



## Press Information 2000



Hornet-S



# Hornet-S

## *Introduction*

The last few years have seen a phenomenal boom in the popularity of unfaired, 'naked' motorcycles that offer sportbike-class performance at an easily affordable entry price. This popularity is representative of all displacement classes, but is especially prominent in the midsize 600cc class, where sales virtually trebled in 1996 alone. This phenomenon is partly explained by the surge of new riders who have

qualified for their full motorcycle licenses opting to go for a full-powered 600cc machine after having been limited through the term of their beginners' licenses to the machines offered in the 125cc class. Another contributing factor is the entry cost in this class, as 'naked' machines, by virtue of being generally shorn of expensive bodywork, high-tech aluminium parts and other styling touches that add

to their cost, provide a satisfying balance of performance, fun and excitement at an exceedingly reasonable price. Likewise, bare-bones naked motorcycles like the Hornet allow riders to add any of a wide range of after-market accessory parts, from bikini cowls to pannier bags and lots more in-between, to fit them to a rider's particular requirements or simply personalise their mount.





# Hornet-S

## *Development Concept*

In the two years since its introduction, Honda's lightweight, sleek and compact 'performance naked' Hornet has won a large following owing to its bare-bones look of spare 'streetfighter' bravado, and its aggressive combination of sharp, full-blooded power output and crisp, responsive handling, which together give the Hornet the highest power-to-weight ratio in its class.

Still, it was felt that for all the Hornet's sporty appeal, many riders—especially more mature ones—would appreciate a bit more in the way of creature comforts, and less of a beating from the wind when riding at the higher speeds that the Hornet itself is perfectly comfortable cruising at for long

hours at a time. So, with the goal of expanding the Hornet's appeal while maintaining the same fun factor that has won it renown, its design team investigated several possible modifications to enhance its riding ease, ranging from a tiny, handlebar-mounted bikini cowl to a full-coverage fairing that could provide all the protection anybody could desire. However, the first alternative seemed to be more of a styling exercise than a serious attempt to enhance the Hornet's riding ease with better wind protection, and the full fairing was dismissed as being too far from the Hornet's original 'Performance Naked' design ideals, and too close to the design parameters of a machine like the CBR600F.

The team thus decided on a half-fairing design that could provide ample protection from the main blast of wind without completely isolating the rider from the 'close to the elements' riding experience, while enhancing handling and maintaining the same fun factor that gives the Hornet its fundamental appeal. The new Hornet-S provides all the explosive performance of the original Hornet, augmented by the long-term riding comfort of a half-fairing that will appeal to an even larger cross-section of riders looking for something out of the ordinary.





# Hornet-S

## Colouring Concept

The new Hornet-S features three eye-catching colour variations for the Year 2000. First is an impressive solid black that boldly contrasts the dark lustre of its half fairing, fuel tank and seat cowl with the silvery painted and metal parts of its engine and chassis to project a lean and mean disposition that leaves no mistaking its single-minded devotion to high-powered riding enjoyment. Brightening the scene on any road the Hornet-S takes are a brilliant metallic silver that quickens the pulse with its

sparkling image of explosive acceleration and responsive handling, and a luxurious candy blue that highlights the distinctive curves of the Hornet-S' fuel tank to reinforce its look of aggressive power and 'take no prisoners' performance. The engine, step holders and rear grab rail also receive an attractive new paint job in the form of a slightly brown-tinted matte silver that complements the Hornet-S' body parts with a colour-coordinated look of finished quality.

### Colour

- Mute Black Metallic
- Candy Tahitian Blue
- Force Silver Metallic



Hornet-S - 20004 - E



# Hornet-S

## *Design Concept*

The only major difference between the new Hornet-S and its Hornet predecessor and sibling is the addition of its newly designed, frame-mounted half-fairing and its related modifications. This compact fairing slices cleanly through the wind to offer a more comfortable ride at the mid-to-high cruising speeds for which it was specially designed. Its three-piece design features wide-coverage side panels attached to a slimly designed central

