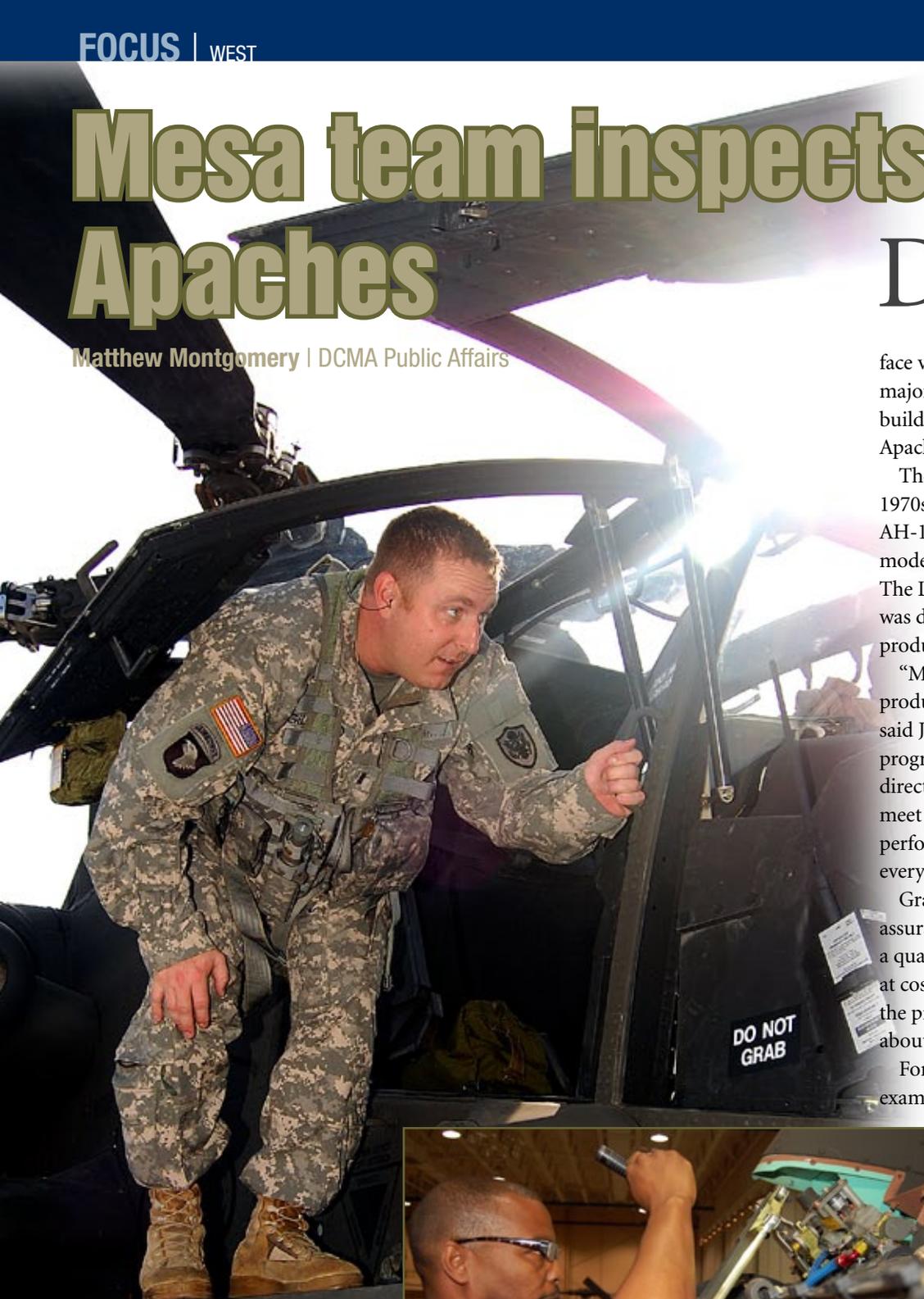


Mesa team inspects Apaches

Matthew Montgomery | DCMA Public Affairs



A Defense Contract Management Agency Boeing Mesa Apache Program technical lead inspects the motor mounts on an Apache Longbow AH-64D helicopter. (Photos by Matthew Montgomery, DCMA Public Affairs)

Defense Contract Management Agency Boeing Mesa oversees

more than 600 contracts at a face value of more than \$15.5 billion. The majority of resources here are spent on the building and remanufacturing of the Apache helicopter.

