responsive handling. This frame also grips the engine as a central stressed member in a diamond mount that provides the added attraction of an impressive, unimpeded view of the engine's mean mechanical look. Detailed modifications, such as repositioning the swingarm pivot for improvements in overall rigidity and other improvements make the frame a completely new creation, and thus incompatible with the current model.

Firmer, More Responsive Suspension Systems

In the pursuit of sharper, more responsive handling and hotter, more competitive performance, the Hornet's suspension systems were also re-examined and revised. Up front, finely retuned fork settings realise smoother and quicker damping response throughout the suspension stroke, while a stronger spring rate and revised damping settings contribute to more progressive operation that makes possible smoother, faster and more assured changes of direction both on the road and on the track.

At the rear, the single monoshock damper's settings were increased for a firmer, more progressive and confident feel tracking through the corners and twisties. As before, the direct-mounted damper features 7-step spring preload adjustability.

Further assuring the new Hornet's instantly responsive handling performance are newly developed OEM tyres produced by Metzler and Michelin, which join the Hornet's currently mounted Bridgestones in featuring a new tread pattern for

enhanced control and riding feel under the widest range of street and track conditions.

Braking control is another area where the new Hornet shines. Up front, its pair of lightweight and compact dual-piston callipers are mounted with sets of high-grip brake pads which quickly and effortlessly slow lightweight, wide-diameter 296mm floating rotors with a fine-tuned hydraulic ratio that ensures smoothly controlled response over a wide range of road and track conditions. The Hornet's compact single-piston rear brake calliper grips a 220mm disc rotor for a peerless balance of braking control.

Equipment

New, Fully Electronic Instrument Display

The Hornet's high-accuracy, fully electronic instruments are also all-new, and feature a sleekly modern design with an integrated dual-canister look that combines with the new dual-bulb multi-reflector headlight to give a concentrated look of aggressive intent to the Hornet's new 'face.' The large, white-face dials provide an easy view, day or night, and the tachometer features a temperature gauge integrated into its design. Inside the speedometer, an easy-to-read LCD provides digital readouts of odometer, dual trip meter and clock readings, which are selectable with the rubber-covered buttons integrated into the lower panel alongside the turn indicator LEDs.

The rest of the Hornet's indicator lights are collected behind the central plastic lens, and include a fuel reserve warning LED that lights up when less than 3.5 litres of fuel remain in the fuel tank, and a blinking red H.I.S.S. warning light to warn away potential bike thieves.

Like several of Honda's latest sports bikes, the Hornet's instruments come alive with a startup routine that first sweeps the speedometer needle up to full throw and then back down again, immediately followed by the tachometer, while LEDs and LCD segments light-up to confirm operation.

New Honda Ignition Security System (H.I.S.S) Protection

Like many of Honda's most recent road bikes, the new Hornet comes fully equipped with the highly capable H.I.S.S. anti-theft system, which features a fail-safe electronic interlock that prevents the engine from being started in any other way than using the motorcycle's two original keys. Totally disabling the engine at the very heart of its ignition system, the system cannot be bypassed by either hot-wiring

the ignition or exchanging the ignition switch module, thus effectively deterring joyriders and greatly reducing the possibility of ride-away theft.

Optional Equipment

• Providing a sharp and refreshing complement to the Hornet's naked look, a light grey-tinted clear polycarbonate meter visor was designed to surround the headlight and provide a measure of wind deflection from the rider's chest area at speed while also helping to keep the bugs away.

• A motion and vibration-sensitive anti-theft alarm complements the Hornet's H.I.S.S. immobiliser security by warding off potential tamperers and thieves with a piercing wail. Equipped with a pair of compact push-button remote controllers, the system provides operating convenience to match its enhanced security. The Hornet has also been specially equipped with mounting and connection hardware to facilitate installation.

• A set of electric grip heaters to provide an extended range of cold weather riding comfort.

• An attractive chrome-plated radiator cap.

• An adhesive-backed tank protector pad set designed to provide extra protection from scuffing and scratches.

• A compact yet extremely handy-to-use magnetic tank bag for carrying a variety of riding necessities.

• A hooking cargo net for carrying larger parcels on the rear passenger seat.

• Sturdy U-locks designed for extra anti-theft security and easy storage under the Hornet's seat.

• An easy-to-use maintenance stand that securely lifts the Hornet off its wheels for easier access to hard-to-reach locations.

• A rugged, full-coverage bike cover to protect the Hornet from rain and the elements.

Specifications	HORNET (ED-type)
Engine	
Type	Liquid-cooled 4-stroke 16-valve DOHC inline-4
Displacement	600cm^3
Bore x Stroke	65 × 45.2mm
Compression Ratio	12 : 1
Max. Power Output	71kW/12,000min^{-1} (95/1/EC)
Max. Torque	63Nm/9,500min^{-1} (95/1/EC)
Idling Speed	1,300min^{-1}
Oil Capacity	4.2 litres
Fuel System	
Carburation	34mm slanted flat-slide CV-type x 4
Aircleaner	Dry, cartridge-type paper filter
Fuel Tank Capacity	17 litres (including 3.3-litre reserve)
Electrical System	
Ignition System	Computer-controlled digital transistorised with electronic advance
Ignition Timing	7˚ BTDC (idle) ~ 47˚ BTDC (13,000min^{-1})
Sparkplug Type	CR9EH-9 (NGK); U27FER-9 (ND)
Starter	Electric
Battery Capacity	12V/6AH
Headlight	12V 55W (low) / 55W (high)
Drivetrain	
Clutch	Wet, multiplate with coil springs
Clutch Operation	Mechanical; cable-actuated
Transmission Type	6-speed
Primary Reduction	1.864 (82/44)
Gear Ratios	1 2.929 (41/14)
	2 2.063 (33/16)
	3 1.647 (28/17)
	4 1.368 (26/19)
	5 1.200 (24/20)
	6 1.087 (25/23)
Final Reduction	2.800 (42/15)
Final Drive	O-ring sealed chain

Frame

Type	Mono-backbone; rectangular-section steel tube

Chassis

Dimensions	(LxWxH)	2,100 x 710 x 1,070mm
Wheelbase		1,420mm
Caster Angle		25° 45'
Trail		98mm
Seat Height		790mm
Ground Clearance		140mm
Dry Weight		178kg
Kerb Weight		200kg (F: 100kg; R: 100kg)
Maximum Carrying Capacity		188kg
Loaded Weight		350kg (F: 131kg; R: 219kg)

Suspension

Type	Front	41mm telescopic fork, 120mm axle travel
	Rear	Monoshock damper with 7-step adjustable preload, 128mm axle travel

Wheels

Type		Hollow-section triple-spoke cast aluminium
Rim Size	Front	17M/C × MT3.50
	Rear	17M/C × MT5.50
Tyre Size	Front	120/70–ZR17M/C (58W)
	Rear	180/55–ZR17M/C (73W)
Tyre Pressure	Front	250kPa
	Rear	290kPa

Brakes

Type	Front	296 x 4.5mm dual hydraulic disc with dual-piston callipers, floating rotors and sintered metal pads
	Rear	220 x 5mm hydraulic disc with single-piston calliper and sintered metal pads

All specifications are provisional and subject to change without notice.