# THE MILITARY COMMANDER

## THE AERO COMMANDER L-26/U-4/U-9, Part 1

Research Project 7617

by Nicholas M, Williams

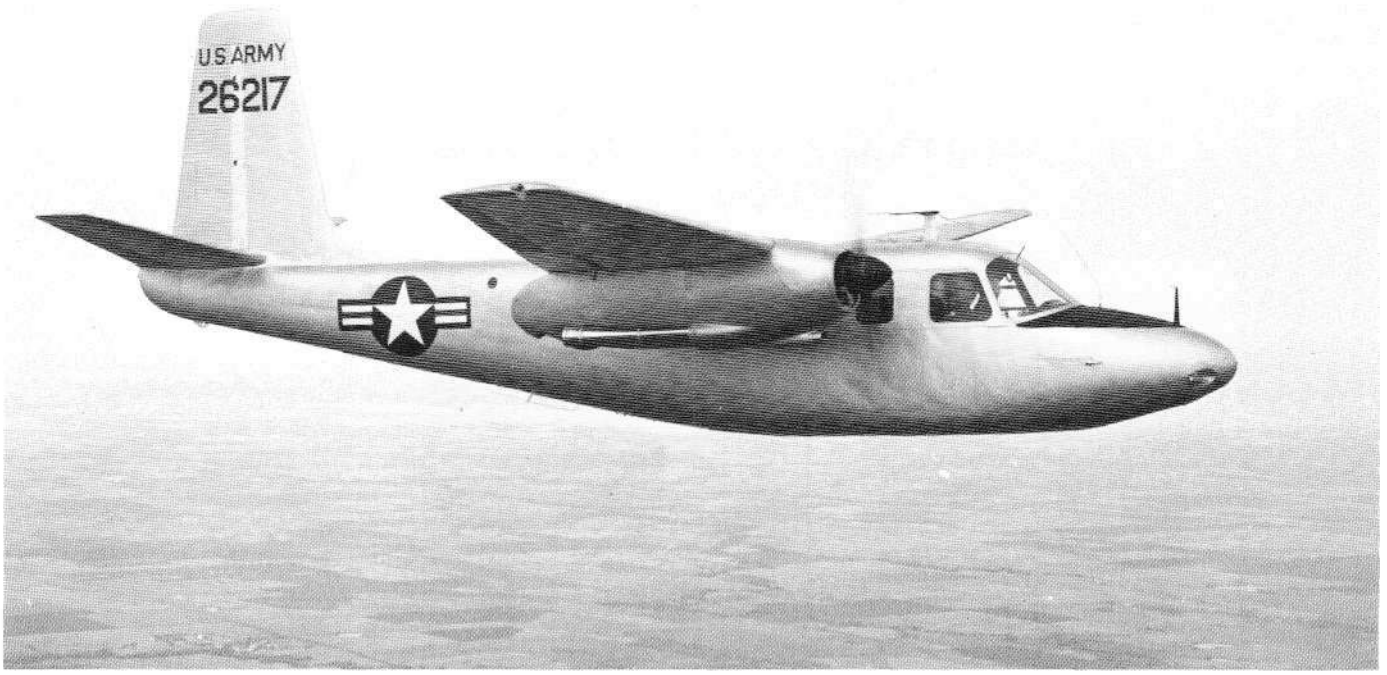
THE LONG SERIES OF TWIN-ENGINED AERO COMMANders produced by the Aero Design and Engineering Co. (later Aero Commander, Inc., and Rockwell Commander, Inc.) are more popularly known as civil business executive aircraft. However, early on during the prototype's development, Aero Design began actively courting the military as a potential customer. After several false starts the Army, and eventually the Air Force, purchased a total of 28 Aero Commanders of various models between 1952 and 1958. Although overshadowed by the more numerous Beech L-23 and Cessna U-3 contemporary light twins, the Aero Commander L-26s provided reliable service to their Army, Air Force and Navy operators for over 30 years.

