HONDA *Come ride with us.*

# Hornet

## *Introduction*

**The 600cc class has been a hotbed of performance and style for several years now, with racer replicas and standards commanding major shares at either end of the market. Honda's own CBR600F has become a respected centrepiece in the Super Sport segment of the class, dominating both the racing scene and dealer sales charts for over ten years. However, Honda has not had a high-performance entry in the 600cc standard class for quite some time. Over the last few years, Honda's engineers have noted a burgeoning trend toward the re-discovery of 'naked' machines that offer a solid, yet exhilarating fusion of performance, simplified style, and comfort as the most versatile answer to a wide range of riding interests and needs. Although these machines might not be the quickest or the best in any head-to-head comparison with more narrowly focused bikes, they do offer an all-encompassing blend of riding enjoyment that goes right to the heart of the motorcycling experience.**

Another exciting trend that found a rabid following on the outer fringes of Europe's motorcycling world for several years, but has recently won a more mainstream following, has been the 'Streetfighter' cult of radically restyled and hopped-up motorcycles that often include completely stripped Super Sport bikes reduced to the barest essentials for outrageous performance.

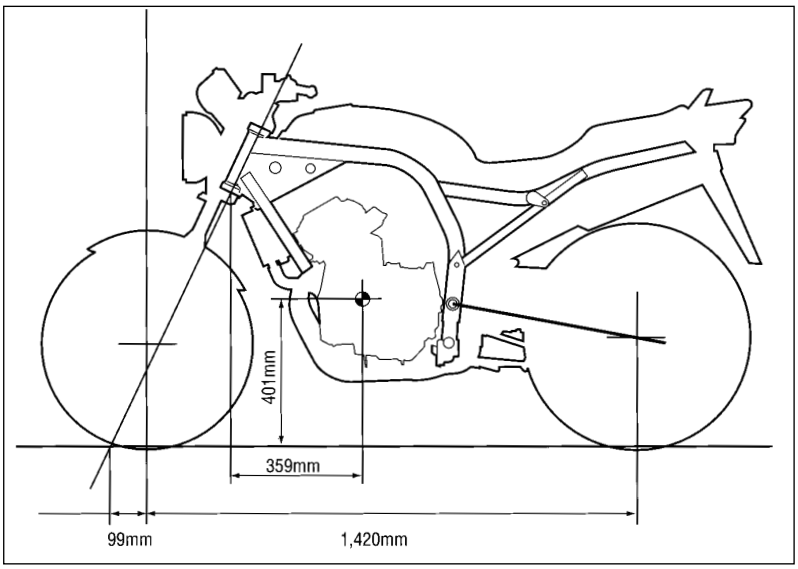
Based on one of its most popular 250cc-class domestic models, Honda set out to develop an aggressively styled middleweight fighter that delivers a big handful of powerful excitement with a class-leading power-to-weight ratio and lightweight handling feel to match. The basic idea was simple: shoehorn a fire-breathing hundred-horsepower inline-4 engine from none other than Honda's own class-leading CBR600F into the ultra-compact bare-bones chassis of a 250cc-class Streetfighter rolling on the wide, meaty tyres of Honda's own Fireblade hyper-bike and shorn of anything that doesn't turn up the juice on its electrifying jolt of performance. Then stand back and see what happens.

