



## EMS 3D Scans Custom Choppers

War Eagle Customs builds custom chopper frames and bikes. In 2010 they won the top award at a Daytona Beach bike show for Best in the Radical Class. Recently they developed a new innovative frame called the Classic Pro-Smooth. It's a very streamlined shape that took a considerable amount of time to create by hand.

### The Problem

Once the new Classic Pro-Smooth frame was finished, War Eagle needed to develop the seat to fit the unique frame. In addition, they wanted to scan the tank to aid in the manufacturing of additional tanks and frames. Finally they wanted to document some key mounting holes and bosses on the frame for the engine installation. To do this they decided 3D Scanning would be a faster and cheaper method.

### The Solution

EMS was contacted and traveled to War Eagle's shop to perform the 3D scanning. Using their Z Scanner Z800, EMS 3D scanned the tank and seat area along with the engine area on the frame to collect the 3D data. Because the Z Scanner is very portable it was easy to setup and 3D scan the tank and seat area including the underside. Trying to do this with more traditional 3D scanners would be time consuming and difficult.

Once the scan data was captured, EMS built a high resolution surface model that could be used for the development of the seat pan and seat. This allowed for a perfect fit and help keep the smooth, streamlined look of the bike. To perform this task EMS used RapidForm's 3D scanning software product. RapidForm allows the user to convert the 3D scan data, which is in a polygon format into high quality surface or solid model. RapidForm also allows the user to remove any imperfections in the scan data or make changes to the design at the same time.

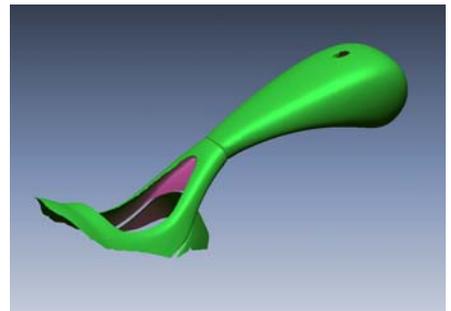
### Conclusion

War Eagle uses traditional methods of building custom choppers but when it came time to capture the design to aid in the manufacturing of some add-on components they turned to EMS and their state of the art 3D scanning technology. This demonstrates how traditional and high tech worlds can co-exist in today's competitive landscape.

To learn more visit [www.ems-usa.com](http://www.ems-usa.com)



War Eagle Custom frame ready for 3D Scanning



3D Scan data of tank and seat area



3D Scan data imposed on the frame