

# 507th Air Refueling Wing

Tinker Air Force Base, Oklahoma



## On-Final Anthology

Vol. 1



**mission: organize, train, and equip combat ready  
citizen airmen to provide strategic deterrence  
and global capabilities**

AN F-16 FIGHTING FALCON FLIES WITH TWO OKIE STRATOTANKERS OVER OKLAHOMA





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# **fueling the fight,** **at home and abroad**

The 507th Air Refueling Wing is the largest Air Force Reserve Command flying unit in the state of Oklahoma. The 507th ARW reports to Fourth Air Force and performs daily missions both locally and around the world in support of Air Mobility Command and U.S. Strategic Command's national emergency war order requirements, operating out of Tinker Air Force Base, Oklahoma. The wing operates and maintains eight KC-135R Stratotanker aircraft providing world-wide aerial refueling to U.S. and NATO aircraft in times of peace, war and national emergency. The 507th ARW trains aircrew on the Reserve KC-135R, the Reserve C-17 Globemaster III, and the KC-46 Pegasus at a geographically separated unit, the 730th Air Mobility Training Squadron at Altus AFB, Oklahoma.

Today, the 507th ARW consists of three subordinate groups and 11 squadrons while employing more than 1,100 men and women. The 507th ARW is made up of Reserve Citizen Airmen, many of whom live and work in our Oklahoma communities in addition to their Reserve commitment. Approximately 200 members of the wing are traditional civilian employees or dual status Air Reserve Technicians who serve as a support cadre.



# 507th Air Refueling Wing



**COL. MILES HEASLIP**

Wing Commander

## CURRENT STRENGTH

- 1,176 Personnel
- 864 Traditional Reservists
- 240 Air Reserve Technicians
- 27 Active Guard Reservists
- 45 Civilians

## LOCAL ECONOMIC IMPACT

- Tinker AFB -- \$4.55 billion
- 507th ARW -- \$92 million
- 513th ACG -- \$13 million

## UNIT TIMELINE

- 1944** -- 507th Fighter Group activated at Peterson Field, Colorado
- 1972** -- Established at Tinker AFB, flying F-105D Thunderchief
- 1975** -- Transferred from active duty to Air Force Reserve
- 1980** -- Transitioned to F-4D Phantom II
- 1988** -- Transitioned to F-16A/B Fighting Falcon
- 1994** -- Converted to 507th ARG flying KC-135R
- 1994** -- Redesignated as 507th ARW
- 1996** -- 513th ACG activated
- 2005** -- Aircraft increased from 8 to 12
- 2007** -- Reserve/Air National Guard Association begins
- 2012** -- Force Structure proposal to 8 KC-135R
- 2015** -- Guard association discontinued, AFRC continues
- 2019** -- KC-46 Pegasus delivered to Altus AFB, Oklahoma



## groups&squadrons

### OPERATIONS GROUP

#### 465th Air Refueling Squadron

#### 507th Operations Support Squadron

#### 730th Air Mobility Training Squadron, Altus AFB, Oklahoma

Operates eight Boeing KC-135R aircraft Reservists, both pilots and boom operators, fly and maintain worldwide mission-ready status and regularly deploy in support of contingency operations and incorporates traditional operations support functions such as Intelligence, Aircrew Flight Equipment, Combat Crew Communications, Operations Plans, war plans and flight records maintenance. The 730th AMTS is charged with training aircrew on the C-17, KC-135R, KC-46 aerial refueling aircraft. The Reservists in the unit work next to active duty Airmen of the 97th Air Mobility Wing, training aircrew members for Air Education and Training Command.

### MAINTENANCE GROUP

#### 507th Aircraft Maintenance Squadron

#### 507th Maintenance Squadron

These units maintain all eight KC-135R Stratotankers and are responsible for periodic inspections, fabrication repairs, propulsion, aerial refueling boom maintenance, aircraft fuel systems and aerospace ground equipment. From installing replacement parts to building a replacement from scratch in order to restore the structural integrity of the aircraft, they work to ensure the safety of the Airmen who fly them. More than just directing essential maintenance operations, they implement crucial aircraft systems checks, deliver combat support and perform air operations all around the world.

### MISSION SUPPORT GROUP

#### 507th Civil Engineer Squadron

#### 507th Force Support Squadron

#### 507th Logistics Readiness Squadron

#### 507th Security Forces Squadron

#### 72nd Aerial Port Squadron

These units are responsible for providing air base ground defense and protecting weapon systems and support personnel. They train and equip engineering teams for worldwide combat support performing rapid runway repair, structural bomb damage repair, firefighting and crash rescue. They aid in transportation, supply, contracting, fuels, maintenance training and plans. Additionally, units load, unload and process airfreight arriving from and departing to locations worldwide, provide personnel management and services support such as lodging, fitness, food, recreation and mortuary affairs.

### MEDICAL GROUP

#### 507th Medical Squadron

The 507th MDS monitors the medical, dental and mental health of all members in the 507th as well as the personnel in the 513th ACG. Major focus areas are maintaining processes and records for annual physical and dental assessments, currency in immunizations and monitoring occupational environments. Other program responsibilities include training initial first-aid care, CPR training, gas mask fit testing and heightening awareness of suicide and prevention. The medical squadron operates out of Tinker Air Force Base's 72nd Medical Group and integrates with the staff. If mobilized, the medical technicians are trained to support a fixed or mobile field hospital site.







**Mission**  
The KC-135 Stratotanker provides the core aerial refueling capability for the United States Air Force and has excelled in this role for more than 50 years. This unique asset enhances the Air Force's capability to accomplish its primary mission of global reach, as well as refueling support to Navy, Marine Corps and allied nation aircraft. The KC-135 is also capable of transporting litter and ambulatory patients using patient support pallets during aeromedical evacuations.

**Features**  
Four turbofans, mounted under 35-degree swept wings, power the KC-135 to takeoffs at gross weights of up to 322,500 pounds. A cargo deck above the refueling system can hold a mixed load of passengers and cargo. Depending on fuel storage configuration, the KC-135 can carry up to 83,000 pounds of cargo.

Nearly all internal fuel can be pumped through the flying boom, the KC-135s primary fuel transfer method. One crewmember, known as the boom operator, is stationed in the rear of the plane and controls the boom during in-flight air refueling.

A special shuttlecock-shaped drogue attached to and trailing behind the flying boom may be used to refuel aircraft fitted with probes. Some aircraft have been configured with the multipoint refueling system, which consists of special pods mounted on the wingtips. These KC-135s are capable of refueling two receiver aircraft at the same time.

**Background**  
Air Mobility Command manages an inventory of 414 Stratotankers, 70 of which are operated by the Air Force Reserve.

The Boeing Company's model 367-80 was the basic design for the commercial 707 passenger plane as well as the KC-135A Stratotanker. In 1954, the Air Force purchased the first 29 of its future 732-plane fleet.



The first aircraft flew in August 1956 and the initial production Stratotanker was delivered to Castle Air Force Base, California in June 1957. The last KC-135 was delivered to the Air Force in 1965.

Of the original KC-135As, more than 415 have been modified with new CFM-56 engines produced by CFM-International. The re-engined tanker, designated either the KC-135R or KC-135T, can offload 50 percent more fuel, is 25 percent more fuel efficient, costs 25 percent less to operate and is 96 percent quieter than the KC-135A.

