Younger generations were more interested in motorcycles that had higher speed ability. Harley Davidson wanted to create a motorcycle with the combination of higher speed with their own original styles. The main problem with this process was the engines they currently used did not have the capability of reaching these higher speeds. Engines with this capability required a new chassis to hold the engine and endure the higher speeds.

To start the creation process the team in charge of designing the motorcycle spent months working on the original design. To make a motorcycle with this type of speed the designers realized they would need to use a liquid cool engine like the ones in their racing bikes, and have more of a sleek build like a dragster. The design team also realized that for a motorcycle to use an engine of this caliber then it would require a new exhaust system with a larger volume to make the motorcycle street legal. The engineers put in charge of creating this original bike designed immediately ran into problems building it while still having the look of a Harley motorcycle. The engineers decided to look at each section of the bike individually instead of trying to build the bike as a whole. They also scratched using the design they had on paper, and began to build models in 3-D. This gave them a different conceptual ideas for the project.

After looking at many different possibilities they began to select the ones that they believed to be the best fit for the motorcycle. After many attempts the engineers figured out a way to create the metal frame without having numerous welds in the build. This allowed the frame to be much more durable and with stand extreme conditions at high speeds. The original
exhaust design was impractical to produce on a higher scale. Especially because the exhaust would need to have a much larger volume than normal motorcycles. For the first time in the history of the company a radiator was needed for this motorcycle. The radiator was hidden in the body of the motorcycle to make it much less obvious. Many different prototypes for this radiator were tried until they realized that fins needed to be added to catch the air and prevent the air from flowing straight through without cooling the engine. Plastic was also used for the first time on a Harley. The ability for plastic to be molded allowed the fuel tank to have a higher volume while fitting into a space that a normal metal container could not.

While all the different parts in the motorcycle were still being worked on the biggest problem still remained to be the engine. To help the engineers at Harley Davidson design this new liquid cool engine the company went to the German company Porsche. After extensive testing they finally found a model that could withstand the five hundred mile Dusseldorf test. While the engine was being created many different prototypes of the motorcycle were created to test all the different components of the motorcycle as a whole in extreme conditions.

After the complete design with the new engine was constructed in the United States the members of Harley Davidson’s test team had to run it through vigorous road tests. This process happened out in the open for about eight months. An example of these tests would be the parade test. This occurred in very high temperatures with the engine not only running, but idle for different periods of time. To help keep the project secret during these eight months they painted the motorcycles entirely black.

To release this new motorcycle to the world the Harley Davidson Company decided to unveil it at the annual Harley Davidson convention. The year that the motorcycle was released the convention was held in Las Vegas, Nevada. This was the best way to effectively
communicate the motorcycle to the public. Everyone who worked on design was both relieved and proud to not only have the motorcycle completed after six years, but also at the level of admiration that the motorcycle immediately received at the unveiling.