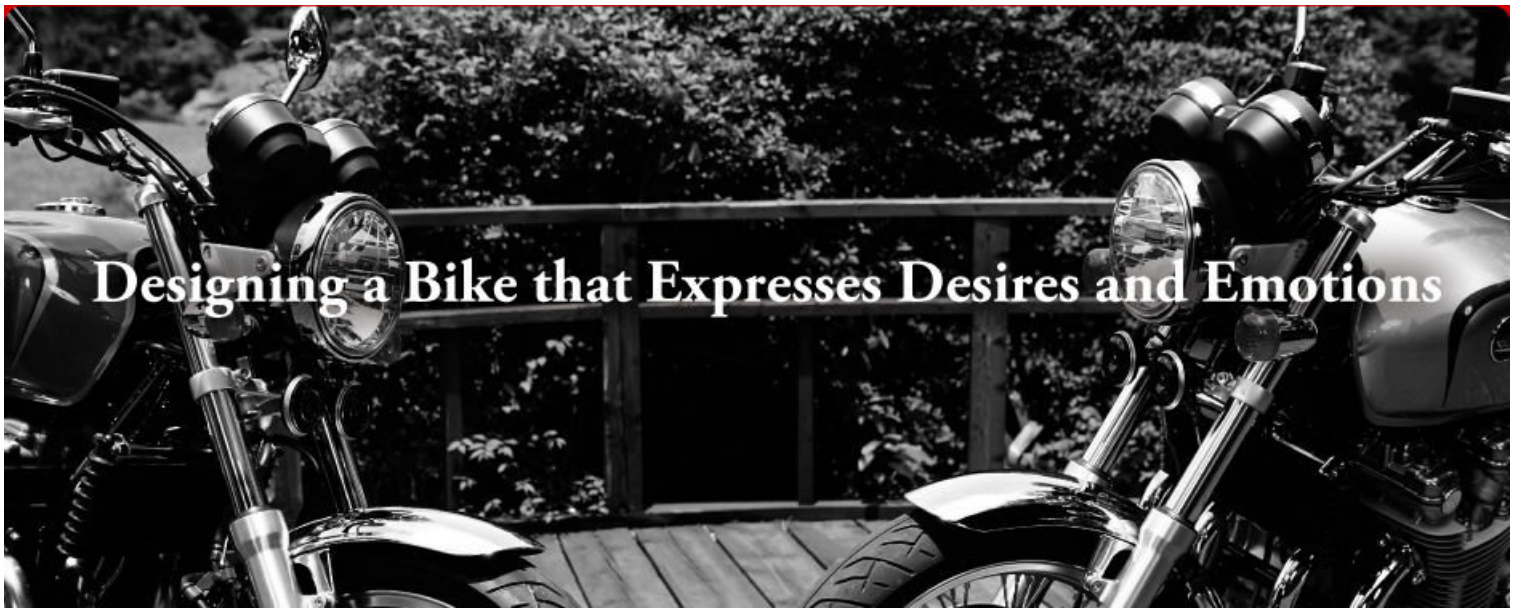
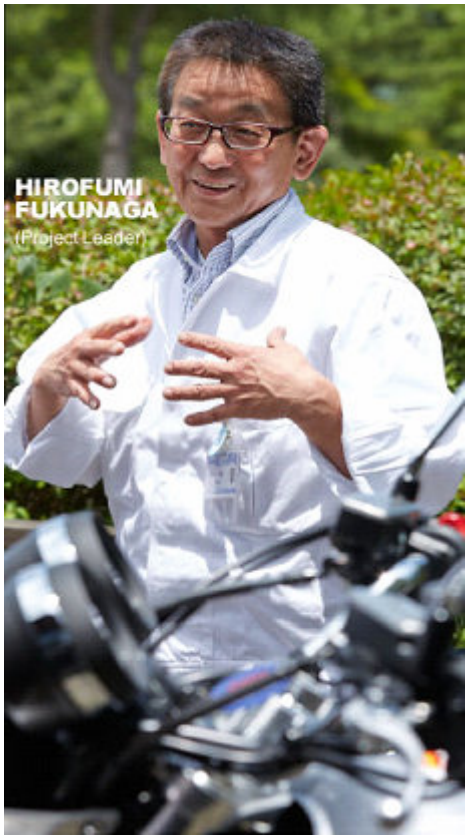




Sekiya:
The CB1100 has been on the market for five years now, but tell me again. Why air-cooled? And what is the modern CB bike?

