



An F-22 from Holloman AFB, N.M.

Moving Time

Lockheed Martin photo

Tyndall and other bases will gain F-22s as the force adjusts its Raptor basing plan to reflect a smaller fleet.

By Marc V. Schanz, Senior Editor



An F-22 heads to its new home at Tyndall AFB, Fla. Tyndall is experiencing a Raptor windfall.

DOD photo

Despite a recent lack of movement on the flight line, the Raptor fleet is set to undergo a significant shift, just as the production line is coming to a close—and as soon as a lengthy, fleetwide grounding is lifted. The number of Raptor units across the Air Force will soon contract, consolidating aircraft at fewer locations. This is being done to improve availability, maintenance, and sustainment, and better align the F-22 force structure with other combat aircraft assets as the Air Force extends the life of a portion of its older fighter fleet.

Some bases will gain; others will lose entire squadrons of F-22s. A big driver behind the move, unsurprisingly, is money and the need to utilize the force as efficiently as possible, in an environment where funding topline is flattening, according to Air Combat Command officials.

“If you are thinly spaced with your assets, it’s much harder to sustain

them,” said Maj. James Akers, chief of the F-22 branch at ACC’s requirements division and the command’s F-22 program element monitor. If assets are widely dispersed, the support and sustainment costs steadily rise over the years—something USAF can ill afford.

“At another time, the Air Force [was] looking at more F-22s [in the inventory], and more bases made more sense. Now that we know where that end state is going to be, it makes sense to consolidate,” he said in a June interview at ACC headquarters.

As in all realignments, there are winners and losers. Currently, the Air Force houses its F-22s at JB Langley-Eustis, Va., Tyndall AFB, Fla., and Holloman AFB, N.M., as CONUS bases. JB Elmendorf-Richardson, Alaska, and JB Pearl Harbor-Hickam, Hawaii, also host Raptors, with Hickam just beginning to receive its complement as of last July. Edwards AFB, Calif., and Nellis AFB, Nev., each host a small

contingent of Raptors for operational test and evaluation activities as well as training at Nellis’ weapons school.

Under the restructure plan, Holloman is on track to lose both of its squadrons of Raptors by Fiscal 2013, moving its aircraft to other squadrons. This is due to force structure, said Akers, an F-22 pilot who flew with the initial Raptor cadre in 2005. “There’s zero attrition reserve built into our fleet plan” as is, he noted.

Deraptorization

The realignment will address some of the inherent difficulties in managing such a small fleet. In short, the extra airframes from Holloman will increase fleet size and reserves at USAF’s other F-22 bases.

On the other side of the ledger, Tyndall will experience a Raptor windfall. The home of the F-22 formal training unit will gain 24 aircraft after the Holloman moves shake out, nearly doubling the base’s current fleet of 32. Tyndall is set to receive the bulk of the realignment, with fighters for use in the base’s training mission—significantly expanding its role in Raptor operations.

“Those 24 jets will stagger to Tyndall; [they] won’t all fly there [in] one day,” Akers added. Tyndall will host both combat-coded and training aircraft, as the FTU’s existing Raptors are Increment 2 configured aircraft—meaning they can shoot air-to-air weapons and drop bombs. The new aircraft soon arriving at Tyndall will be Increment 3.1, more capable combat-coded aircraft.

The reorganization came in the aftermath of Congress’ termination of the F-22 line in 2009, rendering inefficient the old plans for a broader force structure.

Last July, the Air Force first announced its plan to form the most “effective” basing alignment—essentially requiring the redistribution of aircraft from one F-22 unit to four different Raptor bases. Holloman—then-home of the 8th Fighter Squadron, and near some of the largest training ranges in the country at White Sands Missile Range and the Nellis Complex—was singled out for deraptorization.

The 8th FS, barely reactivated in September 2009, was recently inactivated on July 15 and its 24 aircraft slated to be spread out to Raptor squadrons at Nellis, Langley, and Elmendorf and to the base’s other squadron, the 7th FS. The 7th will shut down in Fis-



Technicians put together F-22 Raptors at the Lockheed Martin facility in Marietta, Ga. A smaller fleet made old basing plans obsolete.

cal 2013, Akers said, when its aircraft move to Tyndall.

