



Prince Castle Worldwide

High Chair

This popular restaurant high chair had been manufactured for years without incident, after purchasing tooling, but no documentation from another company. When a new tray mold was brought "on-line", the new trays did not fit the seats.

Challenge

- Inspect and measure a sculpted shape.
- Model in 3D and document in 2D exactly the dimensions of this complicated shape.
- Offer a quick manufacturing solution to keep production shipping.

Reverse Engineering.

We enlisted the services of Gaspardo & Associates, a DiMonte Group Partner, to "White Light Scan" the seat. This non-contact "Laser Scanning" technology produces a 3D point cloud database from which a 3D database of splines or surfaces is extrapolated.

Complex 3D Modeling.

DiMonte Group Inc. then used these splines to create a 3D Solid Model of the bucket seat. The Tray and all relevant components were also modeled and assembled in 3D CAD to identify the misfit.

Design for Manufacture.

Once the cause of the problem was determined, DiMonte Group Inc. was quickly able to offer a solution that allowed all existing stock to be used. By changing a fabricated component, which was inexpensive and could be quickly reworked, we avoided and eliminated costly mold changes.

DiMonte Group Inc. then produced fabrication drawings to document the design and satisfy Prince Castle's ISO requirements.