Under another modification program, a re-engined tanker with the TF-33-PW-102 engine was designated the KC-135E. In 2009, the last KC-135E retired from the inventory.

Through the years, the KC-135 has been altered to do other jobs ranging from flying command post missions to reconnaissance. RC-135s are used for special reconnaissance and Air Force Materiel Command's NKC-135As are flown in test programs. Air Combat Command operates the OC-135 as an observation platform in compliance with the Open Skies Treaty.

The KC-135R(RT) aircraft continue to undergo life-cycle upgrades to expand their capabilities and improve reliability. Among these are improved communications, navigation, autopilot and surveillance equipment to meet future civil air traffic control needs.

**General Characteristics**  
**Primary Function:** Aerial refueling and airlift  
**Prime Contractor:** The Boeing Company  
**Power Plant:** CFM International CFM-56 turbofan engines  
**Thrust:** 21,634 pounds each engine  
**Wingspan:** 130 feet, 10 inches (39.88 meters)  
**Length:** 136 feet, 3 inches (41.53 meters)  
**Height:** 41 feet, 8 inches (12.7 meters)  
**Speed:** 530 miles per hour at 30,000 feet (9,144 meters)  
**Ceiling:** 50,000 feet (15,240 meters)  
**Range:** 1,500 miles (2,419 kilometers) with 150,000 pounds (68,039 kilograms) of transfer fuel; ferry mission, up to 11,015 miles (17,766 kilometers)  
**Maximum Takeoff Weight:** 322,500 pounds (146,285 kilograms)  
**Maximum Transfer Fuel Load:** 200,000 pounds (90,719 kilograms)  
**Maximum Cargo Capability:** 83,000 pounds (37,648 kilograms), 37 passengers  
Pallet Positions: 6  
**Crew:** Three: pilot, co-pilot and boom operator. Some KC-135 missions require the addition of a navigator. The Air Force has a limited number of navigator suites that can be installed for unique missions.  
Aeromedical Evacuation Crew: A basic crew of five (two flight nurses and three medical technicians) is added for aeromedical evacuation missions. Medical crew may be altered as required by the needs of patients.  
**Unit Cost:** \$39.6 million (fiscal 98 constant dollars)  
Date Deployed: August 1956  
**Inventory:** Active duty, 167; Air National Guard, 180; Air Force Reserve, 67







▲ CIVIL ENGINEER AIRMEN REPAIR A RUNWAY

◀ A DEFENDER STANDS READY DURING A DEPLOYMENT TO SOUTHWEST ASIA





DEFENDERS LOAD MAGAZINES DURING COMBAT ARMS TRAINING ▲



A MAINTAINER WASHES A KC-135R ►





## TRUE STORIES

A brief glimpse at some of the heroic, adventurous and awe-inspiring accomplishments carried out by the dedicated Air Force Reservists of the **507<sup>th</sup> AIR REFUELING WING**





# Alaskan Adventure

Airmen travel to Alaska for a breath of fresh air

No less than four units within the wing sent their members to Alaska in July to hone skills and gain knowledge in each of their respective career fields.

Reserve Citizen Airmen of the 507th ARW Wing Staff, 507th Operations Group, 507th Maintenance Group and 507th Logistics Readiness Squadron traveled to Joint Base Elmendorf-Richardson, Alaska, for a breath of fresh training and to see what a different location and people can offer.

507th LRS members spent 14 days training on different aspects of their particular career fields that included, but were not limited to, quality assurance, material management, ground transportation, vehicle maintenance, transportation management office, and logistics planning.

According to the 507th LRS team of logistics planners who traveled to Alaska, Tech. Sgt. Jordan Navarro, Staff Sgt. Casey Cottrell and Senior Airman Justin Cockroft, logistics planning can be a daunting job.

Mainly known for command and control, they are responsible for coordinating with all entities, whether military or civilian, for the smooth transition of passengers and cargo from one location to another for deployments, exercises and, in this case, training.

"We planned this trip from beginning to end," said Cockroft. "It was up to us to figure out how more than 40 people with baggage were going to get around, where we were going to stay, what aircraft we're going to fly on and at the same time keep us all together so we don't lose anyone or anything. It's a big job."

One obstacle they had to overcome for this particular trip was when they received notification that the runway at Joint Base Elmendorf-Richardson was too short for the KC-135R Stratotanker to land on due to construction. They found out only five days prior to the aircraft's arrival.

Cockroft explained that members of the 507th ARW Wing Staff and 507th LRS flew commercially to Alaska, because operational requirements prevented the unit's KC-135R from being able to fly them there; however, everyone was depending on the aircraft for a ride home.

The 507th OG was prepared with a plan B and already had a contract in place with a fixed base operator at the local airport, which is an organization that provides fueling, parking and other aeronautical services to visiting aircraft.

However, the logistics planners had to quickly adjust their plans to accommodate the aircraft's change in location. They had to figure out transportation for the return of rental vehicles, the 40 plus passengers to the new departure destination, organize a baggage team, coordinate clearance for a government vehicle to drive on a civilian flight line and maintain continuity with all members throughout the entire process. All the while complying with TSA regulations and working under a tight budget.

Cockroft said that even though the job can be stressful sometimes, logistics planners are always ready to overcome challenges that change can bring. When planning, they have to keep in mind that the KC-135R usually has mission requirements to meet in whatever location it flies to.

An aerial refueling aircraft does not simply fly to various locations to transport passengers and cargo. The primary mission of the KC-135 Stratotanker is to provide core aerial refueling capability for the Air Force and it has successfully done so for more than 50 years.

Nearly all internal fuel can be pumped through the flying boom and, depending on fuel storage configuration, the Stratotanker can carry up to 83,000 pounds of cargo.

With this capability, it's rare for the aircraft to go anywhere without accomplishing at least one refueling mission and this trip to Alaska was no exception.

In the four days the 507th ARW's KC-135R was there, it flew three aerial refueling missions, one per day, before flying everyone home to Oklahoma on the last day.

The communication between the logistics planners and the aircrew had to be constant in order to keep everyone and everything on track to ensure a smooth trip home.

On top of handling the logistics for the trip, the planners were able to receive critical training in the War Reserve Materials program, which they can't get at Tinker AFB, according to Navarro.

"The program is essential towards readiness," Navarro said. "The 773rd Logistics Readiness Squadron logistics planners trained us, so now we know how to make sure assets are healthy and ready for use in times of contingency."

Overall, the 507th Air Refueling Wing's Alaskan adventure was successful in that all mission and training requirements were met. Not only did the wing refuel more than 15 aircraft and accomplish much-needed training, but the personnel demonstrated flexibility, critical thinking and problem-solving to overcome all obstacles.







# Future Aviators

2019 Aviation Career Education Academy students  
stop by for a hands-on experience

**T**wenty-six students from across the state of Oklahoma visited various units on base June 5, 2019, to learn more about future careers in aviation.

The 2019 Aviation Career Education Program, commonly known as ACE, hosts week long summer camps with assistance from the Oklahoma Aeronautics Commission, Federal Aviation Administration, and Metro-Tech Aviation Careers Campus. Each year, participants visit the base to learn about military aviation.

