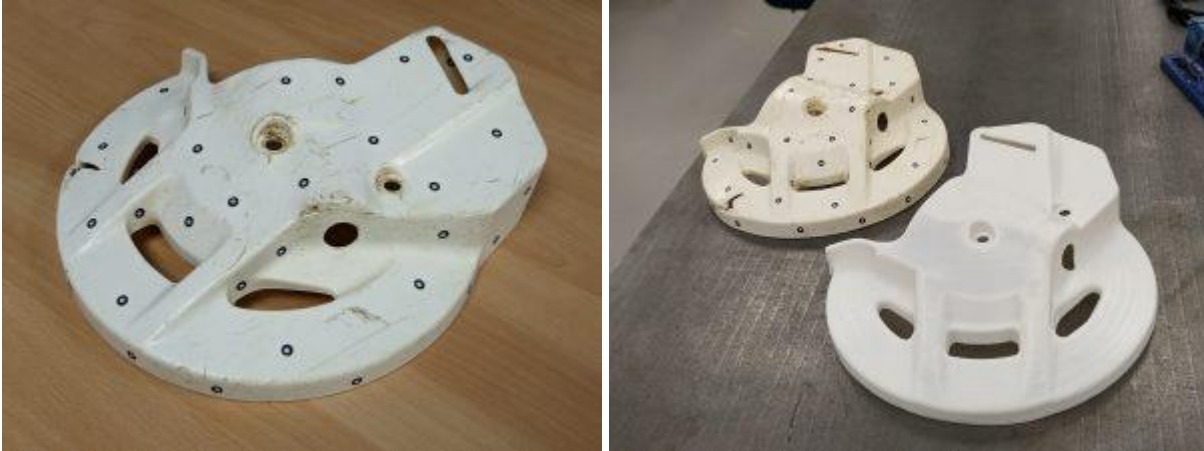


Handyscan Black Elite - 90-91 Kawasaki HX 125 H1 Brake

The Challenge

We were recently put in touch with someone who is in the process of restoring an old Kawasaki HX 125 to mint condition. They're a rare bike to find in good condition, and some parts are no longer made, including the front brake disc/caliper cover. The existing brake cover our customer has had been damaged and needed full reverse engineering to make pristine again.

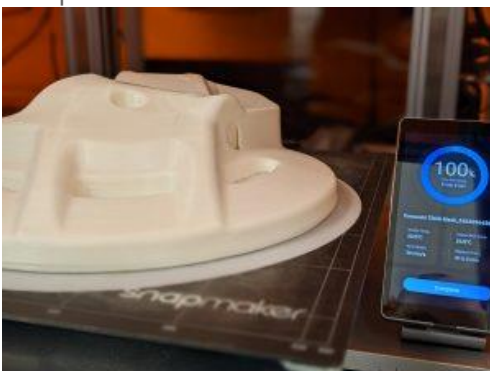


The Process

Due to part damage, it was not possible to scan the part and directly clean up the mesh for reproduction. As a result, the part had to be recreated using parametric CAD. Surfacing techniques were used to create each surface and blend them into the next.

The part was scanned using a Creaform Handyscan Black Elite. This scanner has an accuracy of 0.025mm for small parts, which is important for ensuring a good fit to the mounting points. The surface modelling was done in Geomagic DesignX, which allowed for a combination of more typical surface techniques along with mesh fitted surfaces where required. Once the surface was created, a thickness was added to make the part solid.

The part was then converted to an .STL polygonal model and was printed using a Snapmaker A350 with white PLA. With the bike primarily being for show, brake temperatures didn't need consideration when selecting material. If temperature was a concern, carbon composite materials with HSHT Fibreglass reinforcement may be more suitable. A brim was used to aide in build-plate adhesion, with the print taking over 80 hours to complete.



The Result

The print fit well to the bike first time and didn't require any tweaks or adjustments. The client was very happy with the outcome and has recommended us to some fellow enthusiasts that are interested in their own copies!



Find out more about the Creaform Handyscan Black Elite [here](#). Available for hire directly from Manchester Metrology.

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