

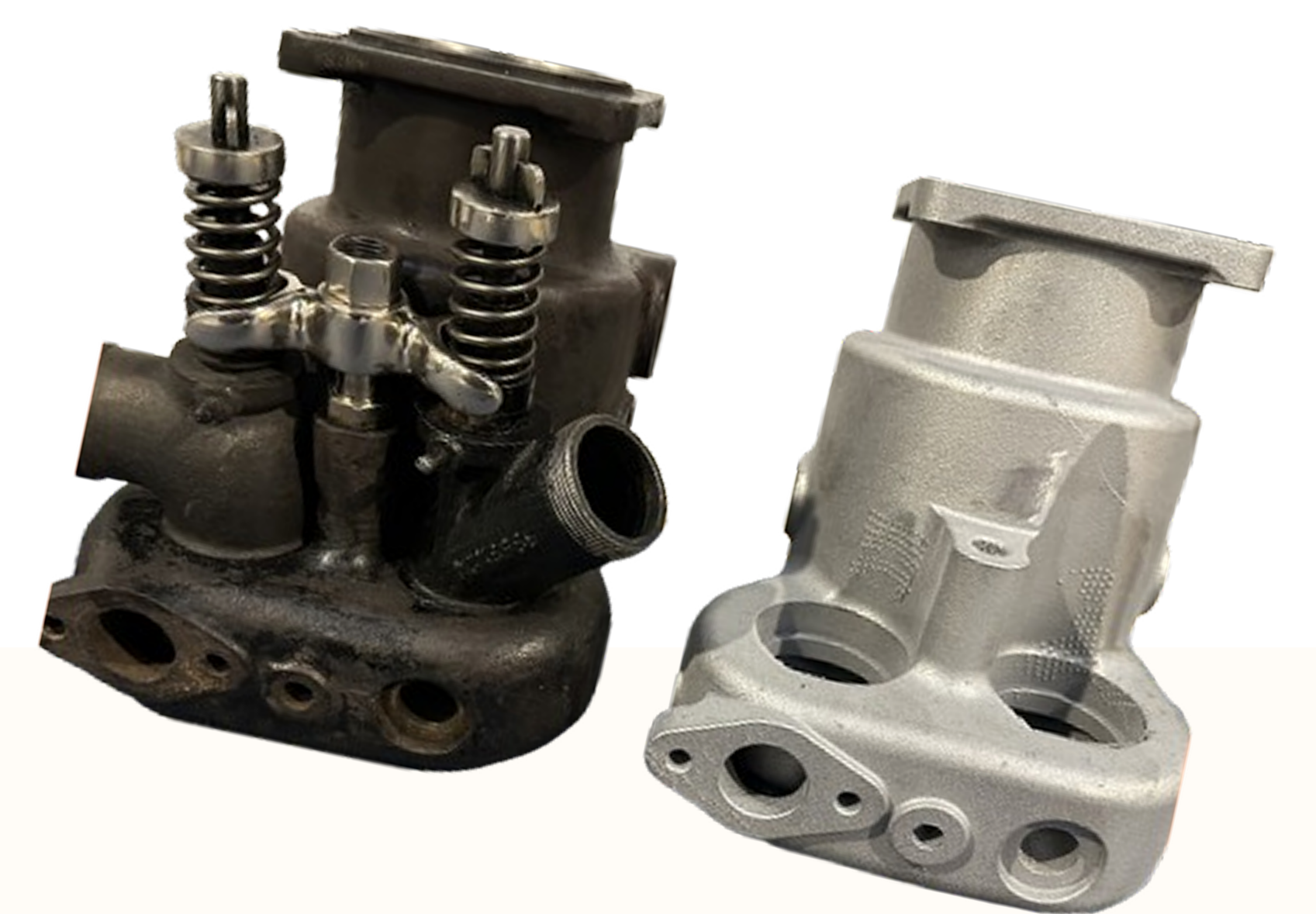
WE ARE AMS, YOUR PARTNER IN
ADVANCED MANUFACTURING

**Making additive
manufacturing
accessible**



1914 Humber Motorcycle 6HP

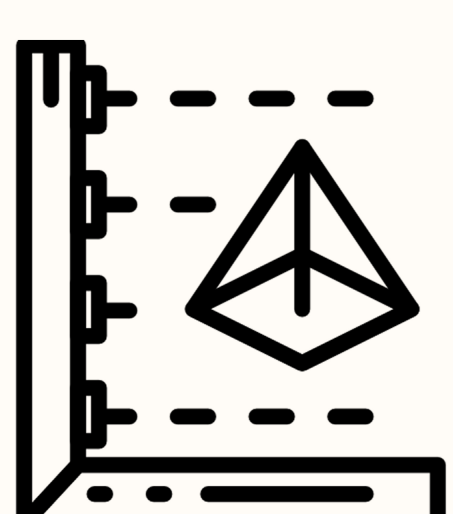
Over time, parts evolve due to technological advancements and their predecessors become obsolete. This is especially useful in older models of transport. Recently, at AMS we have taken great pride in a project to help restore an old Humber motorcycle from 1914 for a local enthusiast. Humber Ltd was a British pioneering manufacturer of bicycles and motorcycles, this specific model was first developed in 1896. Unfortunately, the original parts for these vehicles are no longer produced and any which are remaining are often not in adequate condition. We were faced with the task of creating two, brand new cylinder heads for the motorcycle. These parts feature an internal structure and must be a very specific shape for the engine to function as normal. Additive manufacturing is perfect for this job as it allows us to print complex geometries as well as internal structures - without using traditional moulding methods.



Key Principles

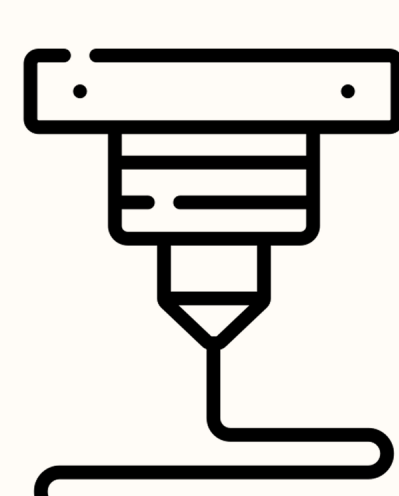
3D Scanning

3D scanning allows us to capture precise digital models of old or worn parts that are no longer manufactured. Using laser or structured light scanning, every surface detail is recorded to create an accurate 3D image. This digital replica can then be refined and prepared for 3D printing. The process enables the reproduction of rare or obsolete parts with high accuracy, extending the life of vintage machinery or equipment.



Advanced Manufacturing

By leveraging cutting-edge processes, we're transforming traditional production methods into sustainable, efficient, and innovative solutions. We have powder based metal AM capability in house via laser powder bed fusion. From parameter development to production, we can support in house. At AMS we aim to provide an all-inclusive engineering partner approach. Here we can supply and support from new material development, through metallic additive manufacture, post processing and qualification/validation.



Preservation

Restoring and reusing old parts helps preserve engineering heritage while reducing waste. It offers a practical solution for maintaining legacy equipment that would otherwise be scrapped due to unavailable components. Using modern tools like 3D scanning and additive manufacturing bridges the gap between traditional craftsmanship and today's technology. This approach supports sustainability and keeps valuable machinery functional for future generations.

