

By Len Vermillion, Editor in Chief

Q&A: 3D Modeling Software



Harley Davidson aficionados aren't your typical motorcycle fanatics. They often yearn for the days of Easy Rider. Joe McGlynn is more than a fan of the old-style Harleys. He is the inventor of a new seat for the Harley V-Twin, a design which molds the new with the old and brings out the rebel in the rider. The self-described CAD novice got some help from a 3D modeling software, and today his company, Crime Scene Choppers, manufactures the seat and other Harley parts.

M McGlynn attributes his success to his investment in the Alibre Design 3D modeling package less than two years ago. The software allowed McGlynn to turn his Harley daydreams into manufacturable realities, and turn his day job into, well, just a day job. With Alibre Design 3D as his co-pilot, he was able to learn 3D modeling on a part-time basis and begin to design his Harley parts.

Although McGlynn was a hobbyist fabricator and was no stranger to computer technology, he had no prior experience in CAD. He says that the modeler gave him user-affable features and full functionality to flesh out his new ideas for Harley parts.

In the following interview, McGlynn explains how he set about putting his dream into motion and how the 3D modeling system helped him accomplish his goals.

Len Vermillion: Why did you set out to create this new seat, as well as all of the other new parts, for the Harley V-Twin?

Joe McGlynn: I like to make parts, and I want to make parts that are interesting and different. A lot of the V-Twin aftermarket parts are somewhat cliché; skulls, daggers, Maltese crosses, and that sort of thing. Harleys have a rich heritage; I wanted to play off of the history without repeating the past. I wanted to make products that take the customer somewhere they haven't been in a long time, and somewhere they have never been at the same time.

LV: You paid a lot of attention to shapes and themes; in particular, a cross between retro and futuristic. Why was styling so important?

JM: A custom bike is all about style and individuality. Folks want personalized transportation that says something about them. People build and ride choppers for enjoyment and personal expression, so style has to lead as far as I'm concerned. I didn't want make parts that look like anyone else's parts, both because my tastes are different, and because it seems like a bad business strategy. I've been using "fins" in a lot of my recent designs, which is a styling cue from the postwar aircraft and hot rod era. A lot of GIs were returning home after the war, building bikes and hot rods. A lot of aircraft technology was available as post-war production tapered off, and the styling influences were permanently fused. The fins are just one of several themes that I plan to explore, having a good CAD tool is critical to the creative process.

LV: Creating that styling must have been difficult. You turned to Alibre Design 3D modeling software to help. How important was the modeling software to reaching the end result?

JM: For one-off parts, I've always created those directly in metal, pound-

ing sheet metal into a sandbag to create compound shapes and welding bits of metal together to create different forms. I needed something that would let me experiment with shapes, try different contours, scale up or down easily. I tried traditional 2D CAD software and that didn't help, we live in a 3D world. It is difficult to convey the excitement and visual impact I wanted in two dimensions.

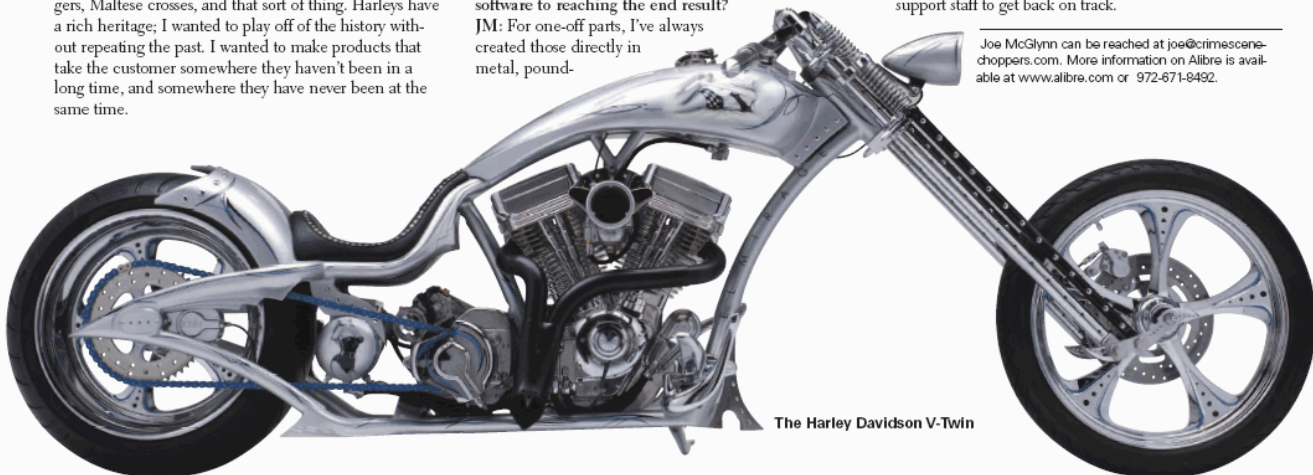
LV: What aspects of the design did 3D modeling turn out to be the most helpful?

JM: 3D modeling was indispensable in visualizing and getting to a prototype quickly. On products like the Speedster gas cap I was able to work out the complex latching mechanism, try different stock hardware for fit, and play with contours to get the look and the manufacturability that I wanted. With the Bad Attitude primary cover it was possible to test the fit before even producing a prototype.

LV: I understand you weren't an expert in the software when you started out and learned the process on a part-time basis. How were you able to learn it so easily?

JM: In the past, I tried to use other 2D CAD systems and found myself at a significant disadvantage. The complexity involved in using the 2D CAD systems I tried was astounding, particularly in light of the limited value. When I started with Alibre it would be safe to say I didn't have a clue about 3D modeling. Before installing the demo version, Alibre provided a one-hour overview "Webinar" free of charge. This gave me a good roadmap of how to get to various capabilities. I went through all of the Alibre tutorials and, at that point, I knew enough to be dangerous. I started designing the Speedster gas cap as my first project, when I got stuck I was able to use the collaborative features of Alibre to work with their tech support staff to get back on track.

Joe McGlynn can be reached at joe@crimescenechoppers.com. More information on Alibre is available at www.alibre.com or 972-671-8492.



The Harley Davidson V-Twin