Fukunaga:
Many people in the R&D Center wanted to make an air-cooled CB. We felt that there weren't many bikes around that middle-aged guys like us would want to ride.
The bike would have to have presence and atmosphere, be simple, and feel secure. The CB is a bike that is rider-centric.
The origin of Honda's large bikes is the CB750FOUR, and many riders expect CB's to have an air-cooled four-cylinder engine, and would remember its 'feel' or 'taste.' We wanted to bring the attractiveness of the air-cooled four-cylinder engine to the modern world.

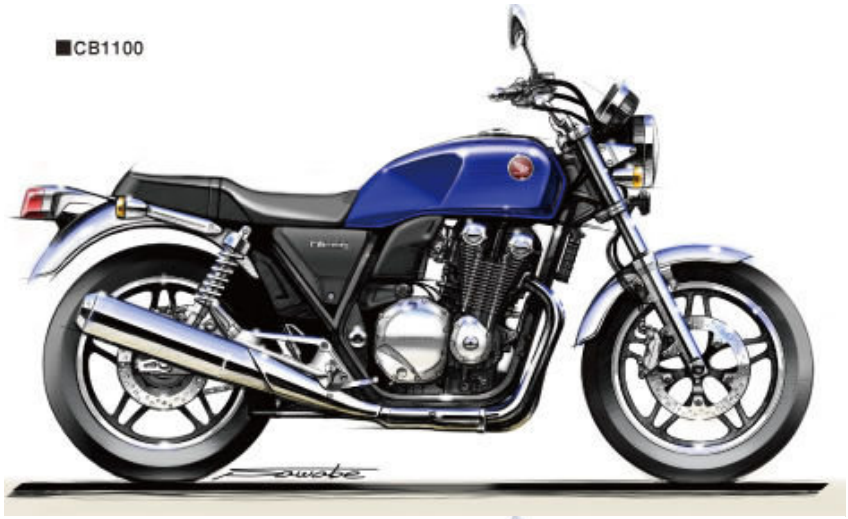
Sekiya:
What elements or conditions were required to do that?

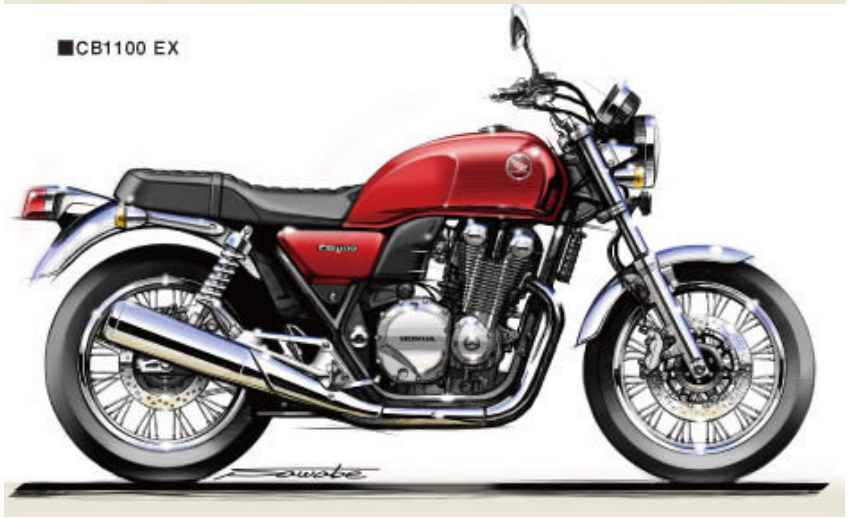
Fukunaga:
Since the rider, in this case me, plays the leading role, I'd like to be able to enjoy the scenery, and look around, while I ride. There cannot be any uncertainty, or anything I'd have to put up with, as that would spoil the ride.
I'd imagine being able to ride at my own pace, while enjoying the sunshine filtering through the tree branches. Since I wouldn't need 100 ps per liter, the specifications were for 60 kW (around 80 ps) at 1100 cc. Engineers are power-hungry, but I insisted on lowering the power.