## Design Concept

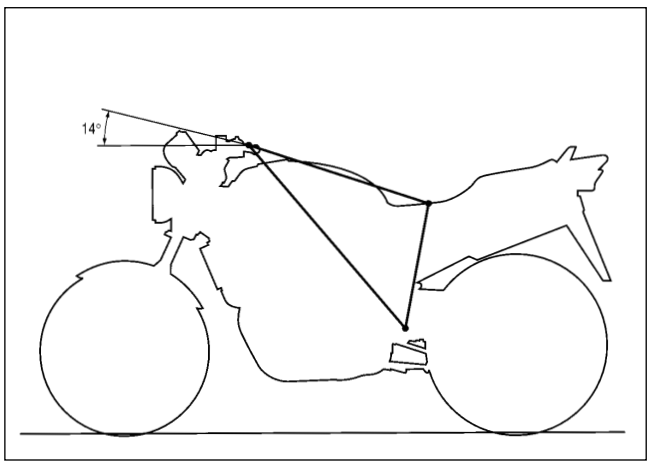
**The Hornet takes the lightweight and agile underlying design themes of the CBR600F to new extremes with its striking bare-bones design and maximized 'fun' quotient. More sport-oriented than any other stripped 'standard' or 'naked' machine, the new Hornet is designed with compact proportions that extend its riding enjoyment to all ages and genders. Notably, the new Hornet should offer outstanding attractions to the rapidly growing number of women riders who are looking for a big dose of motorcycling fun and excitement, but perhaps not with the size and bulk that often comes with it.**

Taking its name literally, the Hornet's wildly shaped fuel tank curves sharply in at the 'waist' and then widely out to follow the lines of the seat cowl as it elegantly tapers to its tail, much like the insect from which this road runner gains its name. Offering a perfect fit for smaller riders, the new Hornet delivers a power-to-weight ratio that will have anybody shrieking for joy in their helmet from the first twist of its throttle. Light weight, compact proportions, eye-catching style and heart-stopping performance. The new Hornet provides an exhilarating combination of exciting features unlike anything that's ever come before.

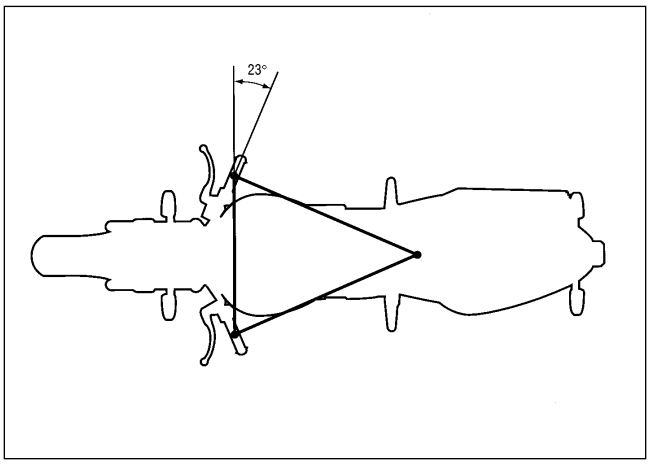
**Frame Geometry**




**Riding Position (side view)**




**Riding Position (top view)**



## *Colouring Concept*

A new concept in midsized streetbikes, the highly aggressive new Hornet will be bombing through the streets in three attractive colour variations that will call as much attention to its uniquely sporty form as its sharply edged styling and big upswept exhaust system. In fire-breathing candy red, the Hornet shrieks of high-performance that begs to be used. Shimmering metallic silver gives the Hornet a high-tech sheen that sets off its rugged, business-like engine and big, meaty tyres. Finally, a blissful candy blue projects a sleek sophistication that just barely disguises the tiger hiding within. With silver-painted engine hanging tough within the Hornet's spare frame, all variations feature black-painted wheels that make its wide, high-performance tyres look all the bigger and meaner.

**Colours**

- Candy Blazing Red
- Boon Silver Metallic
- Candy Tahitian Blue

## Engine

**Based directly on 599cm³ powerplant powering Honda's best-selling CBR600F to racing victories around the world, the Hornet's engine has had its peak power reduced to 96PS in pursuit of a stronger balance of low-to-midrange punch. Tuned for a broader range of power, the engine produces strong, aggressive torque throughout the 3,000 – 7,000rpm range, with its maximum torque peak lowered from the CBR600F's 10,500rpm to 9,500rpm. To help minimize internal friction in order to maximize power, the engine uses the same slipper pistons as the CBR, as well as single valve springs that help minimize frictional losses in the valve drivetrain.**

Originally designed to be hidden away behind a full-coverage fairing, the engine's rough-hewn lines give it a serious, hard-core mechanical look that reinforces the Hornet's image of raw, undisguised performance.