"The goal is to give them exposure and an opportunity to see different aspects of aviation," said Lt. Col. Cory Glenn, 465th Air Refueling Squadron pilot and ACE Academy coordinator. "We want these kids to find something they would like to do for their career and maybe pick a career track in aviation."

Science, technology, engineering and math, or STEM, plays a critical role in developing future aviators, according to FAA officials who helped put the program together.

"We are really fortunate to have people that want to move STEM forward in Oklahoma," said Laura Shepherd-Madsen, ACE Academy coordinator from the FAA. "Aviation is the second largest industry in our state, and it's up to us to be ambassadors to help our children go in that direction."

The ACE academy visit gave students hands-on activities such as touring the KC-135R Stratotanker, F-16 Fighting Falcon and the T-6 Texan II aircraft. They spoke with instructor pilots and learned about the Air Force Reserve mission from aircrew who recently returned from deployments.

The students also participated in activities throughout the week to include building rockets, learning about air traffic control and viewed up-close how aircraft engines operate.

According to Glenn, ACE camps are a great opportunity for kids to get involved in aviation, which is one of the reasons he chooses to volunteer every year. "I'm passionate about it and it's important at their age," Glenn said. "Seventh and eighth grade is really when students need to start thinking about what they want to do later in life. They don't have to decide now, but they need to start taking classes and making the right decisions to allow them to be eligible for jobs in aviation, should they decide to go down this path later in life."





# Okie becomes US citizen



**A**irman 1st Class Godspower Igben, 507th Force Support Squadron food operations specialist, attained his U.S. citizenship in an Oklahoma City courthouse Feb. 22, 2019.

Igben was raised in Lagos, Nigeria, and moved to the U.S. when he was 22 years old. Igben's family members served in the Nigerian military, inspiring him to join the U.S. Air Force Reserve.

Wingmen within his unit attended the citizenship ceremony in a show of support as Igben became a U.S. citizen.

Airman 1st Class Godspower Igben, 507th Force Support Squadron food operations specialist, stands for a photograph with members of his unit after attaining U.S. citizenship in an Oklahoma City courthouse Feb. 22, 2019. ▼



# Defenders Return Home

**R**eserve Citizen Airmen from the 507th Security Forces Squadron arrived at Will Rogers World Airport in Oklahoma City, Oklahoma, Jan. 23, 2019, to reunite with family and friends after a six-month deployment.

The Airmen deployed to the 386th Air Expeditionary Wing, Southwest Asia, in support of Operation Freedom's Sentinel as security forces members.

The 386th AEW, in concert with joint, coalition and host nation partners, delivers decisive airpower, theater basing options and theater logistical support to uphold U.S. Air Force Central Command priorities.

The 386th AEW is an adaptive wing bolstered by a foundation of distributed leadership, mutual trust, and clear purpose. It executes mission tasks with precision while sensing and responding to dynamic environments.

Today, the wing continues to support a diverse mission which spans the entire U.S. Central Command area of responsibility. It serves as the primary aerial hub providing airlift support for Operation Enduring Freedom and the Horn of Africa.







# The A-Team

More than 100 Okies take on RIMPAC

The 507th Air Refueling Wing sent a team of more than 100 Reserve Citizen Airmen and four KC-135R Stratotankers to Hawaii, June 27-Aug. 2, 2018, in support of the Rim of the Pacific (RIMPAC) exercise.

The team consisted primarily of pilots, boom operators and maintainers, but also included a small support cadre of administration, medical, life support, intelligence, squadron aviation resource management and communication technicians.

The 507th Operations Group commander, Lt. Col. Kenneth Humphrey, explained that outside of a deployment, RIMPAC offers one of the best controlled training opportunities for a tanker unit and allows for unit personnel to gain valuable leadership experience.

“Training includes getting out of town with a large number of personnel to support tanker operations, setting up a working facility and flying missions in a joint service, international environment,” Humphrey said. “This type of exercise harkens back to the past when we, as a single wing, deployed en masse to a location and operated.”

The 507th ARW maximized RIMPAC as a training opportunity by rotating personnel and aircraft halfway through the exercise, resulting in two cycles of Airmen attaining an away-from-home-station experience. By July 30, 507th ARW’s RIMPAC team offloaded 1.9 million pounds of fuel and flew more than 147 hours, with more to go until the end of the exercise.

According to Humphrey, the dialogue and experience received at RIMPAC go far beyond normal training for operations and maintenance Airmen. 507th ARW personnel had the chance to work alongside multi-national partners from across the Pacific Rim, members of the U.S. military’s sister services and Airmen from different Air Reserve Component units.

Twenty-five nations, 46 ships and five submarines, and about 200 aircraft and 25,000 personnel are participating in RIMPAC in and around the Hawaiian Islands and Southern California. RIMPAC is the world’s largest international maritime exercise; providing a unique training opportunity while fostering and sustaining cooperative relationships among participants to ensure the safety of sea lanes and security of the world’s oceans.

Humphrey said that, as in previous years, the 507th ARW filled the role as the lead tanker unit in RIMPAC; combining Air Force active duty and reserve personnel from Kadena Air Base, Okinawa, Japan, Grissom Air Reserve Base, Indiana, and the 507th ARW’s geographically separated unit, the 730th Air Mobility Training Squadron from Altus Air Force Base, Oklahoma.

“The camaraderie that comes out of working long hours and executing our assigned mission with multiple units stands out as one of the best parts of RIMPAC,” he said. “I’ve always been a proponent of the idea that unit cohesion in an increased operations tempo goes a long way in improving mission effectiveness and future retention. RIMPAC gives us an opportunity to do just that.”

However, the process of building unit cohesion sometimes comes with a little competition.

507th Aircraft Maintenance Squadron superintendent, Senior Master Sgt. Corey Still, who has attended almost every RIMPAC since 2004, explained that maintainers keep track of how often each units’ KC-135s fly.

Maintainers take ownership of their aircraft, so it makes a small statement when one is grounded for maintenance, Still said.

Despite the friendly competitiveness, maintainers set those feelings aside in order to help crews from other units get their issues resolved.

“It’s a team effort,” he said. “Whenever something breaks, maintainers from all the tanker units here will go out and combine their expertise in order to get that aircraft back up in the air. At the end of the day, we’re all one team with the same goal.”

Still explained that together they have to successfully maintain six KC-135s in support of aerial refueling to Navy, Air Force and coalition partners to help ensure the requirements of the exercise are met.

“The Navy determines how many KC-135s they need for RIMPAC and it’s a testament to the 507th ARW that we keep getting invited back every two years,” he said.

According to Still, it’s likely the 507th will be invited back for the next exercise, however this is his last RIMPAC with the unit as he’s been selected to fill a chief master sergeant’s position at McConnell Air Force Base, Kansas.

Still said that he hates to leave the Okies, but couldn’t have asked for a better send-off than going to RIMPAC one last time with the Airmen of the 507th ARW.

Hosted biennially by Commander, U.S. Pacific Fleet (PACFLT), and executed by Commander, U.S. 3rd Fleet (C3F), RIMPAC 2018 is the 26th in the series that began in 1971.

