

Tandem Notes

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— Phrog Phorum —

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————— Greek Chinooks delivered ahead of schedule

Boeing Philadelphia assembly workers and Chinook Program management shared a major victory in late April with the delivery of the second of seven CH-47Ds for the Hellenic Army, two weeks ahead of schedule.

Director of Chinook Programs, Pete Parsons, praised the efforts of all involved.

“This is how a winning streak gets started,” he said. “Somebody makes a good play, and the next thing you know, people expect to win and will walk through fire to win again.”

The early delivery, part of a Foreign Military Sale (FMS) program to Greece negotiated in 1999, came after Boeing established a team approach with the U.S. Army’s Cargo Helicopter Program Management Office and Defense Department agencies that oversee the complicated FMS process. The team quickly and efficiently resolved inspection and paperwork issues that could affect delivery, setting a precedent for future turnovers on or ahead of schedule.

“Everybody involved should be very proud of this achievement,” Parsons added. “Our entire Operations team built a high-quality aircraft with time to spare, and our program management team ensured the delivery review process worked smoothly. International Chinook Program Manager Jim Waterman interrupted his vacation for a trip to the Army Program Management Office in Huntsville, Ala., to keep the delivery on schedule.”

Parsons further explained that Greek Chinook Program Manager, John Basantis, kept the project moving forward by coordinating the myriad of details with all the U.S. Government and Boeing participants. This accomplishment showed the power of dedication and teamwork.

“These program developments, combined with the recent on-time and on-cost completion of our new Chinook production and assembly line, are tremendously important for the future of the Chinook,” Parsons concluded.

————— CH-47 takes scenic route



Sgt. Ronald Fox, U.S. Army, took this photo of a CH-47D on its way back from NATO-led Kosovo Force operations near the Neuschwanstein (“New swan’s stone”) Castle in Fussen, Germany. The castle was built in the late 1800s by King Ludwig II.

Dear Chinook and Sea Knight User

This is an exciting summer for the Tandem Rotor community. Our next issue will report the first flight of the CH-47F prototype, just completed on schedule, and the F-model rollout ceremony in mid-July.

At that ceremony, we will commemorate the 40th anniversary of the first Chinook flight, which took place on Sept. 21, 1961. Chinooks have been flying for nearly 40 years, an amazing record. Just as amazing, however, is the fact that Chinooks will almost certainly remain in service for another 40 years!

By the time you hear from me again, Boeing will have completed negotiations with the Army and Special Operations Command on a modernization plan for the Special Operations Chinook fleet that will update both MH-47Ds and MH-47Es to an improved MH-47G configuration.

We anticipate major system and structural synergies between the F and G models that will benefit all of our Chinook customers. We are eager to develop a new, more efficiently produced cockpit section for modernized Chinooks. We will also develop an advanced G-model cockpit design that may have implications for the F-model and international Chinooks.

Since Tandem Notes is a customer-oriented newsletter, we’re always eager to receive and publish customer-related news, “tales from the field” and photographs, so please submit them to: Jack Satterfield, Boeing Philadelphia, P.O. Box 16858, M/S P30-18, Philadelphia, PA 19142-0858. Ph: (610) 591-8399; Fax: (610) 591-2701, e-mail: john.r.satterfield@boeing.com; or Doug Holmes (same mailing address and FAX number), Ph: (610) 591-4901, e-mail: william.holmes@phl.boeing.com.

A handwritten signature in black ink that reads "John T. Gilbride".

John Gilbride
Director, Aerospace Support
Boeing Philadelphia

Chinook maintenance trainer moves into new space



The Chinook Composite Maintenance Trainer allows helo users and maintainers to perform and practice most of the maintenance duties they will encounter with the aircraft they purchase.

When the Chinook Composite Maintenance Trainer (CMT) resided on the Boeing Philadelphia campus, it lived in crowded quarters. Now that it has relocated to a state-of-the-art facility, it finally has room to grow.

