Harley recognized the need to build a new bike that would outshine all the other bikes in history. With the combination of speed and style the Harley team went to the factory to conceive an idea. With this idea in mind they knew that they had to keep the signature Harley style yet incorporate new ideas to the bike. From a technology standpoint the engineers and design team felt that it was necessary to introduce a new V1000 engine with a liquid cooled engine, something that has never been done before. This created a challenge because there was nothing to base the design and practically off of, it was a new concept.

With the help of the design and engineering team they collaborated to put this dream into a reality. Harley also consulted with the superbike team and realized that they should use their engine in the new bike. The superbike engine was liquid cooled, which was useful for speed and power. They also looked to the Harley dragster team for ideas regarding power and acceleration. With the ideas of all of these people a solid idea for the new Harley was formed. From the start of the process in 1995, there were many trial and errors that were addressed and reviewed. A major problem was the radiator which had the style but not the capacity to withstand the power of the engine. The radiator also had to be sleek and hidden so that the style would not be altered. Another problem they encountered was the exhaust. They design team came up with a stylish prototype but it was quickly rejected by the engineering team because it lacked practicality and performance. The shape and style of the new Harley was also a problem. The team had to balance between the two concepts, style and actual performance. The designers found out that it was easier to use aluminum for the paneling and siding. This way it was much easier to create
the signature Harley curves and style. Many trial and error prototypes for the fuel tank were made. It had to fit in perfectly to the small space in the frame of the bike. The engineering team came up the idea of using a plastic gas tank instead of metal. By using a plastic fuel tank the designers were able to fit more fuel into the tank and also shape it perfectly into the frame, maximizing the space that could be used.

It took many months to come up with the first prototype, but it was not even close to passing the test of the new Harley. The frame and build of the bike did not withstand the new high powered engine that the Harley team wanted in the bike. The engineering team turned to Porsche to help them create a 115 horsepower engine. With the engine it was able to work with the frame and still have the high performance that they wanted. The two teams, design and engineering, worked together based on each other’s needs. Many ideas were shot down by the engineering team because it lacked practically and the design team made sure that the Harley style was incorporated in all of the pieces of the bike. The team first started building the idea of the new Harley on the computer with 3D models that could be easily changed to fit the new Harley’s needs. After many 3D computer drawings the design team made a clay model in the factory to see how the bike would look in real life. Using a clay model was ideal because it could be easily sculpt and changed with new ideas that were formed. After this clay prototype was built and approved, the Harley team then constructed a real life, real working bike to test.

After many prototypes and corrections the Harley was finally tested. A 500 hour engine durability test was performed to see how the engine and bike could stand up to long usage. A radiation test was also performed in the factory to test the bikes frame, electronics and to see if it could withstand the severe conditions. A water and noise test was implemented on the bike to make sure they Harley lived up to the expectations. A noise test was needed because it had to
have the Harley sound yet also be under a certain noise limit. A simulation and road test was done on the bike to test the over durability and construction of the bike. Simulation tests were used to help the Harley builders know if it could withstand the wear and tear of a regular Harley bike throughout the years.

After 6 years of brainstorming, and hard work the new Harley bike was finished. During the last leg of the completion of the bike the name had to be picked out. It took a year for the marketing team to think of a name to call this new bike. The name had to be something special and recognizable. The V-ROD was the name that was picked. The new V-ROD combines the style and shape of a regular Harley but has new features that set Harley into the new generation. The Harley team was very excited to show the world the new V-ROD at the showcases and show off all of the hard work that was put into building the V-ROD.