

## 71<sup>st</sup> SPECIAL OPERATIONS SQUADRON



### MISSION

### LINEAGE

71<sup>st</sup> Troop Carrier Squadron constituted, 30 Jan 1943

Activated, 9 Feb 1943

Inactivated, 31 Jul 1946

Activated in the Reserve, 15 Mar 1947

Redesignated 71<sup>st</sup> Troop Carrier Squadron, Medium, 1 Jul 1949

Ordered to active service, 1 May 1951

Inactivated, 1 Feb 1953

Activated in the Reserve, 1 Feb 1953

Ordered to active service, 28 Oct 1962

Relieved from active service, 28 Nov 1962

Redesignated 71<sup>st</sup> Tactical Airlift Squadron, 1 Jul 1967

Ordered to active service, 13 May 1968

Redesignated 71 Air Commando Squadron, 15 Jun 1968

Redesignated 71 Special Operations Squadron, 8 Jul 1968

Relieved from active service, 18 Jun 1969

Inactivated, 1 Oct 1973

Activated in the Reserve, 1 Oct 1987

Inactivated, 1 Oct 1993

Activated, 20 May 2005

## **STATIONS**

Alliance AAFld, NB, 9 Feb 1943  
Baer Field, IN, 3-26 Sep 1943  
Fulbeck, England, 7 Oct 1943  
Welford Park, England, 10 Dec 1943  
Fulbeck, England, 10 Jan 1944  
Aldermaston, England, 3 Mar 1944-Feb 1945  
Mourmelon-le-Grand, France, Feb-Jun 1945  
Baer Field, IN, 5 Aug 1945  
Alliance AAFld, NB, 15 Sep 1945  
George Field, IL, 11 Oct 1945  
Greenville AAB, SC, 2 Feb-31 Jul 1946  
Stout Field, IN, 15 Mar 1947  
Atterbury AFB, IN, 1 Jul 1949  
Lawson AFB, GA, 23 Jan 1952-1 Feb 1953  
Atterbury (later, Bakalar) AFB, IN, 1 Feb 1953  
Lockbourne AFB, OH, 17 Jun-c. 20 Dec 1968  
Nha Trang AB, South Vietnam, 20 Dec 1968-1 Jun 1969  
Bakalar AFB, IN, 10 Jun 1969  
Grissom AFB, IN, 15 Jan 1970-1 Oct 1973  
Davis-Monthan AFB, AZ, 1 Oct 1987-1 Oct 1993  
Kirtland AFB, NM, 20 May 2005

## **DEPLOYED STATIONS**

King Fahd Airport, Saudia Arabia, 12 Jan 1991-c.16 Mar 1992

## **ASSIGNMENTS**

434<sup>th</sup> Troop Carrier Group, 9 Feb 1943-31 Jul 1946  
434<sup>th</sup> Troop Carrier Group, 15 Mar 1947-1 Feb 1953  
434<sup>th</sup> Troop Carrier Group, 1 Feb 1953  
434<sup>th</sup> Troop Carrier Wing, 14 Apr 1959  
930<sup>th</sup> Troop Carrier Group, 11 Feb 1963  
1<sup>st</sup> Air Commando Wing, 1 Jun 1968  
14<sup>th</sup> Special Operations Wing, 20 Dec 1968  
930<sup>th</sup> Special Operations Group, 10 Jun 1969-1 Oct 1973  
Fourth Air Force, 1 Oct 1987  
919<sup>th</sup> Special Operations Group, 1 Apr 1990  
919<sup>th</sup> Operations Group, 1 Aug 1992-1 Oct 1993  
58<sup>th</sup> Operations Group, 20 May 2005

## **WEAPON SYSTEMS**

L-4, 1943-1945  
L-5, 1943-1945  
L-5G

L-1, 1944-1945  
UC-64, 1944-1945  
C-46, 1953-1957  
C-46D  
C-119, 1957-1968  
AC-119, 1968-1969  
C-119, 1970  
A-37, 1971-1973  
CH-3, 1987-1990  
HH-3, 1987-1992  
MH-60, 1992-1993  
CV-22

