

Casting Copies

Background

Since the earliest days of our business in 3D scanning, many of our customers have inquired about using 3D scanning to digitally preserve and reproduce rare or hard to find historic parts. We have scanned parts for airplanes, boats, motorcycles and cars, and have plenty of experience referring our clients to take advantage of 3D printing and digital machining technology.

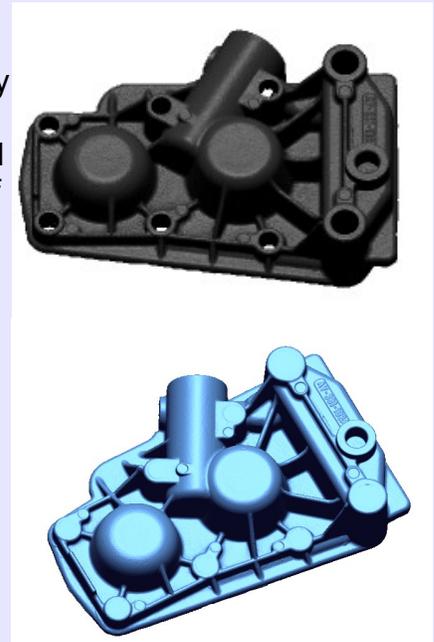
When our client had rare access to a hard to find casting from a vintage Citroen transmissions, he asked us if we could digitally capture the part for future reference.



Our process

The original casting had some dirt and grease from it's years in service. We first cleaned the surfaces thoroughly to remove any grease and dirt buildup from the holes and deep crevices. The scan captures everything, so a clean part helps ensure the final product matches the original. We then applied a light dusting of surfacing agent to the machined metal surfaces to improve the scan quality. The part was captured from multiple angles, top and bottom. Extra time was spent scanning in the deep crevices between the rib features to capture 100% of the exterior surface.

Since this part was destined to be reproduced as a casting, we did some additional post processing to close off the machined holes and fill any features that would be machined later. This brings the part back to the original rough cast form.



The results

3D scanning is a great way to archive hard to find parts, and the first step in reproducing them with modern technology. With a digital model, we can quickly rescale the part to account for shrinkage prior to casting, and send straight to a 3D printer for reproduction in plastic, wax, or even bronze! Print 1 or 10. With a digital model, reproducing rare parts is as easy as making a photocopy.