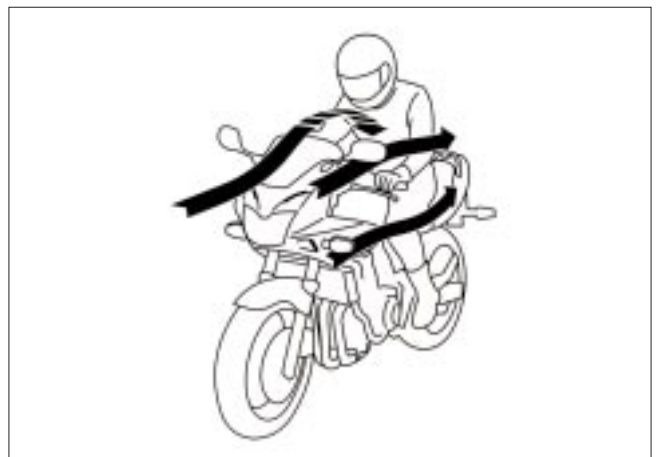
cowl, headlight and windscreen assembly, which is not only somewhat easier to produce, it helps reduce potential replacement costs. The side panels feature outward flares that further enhance the fairing's degree of upper body wind protection for a comfortable balance of long-term riding enjoyment.

To maximise its area of wind protection, the fairing features a pair of built-in ports located above its

headlight that help optimise the balance of air pressure on the inside of the windscreen to reduce the buffeting effects of turbulence on the rider's upper body. The fairing's flush-mounted single-bulb headlight is based on that used for the CBR600F, and features a wide, cat's eye look that provides a clear, brightly illuminated view of the nighttime road ahead.



Half Fairing Air Management Design



Hornet-S - 20005 - E



# Hornet-S

## *Design Concept*

Other styling additions that are also featured on the new Year 2000 Hornet include a shorter rear fender that offers a much more impressive view of its wide, Z-rated ZR rear tyre, and a brighter, high-lustre finish on the exhaust system that extends right under the engine to the upward-bent section leading

up to the silencer, which is painted matte black.

Since the fairing was specially designed for the Hornet-S alone, it cannot be bolted onto a standard Hornet owing to special modifications made to the frame and handling in order to accept it.