This year’s exercise includes units or personnel from Australia, Brunei, Canada, Chile, Colombia, France, Germany, India, Indonesia, Israel, Japan, Malaysia, Mexico, Netherlands, New Zealand, Peru, the Republic of Korea, the Republic of the Philippines, Singapore, Sri Lanka, Thailand, Tonga, the United Kingdom, the United States and Vietnam.





# Engineers Revitalize Glenwood

**R**eserve engineers from the 507th Civil Engineer Squadron partnered with the 72nd Air Base Wing to build three quonset huts and repair damaged facilities at the Glenwood training area in Midwest City, Oklahoma.

The new quonset huts are sturdier, cheaper and fully equipped with electric, heating and air. The improvements aim to make readiness training exercises on the site more efficient, according to members of the 72nd ABW inspection team.

"If we didn't have the support of the Reserve, we don't know how we could have done this," said Jonny Conover, 72nd ABW Inspector General Inspections office.

Many units on base use the Glenwood training area to accomplish expeditionary skills and emergency response training. In the past, Glenwood was used by the Federal Emergency Management Agency as an incident support base during winter ice storms.

"I believe these are the nicest facilities we've ever had for training," said Joe Wade, 507th CES facilities director. "We are always happy to support the host wing with base improvements."

Reservists from the 507th CES work with the installation regularly to help move the base forward. In the past few years Reserve engineers assisted in construction of the 911 emergency call center, made improvements at Indian Hills Lodging and improved other support facilities on base.

Adam Williams, 507th CES site manager, said the new facilities should last around 20 years.



# Spreading Holiday Cheer

**F**or the 23rd year in a row, 507th Air Refueling Wing Airmen visited with the residents of the Norman Veterans Center to deliver gifts and spread holiday cheer during their annual Christmas party Dec. 20, 2018, in Norman, Oklahoma.

The Air Force Reserve-run program, dubbed "Angel Tree," strives to fulfill Christmas gift wishes for the disabled veterans residing at the center. This year, 18 Reserve Citizen Airmen became makeshift 'Santas' to the veterans, by fulfilling their Christmas wishes.

507th Maintenance Group director of operations, Capt. Aaron Wolfe, attended the event and said it was an opportunity to share joy with the people who laid the foundation for current military members.

"This is an opportunity for us to spend time with people who created our heritage as military members," Wolfe said. "They came before us, they wrote the storyline and rules that we still adhere to today."

Overall, members of the 507th Air Refueling Wing donated more than \$200 in cash, clothes and shoes for the residents of the Norman Veterans Center.







# Star Spangled Salute

Saluting our United States Armed Forces,  
Past, Present and Future

The sounds of jet engines filled the air as the U.S. Navy Blue Angels headlined the 2019 Tinker Air Force Base Star Spangled Salute Air and Space Show June 1-2, 2019.

This year's Air Show theme, "Saluting our United States Armed Forces, Past, Present and Future," honored the men and women who served our country and commemorated the 75th Anniversary of D-Day.

Col. Kenyon Bell, 72nd Air Base Wing commander, welcomed visitors on the first day of the air show by skydiving down to show center after tandem jumping with Master Sgt. George Wild of the U.S. Air Force's precision parachute team, Wings of Blue.

"We get so much great support from the local community," said Bell. "It's just our opportunity to be able to give back in some small way over one weekend."

Hosted by the 72nd Air Base Wing and sponsors, the event treated a record number of visitors to an exciting weekend of aerial acts, vendor booths, activities for families and static displays.

The air show was broadcast live via Tinker's Facebook page, reaching an audience of more than 100,000 during the two-day simulcast, according to 72nd Air Base Wing Public Affairs.

Harkening to the Air Force's past, several heritage aircraft flew over the air show crowds including the P-51 Mustang, the A-1 Skyraider, the B-29 Stratofortress and the Mikoyan-Gurevich MiG-17, a high-subsonic fighter aircraft produced in the USSR.

In addition, a Vietnam Combat Search and Rescue demo also showcased the capabilities of the Bell Huey, two Douglas Skyraiders, the De Havilland Caribou and O-2, complete with pyrotechnics.

Maj. Garret Schmitz, commander of the F-16 Viper Demo Team from the 20th Fighter Wing at Shaw Air Force Base, South Carolina, flew his F-16 alongside the P-51 and the A-1 for a 10 minute heritage flight over the skies of Tinker, a tradition that began in 1997 during the Air Force's 50th Anniversary.

"Essentially, we are combining the old warbirds with modern aircraft to commemorate the past and the present," said Schmitz, whose call sign is "Toro." He is one of two pilots in the Air Force who are qualified to fly heritage flights.

A special treat at this year's show was the addition of the B-29 Superfortress "Doc," according to Air and Space Show Director Lt. Col. Casey "KC" Hayes. Doc is one of only two remaining B-29s that are still flying today.

The B-29 Superfortress is deeply rooted in our nation's airpower history by being the largest and most advanced operational aircraft during World War II and the Korean War era."

In order to showcase the combat capability of today's Air Force, Team Tinker's KC-135 Stratotanker from the 507th Air Refueling Wing, the 552nd Air Control Wing's AWACS E-3 Sentry, and a Navy Strategic Communications Wing ONE E-6 Mercury flew over the air show, as well as the B-2 Spirit on Saturday only.

The base took the opportunity during the air show to celebrate the longtime partnership with both the 552nd ACW as well as the 40-year anniversary of the arrival of the Canadian Detachment. Forty-two members of the Royal Canadian Air Force are embedded with seven squadrons of the 552nd ACW and take on various responsibilities with their American partners.

"The 552nd ACW is very grateful for the partnership we

have enjoyed over the last 40 years with our Canadian friends and fellow warriors," said Col. Geoffrey Weiss, commander of the 552nd ACW.

And to highlight the future, the air show featured a new free exhibit, the Science, Technology, Engineering and Math City exhibit, with hands-on activities involving robotics and drones for families and children to enjoy, hosted by community groups, schools, aeronautic and aviation organizations.

Melanne Greenwood, STEM coordinator for Gordon Cooper Technology Center in Shawnee, Oklahoma, highlighted how important it is for educators to get children interested in technology, the earlier the better.

"This year alone there were 81,000 STEM-related jobs in Oklahoma," Greenwood said. "Students are three times more likely to land jobs right here if they go into a STEM-related field and to also double their wage. So, it's not just an education issue, it's an economic issue."

Also in attendance: Kent Pietsch, flying the "Jelly Belly" Piper Cub, Adam "Shakenbake" Baker, flying the Playful Air Shows' "Extra 330", Lt. Col. Justin "Schmed" Lewis flying the FLS Microjet, and Dell Coller, flying the Jack Link's "Screaming Sasquatch" bi-plane Jet Waco aircraft, capable of flying straight up at maximum speed.

Lewis is a local pilot who also serves in the Air National Guard, and on Saturday he surprised his girlfriend, Michelle, upon landing from his aerial act with a marriage proposal. His friend, Adam Baker, used his Extra 330 aircraft to draw a large heart in the sky during the proposal on the runway at Tinker.

It took all of the Airmen at Tinker to stage the two-day celebration, along with more than 500 volunteers to help the show run smoothly.





