



Very Old FRIEND

By Ron Jensen

Air Guard refueling units love their trusty KC-135s, but age and the demands of the 21st century require a modern replacement



STAFF SGT. BENNIE J. DAVIS III

WHEN THE KC-135R Stratotanker sporting tail number 1468 reaches sufficient speed to hurl itself skyward one cold, clear winter morning at the international airport here, its bones creak and its joints moan.

Just the kind of sounds you would expect from a middle-aged veteran.

The airplane, property of the Pennsylvania Air National Guard's 171st Air Refueling Wing, was built when Ike and Mamie Eisenhower occupied the White House and before any of the crew aboard were born.

"As a pilot, I'd like to fly a new airplane every week," says Maj. Dennis Buckley, perched in the left seat of the cockpit. "It's like a new car. It has that new car smell."

Still, neither he nor Lt. Col. Jeff McKee, filling the right seat, is complaining. From their vantage point, this airplane is a mere child, not some graying Baby Boomer.

GLOBAL MISSION A 171st Air Refueling Wing KC-135 Stratotanker refuels a B-2 Spirit bomber over the Pacific in 2006.



HARRY GANDOSZ

AGING BIRD A 171st Air Refueling KC-135 Stratotanker approaches the Youngstown-Warren (Ohio) Regional Airport during training in January.

The current aircraft can offload 50 percent more fuel, is 25 percent more fuel efficient, and is 96 percent more quiet than the early model.

Janiga and his colleagues are nearly in awe of the aircraft and its ability to accommodate the many modernizations, including the current CFM56 engines that provide 50 percent more thrust than the earliest engines without adversely affecting the airframe.

“The original engineering of this aircraft was phenomenal,” says Master Sgt. Ron Shinsky, the 171st’s flight chief.

Still, the wing’s eight KC-135s all rolled off the assembly line in 1958 or 1959. That makes them older than the commander in chief and even a few senators, and older aircraft are expensive to maintain. Some also struggle to meet all of the requirements of modern missions.

The Air Force has tried to begin replacing the KC-135 more than once, but has stumbled over its well-polished shoes each time. Officials agreed to lease some KC-767 tankers and buy others from Boeing in 2003, but that plan was tainted by illegal deal-making that sent two people to jail.

Five years later, the service awarded a contract of nearly \$40 billion to a consortium of Northrop Grumman and

competitors expected to make bids, although EADS had talked of dropping out of the process.

So the effort is now far behind initial hopes to have a new tanker in the sky later this year.

“It doesn’t matter,” says Capt. James Weber of the 171st’s maintenance unit. “Our guys are focused on fixing and launching what we have.”

That’s the approach here and, no doubt, at the Air Guard’s 20 other refueling wings.

BUT WHILE THE pilots and maintainers concentrate only on the aircraft they have, the wing’s commander is paid to look ahead. And he doesn’t especially like what he sees.

“The avionics on that airplane today are just as cutting edge as what you would have in a commercial airliner going over the Atlantic,” says Brig. Gen. Roy Uptegraff, the wing commander. “Structurally, we are in good shape.

“Yes, we can continue to fly this airplane for a long time. But at what cost? There are some tremendous costs looming.”

Uptegraff, who has been flying the Stratotanker for 29 years (“I have seen the investment put into this airplane firsthand.”), pops open a photo on his computer screen of a retired KC-135 now at the “boneyard,” the final resting place for airplanes of all varieties at Davis-Monthan Air Force Base in Arizona.

“We’ve pretty much retrofitted this aircraft,” says McKee.

As evidence, the cockpit panel facing the two veteran Guardsmen is thick with digital screens and the like never dreamed of when this airplane rolled out of a Boeing plant.

Shortly before the mission begins, Lt. Col. Sean Boyle, another pilot, stands in the operations room of the wing and says of the KC-135R, “We have everything a new plane is going to have on it. It’s there. It’s just been added over the years.”

This aerial refueling marvel has had more improvements than an aging Hollywood star and little about it reveals its eligibility for membership in AARP.

“When you walk on, you don’t realize that airplane’s 50 years old,” says Senior Master Sgt. Dave Janiga, the wing’s aircraft structural maintenance supervisor.

