

Housing Elevation Gear for CVR(T) Tank

Solving long lead time issues for parts no longer in production.

Benefits

Combatting obsolescence; extending the life of vehicles indefinitely

Minimizing downtime; keeping operations moving without waiting for parts to be delivered

Production

Method	Time
Manufacturing (Casting or Machining)	6-8 weeks
SPEE3D CSAM Aluminum 6061	22 hours

Background

The CVR(T) serves as a force reconnaissance vehicle utilized by NATO forces and their allies. The Scorpion variant is outfitted with a 73mm cannon designed to “find and fix” enemy armored vehicles in position. The aiming of the cannon is facilitated by the rotation of the turret and the elevation and depression of the barrel. The elevation gear housing contains the mechanism that enables the gunner to accurately aim the cannon through elevation and depression. The failure of this mechanism compromises the vehicle’s combat effectiveness.

The Challenge

Parts for these vehicles are no longer in regular production, with supply chains depending on “new old stock” or limited production runs to maintain operational service. Procuring spare parts in this way can lead to delays, resulting in extended periods of reduced operational effectiveness for the end user.

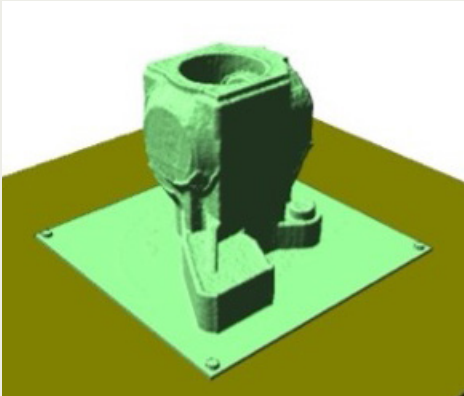
The Solution

SPEE3D’s CSAM technology can 3D print metal replacement parts from design to deployment in less than 22 hours or 1 day.

The Value

Keeping equipment running is essential in critical environments for any industry. Whether it’s a tank on a battlefield, a piece of mining equipment in a remote area, or a valve on an oil rig in the ocean, without the correct spare parts equipment will sit idle and unused. Often the cost of the replacement parts is not the issue, it’s the time it takes to receive them. With CSAM technology customers can reduce the wait time for critical spare parts from weeks to less than a day.

Design to deployment in 21.7 hours



Print: 5.2 hours

Aluminum 6061, 10.5kg of material



Cook: 11.5 hours

Heat treated in a standard air furnace



Cut: 5 hours

Critical surfaces machined on a CNC



About the Equipment

The Combat Vehicle Reconnaissance (Tracked) (CVR(T)) is a family of armored fighting vehicles (AFVs) developed in the 1960s and were in service with the British Army and are still in service with other forces throughout the world. They are small, highly mobile, air-transportable armored vehicles, originally designed to replace the Alvis Saladin armored car.

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