The Aero Commander's design originated in December 1944 when Ted Smith and a number of other Douglas Aircraft Co. engineers organized the Aero Design and Engineering Co. in Culver City, California. Recognizing the potential for future growth of the civil marker following the end of World War II, the group was formed specifically to design and build the prototype of a new class of small, twin-engined aircraft for business use (see "The Aero Commander 520," JAAHS Vol. 35, No. 1, Spring 1990). Construction of the prototype was begun in August 1946, with the first flight of the L3805 (L for the Lycoming powerplants, 380 for their combined horsepower, and 5 for the number of passengers carried) occurring on April 23, 1948.

In July 1949, Aero Design and Engineering began actively offering its Commander for military use as an Army personnel transport, liaison and observation aircraft. Company engineers proposed to re-engine the prototype with the geared Lycoming GO-435As, each producing 260 takeoff horsepower, 70 hp more than the prototype's original Lycomings.[1]

In November 1949, Aero Design and Engineering President Ted Smith was able to report to the stockholders: "In September we were asked by the Fairchild Aircraft Corp. at Hagersrown, Maryland, to fly the airplane to their facility for an evaluation check with the thought that they possibly

L-26B 55-4642 on a predelivery flight in October 1955 with downtown Oklahoma City in the background. This airplane was assigned to the Headquarters Command, 1100th Operations Group, Boiling AFB, Washington, D.C. (Aero Design Courtesy of Bob Cates)




would be interested in the project from a military standpoint. This trip was quite favorable and it is possible that later on the airplane might be used for a small Utility Transport by the military because of its economical first cost and, thereafter, its economical cost of operation."[2]

Despite Smith's optimism, nothing resulted from Fairchild's evaluation. Aero Design was granted a CAA-type certificate for the L3805 on June 30, 1950. In September, the company reorganized and moved to Bethany, Oklahoma, a suburb of Oklahoma City, to tool up for the production version of the Aero Commander, the Model 520. Aero Design spokesmen continued to emphasize possible military production throughout 1950 and 1951, claiming that the Aero Commander was "under consideration" by both the Army and Air Force for use as a "liaison-courier-ambulance litter and utility plane," and as a "flying staff car" for command officers.[3]

In fact, as much as the Army might have coveted the Aero Commander, since its "creation" in 1947 by Congress' passage of the National Security Act, which established the U.S. Air Force as a separate entity, U.S. Army aviation had been severely restricted in the size and types of equipment it could operate. Although sorely in need of modern liaison and command types, Army fixed-wing liaison aircraft had been restricted to 2,500 pounds empty weight by a joint Army-Air Force agreement made in 1949. But the presence imposed on all services by the outbreak of the Korean War in 1950 enabled the Army to rapidly increase its aircraft procurement, as well as reduce the scope of the operational limitations that had been imposed upon it by the Air Force. In October 1951, the Air Force finally lifted the weight restrictions for Army aircraft, and the service was able to actively seek the larger types of aircraft it had needed for many years.

In June 1951, the Aviation Service Test Division of the Army Field Forces, Fort Bragg, North Carolina, conducted an "evaluation of Commercial multiplace fixed wing utility aircraft." Among the types evaluated by the group was the Aero Commander L3805 prototype, which had been reengined with the production Model 520's Lycoming GO-435-C2 powerplants as earlier proposed by the company.

While the specific findings of this evaluation are not known, a follow-up evaluation was made in the fall of 1951 when a "service team" of U.S. Army officers visited the Aero Design and Engineering plant at Bethany, where the first handful of Model 520s were coming off the production line. Capitalizing on the Army's newly allowed interest, Aero Design also made brief flight demonstrations "to military personnel in the Washington, D.C., and surrounding areas" in the fall of 1951.[5]

The U.S. Army also had been quietly testing several liaison types in the armed spotter, or "mosquito," role, specifically the Temco T-35 and Fletcher Defender. With the recent lifting of the 2,500-pound weight limit for its fixed-wing aircraft, the Army now openly proposed arming any of several civil light aircraft, including the Aero Commander. One modification considered was the Model 520 equipped with two .30-cal. machine guns in the nose, and with provisions for 12 rockets to be carried underneath the airplane's wings.[6] As with so many proposals made during this time of rapid aeronautical development during the early 1950s, an armed Aero Commander never was produced.