Both Elmendorf and Langley are to receive six additional aircraft. The bases are already home to two combat-coded F-22 squadrons each, with 24 aircraft apiece.

Two of Holloman's aircraft will be sent to Nellis.

Senior Air Force leadership said they settled on the arrangement after a survey of four Raptor bases, looking at feasibility, timing, cost, and planning factors, which would influence whether or not more F-22s could be supported. Site survey results and "military judgment" were factors in the decisions, the Air Force said in its July 2010 plan announcement. The plan "maximizes combat aircraft and squadrons available for contingencies," said Kathleen I. Ferguson, the Air Force's deputy assistant secretary for installations, when rolling out the effort. Through the consolidation, Raptor "operational flexibility" will be enhanced, she said.

Pilots and ACC officials contend this is an attempt to make the best out of a less than perfect situation—a smaller fleet of elite fifth generation fighters, backing up an old and also reduced fleet of fourth generation aircraft now being asked to extend their service lives further into the future. Of course, bridging the capability gap between older F-15 Eagles and

The Raptor's Long Summer

JB LANGLEY-EUSTIS, VA.

These are trying times for the pilots and airmen who work on the F-22, the world's only operational fifth generation fighter. Since May, the thousands of airmen who live and work at JB Langley-Eustis, Va., have witnessed a sound almost completely alien to them: relative quiet.

The base's tenant, the Raptor, has been grounded from flight operations since May 3 until further notice, as the Air Force investigates potential malfunctions in the aircraft's oxygen system. Save for an occasional flight of a 1st Fighter Wing T-38 "aggressor" aircraft, normally used to train Raptor pilots in tactics, it has been rare to hear the sound of engines spinning up.

Without flight operations, F-22 pilots are training exclusively on simulators. To stay as proficient as possible in the Raptor's operation, they and the ground crews are performing a range of ground-based tasks, according to Air Combat Command officials.

F-16s and fifth generation fighters is not easy, and this weighs daily on Col. Timothy Forsythe.

The Fleet Management Plan

"With the F-22 and F-15, there is a synergistic effect with those two aircraft working together," said Forsythe, a veteran F-16 pilot and chief of ACC's Combat Aircraft Division in the command's requirements division. The Air Force is in no way seeking to bring older Eagles and Vipers up to F-22 and F-35 standards, he said. "We are trying to bridge the gap as much as we can with the technology that's available to get to the fifth generation force we are trying to get to."

In the years ahead, USAF plans to move toward a common configuration

for the Raptor fleet—as opposed to the four separate increments currently laid out in the F-22 force structure, ACC planners say. The Air Force will move to two configurations—one for training purposes, one for combat-ready aircraft. With only 149 of the planned 187 airframes combat coded (including backup aircraft inventory airframes), the distinction is important. Once the fleet is delivered and configured properly, it will allow more efficient upgrades and modernization of software, avionics, and other improvements.

As currently constructed, the F-22A modernization plan will bear out a final fleet composition of 34 Block 20 aircraft used for test and training (the ones which will reside at the

Two F-22s on the ramp at JB Langley-Eustis, Va. Langley is slated to receive six additional Raptors.



USAF photo by SSgt. Verlin Levi Collins

Tyndall schoolhouse), 63 Block 30s, 86 Block 35s, and two test-coded aircraft assigned to Edwards, according to Lt. Gen. Herbert J. Carlisle, the Air Staff's head of operations, plans, and requirements.

Both Block 30 and Block 35 Raptors will accept Increment 3.1 upgrades—which include modernized advanced synthetic aperture radar modifications (AESA), self-targeting Joint Direct Attack Munitions capability with on-board sensors, and the ability to carry eight Small Diameter Bombs—and further advancements. Carlisle noted the Increment 3.1 upgrades would be fielded this year.