Sekiya:
I'd imagine that with a lower output, various aspects of developing an engine would be easier, but was this the case?
Fukunaga:
No, not at all. Since the engine is air-cooled, we had difficulties with engine temperature and environmental aspects such as exhaust regulations. The oil-cooling structure around the spark plug seating was a headache, and since we didn't want the CB1100 to be one-off model, we considered not only Japan-domestic emission regulations, but Euro4 regulations for 2016.
Sekiya:
Air-cooled engines are at a disadvantage to their water-cooled counterparts when it comes to stabilizing combustion temperature and heat dissipation. Oil-cooling the spark-plug seating is a stimulating solution. On the other hand, what are the advantages and the attractiveness of air-cooled engines?
Fukunaga:
The deep-finned engine's appearance and modeling, and the ride's 'feel.' The bike is also airy, to aid cooling, but during development we widened the valves' setting angles to make the cylinder heads look better. Appearance, in this case, matters a lot.
Some people, however, didn't agree. They asked if I had any data to back the changes up, as with ordinary (high-powered) engine layouts, the setting angles were shallow and the valves stood up. Everyone thought so. I convinced them, though, that this bike was not about performance but rather the engine's presence, and anyway, what was so bad about making it look good?

Sekiya:
Were there any guidelines on how it should ride?
Fukunaga:
Basically, no. We did ask the CB750F and CBX engineers for their advice, but we ended up with a whole range of opinions according to their images and obsessions.
Most of the development team was young, from a generation that didn't know air-cooled engines. We went to the Collection Hall in Motegi so they could ride an air-cooled bike, so they could develop their own images. I think it was from then that we were able to narrow down the 'emotional' parameters, such as the the dull sensation of the engine at low revs being refreshing, or only thickening the lower end of the exhaust note. That gave birth to the modern CB personality, and the attractiveness of the new air-cooled four-cylinder engine.
There was an overall feel within Honda for the 2010 model, that we wanted more of the deep rumble, trying to find an even more 'air-cooled ride,' although the CB1100 has an orthodox 4-2-1 exhaust pipe, so there was a lot of trial-and-error getting to where we did.

The 2014 model CB1100 responds to those requests, and improves the ride in the low- to mid-ranges, and with the EX model, heightens the pleasing 'groan' around the 2,800 - 3,200 rpm range.