For example, the lower wing skin on all KC-135s was replaced about 20 years ago. About 10 years ago, an avionics system known as Pacer CRAG (compass, radar and GPS) made the human navigator expendable, reducing the crew to three. And more powerful and quieter engines were installed.

“If we had followed our [tanker] plan, we would have 80 [new] tail numbers on the tarmac by the end of this fiscal year. So we are way behind.”

—Rep. Todd Tiahrt

R-Kansas

European Aeronautic Defence and Space Company (EADS) to build 179 tankers, but a protest by Boeing was upheld by the Government Accountability Office and the contract was voided.

Ultimately, the Air Force wants 400 new tankers, making the entire deal worth about \$100 billion over 30 years.

A new request for proposal was to be released last month with the same two

The airplane in the photo is missing a tail section. The front landing gear has vanished. A gaping hole has replaced the cockpit’s left window.

“You’re looking at an organ donor right there,” he says. “That one’s been pretty well picked apart.”

The missing pieces are on operating KC-135s, he says, performing missions somewhere on the globe.

Other Items Produced in 1958



Emerson Transistor Radio



Philco Television



Kodak Brownie Camera



IBM Electric Typewriter



Chevrolet Corvette

His point is, spare parts for an old airplane are getting harder and harder to find. “We have replaced a number of the landing-gear struts over the years,” he says. “And you know what? They do not manufacture landing-gear struts.”

Some of the components of the KC-135 were built by companies that operated during World War II and are no longer in business.

“Let’s not panic yet,” he cautions. “We have tons of tankers out there in the ‘boneyard.’”

Uptegraff is more worried about corrosion, which, he says, put an earlier version of the aircraft, the “E” model, “out of business.”

“Our maintainers will tell you,” he says, “we find corrosion all the time.”

The wing’s maintenance airmen discovered corrosion recently deep within the cockpit window frame of an aircraft pulled inside for scheduled maintenance.

Col. Mark Van Kooten, the wing’s maintenance group commander, says of corrosion, “You just don’t know where it’s going to come. I’m sure it’s in the back of the mind of every maintenance group commander.”

Uptegraff says the airplanes in his wing have between 20,000 and 25,000 hours of flying time on them. The upgrades over the years were intended to make them reach 40,000 hours, which would seem to be far in the distance.

But Van Kooten says the KC-135 enjoyed a fairly easy life as a youngster.

“In its beginning life cycle, it was babied,” he says.

It was a Cold War weapons system, built to keep airborne the Strategic Air Command bombers that flew constant alert missions in case the Soviet Union got any crazy ideas.

“We’d take off heavy and land really light,” he says. “That’s the way an airplane likes it.”

It was not used as a cargo plane or to ferry passengers, as it is now. It was not a medical evacuation aircraft, also a common use these days.

Plus, it spent a lot of time on the flight line waiting for a mission, which is unlike the torrid pace they are setting these days.

“Is it all sustainable?” Uptegraff asks. “Yes, but at an enormous cost. And the cost is coming.”

For example, there are plans to replace the flight controls—flaps, rudders, spoilers and the like—on all 420 KC-135s in the Air Force. The price tag is \$1 billion.

AND THERE ARE plans to replace the electrical wiring and the fuel bladders in the future, too, among other items.

Van Kooten says the costs for these upgrades were figured a few years ago when the KC-X, as the new tanker program is called, was expected to be a reality by now. Costs, he says, can only go up since more aircraft will go through the upgrades.

Uptegraff is resigned to the reality he faces.

“The new tanker is on the horizon,” he says. “It’s not in our front yard.”

He says, too, “In the long run, that would be cheaper.”

How soon is a new tanker needed? “ASAP,” Uptegraff says.

Of course, the power to put the new tanker closer to Uptegraff’s front door resides in Washington, D.C. Lawmakers who have a stake in the effort all say they want the program completed, but they have different views on who should build the plane.

Rep. Todd Tiahrt, R-Kan., and Rep. Norm Dicks, D-Wash., both have Boeing plants in their states and think the venerable aircraft manufacturer rightly will win the bid, which should be awarded sometime this summer if the schedule holds.

But Sen. Jeff Sessions, R-Ala., would have gained thousands of jobs in his state if the 2008 award to Northrop Grumman and EADS had survived Boeing’s challenge.

All three talk about the effort with a mix of anger and anticipation a couple weeks before the latest request for proposal was released.