Hornet-S - 20006 - E

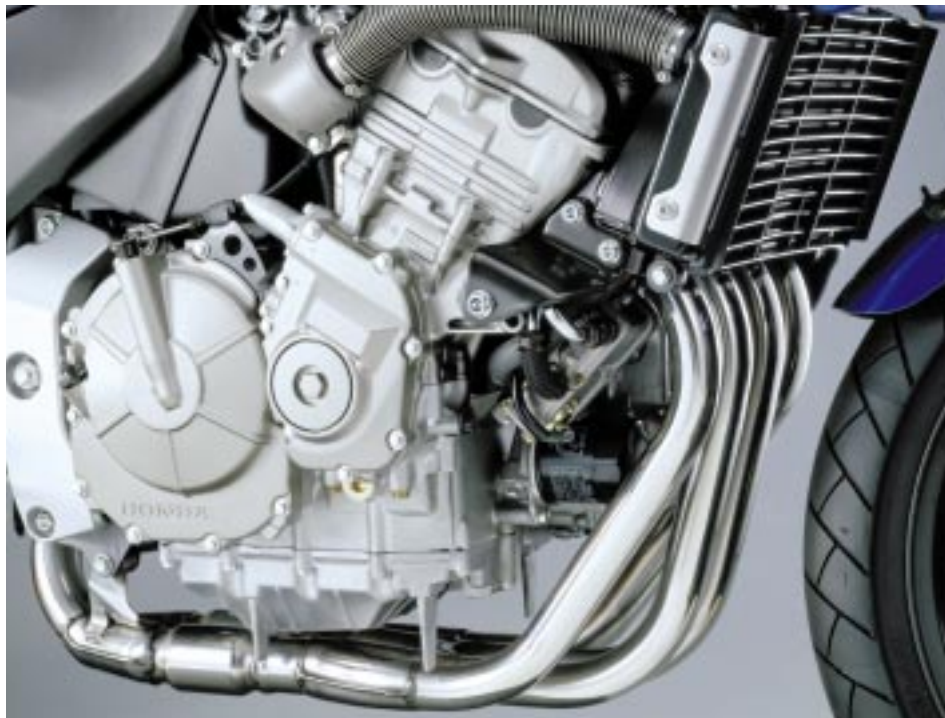


# Hornet-S

## *Engine*

The Hornet-S' powerful 599cm<sup>3</sup> engine is exactly the same unit that provides the standard Hornet with its superb range of performance. Like the current Hornet, the new Hornet-S features a lightweight 4-into-2-into-1 stainless steel exhaust system that empties into a large-volume silencer mounted high up under the right side of the seat, and a simple yet effective air injection system that reduces exhaust

emissions. Tuned for a stronger midrange punch, the engine produces strong, aggressive torque throughout its 3,000 – 7,000rpm range. Its responsive 34mm slanted flat-slide CV carburetors combine with a highly-refined, hot-firing computer-controlled, map-type ignition system to deliver a strong, torque-filled rush of power that comes on low and grows in a smooth line to an explosive peak.





# Hornet-S

## Engine

### New Single-Pulsar Ignition

The Hornet-S' digital computerised ignition system also features different timing setting for the inner and outer pairs of cylinders to compensate for heat differences between the cylinders and provide a more precise balance of performance that ensures strong, reliable performance throughout the rev

range, and quick and easy starts even when the weather turns cold. While a lightweight single-shaft balancer contributes to the engine's smooth, unruffled performance, modifications to the aircleaner's intake duct help improve midrange-to-high-end combustion to provide a further boost in the Hornet-S' acceleration and performance.

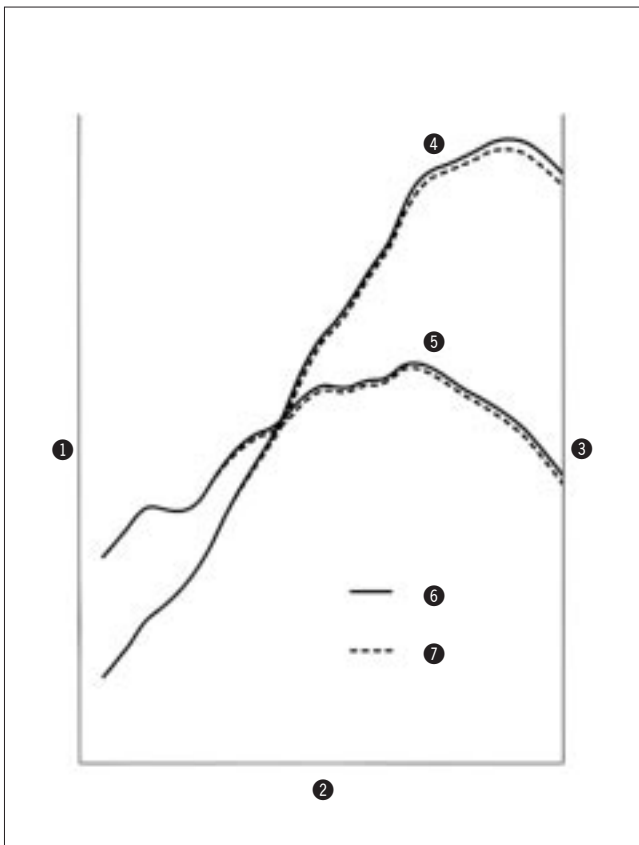
### Smoother Shift Operation

Gear shift feel has also been improved over the current Hornet. However, the Hornet's smooth-shifting transmission remains entirely unchanged. Instead, a new set of damper blocks was designed and installed to provide a snugger fit that minimises the lash and jolt of shift operation.