The engine's responsive 34mm slanted flat-slide CV carburettors replace the 36mm units on CBR600F for a stronger, wider rush of power that comes on low and keeps growing to an explosive peak. This combines with the Hornet's computer-controlled map-type ignition system to ensure strong, reliable performance throughout the rev range, and quick and easy starts on even the coldest mornings. Also taken directly from the CBR600F, the engine's smooth-shifting 6-speed transmission uses the very same gear ratios.

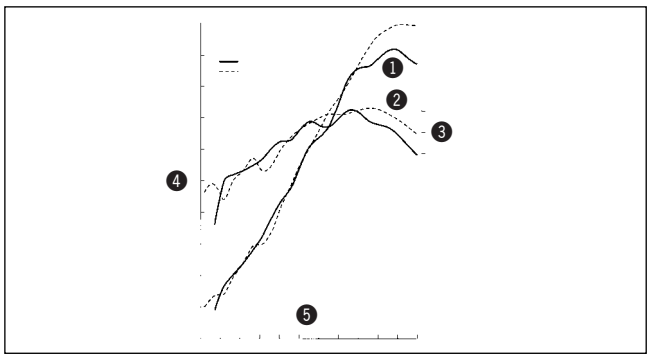
**Engine Performance Comparison**

❶ *Hornet*
❷ *CBR600F*
❸ *Torque (Nm)*
❹ *Power Output (kW)*
❺ *Engine Speed (rpm x 1,000)*

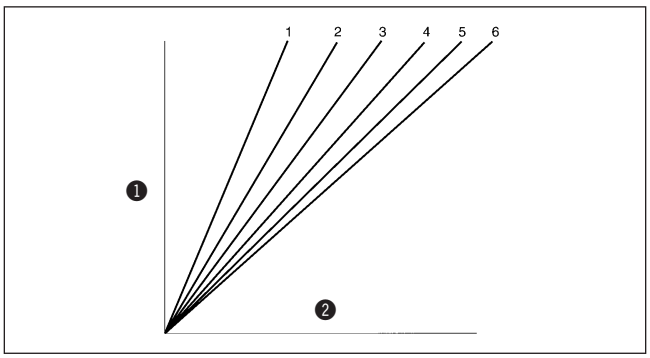
**Speed Chart**

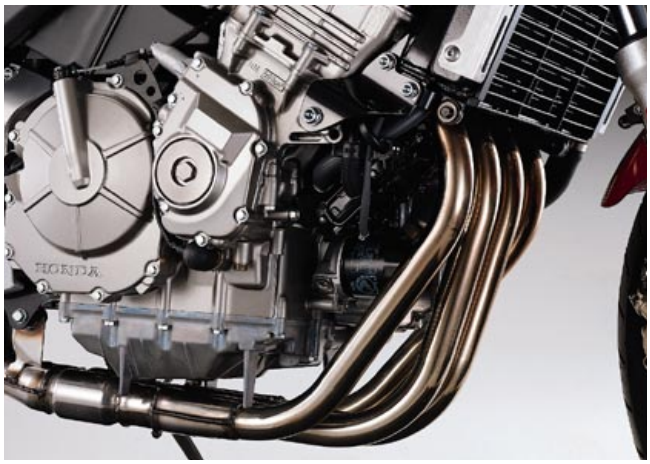
❶ *Engine Speed (rpm)*
❷ *Vehicle Speed*