### **COMMANDERS**

Cpt Jack S. Southard, 15 Feb 1943  
Cpt John R. Loveless, 11 May 1943  
Cpt Ira B. Seiden, 21 Jun 1943  
Maj Glen E. W. Mann Jr., 14 Sep 1943  
Maj Donald W. Morris, 1 Jan 1945  
Maj Thomas C. Ricketts, Sep 1945  
Cpt K. Willis, 6 Oct 1945  
LTC Robert C. Johns, 1 Feb-31 Jul 1946  
Unkn, 15 Mar 1947-May 1951  
Maj John E. Connor, 1 May 1951  
Cpt Lloyd R. Sparks, 28 Jun 1951  
Cpt Wendell A. Linn, 14 Jan 1952  
Cpt William T. Clark, 14 Apr 1952  
Cpt Jesse O. Williams, 23 May 1952  
Cpt Roland Benson, 26 Jan-1 Feb 1953  
Unkn, 1 Feb 1953-Dec 1958  
LTC James A. MacMasters, 1 Jan 1959  
LTC Joe T. Pound, 1 Jul 1961  
Maj William L. Horrell, 11 Feb 1963  
LTC Joe T. Pound, Apr 1964  
LTC William L. Horrell, Dec 1966  
LTC James E. Pyle, 15 Jun 1968-18 Jun 1969  
Unkn, Jul 1969-Mar 1971  
LTC Burl C. Campbell, by 1 Apr 1971  
Maj James C. Wahleithner, 30 Jun 1972  
LTC Richard E. Myers, 30 Sep 1972  
Maj Stanley F. Smith, 30 Jun-1 Oct 1973  
Col Jon E. Hannan, 1 Oct 1987  
LTC Lawrence M. Rolle, 1 Jul 1988  
LTC Robert A. Stenevik, 13 Mar 1989

Col Paul R. Davis, 20 Jul 1991-1 Oct 1993  
LTC James L. Cardoso, 20 May 2005  
LTC Todd A. Lovell, 22 May 2007  
LTC James E. Breck Jr., 6 Jun 2008

## **HONORS**

### **Service Streamers**

None

### **Campaign Streamers**

World War II  
Normandy  
Northern France  
Rhineland  
Ardennes-Alsace  
Central Europe

Vietnam  
Vietnam Air Offensive, Phase IV  
TET 69/Counteroffensive

Southwest Asia  
Defense of Saudi Arabia  
Liberation and Defense of Kuwait

### **Armed Forces Expeditionary Streamers**

None

### **Decorations**

Distinguished Unit Citation  
France, [6-7] Jun 1944

Presidential Unit Citation  
19 Dec 1968-31 May 1969

Air Force Outstanding Unit Awards  
19 Dec 1968-30 Apr 1969  
22 Mar 1989-21 Mar 1991  
1 Jun 1990-31 May 1992  
1 Jun 1992-[1 Oct 1993]  
[20 May]-30 Jun 2005  
1 Jul 2006-30 Jun 2007  
1 Jul 2007-30 Jun 2008

French Croix de Guerre with Palm

6-7 Jun 1944

20-28 Aug 1944

French Fourragere

Republic of Vietnam Gallantry Cross with Palm

14 Feb 1968-[1] Jun 1969

## EMBLEM



28 April 1960



17 June 1968



8 July 1968



On a disc per bend Azure and Sable, a lightning bolt bendwise throughout Gules, in dexter chief seven mullets Argent, overall an Osprey stooping Proper, beaked Argent (Silver Gray), eyed Or, all within a narrow border Yellow. Attached above the disc, an Ultramarine Blue scroll edged with a narrow Yellow border and inscribed "STRIKE SWIFTLY" in Yellow letters. Attached below the disc, an Ultramarine Blue scroll edged with a narrow Yellow border and inscribed "71ST

