

413 FLIGHT TEST GROUP



MISSION

The 413 Flight Test Group executes depot and contract functional check and acceptance check flights as well as low-risk operational test and evaluation. It also sustains combat capabilities of the USAF as well as other services by ensuring combat assets perform as desired.

LINEAGE

413 Fighter Group, Single-Engine established, 5 Oct 1944

Activated, 15 Oct 1944

Inactivated, 15 Oct 1946

Redesignated 413 Fighter-Day Group, 27 Oct 1954

Activated, 11 Nov 1954

Inactivated, 8 Oct 1957

413 Strategic Fighter Wing established, 23 Mar 1953

Redesignated 413 Fighter-Day Wing, 26 Sep 1957

Activated, 8 Oct 1957

Redesignated 413 Tactical Fighter Wing, 1 Jul 1958

Inactivated, 15 Mar 1959

413 Fighter-Day Group and 413 Tactical Fighter Wing consolidated, 31 Jan 1984

Redesignated 413 Flight Test Group on 18 Jul 2003

Activated in the Reserve, 1 Oct 2003

STATIONS

Seymour Johnson Field, NC, 15 Oct 1944

Bluethenthal Field, NC, 9 Nov 1944-6 Apr 1945
Ie Shima, 19 May 1945 (ground echelon), 15 Jun 1945 (air echelon)
Kadena, Okinawa, Nov 1945
Yontan, Okinawa, 29 Jan-15 Oct 1946
George AFB, CA, 11 Nov 1954-15 Mar 1959
George AFB, CA, 24 Oct 1957-15 Mar 1959
Robins AFB, GA, 1 Oct 2003

ASSIGNMENTS

First Air Force, 15 Oct 1944
301 Fighter Wing, 2 Nov 1944-15 Oct 1946
Ninth Air Force, 11 Nov 1954
Eighteenth Air Force, 1 Oct 1957
831 Air Division, 8 Oct 1957-15 Mar 1959
Twenty-Second Air Force, 1 Oct 2003

ATTACHMENTS

479 Fighter Day Wing, 11 Nov 1954-7 Oct 1957

WEAPON SYSTEMS

P-47, 1944-1946
F-86, 1954-1956
F-100, 1955-1959

COMMANDERS

LTC George H. Hollingsworth, 15 Oct 1944
Col Harrison R. Thyng, 1 Nov 1944
LTC John B. Coleman, 14 Oct 1945
Col Loring F. Stetson Jr., c. Jun-15 Oct 1946
Col George Laven Jr., 11 Nov 1954
LTC Maurice G. Long, 4 Oct 1955
Col Gordon F. Blood, 16 Jan 1956
Col Robert W. Stephens, 13 Jul 1958-15 Mar 1959
LTC Stephen Niemantsverdriet, #2001
Col Phillip Neely
Col Jeffrey E. Brett
Col Russ Reimer

HONORS

Service Streamers

Campaign Streamers

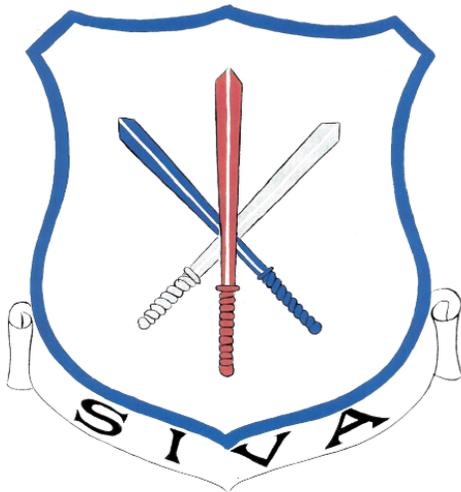
World War II
Air Offensive, Japan
Eastern Mandates

Western Pacific
Ryukyus
China Offensive

Armed Forces Expeditionary Streamers

Decorations

EMBLEM



413 Fighter-Day Wing emblem

413 Strategic Fighter Wing emblem: Argent, within a diminutive border per border of the like and azure a sheaf of broad swords points upward gules of the second, vert and or, all with hilts of the first (Approved 16 Apr 1955.)