### Engine Performance Comparison

- ① kW
- ② Engine Speed (rpm)
- ③ Nm
- ④ Power
- ⑤ Torque
- ⑥ New Hornet & Hornet-S
- ⑦ Current Model

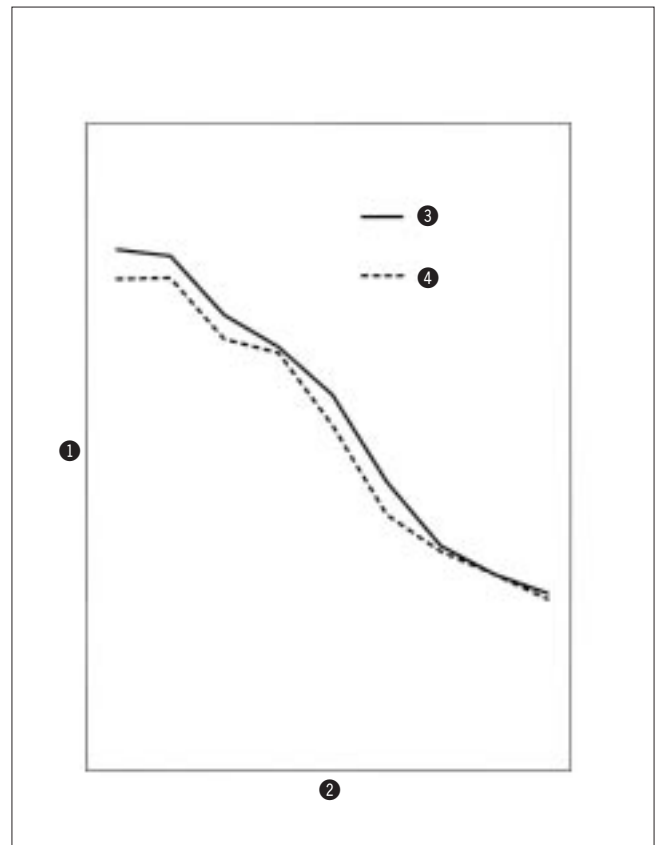
Engine Performance Comparison



### Fuel Consumption Comparison

- ① Fuel Consumption (km/l)
- ② Speed (km/h)
- ③ New Hornet & Hornet-S
- ④ Current Model

Fuel Consumption Comparison





# Hornet-S

## Chassis

To ensure that the Hornet-S provides the same degree of aggressive performance as its standard, unfaired sibling, great care was taken not only in its fairing design, but also in the design of the chassis on which it's mounted. Amazingly, in contrast with its perceived size, the addition of this new fairing only results in an additional 3kg of weight compared to the bare-bones Hornet.

The front fork was given a 5mm forward offset (from 35 to 40mm) to extend its trail and enhance riding feel, while still maintaining the light, quick control for which the Hornet has become renowned. A new 17" front wheel replaces the current Hornet's 16" rim, and mounts a high-performance, wide-

carcass Z-rated ZR tyre that further ensures light handling and enhanced riding feel. The new, more widely used 17" rim also makes available a wider assortment of replacement tyres when the time comes to put on a new set of treads. At the rear is mounted the same ultra-wide 17" tyre used on both the Hornet and the CBR900RR Fireblade.

Since the Hornet-S's fairing offers a broad area of wind protection, the riding position could also be made a bit taller to take advantage of the relative pocket of calm behind it. So, the handlebars were repositioned slightly back for a more relaxed reach to the bar than would be comfortable on an unfaired bike at top speeds.



Hornet-S - 20009 - E



# Hornet-S

## Chassis

### Enhanced Braking Control

Braking control is another area where the Hornet-S sees improvement over the original Hornet. Its set of high-grip front brake pads combine with a fine-tuned hydraulic

ratio to provide smoothly controlled response over a wide range of riding conditions. Likewise, several of the rubber brake lines used on the current Hornet were replaced with metal tubing to ensure crisp brake