SPECIAL OPERATIONS SQ” in Yellow 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 stars in the upper field division represent the sky, the theater of operations. The Osprey signifies perseverance without rest until achieving the objective. The lightning bolt signifies power and swiftness with sacrifice. (Approved, 27 Jun 2005)

## **MOTTO**

## **NICKNAME**

## **OPERATIONS**

During World War II, the 71st Troop Carrier Squadron conducted airborne assaults on Normandy, Holland, and Germany, relief of Bastogne, and aerial transportation of passengers and cargo within the European Theater of Operations.

Reserve troop carrier training after the war. Served in active duty status during the Korean War, 1951-1953 and again during the Cuban Missile Crisis in 1962.

11 Apr 68 930th Tactical Airlift Group (TAG) of the Continental Air Command (CONAC) and 71st Tactical Airlift Squadron (TAS) received 30-day notice of call-up to active duty.

13 May 68 930th TAG/71st TAS reported for active duty at Bakalar AFB, IN. Eighteen C-119G Aircraft, 83 Officers, 254 Airmen, Total 337 Reservists affected.

Summer 68 Transitioned from C-119G cargo configuration to AC-119G Gunships. Flight crew augmentation, combat training, ground maintenance training at LAFB.

During the period 13 May 68 through 17 May 68 at Bakalar AFB, the unit:

- a. Reviewed all personnel records for completeness, and prepared equipment for move to LAFB.
- b. Supported TAC levied airlift missions and supported upgrade training in all areas.
- c. Airlifted personnel and material from Bakalar AFB to Lockbourne AFB.

On June 15, 1968, about a month after the 930th Tactical Airlift Group had been mobilized at Bakalar AFB, Indiana, with eighteen C-119Gs, its 71st Tactical Airlift Squadron moved to Lockbourne AFB, Ohio, and converted to gunship operations. On that same date, the 71st was redesignated as the 71st Air Commando Squadron, a name that lasted less than a month, as the unit became the 71st Special Operations Squadron on July 8.

The first training class in the AC-119G gunship for Southeast Asia duty was accepted by the 4413th Combat Crew Training Squadron (CCTS) on 3 Jul 68. Most of the 71st's personnel were experienced and qualified in C-119G crew and support positions, so the training stressed equipment and procedures peculiar to the AC-119G gunship. The C-119Gs of the 71st SOS were

gradually sent to the Fairchild-Hiller plant in St. Augustine, FL for modification to AC-119G gunships, or to other units as replacements for their commitment to the modification program.

Conversion from tactical airlift to gunship operations in the AC-119 brought significant changes. When the 71st Tactical Airlift Squadron was recalled, the C-119G aircraft crew consisted of (2) Pilots, one (1) Navigator, one (1) Flight Engineer, and one (1) Loadmaster. The AC-119G aircraft crew required two (2) Pilots, two (2) Navigators (one Navigator operated the Night Observation Sight), one (1) Flight Engineer, two (2) Gunners, and one (1) Illuminator Operator. Loadmasters cross-trained as Illuminator Operators. Volunteers from other Reserve Units were accepted to fill vacancies and the Air Staff ordered men from various Air Force sources to fully man the 71st SOS, which was scheduled to depart for Southeast Asia on 27 July 68. Delays in departure ensued. Also, a change in the ratio of crews to airplanes increased total crew requirements from sixteen to twenty-four. By November 21, 1968, the crews had formed and were ready.