# Everyday Heroes

Okies prove that ordinary actions have an extraordinary impact



**Master Sgt. Eric Whitesel**  
**507th Aircraft Maintenance Squadron**

**A** KC-135R Stratotanker crew chief with the 507th Aircraft Maintenance Squadron saved the life of an eight year old boy who was trapped in a flooded drainage ditch May 29, 2019, in Prague, Oklahoma.

Master Sgt. Eric Whitesel, a 32-year veteran of the Air Force, along with Torren Jackson's uncle, Dakota Fite, used quick thinking to pull the boy out of the flooded culvert following record-setting rainfall in the state.

"We hope that Mr. Whitesel understands how truly grateful we are for the heroic acts he took to save my grandson's life," said Fite. "Our family is blessed to have a guardian angel among us."

When Whitesel arrived home that day, he said the weather was changing drastically, and a heavy thunderstorm hit. After the storm passed, his house lost power and he said he was determined to talk to the city manager about it; so he set out to find him. As he drove through town, he came upon two people in the street and saw the front of a bicycle sticking out of a culvert.

While riding his bike, Jackson was swept from the road and became trapped in the culvert, according to reports. He held on to his bicycle

and managed to maintain his breathing despite the amount of water flowing through the pipe. Torren's uncle, Dakota Fite, was on the scene and his brother, Teggan Jackson, had already run for help before Whitesel arrived.

"He's the real hero," Whitesel said. "He ran to the nearest house to call 911, and then ran to his grandmother's house 3 or 4 blocks away."

"I told him there was no time to waste," Whitesel said. "If we don't take action, this boy is going to drown."

Fite entered the ditch, sat down and used his back and legs to divert the water. Whitesel pulled on the bike's handles and Fite pulled on the wheels, eventually freeing the boy, who was holding on to the bike's rear wheel.

First responders arrived during the rescue, and escorted Jackson to the hospital via ambulance, where he was treated and released with minor injuries.

Whitesel, a volunteer fire fighter for 22 years, has saved countless lives since he began volunteering in his small hometown of Saltsburg, Pennsylvania, where his grandfather also served.



**Staff Sgt. Justin Jarrett**  
**507th Security Forces Squadron**

**I**t was one week before Christmas in 2017 when Officer Justin Jarrett and two other Oklahoma City police officers were dispatched to respond to a "trouble unknown" emergency call on the northwest side of the metro.

Jarrett, who is also a Reserve Citizen Airman assigned to the 507th Security Forces Squadron at Tinker Air Force Base, Oklahoma, and two other officers were in their patrol cars and located within a mile of the emergency.

"We weren't really sure what we were going into," Jarrett said. "We pulled up to the house within a minute of the call coming out, and when the caller answered the door she just pointed to the back bedroom."

The group of officers ran into the bedroom to find an unresponsive, unconscious man on the bed.

"First, we checked him for a pulse," Jarrett said. "We couldn't find a pulse, so we immediately moved him to the floor to begin CPR."

Jarrett said he began chest compressions while the other officers monitored the man's airway, looking for signs of breathing.

Once the paramedics and firefighters arrived, they took over and spent 20 to 25 minutes alternating between CPR and the defibrillator until the patient was transported to the hospital.

"According to the doctor, our quick response time and the quality of our chest compressions are what saved his life," Jarrett said.

Jarrett's actions resulted in his being awarded the Life Saver Award at the Oklahoma City Police Department annual awards banquet in May 2018.



**Senior Master Sgt. Corey Still**  
**507th Aircraft Maintenance Squadron**

**A**n off-duty Reserve Citizen Airman with the 507th Aircraft Maintenance Squadron provided lifesaving assistance to a motorcyclist who suffered critical injuries following a vehicle accident in Norman, Oklahoma, Nov. 2, 2017.

Senior Master Sgt. Corey Still, 507th AMXS aircraft maintenance unit superintendent, witnessed a motorcycle collide with an SUV while driving with his family.

"We were headed to dinner after parent-teacher conferences when I saw a red SUV pull out in front of a motorcycle," said Still. "Once I heard the bang of the collision, I slammed the car in park and ran to check on the vehicles involved in the accident."

"I was the first person to reach the motorcyclist who was completely unresponsive," he said. "Another bystander wanted to take the motorcyclist's helmet off, but I knew that was a bad idea from self-aid and buddy care training."

Still said he then instructed a bystander to call 911.

"After I made sure the motorcyclist was in a stable position I checked on the SUV driver," Still said. "She was trapped in the driver seat and was starting to panic, so I cut the side airbag out with my pocket knife and assisted her to the passenger side of the SUV."

Still said he returned to check on the motorcyclist who had started to regain consciousness, so Still and another helper held him in place and assured him that paramedics were on the way.

"I do think my military training played a big role in first aid," said Still. "Thanks to the training I have received, I was able to take control of the scene until the first responders arrived."



# CITIZEN AIRMAN

April 2019

**A  
NEW  
ERA**



**RESERVE  
WELCOMES  
FIRST  
KC-46A  
PEGASUS**

## KC-46A Pegasus

Air Force leaders accept the new KC-46A Pegasus during a historic arrival celebration

**R**eserve Citizen Airmen of the 730th Air Mobility Training Squadron at Altus Air Force Base, Oklahoma, dignitaries and Air Force leaders accepted the new KC-46A Pegasus during a historic arrival celebration.

Reservists in the 730th AMTS are charged with training aircrew in the C-17 Globemaster III, KC-135R Stratotanker and the newest aerial refueling aircraft, the KC-46A Pegasus. The Reservists work next to active duty Airmen of the 97th Air Mobility Wing, training aircrew members for Air Education and Training Command.

Gen. David Goldfein, Chief of Staff of the U.S. Air Force, spoke at the unveiling ceremony about the future of the force.

"As the 21st Chief of Staff, I believe I have one obligation that I consider a sacred duty," Goldfein said. "We must ensure that every Airman we send into harm's way is properly organized, trained, equipped and well-led. Today is about fulfilling a part of this obligation. Today we equip our Airmen at Altus, and put in their hands the finest tanker on the planet."

AETC Commander, Lt. Gen. Steven Kwast, highlighted the importance and impact of training future aviators.

"We have taught these Airmen to be competitors," Kwast said. "If they do what I know they are capable of doing, you might find that this machine, coupled with the team of Airmen who know how to use it, becomes one of the most powerful tools of air superiority in the 21st century."

Total force Airmen at Altus AFB will put the KC-46 through its paces in the Combat Mobility and Expeditionary Training Center of Excellence, where more than 2,000 airlift and aerial refueling aircrew members train annually.

One Citizen Airman, Tech. Sgt. Michael Fagan, a 730th AMTS instructor boom operator and veteran of 15 years, watched intently as the KC-46 rolled up to the hangar. Fagan qualified more than 50 students in the KC-135R Stratotanker before he was selected to be one of the initial cadre members for the

KC-46 flight training unit.

"It's a very humbling position to be in, and I'm very proud to have made it this far," Fagan said. "I love being a boom operator. It's great to instruct a student, and see that moment on the flight when it clicks for them. That's the reason I do it."

Senior leadership at Air Force Reserve Command highlighted the importance of the new tanker in increasing global combat mobility.