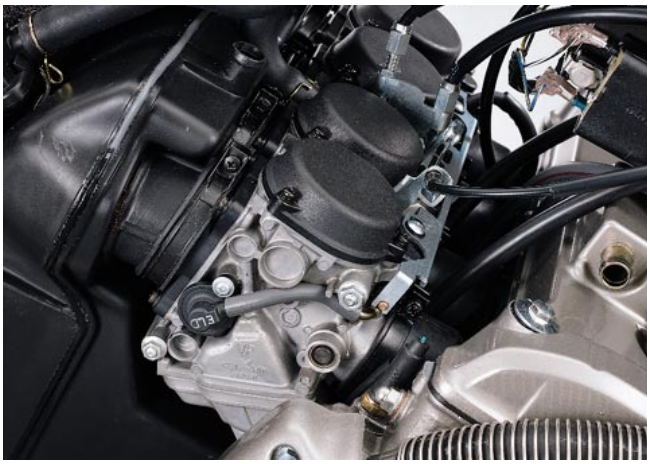
**Engine Performance Comparison**




**Speed Chart**





## Engine

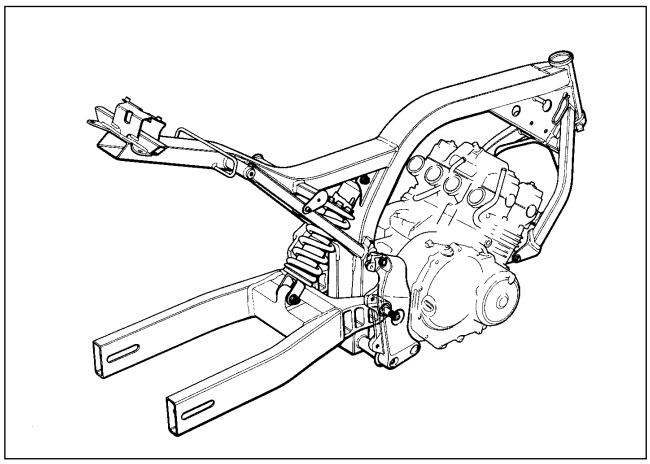
**Low-Pollution Air Injection System**
The Hornet's engine features a newly adapted air injection system that helps the engine meet EURO-1 emissions regulations by injecting stream of fresh air into exhaust port of each cylinder during the exhaust stroke to prolong burning of exiting gases for more complete combustion. The system's newly designed sub air box is mounted on the front of the engine, where it supplies cool air to ports.

**High-Mounted 4-2-1 Exhaust System**
Featuring a head-turning look and a soul-stirring sound, the Hornet's highly aggressive 4-into-2-into-1 polished stainless steel exhaust system feeds into a large-volume silencer mounted high up along right-side base of the seat cowl, where it provides top performance and a stirring exhaust note for the rider. The silencer is covered by an attractively designed stainless steel protection plate that protects rider and passenger legs from the heat of the exhaust.

### Unique 'Mono-Backbone' Frame

One of the Hornet's most innovative features is certainly to be found in the design and construction of its remarkable frame. Unlike the perimeter-style tubular steel frame used in the CBR600F, the new Hornet is built on a unique 'Mono-Backbone' configuration like that first introduced last year in Honda's dual-sport look SLR650. This lightweight and rigid frame is constructed of sturdy pieces of rectangular-section steel tubing laid out in a remarkable simple diamond configuration. Its main backbone reaches back from the steering head all the way down to the back of the engine cases, where it ties together the engine and swingarm pivot. This infinitely simple design concentrates all the bike's torsional stresses along a single axis that ensures confident control at all speeds. The frame's light weight and short wheelbase also combine to deliver sharper, more responsive handling. The frame's pair of pincher-like box-section engine hangers reach down from the steering head to grip the front of the engine as a central stressed member, while the frame's large rectangular steel seat rail reaches back from its welded junction with the main backbone and is supported by two triangulated box-section braces for optimal rigidity. Two large lightweight, open forged aluminium plates are mounted on either side of the rear base of the frame and bolted directly onto the swingarm pivot shaft. These pieces carry the foot pegs, levers, pillion peg extensions and related components while imparting a stylish high-tech design.