The CMT moved to the New Castle County Airport, Wilmington, Del., in April as part of the new Boeing Philadelphia Rotorcraft Training Center—a place where rotorcraft operators and maintenance technicians receive hands-on training with the products they buy and the aircraft they fly. Although the CMT is not a flight-worthy version of the heavy-lift helo, it allows students to perform and practice most of the maintenance duties they will encounter with the aircraft they purchase.

“In the new facility, everything is at our fingertips. There is a huge difference between shared space and dedicated space.”—John Abreu, manager, Chinook Aircrew Manuals and Training

“The purpose of the trainer is to replicate the fielded Chinooks for U.S. and International customers, enabling them to learn by doing,” said John Abreu, manager, Chinook Aircrew Manuals and Training.

“We provide training for two levels of

maintenance at the new facility: on-aircraft and off-aircraft component repair. The CMT was specifically designed to enable us to teach everything from daily inspections to removal and replacement of dynamic components, such as transmissions and rotor heads.”

In addition to the main CMT unit, the facility houses several Part Task Trainers (PTTs) that replicate individual aircraft systems and simulate off-aircraft maintenance.

The PTTs allow students to learn how the systems work independently, progressing from the simple to the complex, culminating with the training performed in the intermediate level shop areas and on the CMT itself. Students also have access to a complete library of technical manuals and a fully-stocked tool crib.

“The difference between the two facilities is night and day,” said Abreu.

Prior to moving to the new facility, the CMT—which has full electric and hydraulic power—was located in an isolated, cramped maintenance area and a handful of antiquated 12 feet by 60 feet trailers that were used as classrooms.

“The old location had several drawbacks,” said Abreu, whose team utilized the area for 10 years. “The trailers did not have sufficient lighting for learning, and our total space was right around 12,000 square feet.

In the old facility, only one or two PTTs could be used at a given time. If we wanted to use a different PTT, we’d have to swap them in and out of storage. In the new facility, everything is at our fingertips. There is a huge difference between shared space and dedicated space.”

The new facility is 40,250 square feet, and can now meet the training needs of all Boeing rotorcraft maintainers and provide growth opportunities for all rotorcraft products. Abreu’s team considered a number of facility designs before agreeing on the current layout.

“Everyone on the team reviewed the blueprints for weeks and contributed ideas based on personal experience,” he said. “It’s just another example of employee involvement.”

The center trains approximately 350 students each year, including U.S. Air National Guard, International military and U.S. Army active duty. With a mature Catalog Training Program and the ability of customers to order training online, Abreu expects enrollment to increase.

“We have a number of goals for the new facility,” he explained. “We want to continuously tweak our operation, provide additional training to our staff, escalate new business activity and provide the best training available to our customers. We teach maintenance the way it’s supposed to be taught—by the book.”

New Chinook line promises savings, safety

Boeing Philadelphia recently completed renovations to the Chinook final assembly line that should help maintain aircraft cost and quality and increase employee efficiency.

The new single assembly line, which took 14 months to complete, consolidates two parallel rows into a more productive work area. It provides open space that permits smooth flow of subassembly components into the main line in a “fishbone” pattern.

“The Chinook is a great helicopter, and our efforts to keep it competitive in the world market will pay off, not only for Philadelphia, but also for those customers fortunate enough to utilize CH-47s for military and civil missions,” said Chinook Program Manager Pete Parsons.

Spare parts tracking method hits the ‘mark’

Everything in the grocery store has a bar-code for scanning at the checkout counter, right? So what’s so tough about using the same process for military spare parts?

It’s not that easy, says Bob Beggs, Boeing Philadelphia Army Parts Marking program manager. The Parts Marking program is one of several projects being executed by Phantom Works Advanced Support Concepts that may help the U.S. military streamline complicated maintenance processes. Beggs and his team hope to improve Army Aviation material management and reduce aviation operating costs.

The Parts Marking program team, with funding from the Army Aviation Applied Technology Directorate and help from Boeing Commercial Airplane Group, the C-17 program, and several contractors, recently conducted a successful field trial using CH-47 Chinooks to evaluate the feasibility of tracking parts and spares with a bar-code system.