"The Air Force Reserve plays an integral role in global and national security and it starts at the school house with our partnership with AETC," said Maj. Gen. Kenneth Lewis, Deputy Commander of AFRC.

The 730th AMTS, which falls under AFRC's 507th Air Refueling Wing at Tinker AFB, Oklahoma, is an associate unit that merges with active duty Airmen in the 97th AMW to accomplish aircrew training.

Col. Miles Heaslip, 507th Air Refueling Wing commander, highlighted the important role of the instructor team in the flight training unit.

"Reservists bring so much experience to the fight," said Heaslip. "For our guys and gals that are out here flying, this is what they love to do. This is what they want to do."

The KC-46A provides improved capabilities over older Air Force air refueling aircraft to include boom and drogue refueling on the same sortie, a refueling capability of more than 212,000 pounds of fuel and palletized cargo up to 65,000 pounds, depending on fuel storage configuration.

In addition to KC-46 training at Altus AFB, Tinker AFB will serve as the KC-46A Pegasus maintenance depot. The Oklahoma City Air Logistics Complex will provide maintenance, repair and overhaul operations for the KC-46A. The new maintenance operation brings with it a 158-acre facility with multiple hangars and 1,300 estimated jobs to Oklahoma.







# Once an Okie, Always an Okie

The U.S. Air Force Reserve at Tinker AFB,  
an illustrious history

**A**ir Force Reserve units served at Tinker AFB dating back to June 1946, when they were still part of the Army Air Forces. Early Reserve personnel were used as “fillers” to meet worldwide requirements for strategic and tactical forces.

The first Reservists served in the 177th Army Air Force Base Unit, which would eventually become the 310th Bomb Wing, Light, July 10, 1947. Records of the time indicate they trained in the AT-7 Navigator and AT-11 Kansan. They also operated one C-47 that was used primarily for transporting Reservists to training at Tinker Field. Unfortunately, most of those aircraft were destroyed in the infamous “Tinker Tornado” of March 20, 1948.

The 937th Troop Carrier Group, (later the 937th Air Transport Group and then 937th Military Airlift Group) activated here on January 17, 1963, due to a reorganization by Continental Air Command to better facilitate the mobilization of Reserve forces when needed. This Reserve group was one of the last Air Force units to fly the C-124 and many Reserve Citizen Airmen transferred to the newest Reserve unit; the 507th Tactical Fighter Group.

Previously known as the 507th Fighter Group, this unit already had an impressive history serving in World War II as bomber escorts in the Pacific Theater operating the Republic P-47N Thunderbolt long range escort fighter. The 507th FG earned the Distinguished Unit Citation for destroying enemy interceptor aircraft over Korea three days before the Japanese surrendered. The unit was redesignated as the 507th Fighter Wing in 1961 to provide interceptor support and responded to the Cuban Missile Crisis with aircraft and crews on 15 minute alert status. The 507th FW was inactivated in 1968.

On May 20, 1972, the 507th Tactical Fighter Group reactivated here and replaced the 937th Military Airlift Group for the Air Force Reserve. The group’s single operational flying squadron, the 465th Tactical Fighter Squadron, activated on the same date, equipped with the Republic F-105D Thunderchief aircraft. This made the 507th TFG the first Air Force Reserve group to have fighter aircraft in nearly twenty years.

The fighter pilot culture prevailed on the Reserve campus and the letters “SH” were proudly painted on the tail stabilizers of the jets. The two letter designator was specifically reserved for fighter aircraft and officially stood for “Sooner Home.”

In 1980, the Okies of the 507th TFG Okies were re-equipped with the McDonnell Douglas “Mig Killer” F-4D Phantom II fighter aircraft. The unit converted again in 1988, operating and maintaining the F-16A/B Fighting Falcon aircraft until 1994.

In the early 1990s, active duty Air Force units underwent a downsizing and restructuring process. Starting in 1992, the 507th TFG went through the first of many changes to align itself with the U.S. Air Force objective wing structure and to rapidly blend in with active forces in time of war or national emergency.

In February 1992, the 507th Tactical Fighter Group was renamed the 507th Fighter Group. Then, on Nov. 13, 1993, the 507th FG received a message from Headquarters Air Force Reserve that the unit would be redesignated as an air refueling group and convert from fighter to tanker aircraft.

On Jan. 21, 1994, by Special Order GB-0011, the 507th TFG converted to its current aerial refueling mission employing KC-135R “Stratotanker” aircraft and officially becoming the 507th Air Refueling Group. At the same time, the unit was reassigned from Tenth Air Force to Fourth Air Force and from Air Combat Command to Air Mobility Command. The unit’s entrance into the tanker mission ended more than 21 years of fighter jet missions.

The 507th ARG was redesignated as a wing on Oct. 1, 1994, and renamed the 507th Air Refueling Wing.

Then on Mar. 15, 1996, a new Air Force Reserve unit, the 513th Air Control Group (Associate) was officially activated and the 507th ARW was redesignated the 507th Wing. The wing was instrumental in bolstering the new unit and was now responsible for two airframes:

the KC-135R and the E-3 Sentry Airborne Warning and Control System, also known as AWACS.

However, the union was short lived, as the 513th ACG was reassigned to report to Tenth Air Force on April 1, 1997, and operational responsibility was shifted away from the 507th Wing. The 513th ACG is the only Reserve AWACS unit in the Air Force and continues to operate its command and control mission out of Tinker AFB today. The group is associated with the 552nd Air Control Wing and Reserve Citizen Airmen work side by side with active duty Airmen on AWACS and at Control and Reporting Centers around the world.

On December 2, 1996, the 507th Wing officially started its air refueling tanker alert mission with crews on alert 24-hours a day for U.S. Strategic Command.

The Air Force Reserve was designated the Air Force Reserve Command on Feb. 17, 1997, which gave the Air Force nine major commands. Then on Aug. 1, 1997, the 507th Wing reverted back to the 507th ARW.

The 507th ARW flew its first real-world tanker/airlift mission within a year of converting; delivering food and clothing supplies to flood victims in Georgia. Since then, the 507th ARW has supported nearly all major contingencies to include Operations Deny Flight, Joint Endeavor, Phoenix Tusk, Noble Eagle, Desert Shield, Desert Storm and others. On a daily basis, 507th ARW aircraft and Citizen Airmen can be found supporting the same missions as the active duty force around the world.





# CMSAF Wright Visits Oklahoma

The 18th CMSAF advocates for resiliency



Chief Master Sgt. of the Air Force Kaleth O. Wright visited the 507th Air Refueling Wing, July 31, 2019 and conducted an enlisted all-call to discuss the power of total force integration and the importance of resiliency.

After a tour of the 507th ARW and a mission briefing, Chief Wright had the opportunity to meet with Airmen of the 507th ARW. He listened and addressed concerns related to the unique challenges that face members of the Air Force Reserve.

Chief Wright concluded his visit by coining two Okies for their outstanding performance and posing for an 507th ARW group picture.



▲ STAFF SGT. AMBER ARTIS, A MEDICAL TECHNICIAN, RECEIVES A COIN FOR OUTSTANDING PERFORMANCE FROM CHIEF MASTER SGT. OF THE AIR FORCE KALETH O. WRIGHT.



