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DLA awards first competitive contract for additive manufacturing

By Beth Reece

FORT BELVOIR, Va. – A newly awarded competitive contract for an additively manufactured part that prevents structural damage to F-15 aircraft reinforces the Defense Logistics Agency's commitment to collaborating with the military services on 3D printing procurement strategies.

The contract is the first of its kind. DLA has already procured additively manufactured parts through sole-source commercial contracts and sole-source organic contracts, which are fulfilled by DOD organic industrial

sites.

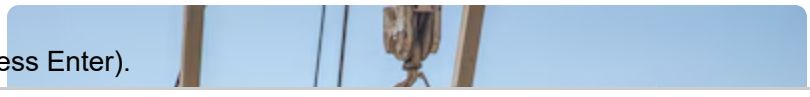
“Now we’ve demonstrated that we can also procure parts that are additively manufactured through open sources. That’s the best of all three methods because it inspires competition among vendors and gives us more options,” said Tony Delgado, DLA’s additive manufacturing program manager.

The Air Force previously manufactured the part, a pylon bumper, at the Reverse Engineering and Critical Tooling Lab at Tinker Air Force Base, Oklahoma, but opted to seek commercial production to keep from overwhelming its additive manufacturing capability, said Robert Stamper, a senior supply chain specialist for the Air Force Rapid Sustainment Office.

“We went to DLA for help because it has the know-how and experience for dealing with contract bidding, and they’ve been an amazing partner,” he said, adding that the part was contracted within six months.

The Air Force’s ability to provide the technical data package to manufacture the part additively made it a good choice for competitive contracting, said James Warren, a DLA business process analyst. The data package includes 3D PDF drawings, print files and quality assurance requirements.

“We were also confident that we’d get a company to bid because the contract was for a large quantity at almost 1,300 parts,” he said, adding that the first parts will be submitted for testing by the end of the year.



Although a DLA Headquarters team manages the agency's additive manufacturing efforts, procurement specialists at DLA Aviation, DLA Land and Maritime, and DLA Troop Support assist by helping to find vendors that match contracting needs and executing contracts after they've been awarded.

"We're working hand-in-hand because additive manufacturing contracts are still pretty new to DLA, and many of the additive manufacturing vendors are also new to doing business with DLA," Delgado said. "Eventually, these contracts will be just like any other procurement."

DLA created an Additive Manufacturing Integrated Product Team in March 2023 to unite goals across the agency's supply chains, define processes for integrating additive manufacturing into the Defense Department supply chain, and establish methods for DOD and industry to share technical data.

Since then, the agency has partnered with the military services to procure DLA-managed parts through commercial and organic contracting. The items include parachute rip cords and B-2 knobs for the Air Force, as well as fuel pump module protective caps for the Marine Corps. DLA is also working with the Army to procure 3D parts such as M1 Abrams tube assemblies and with the Navy for H-60 Seahawk electronic covers.

Additive manufacturing has been widely recognized as a game changer in contested logistics because it allows troops to print parts when and where they're needed.

"Warfighters won't have to wait for a ship to bring the parts they need

across the ocean; they just need the technical data file and the machine to print them," Delgado said, adding that additive manufacturing eliminates the need for storage and transportation. "So, we're also eliminating handling costs and the longer lead times that come with traditional manufacturing."

Warren said it's essential for DLA to work with the services on incorporating additively manufactured parts into the supply chain because service engineers determine whether a 3D-printed part meets the same standards as those produced with traditional methods.

Quality assurance is often the most challenging part of additive manufacturing, Delgado added. Processes for traditional manufacturing using casting and forging methods are already standard and guarantee that parts produced will always be the same when those standards are followed, typically inside a factory environment.

However, the mobile, "factory-in-a-box" nature of AM creates nuances by which parts might look right but fail or degrade under normal military use. Polymer material used in 3D printing has specific storage conditions to prevent water absorption, for example, and certain temperatures are required for metal in various stages of production.

"The variables go on and on, and there are different printing and manufacturing environments. That's why it takes engineers so long to lock in all the parameters and approve the process," Delgado said.

He and Warren want the services to know that DLA is open for additive

manufacturing business.

“We’re here to help release the burdens of contracting from their shoulders,” Delgado said. “That’s why DLA exists – we can manage consumable repair parts for all the military services.”

They are also working with the DLA Small Business Office to help prospective vendors with the DLA Enhanced Joint Certification Program so they can access technical data for future solicitations. Other efforts include updating the DLA Internet Bid Board System so vendors can search solicitations for additive manufacturing opportunities.

For more information about additive manufacturing opportunities in DLA, email James.Warren@dla.mil.

Editor’s note: The Air Force Rapid Sustainment Office, a division of the Air Force Life Cycle Management Center Combat Readiness Directorate, accelerates game-changing capabilities that sustain a modern Air Force. By exploiting new and emerging technologies, the RSO delivers sustainment and maintenance solutions at the speed of need to maximize warfighter readiness. Learn more at https://www.aflcmc.af.mil/RSO.

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