“Wrappers and packages for nearly everything we buy today routinely include bar-codes,” explained Beggs. “Unfortunately, aircraft spares typically don’t come in wrap-

pers or packages. To implement this tracking system, our team has to consider compatibility with materials and finishes, space considerations and optimum mark placement. One of our goals is to place bar-codes where maintainers can scan them in the field without removing parts from an aircraft.”

The field test involved 65 parts on the first CH-47F Engineering and Manufacturing Development aircraft.

“We marked the parts using a self-contained laser system to make aluminum labels that we immediately attached to the parts,” said Beggs. “We also marked parts directly with a Dot-Peen system, as well as using ink and stencils where appropriate. The marks are similar to bar-codes on consumer products, but contain information unique to each part.”

Boeing and Army engineers are assessing which parts will be marked on the Chinook when the aircraft are returned to Boeing for F model remanufacturing.

“As far as we know, no one has marked an aircraft this way before,” noted Beggs. “We call it ‘Opportunistic Parts Marking’ because it lets us mark parts on an aircraft, in the field, in the factory or in shelf stock.

Thanks to the test, we understand various options for marking a legacy aircraft like the Chinook in the most cost effective manner possible, and our customers already are realizing the importance of accurate parts identification and tracking to aircraft configuration and inventory management.”

Parts marking is just one element in part life cycle management. Beggs’ team will demonstrate to the Army how parts marking, in conjunction with an automated maintenance management system, can cut helicopter operating and support costs.



Using a self-contained laser system, Boeing generated bar-code labels like this one for Chinook components to facilitate parts tracking and inventory management.

Helo commander honored for flight record



Maj. Gen. Mineharu Yamane, commander, the 1st Helicopter Brigade of Japan Ground Self Defense Force, received a safety award for its 65,000 hours accident free record from The Boeing Company on April 6.

The above photo shows Dr. Wesley E. Spreen, manager, Asia Pacific Business De-

velopment, presenting Maj. Gen. Yamane a commemorative plaque.

The brigade operates 32 CH-47J/JA Chinooks, manufactured by Kawasaki Heavy Industries under license from Boeing since its first delivery in 1988. The fleet participates in disaster recoveries, transportation support and combat support training.

Did you know?

- Interested in sharing your Chinook-related experiences with other users and maintainers? An effort is underway to link Chinook users’ websites into a main hub that will facilitate information exchange and promote units’ accomplishments and missions. For more information, contact Shawn Carmody, a National Guard Chinook maintainer, at kopterdr47@hotmail.com.
- Aug. 4, 2001 will mark the 20th anniversary of the RAF Chinook’s operational service with the No. 18 squadron. Check out the next issue of Tandem Notes for more information.
- Boeing delivered its first CH-47SD or “Super D” Chinook tandem-rotor helicopter in a brief ceremony in early June. The Super D is the standard international CH-47 model. Although it retains the familiar Chinook external profile, the CH-47SD provides long-range fuel tanks with 2,068-gallon capacity, doubling the operational range of earlier Chinooks. The Super D features a longer “radar nose” to accommodate radar antennas.

Heavy-lift helos in action



Photo courtesy Patrick Allen

An RAF CH-47 from Air Assault Brigade No. 16 performs a triple-load FARP exercise.



Photo by PH2 Crystal M. Brooks

Marines from the 31st Marine Expeditionary Unit wait to be extracted by USMC CH-46 Sea Knights after a completed Training in Urban Environment exercise in Dededo, Guam.



Photo courtesy Columbia Helicopters

Columbia Helicopters' Boeing 107 performs a logging mission in the northwest U.S.



Photo courtesy Columbia Helicopters

A Columbia Helicopter Chinook lifts a tower during construction.

CH-47F model moves to production phase



The Boeing Philadelphia F-model crew celebrates the completion of the F-model prototype.

The U.S. Army has awarded Boeing a contract valued at nearly \$27 million to begin transitioning the CH-47F Chinook modernization program from the engineering and manufacturing development phase to production.

The first of two F-model engineering and manufacturing development prototypes is complete and preparing for first flight in late June. The modernization program calls for the remanufacture of 300 U.S. Army CH-47Ds to the F-model configuration.

Boeing is reducing fuselage vibration and adding an integrated digital cockpit system, more powerful engines and other system improvements.