



## Dana

LOCATION	Trentino-Alto Adige/Südtirol, Italy
INDUSTRY	Automotive
APPLICATION	Workholding Gears
PRINTER	X7
MATERIALS	Onyx



Dana Incorporated is a Fortune-500 company with a rich 115-year history as a supplier of drivetrain and e-Propulsion systems for the automotive industry. With 36,000 employees in 33 countries and manufacturing facilities all around the world, Dana has invested in additive manufacturing by deploying numerous Markforged metal and carbon fiber 3D printers across their facilities.

The Trentino office in Italy needed to make workholding fixtures for gears that are micro-grinding hydraulic part surfaces. The fixtures act as workholding while the parts they hold are processed. The team needs to fabricate a custom gear for each part they're grinding, and these workholding gears are usually machined traditionally out of high-density ABS sheets. However, this process can get prohibitively expensive when the design requires small holes, as the workholding fixture would need to be milled instead. The team turned to their Markforged X7 3D printer to print out these components in Onyx, and have seen 70% cost savings and a 90% reduction in lead time per fixture. To date, these gears have not failed in over a year.

**70%**  
COST SAVINGS

**90%**  
LEAD TIME REDUCTION