Land Rover Defender Clutch Slave Cylinder

Combating long lead times with on-site production.

Benefits

Better equipment utilization and reduced downtime

Production Method	Production Time
Manufacturing (Casting or Machining)	6-8 weeks
SPEE3D CSAM Aluminum Bronze	20 hours

Background
The Clutch Slave Cylinder is used in various Land Rover models, including the Defender-based Truck Utility Light/Medium (TUL/TUM) High Specification (HS) (Wolf) for Defense. A clutch slave cylinder is an integral part of the way a manual transmission system works. Without it, a driver would not be able to switch gears. It works by moving pressure plates to disengage the clutch from the engine of your car when you push in the clutch pedal.

The Challenge
Original complete parts are no longer produced, leading to shortages in Defense supplies. While rebuild kits from the original manufacturer are available, repairing the part is impossible if the body is damaged.

The Solution
By producing a compatible body that can be used with the original rebuild kit, new inventory of aftermarket replacements will not be needed. SPEE3D's CSAM technology can 3D print metal replacement bodies from design to deployment in less than 20 hours or 1 day. The part was reverse-engineered in the field, and only critical machining was done to speed up time-to-part.

The Value
Maintaining equipment in critical environments is vital for any industry. Obtaining spare parts, especially for older equipment, can be challenging. Using CSAM technology, customers can produce parts on-site within a day, eliminating search time and reducing downtime.

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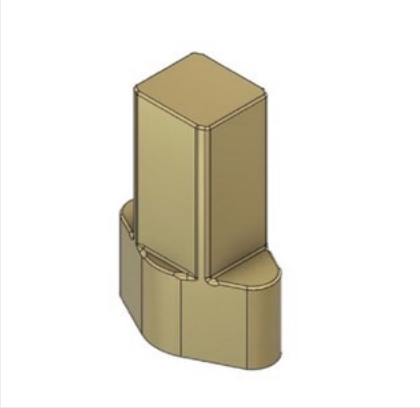
Design to deployment in 19.5 hours



Print: 32 minutes

Aluminum Bronze, 1.8kgs of material

Cook: 17 hours

Heat treated in a standard air furnace

Cut: 2 hours

Critical surfaces machined on CNC

About The Equipment

Land Rover has been producing off road capable vehicles for over 70 years, with the Defender variant still being used in both in Defence and civil applications globally. The versatility of these vehicles has meant owners are seeking alternative ways to repair and maintain them beyond their original expected life.

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