Designers Talk #7

CB1100

Design Top

The history of Honda's motorcycles began 60 years ago, as did the history of Honda's pursuit of ultimate motorcycle performance.

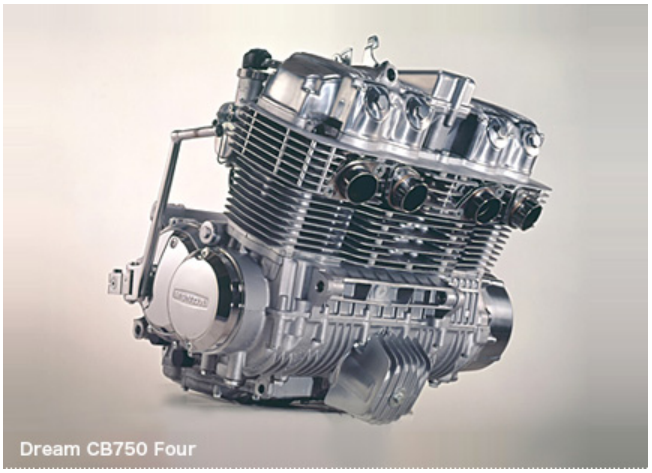
Striving to maximize both speed and rider comfort, Honda has taken on—and overcome—an extremely wide variety of challenges.

Honda's approach to motorcycle design

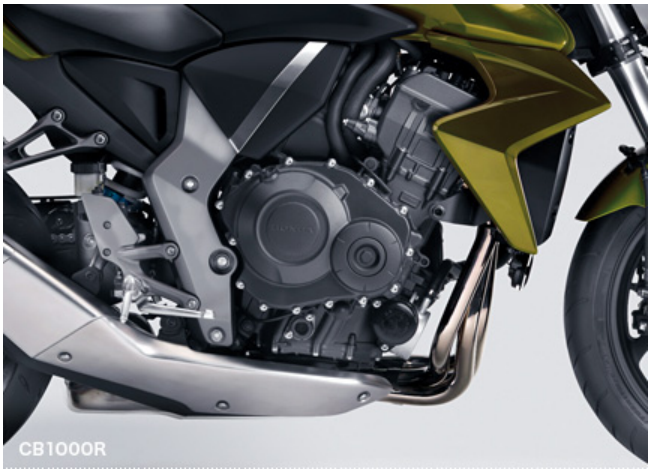
The steady evolution of Honda's motorcycles over the decades would not have been possible without Honda's distinctive approach to motorcycle design. For example, in pursuit of optimal engine performance, Honda advanced from air-cooled to liquid-cooled engine designs, eliminated the cooling fins once considered essential.

While enhancing engine performance, Honda sought also to increase handling stability. The rider has more forward-leaning posture on the bike for easier, more-fluid cornering. This and the addition of a cowl and fairings for enhanced aerodynamic performance make for a stylish design.

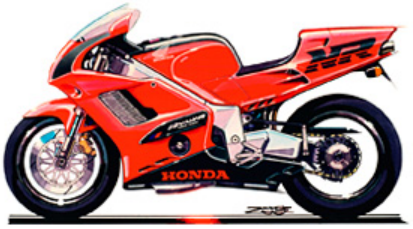
While Honda's bikes continuously attained new levels of performance, their designs also became more refined and stylish. In both performance and styling, Honda has always been ahead of the times, taking on tough challenges to produce such ground-breaking models as the NR750, the CBR900RR and the RC211V. These are just a few of the ground-breaking models that have exemplified Honda innovation over the years.



Both a feature and a motif, small fins cover the air-cooled engine of the 1970 Dream CB750 Four, increasing the amount of engine surface area with which air can come in contact.



The 2008 CB1000R, the high-performance naked bike that is so popular in Europe features a liquid-cooled engine, so its surface has no cooling fins.



The design of the 1992 NR750 gives it presence that instantly catches the eye—even in a parking lot filled with tens of thousands of bikes.

Boasting the ultra-high performance required of a super sport bike, the CBR900RR combined a large-displacement engine with an extremely compact design. Honda took on a great challenge to make commercial production of this model a reality.

The compact cowl and fairings of the RC211V, a racing motorcycle designed for elite MotoGP competition, completely upended the conventional wisdom on racing bike styling.

It just had to be an air-cooled engine

Instant acceleration has its appeal, as does modern styling that conveys the swiftness of the bike. But there's a lot more to the path of motorcycle evolution.

I found myself thinking along these lines for the first time when I returned to Japan after several years in Europe. It was also at this time that I grabbed a pencil and quickly sketched the drawing shown on this page.

Tires. Engine. Frame. Tank. Seat. I thought about how to craft all the necessary elements beautifully and combine them in a perfect whole.

A simple and efficient double cradle frame embraces the air-cooled inline-4 engine which secured Honda's status as the 4-cylinder pioneer and the creator of the CB750 Four and the CB400 Four.