▲ CHIEF MASTER SGT. OF THE AIR FORCE KALETH O. WRIGHT COINS MASTER SGT. BRAD BLOCK, AN AIRCRAFT MAINTENANCE SUPERVISOR, FOR OUTSTANDING PERFORMANCE.





# Okie Honors

## Wing earns Meritorious Unit Award



The 507th Air Refueling Wing earned the Air Force Meritorious Unit Award recognizing the organization for outstanding service to the United States in direct support of worldwide combat operations from Jan. 1 -- Dec. 31, 2017.

The MUA is awarded to Air Force active duty, Reserve and Guard units for outstanding achievement or service in direct support of combat operations for at least 90 continuous days during military operations against an armed enemy of the United States on or after Sept. 11, 2001.

The award citation states that the 507th ARW deployed 345 Reservists around the globe as part of operations Atlantic Resolve, Inherent Resolve and Freedom's Sentinel, which directly supported strikes against the Islamic State in Syria, Iraq and Afghanistan. Also, the wing led air refueling operations in multiple global missions for Central, Pacific, European, Northern and Africa commands.

In order to earn the MUA, units must display superior performance of difficult tasks to set them apart and above other units with similar missions. The degree of achievement required is the same as would warrant the award of the Legion of Merit, and superior performance of normal missions alone does not justify award of the MUA.

The 507th ARW's accomplishments during 2017 included showcasing an exceptional Air Force Inspection System by receiving the fewest findings command-wide by AFRC's Unit Effectiveness Team, and passing an Air Mobility Command Nuclear Operational Readiness Inspection with continuous aircrew and aircraft alert air refueling capability.

The 507th Operations Group commander, Col. Kenneth Humphrey, said that passing the NORI was just one impressive accomplishment his Airmen achieved. Aircrew deployed from the 507th ARW received AMC's Aircrew Excellence Award for recovering a KC-135R aircraft after two engines failed during a

nighttime combat sortie.

"I am humbled by the amount of talent and diversity we have here," said Humphrey. "We have multiple first responders, entrepreneurs and small business owners. We have teachers, university professors and airline pilots. Even an FBI agent and a Texas town mayor are part of our ranks. Yet all contribute and sacrifice their personal time and resources to serve as Reserve Citizen Airmen."

During 2017, the 507th ARW's air and maintenance crews achieved an impressive 2,666 flying hours, supported 685 sorties and provided over 17 million pounds of fuel to 2,043 receivers.

Another group in the 507th ARW also shined in the deployment arena; the 507th Mission Support Group.

507th MSG Commander, Col. Richard Ropac, lauded his team for providing unparalleled support to ongoing war efforts throughout the area of operations by putting boots on the ground in Syria, Iraq, Kuwait and Afghanistan. The group outprocessed and executed the mobilization of more than 300 personnel in support of contingency operations; prepped, inspected and loaded 53,000 pounds of cargo; and security forces provided transfer security of 120 Taliban detainees in theater.

"2017 was a phenomenal year for the mission support group," Ropac said. "Ops tempo was high and the morale of the group showed through the commitment and success of personnel in all of our squadrons."

Not only did the 507th MSG shine while supporting deployments abroad, they also had many successes on the home front, including an "almost flawless" rating from the AMC Inspector General, constructing a \$3.4M Next-Generation 911 call center and establishing a wing honor guard to offset host base shortfalls.

## 2018 Wing Annual Award Winners

### Airman of the Year

Senior Airman Preston Baker  
507th Aircraft Maintenance Squadron



### NCO of the Year

Tech. Sgt. Benjamin Alexander  
730th Air Mobility Training Squadron

### SNCO of the Year

Senior Master Sgt. Justin Henry  
507th Aircraft Maintenance Squadron

### CGO of the Year

1st Lt. Adrian Mack  
507th Aircraft Maintenance Squadron



### 1st Sgt. of the Year

Master Sgt. Lindsay Newton  
507th Aircraft Maintenance Squadron

### Spouse of the Year

Jennifer Smith  
Spouse of Master Sgt. David Smith,  
507th Security Forces Squadron

### Civilian of the Year

Ashley Parker  
507th Operations Group  
\*Not pictured







## E-3 SENTRY

### Mission

To provide combat-ready Airborne Warning and Control System Citizen Airmen to Fly, Fight & Win.

### History

The 513th Air Control Group was activated at Tinker Air Force Base, Oklahoma, in 1996, becoming the first Air Combat Command associate organization. The Air Force Reserve's associate program merges Reserve units with active-duty units at Air Force bases throughout the United States. The program, which began in 1968, creates Reserve units that share joint use of active-duty aircraft and equipment for training and work directly with active-duty personnel. Reservists fly the same missions, establish autonomous Reserve units and maintain the same professional standards as their active-duty counterparts. Associate unit aircrews fly daily on missions throughout the world. The flexibility of the associate program allows a Reserve aircrew member to fly as part of an active-duty crew or with an all-Reserve crew.

### Personnel

- 395 Personnel
- 292 Traditional Reservists
- 95 Air Reserve Technicians
- 8 Civilians

### Squadrons

513th Aircraft Maintenance Squadron  
513th Maintenance Squadron  
513th Operations Support Squadron  
970th Airborne Air Control Squadron



# AWACS Leads the Way

Imagine you are an aircraft maintainer and a mission is scheduled to fly in the next 24 hours. You need a part that has been discontinued for more than 30 years. A specially-commissioned replacement is available for \$15,000, but it will take a year to arrive.

A technician tells you he can get you the part by the end of the day for less than \$500. When you ask how, the answer is shocking: He's going to "print" one.

The previous scenario is a real-world example of what aircraft maintainers for the 513th Air Control Group do every month for the Air Force's only Reserve associate unit for America's Airborne Warning and Control System (AWACS) fleet. Assigned to Tinker Air Force Base, Oklahoma, the AWACS maintenance community is a blend of active-duty Airmen with the 552nd Air Control Wing, traditional Reservists, Air Reserve Technicians and civil service employees -- all working together to keep the parts-and-labor intensive AWACS fleet flying.

"With our 3D printing capability, we can have 30 parts ready in hours with spares distributed into the AWACS supply system," said Staff Sgt. Christopher Ritter, metals tech section chief for the 513th Maintenance Squadron. "The technology is simple. An Airman can become competent on the printer in 10 days, from software and machine maintenance to getting signed off on the printer in his training records."

Ritter said the printers represent an added empowerment for the 21st century Air Force maintainer. If a vital part not under contract is unavailable, the maintainer can print their own. After a thorough inspection, a zero balance issue, meaning parts are unavailable, can be eliminated.

Zero balance for parts is a problem across the service as aircraft age and contracts lapse. The advent of 3D printing has empowered maintainers to fill voids in the supply system.

The printer AWACS maintainers use has a printing area of 16 inches x 14 inches by 16 inches and allows for spools of colored plastic to be subject to high heat, melting them through a stylus that follows a plotted pattern. A manufactured piece cools rapidly at room temperature, then becomes as hard as most metals.

Ritter demonstrated how a printed mold fixture was durable enough to bend sheet metal in a hydraulic press to create necessary brackets for the airframe. The printed plastic mold reduces an eight-hour long project to less than 90 minutes.