The Apache program started in the 1970s as the Army looked to replace the AH-1 Cobra. The first Apache, an AH-64A model, was delivered to the Army in 1984. The Longbow version, an AH-64D model, was delivered in 1987 and is scheduled for production through 2013.

“Most of our oversight is focused on the production and remanufacturing process,” said John Graham, DCMA Boeing Mesa program integrator. “We actually deliver directly to the Army and ensure aircraft meet contractual obligations, specification performance standards, and that everything operates safely during flight.”

Graham said the office staff and quality assurance specialists in the plant make sure a quality product is delivered on time and at cost. Currently, that means overseeing the production and remanufacturing of about four aircraft monthly.

For the QA team, this means 24 product examinations, 13 mandatory government inspections and 34 Process Review Plus Inspections must be completed before a single Apache can leave the facility.

During each review or examination more than 120 individual characteristics must be verified, witnessed or checked. This equates to more than 2,200 individual actions that must be accomplished before DCMA will approve the aircraft for delivery.

“We monitor the entire process here at the plant,” said Jeff Adams, DCMA Boeing Mesa Apache Program technical lead, “from the time the airframe comes in on one side, to them



A Defense Contract Management Agency Boeing Mesa quality assurance specialist inspects the tail rotor of an Apache Longbow AH-64D during the final stage of production at the Boeing Mesa plant.

going out to paint and flight test on the other.”

The plant operates on a system where each phase of work is completed over a six-day period. The aircraft then moves forward and the next phase begins. During the initial phase of this process, the QA team performs random inspections on the airframe to ensure quality.

“During the first phase, we mainly check things that are not routine like dents and minor damage to the airframe,” said Adams, one of two technical leads who work in final assembly. The goal is to make sure that nothing is allowed to pass the initial stage that would compromise the overall integrity of the Apache.

Adams, who has been with DCMA for two and a half years, said the DCMA role becomes more involved as the airframe moves through the plant. DCMA QA specialists oversee Boeing employees as they perform modifications to the airframe, install hydraulics, wings and internal components; route wiring harnesses, and start hanging the engines as the airframe moves forward.

The Apache has two engines that produce more than 3,400 combined horsepower. Each cost approximately \$1 million and allow the aircraft to reach speeds up to 150 miles per hour. Adams said that ensuring they are installed correctly is critical to the program.

“This is where we get more involved because it’s part of our safety of flight inspection,” said Adams. The mandated inspections entail overseeing the engine mounting as well as the installation of the drive trains, flight controls and other components.

“We do everything from checking the engine motor mounts to witnessing the torque of a drive shaft,” he added.

DCMA employees also perform random inspections to ensure quality and compliance. These checks are in addition to the normal inspections, witnesses and verifications that must be performed.



A Defense Contract Management Agency Boeing Mesa Apache Program technical lead inspects the motor mounts on an Apache Longbow AH-64D helicopter.

“DCMA being a part of the process helps out immensely and having us here in the plant is a great thing,” said Adams. “We know the process, we know the Boeing employees, and we are able to effectively monitor the program. I think it really improves the quality and final product to the customer.”

After the Apache is assembled in the first plant, it moves to the next stage where it receives a coat of green paint, along with black numbers and lettering. After painting, the aircraft goes to the next phase of production where the main rotor blades, crew station doors and other final components are installed.

A separate group of DCMA quality assurance specialists work the final phase of production and perform acceptance and pre-flight inspections. However, this doesn’t mean the team works solely in their respective buildings.

“We work very closely with our teams in other buildings and participate in their processes, which can be very beneficial,” said Adams. “For example, we were helping perform an acceptance inspection and found an issue with a hanger bearing bracket. The next day we walked the line in

my building and found a similar situation on an airframe, so we wrote a corrective action request for it to be fixed.”

The pre-flight inspections are followed by test flights performed first by Boeing pilots first and then by DCMA government flight representatives. The DCMA Boeing Mesa office has a staff of three Army pilots who ensure the Apaches are ready for delivery.

“We take out new aircraft and make sure they function as required by the contract,” said Army Chief Warrant Officer 3 Sean Gilland, DCMA government flight representative and Army acceptance pilot. “We check the handling quality, make sure the auto rotations are good, engines are performing to specifications and all the electronics are functioning within contract parameters.”

Gilland said the experience working at the DCMA Boeing Mesa plant serves a vital purpose in the process.

“It is a rewarding experience knowing I’m checking the Apaches out before they go to their respective units – but there is also a big sense of responsibility,” said Gilland. “These are going to units I know and could be flying with in the future.” **C**