The fleet is not monolithic, and another factor involved in moving around F-22s is to consolidate more-capable Block 30s and 35s at certain locations to make sure they can be utilized to their full extent. "A lot of the new aircraft coming off the line come to Langley," Akers noted.

Newer aircraft arrive and older aircraft, some delivered five years ago, go to Hickam or Holloman. This is part of the fleet management plan. It "also deals with newer versus older jets," Akers said, noting there is a broader effort to put most of the Block 30 and 35 aircraft at Langley and Elmendorf, to make sure the capability is evenly bedded down.

The factory is up to aircraft No. 181 as of June 30, Akers said, and Lockheed Martin is preparing to deliver that bird to the Air Force. The last four aircraft are Lot 10, and will be delivered by 2012.

The consolidation occurs at a sensitive time for USAF's fighter fleet, just coming off the 2010 Combat Air Forces reduction program, known as "CAF redux," which saw some 250 older F-15s and F-16s plucked from the force structure and retired to save money. During the Fiscal 2012 review, USAF delivered the service's "moderate" risk fighter force structure requirement to the Office of the Secretary of Defense—1,200 primary mission aircraft and 2,000 total aircraft, according to Carlisle.

A total aircraft shortfall of about three to five percent through the Future Years Defense Program is expected to persist. The capability shortfall will be alleviated through "aggressive management of F-35 production," legacy fighter fleet reviews and sustainment, selected service life extension programs, and modernization efforts, Carlisle said before the Senate's airland subcommittee on May 24.



USAF photo by A1C Brett Clashman

A1C Justin Horne salutes the pilot of an F-22 during a 2010 Red Flag exercise at Nellis AFB, Nev. Consolidating Raptors at fewer locations could improve availability, maintenance, and sustainment.

Enhancements either under way or under consideration for legacy fighters such as the F-15 and F-16 will ensure those aircraft remain "very viable into the future," especially when paired with fifth generation fighters, Carlisle said. "If you pair F-15s with F-22s and F-35s, you now have the ability to open an anti-access area and allow those airplanes to get in and do work and then come back out."

Making the Best of It

"What we've all discovered is with the F-22 and F-35 coming on, those airplanes give added capability to the fourth generation airplanes as well," Carlisle added.

The realignment of the Raptor force is one piece of USAF's plan to leverage as much capability as possible out of a force accepting "moderate" risk for future operations. In addition to looking at the Raptor, other assets and their basing have undergone scrutiny.

"If numbers aren't where you think they were going, if capability isn't going to be what you thought it was, you are always examining what you thought you need ... and where they would go," Forsythe said.

It's about "chess pieces. It's not just where they are stationed; it's capacity overall in numbers and it's the capability they bring overall to the fight," Forsythe said. Most of the combat air force has operated in semipermissive environments in Iraq and Afghanistan over the last decade, but there are two other threat scenarios that would pose very different risks: the anti-access,

area denial environment, where only fifth generation assets could effectively operate, and the "contested" environment, where advanced, networked air defenses are employed.

The differences between those scenarios "drive capabilities and necessities," he said. Simply put, F-22s will be flying with Eagles and Vipers for years to come—and the stealth fighters will have to be used judiciously. "Because of the limited numbers of F-22s, we need to keep as many assets as we can, depending on the air superiority mission they are in," Akers said.

Will all of this movement and modernization get USAF the capability it needs to address the range of scenarios presented? Maybe. One of the tougher problems to solve deals with an anti-access threat, because a force of life-extended fourth generation aircraft with a limited number of F-22s will have difficulty operating in that environment. This makes future management of the F-35 strike fighter acutely important.

"Remember the three battlespaces. [With] anti-access, we will not get there from here," Forsythe said, referring to the 2011 force structure. "Not with old iron. Aluminum jets aren't going to cut it."

There are other scenarios, however, and the Air Force is committed to supporting the national military strategy, "so we still have to have enough iron to do that work," Forsythe said. "You will never replace an F-22 with an F-15C. ... It won't happen. But it is what we have and we are absolutely making the best of what we can." ■