**Steel 'Mono-Backbone' Frame**

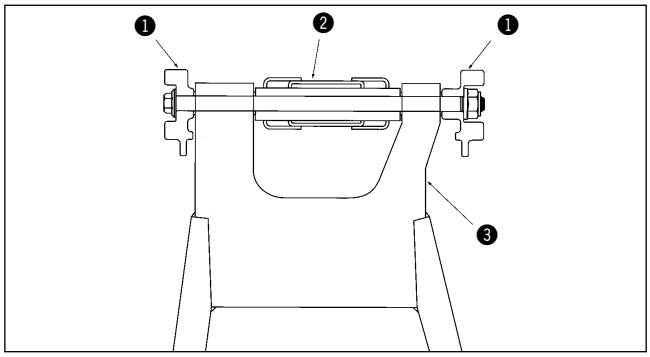


**Steel 'Mono-Backbone' Frame**
*(showing aluminium swingarm and monoshock rear suspension)*
*(Hornet 250 J-Type)*

**Swingarm Pivot Cross-Section**

❶ *Pivot plate bracket*
❷ *'Mono-Backbone' frame*
❸ *Swingarm*

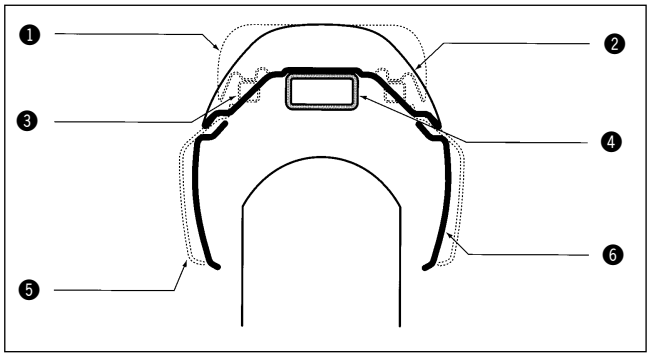
**Swingarm Pivot Cross-Section**




**Seat Cross-Section**

❶ *Standard seat profile*
❷ *Hornet seat profile*
❸ *Standard seat rails*
❹ *Hornet seat rail tube*
❺ *Standard sidecover profile*
❻ *Hornet sidecover profile*

**Seat Cross-Section**



**Simple, High-Performance Suspension System**

Set-up for an optimal balance of streetbike performance, the new Hornet's suspension features a 41mm non-adjustable front fork that offers aggressive yet smoothly compliant handling for most riding situations. At the rear, a single 'Monoshock' damper supports a massive-looking aluminium swingarm. Featuing large, 32 x 80mm rectangular-section spars, the swingarm is almost entirely constructed of big cut-and-welded sections of extruded aluminium to realize a highly rigid and lightweight design. Connected directly from the swingarm's upper cross-member to the back of the frame's main backbone, the 7-step spring preload-adjustable damper provides 128mm of comfortably controlled rear wheel travel.

**Big, Bold Wheels and Brakes**

Offering both the looks and performance of the raging Streetfighter it is, the Hornet's ultrawide-rimmed triple-spoke wheels mount large-section Z-rated tyres—in fact, the very same tyres used on CBR900RR Fireblade. The Hornet's reduced power and weight compared to the Fireblade combine to give these tyres the dual advantages of high performance and long life. Maintaining strong braking performance to match its power and handling potential, the Hornet mounts a responsive pair of large-diameter front disc brakes that feature dual-piston calipers gripping 296mm drilled floating rotors between asbestos-free resin mould pads. At the rear, a 220mm single-piston caliper disk brake ensures confident control.