413 Flight Test Group emblem: Sable, a sheaf of broad swords points upward Gules, Azure, Vert and Or, all grooves and hilts of the first, all within a diminished bordure Yellow. Attached below the shield, a White scroll edged with a narrow Yellow border and inscribed "413 FLIGHT TEST GROUP" in Blue letters. **SIGNIFICANCE:** Ultramarine blue and Air Force yellow are the Air Force colors. Blue alludes to the sky, the primary theater of Air Force operations. Yellow refers to the sun and the excellence required of Air Force personnel. The charge of swords is representative of the abilities of the unit to achieve all air operations. (Approved, 3 May 2004)

MOTTO

Bombcats
Siva

OPERATIONS

Trained for very-long-range operations with P-47s. The air echelon left Bluethenthal Field in mid-Mar 1945. Flew combat missions from Saipan to the Truk Islands in May before joining the ground echelon on Ie Shima in mid-Jun. Initially served as part of Twentieth Air Force in the Pacific; reassigned to Eighth Air Force in mid-Aug 1945. Engaged in dive-bombing and strafing attacks on factories, radar stations, airfields, small ships, and other targets in Japan. Made several attacks on shipping and airfields in China during Jul. Flew its only escort mission on 8 Aug 1945 when it covered B-29s during a raid against Yawata, Japan. Served as part of the air defense and occupation force for the Ryukyu Islands after the war. Inactivated on Okinawa on 15 Oct 1946.

Activated as part of Tactical Air Command in 1954. Trained to achieve and maintain combat readiness by participation in tactical exercises, firepower demonstrations, joint training with US Army and US Marine Corps units, and tactical evaluations.

Provided augmentation of Sixteenth Air Force in Spain, through deployment of assigned squadrons on a rotational basis, 1958-1959.

15 F-86Hs were received in January 1955. By that time, 70 tactical (fighter) aircrews were assigned, but of those 11 had fully transitioned to the F-86H and only 8 were considered fully trained.

In early February, 29 F-86Hs were located on the base. In early March, six pilots departed George AFB to pick up additional F-86Hs at Columbus. They didn't return until 24 March because, in the interim, all F-86H aircraft were grounded until technical order compliance on the ejection seat was completed.

The group moved, in March, to what came to be called "Tent City" on the base to facilitate reconstruction of the parking ramp. The then present asphalt needed to be dug up and replaced by concrete to accommodate the F-86H and future Century Series fighters.

The group received 30 new F-86Hs in April which brought about an increase in flying time achieved.

The F-86H remained the principal tactical aircraft in the 413 FDG through March 1956. At that time, the remaining Sabres were grounded so that they could be maintained and inspected in preparation for transfer. Up until the grounding, the group still experienced problems with the F-86H cannon system. With 27 jets transferred out, 48 remained. Of those Sabres, only 11 could fire all four cannon. The remainder still had problems with structural deficiencies in the nose of the aircraft or gun gas purging problems.

From one of the Air Force's oldest active airframes, the B-52 Stratofortress, to the newest weapon system, the F/A-22 Raptor, the the 413 Flight Test Group handles them all. Other Air Force Reserve units fly and maintain one or, in some cases, two types of airframes. However, the 413 FTG, headquartered at Robins Air Force Base, Ga., oversees the operations of eight geographically-separated units, spread out from coast to coast, flying 12 different aircraft.

The unit accomplishes this feat with a work force of only slightly more than 200, comprising traditional Reservists, members of the active Guard and Reserve, and civilians. Their mission is to make sure aircraft are safe after being stripped down and put back together. "We support Air Force Material Command in two capacities: depot flight test and test support," said Col. Darrel Ekstrom, 413 FTG commander. "We handle the FCF (functional check flights) and ACF (acceptance check flights) of airplanes that have gone through programmed depot maintenance or a contractual upgrade. We take them out, fly them, make sure everything works like it's supposed to and then deliver them back to the field. "The other piece is test support. We support a variety of missions in the test programs at Edwards AFB, Calif., and the Big Crow Program at Kirkland AFB, N.M." In addition to these responsibilities, the group performs onetime flights of damaged or crippled aircraft back to a repair facility where they can be fixed and returned to the Air Force inventory.

