

Improving Production Support

In-house capability to quickly produce custom tooling and fixtures for the production process

The challenge

Production-floor reviews showed that some of the tooling and work aids used by operators did not match the actual manufacturing need.

- Holders and supports made from foam or silicone were approximate, rather than matched to the operator, component, or process.
- Other fixtures were machined from Delrin — a good engineering material, but procurement and machining could take up to a month.
- Even a simple fixture or workstation aid took a long time to reach the floor.

The solution

A basic 3D printer was brought in to support the production floor directly.

- Jigs, fixtures, holders, and work aids are designed and produced to specific operator and process requirements.
- The same capability produces prototype parts and engineering aids for the Engineering Department.
- Iteration is fast: print, test on the floor, modify against actual use, reprint.
- Costs are well below conventional CNC machining, particularly in development and low-volume production.
- From completed design to a working part on the floor: usually under 24 hours.

One example: a series of dedicated fixtures for operators in the wiring department, designed around their workstation and assembly requirements. The department now has dedicated tooling for a range of tasks.

The benefits

Application-specific tooling, much shorter lead times, lower production costs, better workstation ergonomics and efficiency.

The tooling also keeps workstations cleaner and better organized and the production floor more consistent.