"The printed plastic is heavier than phenolic parts," explained Ritter, referring to a type of lightweight plastic resin used in many aircraft worldwide today.

That can be a disadvantage when every pound of weight added to an aircraft means greater fuel consumption, so smaller pieces are more convenient to manufacture.

Another advantage of the 3D printing capability is, while it

only prints plastic parts, the plastics can be up to four layers thick and be high-performance thermoplastics, static-dissipating polymers or heat-resistance compounds.

In December 2015, the plastic met the requirements for fire and smoke safety and was approved for use. Ritter said it's for this reason that some 3D printable parts can also be used as welding fixtures to hold metal parts while welding, whereas phenolics cannot.

"We can hold a blowtorch to a printable plastic part and, while it may turn black, it won't burn or emit any harmful vapors," he said. "Phenolics produce a toxic vapor when subject to open high heat."

Tech. Sgt. Joshua Rea, Ritter's counterpart with the 552nd Maintenance Squadron Fabrication Flight, said the printer can only be used for parts that are not under contract.

"All active-duty and Reserve Airmen in our shop use this 3D printer regularly," said Rea. "We give our Airmen training projects during the week to maintain their familiarity with the machine. It might be a bathroom door knob handle that's no longer made or a seat assembly component. The [ACG] Reservists expand our fabrication capabilities and help us in designing new parts. We're glad to work alongside them and they are valued members of Team AWACS."

Ritter said he is optimistic for the future of tomorrow's maintainer when it comes to 3D printing capabilities. Having been an AWACS maintainer for only two years, his past maintenance experience includes F-16, F-15 and A-10 weapon systems -- all aircraft that were built before he was born.

"If I'd had one of these 3D printers when I started in the Air Force, it wouldn't be the same service it is today," he said. "The 3-D printer makes the maintainers' job so much easier."





Okies reunite with their families  
after deploying around the world







U.S. AIR FORCE THUNDERBIRDS FLY ALONGSIDE A KC-135R ▲

FIREFIGHTERS PARTICIPATE IN AN ANNUAL 9/11 FIRE CLIMB ►





COMMON ACRONYMS & JARGON

**AFRC** *Air Force Reserve Command*  
AFRC provides the Air Force approximately 20 percent of their capability at four percent of the total Air Force budget. The Air Force Reserve performs two missions no other military service does: fixed-wing, aerial-spray missions and hurricane forecasting. AFRC also supports the space program, flight test, special operations, aerial port operations, civil engineer, security forces, intelligence, military training, communications, mobility support, transportation and services missions.

**AGR** *Active Guard Reserve*  
National Guard and Reserve members who are on voluntary active duty providing full-time support to National Guard, Reserve and Active Component organizations for the purpose of organizing, administering, recruiting, instructing or training the Reserve Components.

**ART** *Air Reserve Technician*  
A full-time Department of Defense civilian who is required, as a condition of employment, to be an Air Force Reservist and perform the same duties as a civilian as he/she does during monthly Reserve training.

**AT** *Annual Training*  
The minimum period of Active Duty Training or Annual Field Training the Reserve member must perform every year.

**BOOM**  
The long arm lowered from a KC-135 in flight that allows the refueling of other aircraft, also short for an in-flight refueling technician, or boom operator.

**CATM** *Combat Arms Training and Maintenance*  
Security Forces personnel who train base populace on the use of small arms, oversee, maintain and repair all small arms in the U.S. Air Force inventory.

**DEFENDER**  
Nickname for security forces squadron personnel.

**D&TF** *Development and Training Flight*  
D&TF prepares Air Force Reserve members mentally and physically for the transition from civilian to military life through academic and fitness-based awareness programs.

**FALCON**  
Nickname/call sign of the F-16A. This airframe was flown by the 507th ARW until 1994.

 **FOURTH AIR FORCE**  
March Air Reserve Base, California, and its subordinate units are responsible for “strategic reach forces,” which includes aerial refueling and long-range, strategic airlift missions.

**HOSE & DROGUE**  
The hose is a flexible, retractable tube that trails from an aircraft during aerial refueling. The drogue, a small parachute, stabilizes the hose during flight and acts as a ‘funnel’ for the probe of the aircraft being refueled. The KC-135Rs used by the 507th ARW can use either a boom or a drogue to refuel.



**ISO** *Isochronal inspection*  
An extensive examination and maintenance of an entire airframe and systems that seek to increase the overall performance and safety of the aircraft. Can be minor, major or depot level.

**IMA** *Individual Mobilization Augmentee*  
Reservists who augment our active-component counterparts at wings, major commands, combatant commands and government agencies.

**IRR** *Individual Ready Reserve*  
Composed of former active duty or Reserve personnel, these Reservists are not attached to the Selected Reserve, who drill consistently with an organized unit. IRR members can be activated at a moment's notice by the president in times of grave national emergency.

**LOGGIE**  
Nickname for logistics readiness squadron personnel.

**OKIES**  
An endearing term for anyone past, present and future who serve in the 507th Air Refueling Wing.



**PAX**  
A simple, shortened term for aircraft passengers.

**PEGASUS**  
Nickname/call sign of the KC-46A recently delivered to the 730th Air Mobility Training Squadron. The KC-46A is the Air Force's newest refueling aircraft.

**PHANTOM**  
Nickname/call sign of the F-4 fighter jet. The F-4 was flown by the 507th ARW until the switch to F-16s.

**PME** *Professional Military Education*  
Refers to the professional training, development, and schooling of military personnel.

**PORT DAWG**  
Nickname for aerial port squadron personnel.

**PRIME BEEF**  
Nickname for civil engineer squadron personnel.

**RUTA** *Rescheduled Unit Training Assembly*  
When needed, Reservists can reschedule a unit training assembly.

**TDY** *Temporary Duty*  
Used to describe a temporary duty location other than ones permanent station.

**THUNDERCHIEF / THUD**  
Nickname/call sign of the F-105D Thunderchief supersonic fighter-bomber used by the Air Force. Capable of Mach 2, it conducted the majority of strike bombing missions during the early years of the Vietnam War.

**TR** *Traditional Reservist*  
TR's are Reservists who work and perform readiness training with their Reserve unit one weekend per month (24 days), plus an additional two-weeks of active-duty training per year.

**UTA** *Unit Training Assembly*  
A UTA is a required, two-day, monthly training period for Reservists, usually scheduled for the first or second weekend of each month. Commonly called drill.







▲ EDUCATION & TRAINING PERSONNEL IN ACTION

◀ A DENTAL TEAM TREATS A PATIENT DURING A HUMANITARIAN DEPLOYMENT





▲ A MAINTAINER INSPECTS A KC-135R ENGINE BEFORE TAKE OFF

## 507TH ARW HEADQUARTERS

WING COMMANDER  
Col. Miles Heaslip

COMMAND CHIEF MASTER SERGEANT  
Chief Master Sgt. David Dickson

PUBLIC AFFAIRS STAFF  
Lt. Col. Jon Quinlan  
1st Lt. Callie McNary  
Master Sgt. Grady Epperly  
Tech. Sgt. Lauren Kelly  
Tech. Sgt. Samantha Mathison  
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