About every five years, each aircraft is scheduled for a maintenance overhaul at a depot facility. In many cases, members of the group will fly out to the field to pick up an aircraft slated for this maintenance. These flights give crew members the opportunity to check out and note

any additional issues that need attention. During depot maintenance, aircraft are stripped down, inspected, repaired and put back together. After this process is complete, the aircraft is handed over to the FTG to complete the functional check flight, a four-phase check between depot maintenance and the home unit. These flights check the overall function of the airframe and its airworthiness. This mission is spread out among units within the group, including:

- " 339th Flight Test Squadron, Robins AFB: C-130s, C-5s and F-15s.
- " 514th FLTS, Hill AFB, Utah: A-10s, C-130s, F-16s, F/A-22s and F-4s.
- " 10th FLTS, Tinker AFB, Okla: B-1s, B-52s, KC-135s and E-3s.
- " 415th Flight Test Flight, Randolph AFB, Texas: T-38s.
- " 313th FLTF, Kelly USA, Texas: KC-135s.

The first phase of an aircraft FCF involves a forms check. The maintenance professionals and flight test unit review all of the paperwork associated with the maintenance performed on that particular aircraft. Once all of the paperwork is determined to be in order, the crew takes over the aircraft and gets ready for the physical checks. "The purpose of the FCF is to check the aircraft systems, to include avionics systems," Colonel Ekstrom said. "Each aircraft has a different checklist, called a Dash-6, which tells crew members exactly what they are supposed to check."

This extensive checklist includes everything from a simple aircraft walkaround, opening and closing the doors to an engine run-up. After making sure everything is safe on the ground, the crew takes to the air to complete another extensive checklist. "The crews check to make sure the landing gear goes up and down," Colonel Ekstrom said. "They shut down the engines and restart them. They check avionics programs that have been upgraded. These avionics checks vary from airplane to airplane, depending on the work that was performed." "We take a build-up approach to these checklists," said Senior Master Sgt. O'Brian Webster, 413 FTG group superintendent and a NKC-135 flight engineer. "It's a check from the big items to the small items. You don't go out and check the navigation system before you check out the engines and landing gear. FCF pre-flights are about three times longer than normal pre-flight checks, and usually it will take two or three checks before the aircraft is flown." With their vast experience and methodical approach, the crews are very good at solving even the most difficult problems.

"Our crews provide a very systematic troubleshooting approach," said Col. Doug Carpenter, 413 FTG vice commander. "They have an added array of techniques and procedures that can help dig a little bit deeper into an airplane and figure out what is wrong. "We've had instances where after an airplane was delivered back to the unit an unusual problem arose. The field unit couldn't troubleshoot and fix the problem, so it asked for help. Our crews were able to take the aircraft back and run their FCF procedures, dig a little bit deeper and troubleshoot it. They have a few additional little tricks to figure out what is going on." Since the Air Force is flying aircraft that are 20, 30 or 40 years old, or older, it's constantly having to upgrade technology to keep the aircraft as up to date as possible.

For example, KC-135 Stratotankers are currently undergoing an avionics modernization program at Kelly USA. With the installation of new equipment or the performance of avionics system upgrades comes the need to perform more check flights. One way to distinguish between an avionics check flight and a functional check flight is to answer a simple question: "Did they add anything new to the airplane, or did they overhaul what was already there?"

Colonel Carpenter said. "With an FCF, you don't modify the airplane you just rebuild and repair what's already there. "But, with an ACF, you add in a new system or technology, so our crews verify the new system is working properly. Once checked out, we'll accept the modifications to the airplane."

Units that conduct ACFs are most likely operating on a fixed contract and, as a result, have a mission completion date rather than an open-ended mission. The 413 FTG recently had a unit that completed its mission and was deactivated. After more than seven years, the 420th FLTF, which operated at the Williams-Gateway Airport in Mesa, Ariz., was deactivated Oct. 31. The 420th supported the T-38C Avionics Upgrade Program by flying depot-level test sorties and conducting ACFs after cockpit upgrades were completed on 468 aircraft. All of the aircraft are now operational at Air Education and Training Command pilot training bases, and the Air Force and Navy test pilot schools. 2008

USAF Unit Histories
Created: 1 Jan 2023
Updated:

Sources
Air Force Historical Research Agency. U.S. Air Force. Maxwell AFB, AL.