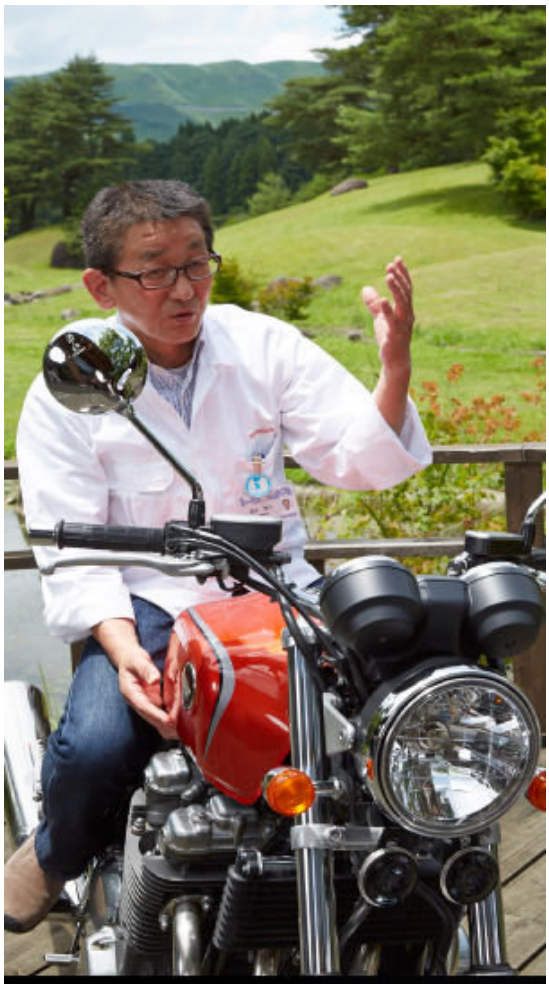


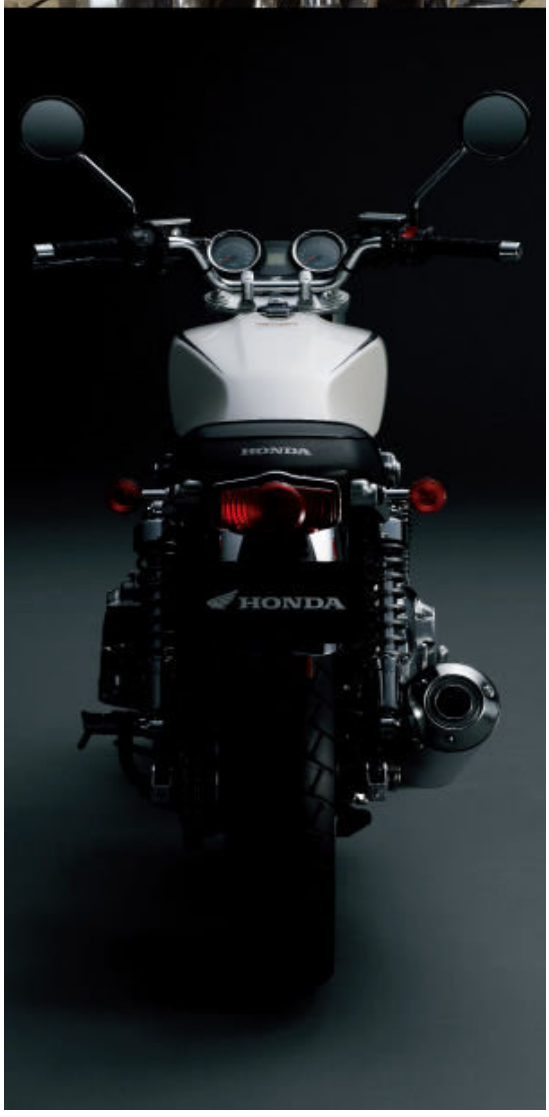
Sekiya:
Are there any interesting or memorable episodes you can share with us?

Fukunaga:
The entire development process was back-breaking! First, we had to get everyone on the same page for the emotional aspects, such as what 'good styling' or 'great handling' was.
It's beyond specifications or performance, so we had to have a common vision on aspects that couldn't be numerated.
Clay models, for instance, are usually placed with other models on the design floor, but with this model, we had a dedicated room for it, and had the members assemble for periodic meetings. We don't normally do that. We also had each member evaluate or comment on aspects of the bike that weren't within their field. That way, we avoided anyone having fixed ideas or myopic views, and we all shared proposals and made changes in direction. There were many debates, but the overall morale was raised, and we all headed towards one objective. It was a good experience. The young members grew an emotional attachment to the CB1100, to the extent that some bought it once mass-produced.

Sekiya:
Wouldn't such an emotional attachment cause difficulties in discussions, such as the modeling and configuration, with the factory?

Fukunaga:
Even if everything was okayed within the R&D Center, mass-production would cause a big fuss. The complex modeling of the engine would meet comments such as 'why would we want to build an engine with such low yields?'
We had the most problems with the thin engine fins. We were adamant about the thin fins from the start, and there was no way that we'd change our minds. So, a lot of time and shouting was put into convincing the factory, and attaining their understanding.





Sekiya:
I can feel the heat from here. I think such serious disagreements don't occur without such passion in what you're making.
Fukunaga:
We were hellbent on getting the shape right, till the very end. We were even adamant about the the corner curve radius for each of the stay's holes. The factory cannot manufacture what isn't in the plans, so it was a matter of asking them to 'do just a bit more.' Over and over again.
The prototype is like an à-la-carte dish. We evaluate it, and feed the changes back into the plans, but once in mass-production, some inconsistencies are born. The trick was to reduce these inconsistencies.
I think the bike is as good as it is, because we had people in the factory see, ride, and understand the level of the engine's potential and 'feel' that we wanted.
Once the factory understood us, they started giving us ideas on how to improve the quality of the mass-produced model. This was what happened for the 2014 model.
Sekiya:
Mass-produced à-la-carte dishes. It sound's like a creator's dream, attesting to how far you went without compromise.
Fukunaga:
Developing this bike, without using specs or numeric performance figures as guidelines, was more difficult than producing a super sports bike. We developed a bike with a presence and performance that invigorates the five-senses, within an orthodox bike frame, while satisfying durability and environmental performance requirements. There is so much more to the CB1100 than what's in the plans, and I hope that the rider will feel, and enjoy, the passion that has gone into it.
Sekiya:
The CB1100 was developed from scratch, encapsulating each member's passions, to reinvent Honda's 'CB' tradition with an air-cooled engine. I now understand that the depth and refinements of the 2014 model are the result of the developers' passion in nurturing the CB1100.
I also learned that in order to realize the developers' will with a high purity, uncounted imaginative and unique solutions, passions, and processes of conveying and coordinating ideas - that cannot be written - with the factory, are vital. Through these interviews with the various members, I have had the pleasure to learn the techniques involved in unique solutions, and feel their passion.

CB1100 / CB1100 EX