Deputy Defense Secretary Nitze approved the deployment of the 71st Special Operations Squadron to South Vietnam on 27 Nov 68: The 71st SOS was to ferry eighteen (18) AC-119G aircraft to Nha Trang, South Vietnam via McClellan AFB, California; McChord AFB, Washington; Elmendorf AFB, Alaska; Adak; Midway; Wake; Guam; and Clark AB, Philippines. (The guns and mounts had been removed and a 500 gallon rubberized fuel tank had been installed for extra fuel load. The guns and mounts would be shipped to Nha Trang so as to arrive at the same time as the aircraft.) Each aircraft would be manned with a crew of: Pilot, Co-Pilot, Navigator, Flight Engineer, and Crew Engineer. (Note: There was no enroute support team or enroute support kit - both were needed as experience proved - Personnel on enroute bases were not familiar with the AC-119G aircraft, therefore enroute support was poor. The 71st SOS sent maintenance teams to Tinker AFB and Wake AB to make engine changes.)

All other 71st SOS personnel (258) and unit equipment (338,000 pounds) was to be airlifted from Lockbourne AFB, Ohio to Nha Trang, South Vietnam, on three C-141 aircraft via Elmendorf AFB, Alaska, and Yokoda AB, Japan. Flights were to depart 10 Dec 68, 22 Dec 68, and 10 Jan 69. The first flight included unit equipment and an advance party (ADVON) with L/Col. Donald L. Beyl in charge. They arrived at Nha Trang 12 Dec 68 and immediately started making arrangements for arrival of the main force of 71st SOS personnel. The second flight was made up of mostly personnel, including the Commander, Operations Scheduler, Administrative personnel, other crew members and maintenance personnel. Some unit equipment was included.

The flight arrived at Nha Trang 24 Dec 68. All crew members, except the Commander whose presence was required at Nha Trang until his staff was in place, remained aboard and continued on to Clark AB, Philippines, to attend the PACAF Jungle Survival School (referred to as 'snake school'). Jungle Survival Training was a PACAF requirement before flying combat missions in the Vietnam theater. The Commander attended 'snake school' with other arriving crew members. The third flight with the balance of unit equipment and personnel arrived at Nha Trang by mid Jan 69 as scheduled, thanks to the excellent supervision of Maj. Duane C. Oberg, Squadron Mobility and Administrative Officer.

The first two AC-119G aircraft departed Lockbourne AFB on 5 Dec 68; two aircraft 10 Dec 68; and then as the aircraft became available from the weight reduction program at the Fairchild-Hiller plant in St. Augustine, Florida. The last aircraft departed St. Augustine on 29 Jan 69. Two (2) AC-119G aircraft arrived at Nha Trang on 27 Dec 68 with a total of four (4) AC-119Gs arriving by 31 Dec 68. By the first of March, all eighteen (18) AC-119G aircraft of the 71st SOS had arrived in the combat theater.

As the aircraft ferrying crews arrived, they were immediately sent to the Jungle Survival School at Clark AB, Philippines. This was made possible through the special efforts of L/Col. Boris C. Chaleff. L/Col. Chaleff, the Acting Operations Officer/Operations Scheduler, was in the first group (from the second C-141 airlift) to attend the 'snake school'. He established a valuable working relationship with M/Sgt. Berry, NCOIC of the Survival School. L/Col. Chaleff explained the high precedence rating of "Combat Hornet", the method of arrival of aircraft and crews, and the immediate requirement to fly fraggged missions. M/Sgt. Berry allowed the 71st SOS to send crews to the Survival School without the required waiting period. A phone call from L/Col. Chaleff at anytime was acceptable. (The 71st SOS showed its appreciation by sending jungle combat boots and jungle fatigues to Survival School personnel.) Gaining timely admission to the Jungle Survival School was critical to our mission and it became almost routine. The remainder of the problem was getting in-country flight reservations for the aircrews from Nha Trang to Saigon and on to Clark AB. The airmen in the 71st Operations Section spent an inordinate amount of time on a highly inefficient telephone system making the necessary travel arrangements. This was another example of the Reservists performing beyond the call of duty and outside of the system in order to get the job done.

As the AC-119G aircraft arrived at Nha Trang, maintenance personnel set to work removing the special ferrying fuel tanks, reinstalled and adjusted the miniguns, and in general got the aircraft operationally ready. This proved a stiffer job than expected as some of the aircraft and numerous maintenance write-ups.