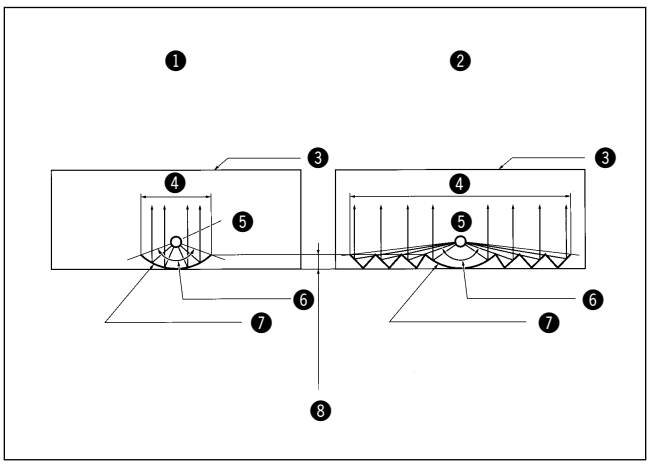

**White-Face Meters**
The Hornet's traditional-looking canister-style combination meters are mounted atop the steering head and feature bright white, easy-to-read faces. ISO-standard symbols are printed directly on the faces of all indicator lights to facilitate recognition in any language.

**Multi-Reflector Indicators**
The Hornet is equipped with brilliant, new-design multi-reflector indicators that feature a larger expanse of internal reflector area for righter, easier recognition over a wider area.

**Indicator Reflector Comparison**

❶ *Single-Reflector Type*
❷ *Multi-Reflector Type*
❸ *Lens surface*
❹ *Reflective surface area*
❺ *Light source*
❻ *Reflection angle*
❼ *Reflector surface*
❽ *Reflector depth*

**Indicator Reflector Comparison**



## *Equipment*

**Aluminium Rear Grabrail**

The Hornet's cast aluminium grabrail is designed with a broad, blade-like surface that offers a comfortable grip for the pillion passenger while complementing the shape of the sharply defined, streamlined tail section.

**Side-Access Tail Compartment**

The Hornet's relatively large 3-litre underseat carrying compartment features special mounts moulded in its base for carrying any of several sizes of U-type security lock.

## Specifications

| Specifications | | Hornet (G-type) |
|---|---|---|
| Engine | | Liquid-cooled 4-stroke 16-valve DOHC inline-4 |
| Bore × Stroke | | 65 × 45.2mm |
| Displacement | | 599cm$^3$ |
| Compression Ratio | | 12 : 1 |
| Carburettors | | 34mm slanted flat-slide CV-type × 4 |
| Max. Power Output | | 93.6PS/12,000rpm (95/1 EC) (68.7kW/12,000min$^{-1}$) |
| | | 96PS/12,000rpm (DIN) (70.6kW/12,000min$^{-1}$) |
| Max. Torque | | 6.2kg-m/9,500rpm (95/1 EC) (60.8Nm/9,500min$^{-1}$) |
| | | 6.4kg-m/9,500rpm (DIN) (62.7Nm/9,500min$^{-1}$) |
| Ignition | | Computer-controlled digital transistorized with electronic advance |
| Starter | | Electric |
| Transmission | | 6-speed |
| Final Drive | | 'O'-ring sealed chain |
| Dimensions | (L × W × H) | 2,090 × 730 × 1,060mm |
| Wheelbase | | 1,420mm |
| Seat Height | | 790mm |
| Ground Clearance | | 140mm |
| Fuel Capacity | | 16 litres |
| Wheels | Front | 16 × MT3.50 hollow-section triple-spoke cast aluminium |
| | Rear | 17 × MT5.00 hollow-section triple-spoke cast aluminium |
| Tyres | Front | 130/70 ZR16 (61W) (Michelin, Bridgestone) |
| | Rear | 180/55 ZR17 (73W) (Michelin, Bridgestone) |
| Suspension | Front | 41mm telescopic fork, 125mm axle travel |
| | Rear | Monoshock damper with 7-step adjustable preload, 128mm axle travel |
| Brakes | Front | 296 × 4.5mm dual hydraulic disc with dual-piston calipers, floating rotors and resin mould pads |
| | Rear | 220 × 5mm single-piston caliper hydraulic disc with sintered metal pads |
| Dry Weight | | 176kg |



All specifications are provisional and subject to change without notice.