Building on this proud tradition, the approach to the new bike strives for beauty, craftsmanship, ease. In other words, I wanted to create a beautiful motorcycle with artisan-level handiwork that's also approachable and easy to ride.

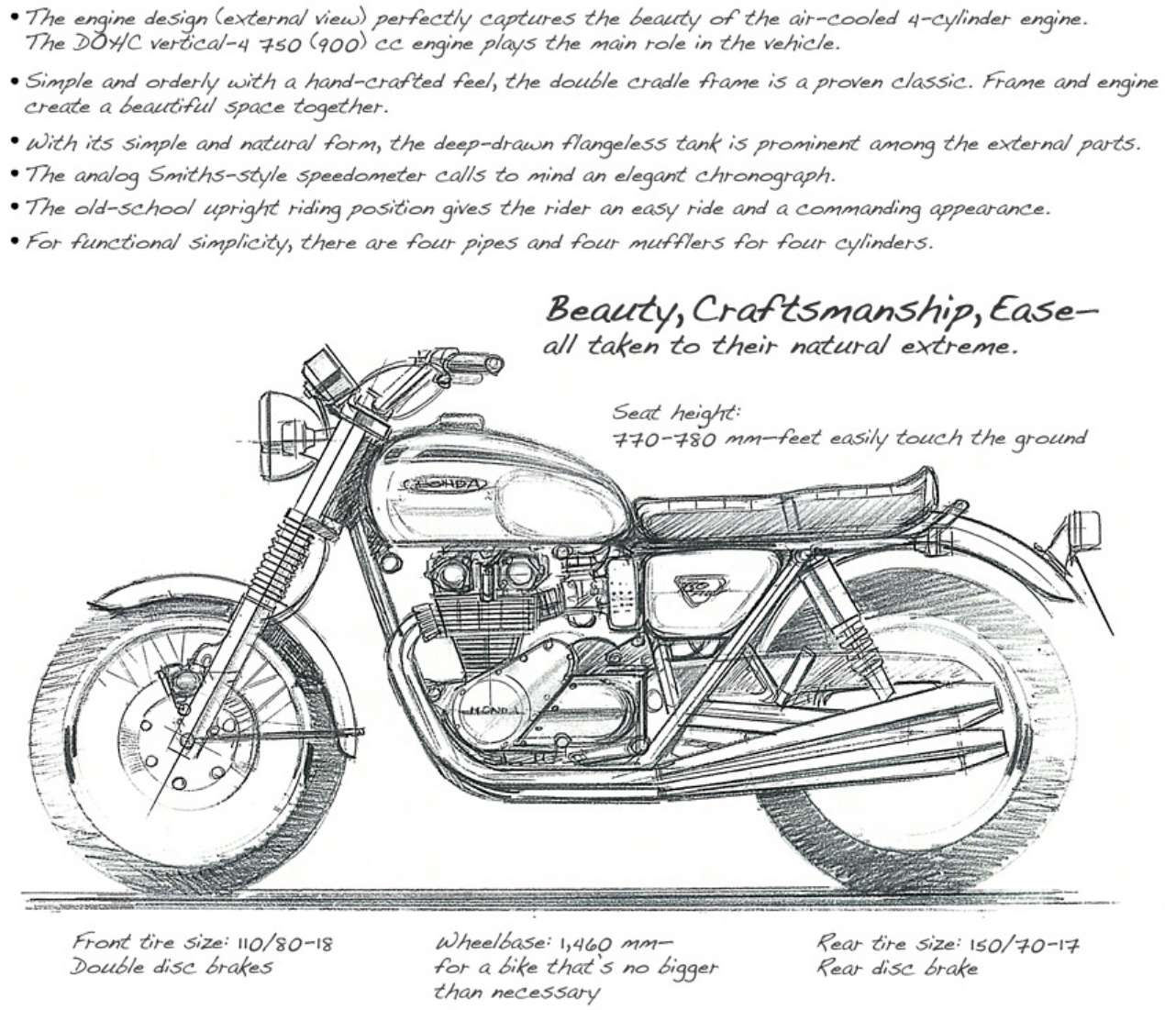
"Why are you giving that new engine air-cooling when you know its performance won't be as good? You had better have a pretty convincing explanation!"

That's the kind of thing people said when we began the development process. And I could understand that thinking. Going with an air-cooled engine was bound to seem "retro" to people at Honda, which had long favored liquid-cooled systems in the pursuit of maximal performance.

When asked to explain my choice, I could only say: "My only reason is that a lot of customers like air-cooled engines."

I like the metallic sound the engine makes as it cools… A motorcycle's engine should have oil in it, not water… Just looking at the cooling fins inspires me… There is something about an air-cooled engine—a feeling you simply can't get from the liquid-cooled engine in a high-performance bike. To me, a bike rider and a bike fan, a future without air-cooled engines just didn't seem right. And I was certain I wasn't the only one who felt this way!