The 71st SOS (call sign "Shadow") was assigned to the 14th Special Operations Wing at Nha Trang, and would operate out of three locations:

NHA TRANG AB - 71st SOS Headquarters and Flight A with five (5) aircraft  
Commander: L/Col. James E. Pyle  
Opns. Officer: L/Col. Warren L. Johnson

PHAN RANG AB - Flight B with six (6) aircraft.  
Commander: L/Col. William E. Long  
Opns. Officer: L/Col. Earl W. Scott

TAN SON NHUT AB - Flight C with five (5) aircraft  
Commander: L/Col. Donald F. Beyl  
Opns. Officer: L/Col. Robert S. Mulgrew



Nha Trang AB, headquarters of the 14th SOW, would serve as the main support base and have two (2) spare aircraft. All major inspections would be done at Nha Trang. When an aircraft at Flight B or Flight C was due for an inspection, one of the spare aircraft was flown to the forward location and exchanged for the aircraft in need of an inspection.

The first AC-119G Shadow combat missions were flown out of Nha Trang AB on 5 Jan 69. An evaluation team analyzed the Shadow gunship's performance (5 Jan to 8 Mar 69) in Combat Air Patrol for Base and Hamlet Defense, Interdiction, Armed Reconnaissance, Forward Air Control, and Close Air Support missions. The evaluation report revealed the weapon system performed all missions satisfactorily except Forward Air Controlling. The aircraft was rather slow, hard to maneuver, and vulnerable to enemy fire - not well suited to the Forward Air Control role.

All through the evaluation period, more aircraft and crews arrived, proceeded to "snake school" and returned to immediately start the in-theater combat training check-out. To expedite combat crew checkout, 14th SOW "instructor pilots" worked with several selected 71st SOS pilots so as to certify them as "instructor pilots". Two of the 71st SOS IPs, Major Benjamin McPherson and Capt. Marvin Evans, contacted the Squadron Scheduler and volunteered to fly until "fatigued". Major McPherson flew fourteen nights straight and Capt. Evans flew seventeen nights straight before taking a night off. This extra effort on their part helped immensely toward complete squadron crew checkout.

As air crews became combat-ready, the forward locations were activated. Tan Son Nhut (flight C) was the first forward location to be activated in January, 1969. On the eve of deployment of Flight C to the Tan Son Nhut AB, the designated Wing airlift support programed to airlift the flight C support equipment and ground personnel was cancelled due to a higher priority mission. Colonel Ginn, 14th SOW Deputy Chief for Operations, stated several key personnel were working on the problem and were getting nowhere through channels. 71st SOS Squadron Scheduler, L/Col. Chaleff, personally contacted several Sergeants on base that had airlift connections and by phone they made arrangements to divert sufficient aircraft capability to accomplish the move as originally planned.

The forward location, Phan Rang (Flight B), was in place and flying missions by 15 Feb 69. All three locations flew three fraggged missions each night, the first taking off at 6:30pm with the second and third taking off at two to three hour intervals. Each mission flew until released by the sector command - release depending on enemy action in the sector. Missions varied from one to three sorties of approximately four hours plus each. (Refueling was done at the nearest base in sector.)

The crews of the 71st SOS got their greatest satisfaction from successfully defending friendly ground troops in danger of being overrun by an enemy force. But Shadow brought a new dimension to the use of the gunships in Vietnam.