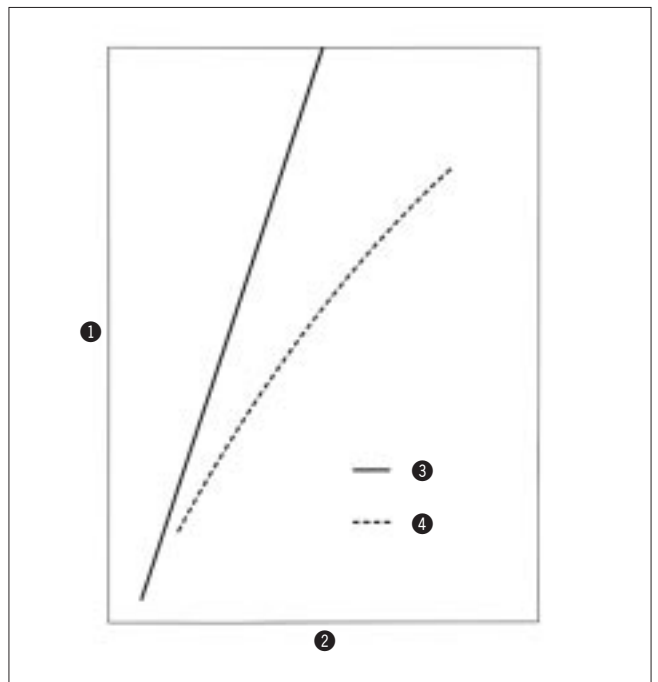
response even after repeated periods of hard braking. However, although the Hornet-S features smoothly responsive braking control, its brakes are not designed for the extremes of circuit racing.



### Front Braking Force Comparison

- ① Deceleration Rate (m/s<sup>2</sup>)
- ② Brake Lever Pressure (N)
- ③ New Hornet & Hornet-S
- ④ Current Model

### Front Braking Force Comparison



Hornet-S - 200010 - E



# Hornet-S

## *Equipment*

### **Slim, Fully Electronic Meter Panel**

Mounted inside the fairing's compact cockpit is an ultra-thin, fully electronic meter panel based closely on the unit used in the VTR1000F Firestorm. Its high-visibility layout includes a large, centrally positioned tachometer located high in the panel and a smaller speedometer positioned to its lower left. Both meters feature simulated carbon-fibre faces for an aggressive look of performance, while the unit's indicator lights are clustered together to the right for optimum visibility.

### **Decorative Step Guards**

The Hornet-S also features a set of sharp-looking bright red, dimpled plastic inner step guards that provide a smoother footing and protect shoes from wear while accentuating the Hornet-S' fast sport riding credentials.





# Hornet-S

## Specifications

### Specifications

### Hornet-S (ED-type)

Engine	Liquid-cooled 4-stroke 16-valve DOHC inline-4
Bore × Stroke	65 × 45.2mm
Displacement	599cm <sup>3</sup>
Compression Ratio	12 : 1
Carburettors	34mm slanted flat-slide CV-type × 4
Max. Power Output	95.3PS/12,000rpm (95/1 EC) (70kW/12,000min <sup>-1</sup> ) 97.5PS/12,000rpm (DIN) (71.7kW/12,000min <sup>-1</sup> )
Max. Torque	6.3kg-m/10,000rpm (95/1 EC) (64.6Nm/10,000min <sup>-1</sup> ) 6.5kg-m/10,000rpm (DIN) (66.6Nm/10,000min <sup>-1</sup> )
Ignition	Computer-controlled digital transistorised with electronic advance
Starter	Electric
Transmission	6-speed
Final Drive	'O'-ring sealed chain
Dimensions (L×W×H)	2,095 × 740 × 1,175mm
Wheelbase	1,425mm
Seat Height	790mm
Ground Clearance	140mm
Fuel Capacity	16 litres (including 3-litre reserve)
Wheels	Front 17 × MT3.50 hollow-section triple-spoke cast aluminium Rear 17 × MT5.50 hollow-section triple-spoke cast aluminium
Tyres	Front 120/70 ZR17 (61W) (Michelin TX15; Bridgestone BT56F) Rear 180/55 ZR17 (73W) (Michelin TX25; Bridgestone BT56R)
Suspension	Front 41mm telescopic fork, 120mm axle travel Rear Monoshock damper with 7-step adjustable pre-load, 128mm axle travel
Brakes	Front 296 × 4.5mm dual hydraulic disc with dual-piston callipers, floating rotors and sintered metal pads Rear 220 × 5mm hydraulic disc with single-piston calliper and sintered metal pads
Dry Weight	179kg

All specifications are provisional and subject to change without notice.