Based on my sketch, this "bike that defies logic and just demands to be ridden" became a reality: We displayed the CB Four concept model at the Tokyo Motor Show in 1999, and I was extremely thankful for the enthusiastic response it received there. In 2007, aiming to create a bike that fulfilled fans' vision even more fully, we displayed a new concept model at the Tokyo Motor Show, the CB1100F. Eventually, this concept model became the production model known as the CB1100.



This is the sketch the designer drew after his return from Europe. Based on it, the CB Four concept model was born.

Displayed at the Tokyo Motor Show in 1999, the CB Four concept model celebrated the 30th anniversary of the inline-4 CB bikes. With its uniquely emotional exterior styling and form-follows-function aesthetic, this was a naked motorcycle for the serious rider.

The CB1100F concept model, displayed at the Tokyo Motor Show in 2007. Following in the footsteps of the 1999 CB Four concept model, this model also honored the air-cooled 4-cylinder CB bikes. With 17-inch tires in the front and rear, this bike was quite sporty as compared to the CB1100.

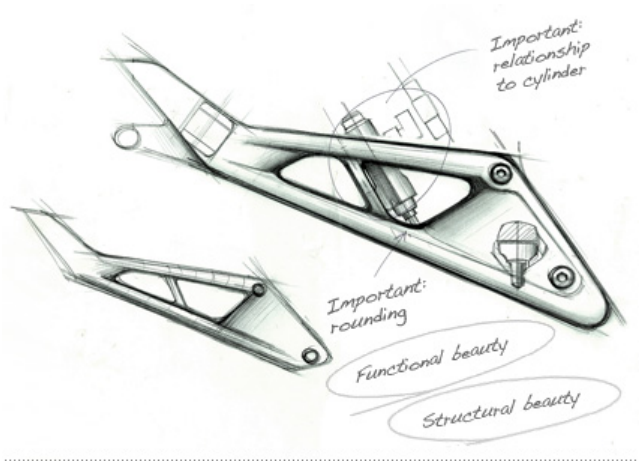
Our mission: design—not styling

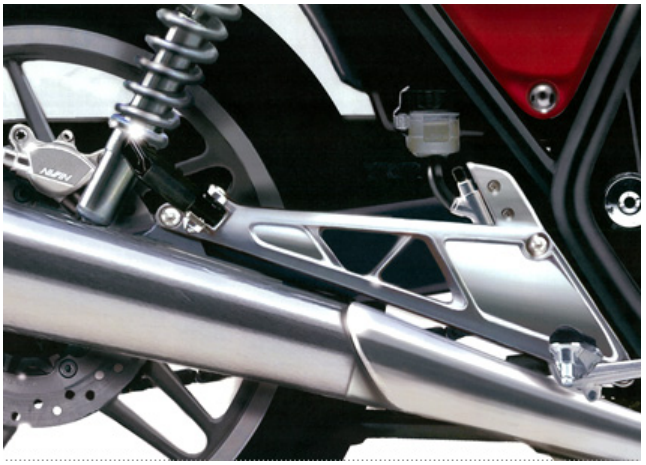
In taking on the design of the CB1100, the team and I agreed that our mission was design—not styling. These words tend to get confused with one another, but at base they mean two totally different things. "Styling" refers to establishing the look

Unlike an automobile, a motorcycle is not covered with a body, so there is no clear division between exterior and interior. Rather, the visible mechanical parts serve as the exterior decoration. For these reason, we needed to keep our focus on

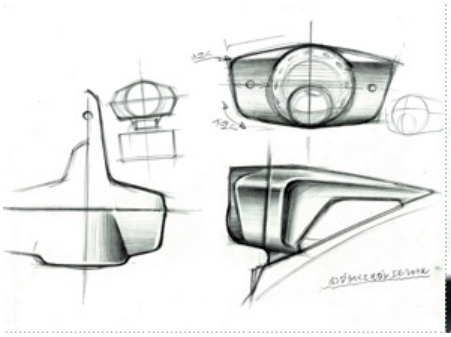
the vehicle needs to have, adding motifs, and otherwise enhancing its appearance. On the other hand, the elements of "design" are mostly to be found in the actual drawings of the machine, serving as the true origins of the form of the vehicle.

the pure design elements, making each mechanical part as beautiful in form as possible. To create parts that were both beautiful and functional, we utilized the characteristics of many different materials, including metal, plastic, leather and rubber. This approach is what design is all about and lets designers show what they can really do.





The goal is to design each of the parts that form the motorcycle so that they are both functional and beautiful.
Even the step holder reflects the designer's meticulous attention to detail.



Revived for the CB1100, the classic tail lamp shape—a circle inside a straight-edged figure—symbolized the CB series in the past.
The chromed portion is even shaped to produce a beautiful reflection from the lamp.