With its night-sight equipment, automatic flare launcher, and million candlepower searchlight, the AC-119G truly lived up to the 71st's motto, "Deny Him the Dark". It searches for troop

concentration, interdicts the enemy's supply routes and uses its unique capabilities in unusual and highly helpful ways. Shadow's light was even used to illuminate an area where doctors were performing a delicate operation on a wounded Vietnamese soldier. The compound had lost its electrical power while under heavy attack by the Viet Cong. A call for help was answered by the Shadow which was supporting the Vietnamese in their efforts to clear the enemy out of the besieged village. For more than 30 minutes the pilot maintained the aircraft in a disciplined circular pattern, disregarding the extreme vulnerability to enemy ground fire. Finally the operation was over - the soldier would survive. L/Col. Burl G. Campbell piloted the Shadow during its mission of mercy. His crew consisted of Capt. John L. Parish, Co-Pilot; L/Col. James H. Kirke and Major Harold R. Crawford, Navigators; M/Sgt. Ronald E. Wheeler, Flight Engineer; S/Sgt. Robert C. Johnson, Illuminator Operator; and Sgts. Robert Baum and James R. Boyd, Aerial Gunners.

On the night of 9-10 May 69, L/Col. Earl Scott, aircraft commander of Shadow 62, was operating in a sector and in contact an Army of the Republic of Vietnam ground force. He was advised by the sector command post to evacuate the area as an "Arc Light" mission (B-52 bombing mission) was scheduled for that area shortly. He immediately advised them of the friendly troops in the area, but was again ordered out of the area as they didn't show any friendlies in that area, and the "Arc Light" mission was proceeding. L/Col. Scott refused to leave the area and after many verbal exchanges, the "Arc Light" mission was diverted to its secondary target.

L/Col. Scott and his crew received a Letter of Appreciation from General George S. Brown, Commander, 7th Air Force (PACAF); also from Colonel William K. Bush, Commander, and Colonel William H. Ginn, Deputy Commander for Operations, 14th Special Operations Wing (PACAF), which read in part: "When placed in a unique situation, Lt. Col. Scott and his crew did not respond routinely. They instead, properly analyzed the danger to friendly ground forces and make the fact known. At the risk of censure, they persisted until corrective action was taken. The validity of their judgement has since been established and there can be little doubt that a potentially tragic situation was averted." The above-mentioned Letters of Appreciation along with letters from Lt. Col. Pyle, Commander, 71st SOS, and Lt. Col. William E. Long, B Flight Commander, 71st SOS, were forwarded to Lt. Col. Scott.

The 71st SOS Operational Record in Southeast Asia:

1,209 Fragged Missions

1,516 Sorties

14,555,150 Rounds of 7.62mm ammunition expended

10,281 Flares dropped

6,251 Combat hours flown

682 Confirmed hostiles killed by air (1,104 probables)

43 Vehicles confirmed destroyed (8 probables)

The greatest achievement was not a single fatality, and not an aircraft lost during the tour.

Only six aircraft received any kind of battle damage in the air. Five suffered minor small arms fire damage. the sixth was the most serious, being struck by rounds of 12.7 mm fire which put 19 holes in the aft part of the fuselage and caused minor wounds, lacerations in neck and back

to an active duty gunner augmenting the basic reserve crew. Two other aircraft of the 71st SOS received damage on the ground, but neither was disabling. One aircraft received minor damage when Nha Trang Flight A was hit by six rounds of 75 mm recoilless rifle fire. The other aircraft was hit by ricocheting mortar fragments at Phan Rang flight B, but it took off 90 minutes later in defense of the base. Although no significant damage was done, all three sites, Nha Trang, Phan Rang, and Tan Son Nhut shared in eight other ground attacks during the Squadron's tour in Vietnam.

Five Reservists extended their tour in Vietnam: MSgt. Dale Stickles, MSgt. Herb Weaver, SSgt. George Dragoo, SSgt. Len Swallow and SSgt. Hector Trevino.

