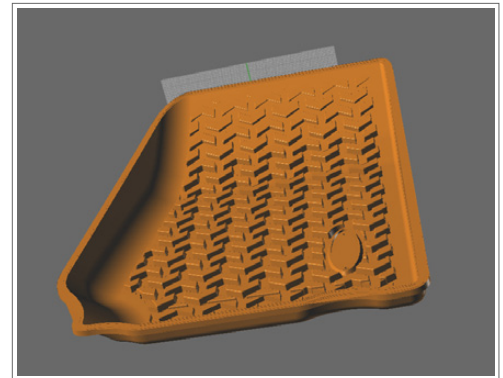




SITUATION

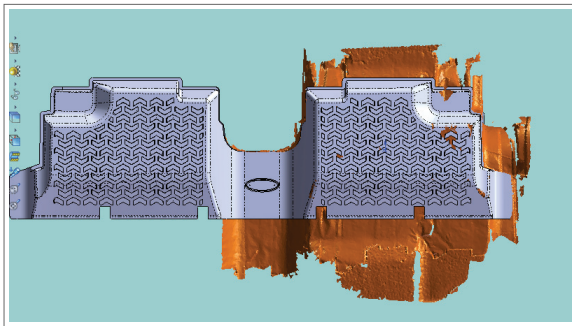
Omix-Ada is the premier manufacturer of Jeep replacement, restoration and accessory products, including the Rugged Ridge accessory line of floormats. Currently, Jeep floormats are either "carpet," thermoformed rubber that fits the car, or "deep" all-weather flat floormats that are not formed to fit.

Omix-Ada wanted to combine the advantages of both types of mats to create OEM-quality mats that are both formed to the vehicle and deep. However, they needed help in both capturing the exact cab floor geometry and in incorporating their design ideas into a manufacturable CAD model to create tooling for the new floormats.



FRONT FLOORMAT CAD

SOLUTION



REAR FLOORMAT CAD DATA FIT TO SCAN DATA

Omix-Ada contacted 3DScanCo for a complete design and reverse engineering solution. 3DScanCo scanned the front and back floor areas of a 2-door and a 4-door door Rugged Ridge Jeep Wrangler to make sure any variances in size and shape were discovered. 3DScanCo used the Konica Minolta VIVID 9i laser scanner attached to a jib arm to maneuver around in the constrained area of the Jeeps' cabs.

Multiple design cycles were required to design mats for tooling. Eventually, the Rugged Ridge logo and a floor hook were digitally incorporated into the mat design. Rapidform, used to offset patterns from the scan data, was extremely helpful because it gave designers the

ability to draw straight lines smoothly and to accurately trim/design. 3DScanCo was able to create a very precise and tight-fitting class B surface that was directly importable into SolidWorks and enabled the offset into a very smooth, ideal class A surface.

RESULTS

The innovative design of this new type of floormat is a first in the industry for any vehicle, not just for the Jeep brand. This patent pending product, designed by the engineering team at Omix-Ada, Inc. with help from 3DScanCo, was exhibited at SEMA (Specialty Equipment Market Association) 2008 in Las Vegas, which drew the industry's brightest minds and hottest products to two million square feet of exhibits. The floormats were nominated as a finalist in the "best new interior product" category for the entire show.



MANUFACTURED FLOORMATS

TECHNOLOGY

- Konica Minolta VIVID 9i
- Rapidform XOR

TECHNIQUES

- 3D Scanning
- Reverse Engineering
- CAD Design Services

APPLICATIONS

- Fit Engineering
- Automotive Industry
- Plastic Injection Molding
- Tooling

Omix is very appreciative of the valuable services provided by [3DScanCo] in the development process which allowed us to bring this product to life.

Matt Stanisec
Director of Engineering
Omix-Ada, Inc.

