As the motorcycle market changed and there was a market pull for a faster yet stylish bike, Harley Davidson came to the rescue. For years Harley Davidson was known for their style and custom looks. However, they began to lose business to those who wanted speed. It was time to move with the up and coming generation and leave the old designs in the past. This would be what led to the creation of a new Harley, designed from the ground up. The problem was no one had ever combined the two desires into a flawless bike.

The racing motorcycle did not have the flamboyance or longevity of a Harley and the standard Harley did not have the speed. Designers and engineers would work together to combine the two requests into the same product. Six years and millions of dollars later, the VROD was ready.

In order for the process to begin, Harley Davidson began to benchmark/talk to experts such as Porsche about their world-class engines. In addition to information on the physical parts, the workers would need to gather information on the rules of sound and pollution, regulations, and safety required.

During conceptual stages, the bike was comparable to a standard flamboyant Harley Davidson. As the stylists came up with new chic, innovative designs for the bike, the engineers would think on a practical level, often having to change the designs the stylists came up with. Together the designers and engineers would have to negotiate until they would reach a comparable agreement on the efficiency and the speed of the bike. In order to hold the newer, faster engine, the design team decided to add the two rail, a second curve structure on the frame for a more one of a kind look. Additionally, they made the angle of the handle bar smaller in order to have a more control feel. As the team generated these ideas, they would brainstorm with sketches, clay models, and 3D software. The engineers and designers would challenge each other past their limits. For example, the engineers needed to have a 12 litter exhaust but the designers thought it looked bulky. Together they created a system that would travel through a double chamber, single curved chamber, and back to the double chamber. This would combine the style and productivity needed. Additionally they moved the bulky, useless one gallon, drag racing gas tank, to a plastic, four gallon tank under the seat. The radiator would also be a huge concern as it needed to be large enough to cool the rapid engine/motorcycle, but look commendable at the same time. The engineers wanted the engine to go 500 hours/21 days, however with the designers wants, it only lasted four hours. In the end, the engineers would make changes and compromise at 400 hours.

Before releasing the bike to the public, it was extremely important that Harley tested the prototype and passed all requirements and regulations. The first tests would make sure that the bike could withstand extreme heat, electronic interference, dangerous rains, bumpy roads, blistering sun, and many more requirements. In order to test these wants, Harley used a “hot wash” (power washer) to see if the VROD would still run when extremely wet. Additionally, at the structure lab the bike would be twisted, and pounded to make sure it lasted for years to come. Also, the bike was put on a bumpy road stimulator for over five days. Then, some parts would be tested for fog/sea air, blistering sun, acid rain, and many more challenges the bike would possibly face. Lastly, the bike was tested in an audio lab to combine the standard Harley sound, while still passing the sound laws implemented by the community. In addition to testing the prototypes, the team would need to pick out a name before releasing the bike to the public. This process would take over a year! Every time the crew selected a name, it would lead to trademark issues. The VROD name came to be from the V-twin engine, and the VR2000 performance racing bike.

After so many years and designs between the designers and engineers, it was time to communicate the design to the people not a part of the initial crew. This would be the head owner and public market/customer. Before designing the bike, and releasing the final product, the team needed to get approval from the project lead, Willie G. Davidson. In order to help communicate the design, the team
would make sketches, 3D models and clay. It would be a lot easier to make an adjustment on a clay model than the actual bike. Not to say all the money and time it would save! Six years later, the Harley Davidson team had come up with an innovative bike that changed the motorcycle community forever.