The members of the 71st SOS received the following decorations:

751 Air Medals

143 Distinguished Flying Crosses

18 Bronze Stars

47 Air Force Commendation Medals

2 Purple Hearts (minor injuries)

The 71st SOS participated in a non-combat mission during their tour. The Cau Da elementary School, set high on a hillside above the Bay of Nha Trang, was in danger of sliding down the hill due to soil erosion. As soon as the Squadron was asked to help, a call went out for volunteers. Between 20 and 30 men volunteered to go out to the school during their free time and help any way they could. Plans were quickly drawn up to build a supporting wall and fill in behind it. Construction was begun at once. Rock was broken up at a nearby quarry and hauled to the school. Using cement mixed on site., 71st SOS volunteers and villagers began assembling the wall. A nearby unit of the South Vietnamese Navy also helped. With the main wall completed, the 71st men moved their efforts to a diversionary wall that would halt any erosion in the future. Also a stairway down the hill was constructed to make it easier for the children to get to school. It was a very satisfying "civic action project".

The 71st SOS left Nha Trang AB on 5 Jun 69 via three (MAC) C-141 aircraft. (The 18 AC-119G gunships were reassigned to the 17th Special Operations Squadron.)

The three C-141 aircraft arrived at Bakalar AFB, Columbus, IN on Friday, 6 Jun 69 to a great welcome from family, relatives, and friends - including Columbus Mayor Eret Kline, Indiana Governor Edgar Whitcomb, and Colonel Alfred Verhulst, Vice Commander, Air Force Reserve. Governor Whitcomb presented each man a Service Recognition Certificate from the State of Indiana - the first time Indiana had ever done this. After a free weekend, the 71st SOS returned to base for processing and normal duty until released from active duty on 18 Jun 69. Deactivation ceremonies on 17 Jun 69 was climaxed by a Squadron review

As of 19 Jun 69, the 71st SOS reverted to Reserve Status and continued their training at Bakalar AFB through December 1969, when it was reassigned to Grissom AFB, Peru, Indiana.

The Air Staff decided to convert the 930th because its 71st Special Operations Squadron had just acquired considerable combat experience, even if in another mission.

Called to active duty status on 1 Jan 1992. Carried out combat search, rescue, visual reconnaissance and other special operations in Southwest Asia, Jan-Apr 1991. Released from active status on 21 Apr 1992.

On 2 March 2009, at approximately 1422 hours local time (L), a CV-22B Osprey aircraft, tail number 02-0024, suffered a compressor stall and subsequent engine failure of the left engine shortly after takeoff at Kirtland Air Force Base (AFB), New Mexico (NM). The mishap aircraft (MA), assigned to the 71st Special Operations Squadron (71 SOS) of the 58th Special Operations Wing, Air Education and Training Command, was conducting a local student training sortie when the mishap occurred. The mishap crew (MC), members of the 71 SOS, consisted of the mishap instructor pilot (MIP), the mishap student pilot (MSP), the mishap instructor flight engineer (MIF), the mishap student flight engineer (MSF), and the mishap tail scanner (MTS). The primary damage was to the aircraft's left engine which was estimated at \$1,154,773. There were no ground injuries and there was no damage to other government or private property.

At 1422L, after normal maintenance and pre-flight checks, the MA performed a standard takeoff departing to the west of Kirtland AFB, NM to conduct a local student training sortie. Twenty seconds after becoming airborne, at an altitude of 103 feet and calibrated airspeed of 96 knots, the MA's warning caution and advisory (WCA) system displayed a compressor stall caution for the left hand (LH) engine; seconds later, the MA's WCA system announced LH engine failure while the aircraft automated control system initiated shutdown of the LH engine. Operating on single engine power, the MC declared in flight emergency and coordinated an emergency landing with the local air traffic control tower. The MC followed the required emergency procedures for engine failure and landed at Kirtland AFB, NM, without further damage to the MA or any injuries to the MC.