“This has slid since 2003,” Tiahrt says. “If we had followed our plan, we would have 80 [new] tail numbers on the tarmac by the end of this fiscal year. So we are way behind.”

The delay, he says, has added \$15 billion to the ultimate cost.

Dicks agrees and puts the blame on Sen. John McCain, R-Ariz., who deep-

sixed the leasing plan as wasteful and kept up the battle when the corruption came to light.

Both Dicks and Tiahrt are against giving a contract like this one to a foreign company like EADS, even though many jobs would be in America.

Tiahrt says he wants “an American tanker made by an American company by American workers.”

Dicks says, “If they would just do this fairly, I don’t think there’s any way Boeing doesn’t get the bid.”

Sessions says, “I’m confident we’ll get [a tanker]. It’s the No. 1 priority for the Air Force and has been for several years. We came close the year before last.”

He was angered by the talk that foreigners would build the aircraft when EADS got the bid in 2008.

“That offended my constituents,” he says.

He says another protest is “very possible” following the bid award and says “litigation ... could drag on for years.”


But Sessions also mentions the idea of a split contract, giving both bidders a piece of the action.

“[Defense Secretary Robert] Gates has said he doesn’t favor that,” the senator says, “but I think we’re at a point where he should reconsider that.”

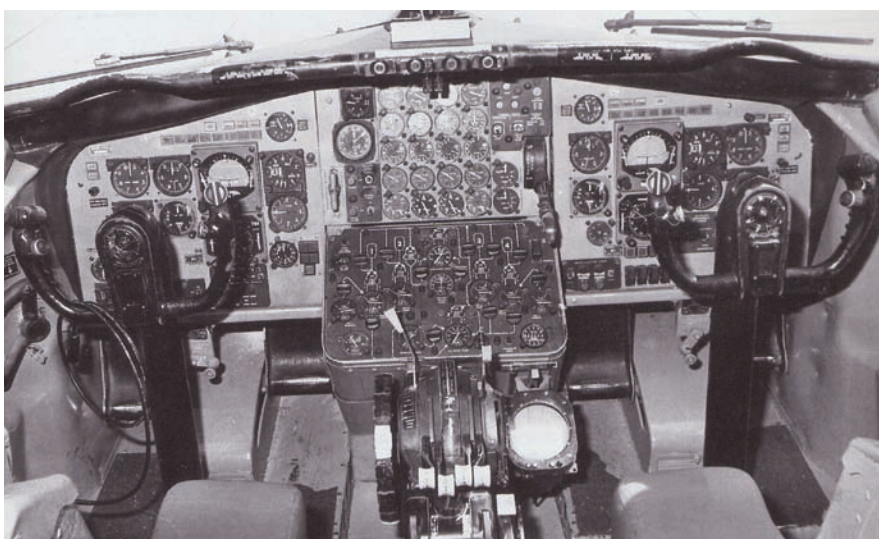
WHILE THE INTERESTED lawmakers keep a watchful eye on the effort, the refueling wings will go about their business, just as tail number 1468 is doing on this winter day.

It soars over the Finger Lakes of New York and along the coast of Lake Ontario for a rendezvous over Syracuse, N.Y., with a pair of thirsty F-16 Fighting Falcons from the New York Air Guard.

The three aircraft join the aerial ballet that is an in-flight refueling process—the tanker flying steady and stable, while the customers line up for service. Lying on his belly in his roost in the airplane’s tail, Master Sgt. Pat Sharkey, the boom operator, dispenses the fuel and waves them away.

Buckley and McKee turn the aircraft for home, where it lands in the slanting rays of a January sun, a bit lighter and three hours older. 

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—Brig. Gen. Roy Uptegraff
Commander, 171st Air Refueling Wing



Tech. Sgt. Shawn Monk

UPGRADE The new avionics system in the KC-135s replaced the old electronic-mechanical instruments of the 1950s (above) with banks of digital displays.



NGAUS Action

NGAUS was a driving force behind many of the upgrades to Air National Guard KC-135 Stratotankers, including new wing skin; the new, quieter and more powerful engines; and state-of-the-art avionics. The association supports the Air Force effort to replace the KC-135 with new aircraft. In the interim, infrared countermeasures on every refueling tanker is a NGAUS legislative priority in the fiscal 2011 defense budget.