The Accident Investigation Board President determined by clear and convincing evidence that the cause of the mishap was due to the LH engine ingesting foreign object and debris (FOD) originating from the aircraft's LH Central De-ice Distributor (CDD). Evidence identified the ingested FOD as a mounting bolt from one of the bonding strap mounting locations of the LH CDD. Further, a bonding strap nutplate on the CDD was inadequate in keeping the mounting bolt in place, and over time, centrifugal and vibratory forces allowed it to loosen and eventually back out. There was substantial evidence showing that CDD mounting components on the CV-22 have a history of structural compromise, and this trend is common and well documented by the MV-22/CV-22 community. Based on this evidence, the board president concluded that a design issue associated with the mount support brackets, bonding straps, and bonding strap mounting hardware on the CDD units was a contributing factor to this mishap.

The CV-22 Osprey, which has been incrementally delivered here since March, is now an Air Education and Training Command asset. The owner has been Air Force Special Operations Command, but after the recently completed Operational Utility Evaluation and final transfer and acceptance maintenance inspections, the four tilt-rotor aircraft here are now in the AETC inventory. The last Osprey made the transfer July 14.

"It's like buying a car," said Lt. Col. Jim Cardoso, commander of the 71st Special Operations Squadron, the 58th Special Operations Wing unit which will conduct future training on the aircraft. "You want to know if the blinker doesn't work and have it fixed before you buy it. It makes sure there are no surprises in what we're accepting from the losing command."

The long and sometimes serpentine path for a new aircraft to be accepted is more complicated than testing a light switch or kicking the tires.

After the aircraft started arriving in the spring, the Air Force Operational Test and Evaluation Center began the OUE needed to find out the answer to the question: "Is the aircraft suitable for training?" To accomplish this, AFOTEC tasked AFSOC's 18th Flight Test Squadron in Florida to create a detachment to test the aircraft. The final sortie of the three-week OUE was June 29. Early in July, the final transfer inspection was conducted in conjunction with the aircrafts' periodic maintenance in order to save time and hours.

"It was AFSOC and AETC maintainers working together, one set doing the 'transfer' inspection and the other doing the required 'acceptance' inspection," Colonel Cardoso said. "All four aircraft are now transferred to AETC. It was done piecemeal - whenever the aircraft came up for periodic inspection ~ but it was done quickly."

Although the two teams of inspectors worked closely during this phase, the acceptance portion was more intensive, said Chief Master Sgt. Michael Hall, NCOIC of the 71st Aircraft Maintenance Unit. That's simply because the acquisition of an entirely new aircraft into the Air Force inventory means new problems must be resolved.

"We had a few expected glitches, mostly with the database," Chief Hall said. "It's a simple transfer of a database of maintenance scheduling when we're accepting an older aircraft, but the CV-22 is new and we found ourselves setting up a whole new database, which we had to make sure was accurate and up-to-date."

But Kirtland's Osprey community is not finished jumping through the inspection hoops yet.

Next is the Initial Operational Test and Evaluation to begin in the fall of 2007, in which the Osprey will be run through the paces to make sure it's fit for operational employment. This month the entire squadron goes to Edwards AFB, Calif., for five weeks to help out with one phase of the developmental test. The CV-22 will be in the California desert to help in the Electronic Warfare Integration Assessment, which tests its electronic warfare system capabilities.

"We're basically trying to help find out if the electronic warfare system does what the contractor says it will do," the colonel said. "We're helping to find out if the CV-22 is operationally suitable to do the mission."

Eventually, Colonel Cardoso said, the inspections lead the aircraft to its final goal in January 2009 - the Initial Operation Capability. This will be the moment the warfighting command certifies the aircraft is fully mission capable.

"Everything is geared toward that moment," he said.

After the return of the Osprey community from California in August, the CV-22 will be ready to begin its mission here: training flight crews.

"After the EWIA we can solely concentrate on being a school," Colonel Cardoso said. "In September, we'll be like all the other squadrons in the 58th SOW we'll be training, which is what we've been building up to since the squadron stood up in May 2005. It's exciting to finally

be doing what we've been set up to do.

"Six months ago, seeing a CV-22 over the Albuquerque skyline was a 'Gosh, what's that?' moment. Six months from now it will be commonplace."

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Air Force Order of Battle

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#### Sources

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