**Army YL-26/U-9A 52-6217/6219 (520-17/21/23)—**As a result of Aero Design's promotional efforts and the Army's need for more modern liaison aircraft, on June 17, 1952, three Aero Commander 520s were purchased essentially off-the-shelf by the Air Force for the Army's Fiscal Year 1952 User Test

The first military Aero Commander, YL-26, 52-6217 (520-17), on an Army acceptance flight over Western Oklahoma in the fall of 1952.
(Rockwell International #520-790990 Courtesy of Bob Cates)

The prototype Aero Commander was demonstrated at several East Coast military installations in 1951. L3805 N1946 is shown at Wright Field in its striking blue and red paint scheme in 1951. (National Archives 18-WP-3106)

Army YU-9, 52-6217, is shown at Fort Bragg, North Carolina, in 1962 painted brown and white overall with da-glo nose, wing tips and tail, and with Model 560 or later three-bladed propellers.
(Army SC599787 by Sfc. William C. Seaburg)

Program. YL-26s 52-6217/6219 (520-17/21/23) were purchased by the Air Force as the procuring agency for the Army under contract AF33(600)-16617 to participate in an Army service test, after which a decision would be made regarding future military production orders.

While the three YL-26s were basically stock Model 520s, a "substitute engineering inspection" of YL-26 52-6217 was made by Air Force and Army personnel at Aero Design's factory on October 21, 1952. The inspection team examined the YL-26 to determine compliance with contractual requirements in the areas of modifications made to the radios, the installation of constant-speed, full-feathering propellers, generators, a fuel grounding jack, recessed seats with removable cushions permitting the use of back type parachutes, electrically heated pitot tube, and several minor interior detail changes. The airplane also was to be finished in an aluminized paint, with standard military insignia and markings. The inspection team found nine items which needed to be accomplished before acceptance, one item to be included in the second and third airplanes, and 13 items considered to be not acceptable or to be considered in future procurements of the airplane. In addition, the group recommended that a study be made toward providing the YL-26 with a steerable nose wheel.[7]

After the recommended changes had been made at the factory, YL-26 52-6217 was accepted by the Army and flown to Fort Bragg, North Carolina, on November 21, 1952. Over the following year the airplane was flown by the Headquarters, Army Field Forces, Board No. 1, in a user test to determine if it fulfilled the Army's requirement for "long-range, high-speed staff transportation."[8] The YL-26 was flown in "direct comparison" with the Beech L-23, which also was being considered for the Army's command-executive air transportation mission.

The test board evaluated the YL-26 in 12 areas: overall characteristics; cockpit and cabin arrangement; powerplants and propellers; airframe and landing gear; maintenance; ground handling; flying qualities; twin engine reliability and single engine performance; navigation and communication equipment; night flight suitability; instrument flight; and the airplane's autopilot.

As tested, the YL-26 was equipped with the Model 520's standard 260-hp Lycoming GO-435-C2B engines, twin-bladed Hartzel full-feathering, constant-speed, metal propellers, VHF command transmitters and receiver, VOR, Lear ADF, marker beacon receiver, low-frequency range receiver, and a Lear L-2C autopilot. The airplane had a wingspan of 44 feet, length of 34' 2.5″, and height of 14' 4.5″, while empty weight was 3,800 pounds and gross weight was 5,500 pounds. The YL-26 could cruise at 197 mph and had a top speed of 211 mph and a service ceiling of 24,000 feet; with its standard 150-gallon fuel capacity, the YL-26 had a range of 1,150 miles with a 30-minute reserve.

Following this year-long test program, the YL-26 was found to be satisfactory in all areas except ground handling, due mainly to the lack of a steerable nose wheel, and the automatic pilot, which had so many deficiencies that, on June 1, 1953, the Army directed that the autopilot be disconnected and its use discontinued on the YL-26s.[9]

In the comparison made between the YL-26 and L-23, the Aero Commander was found to have the following advantages: easier to enter and exit; freedom of movement within the cabin; controls, trim tabs and landing gear and flap handles were more accessible and distinguishable; overhead panel switches were easier to operate; visibility of the terrain was better for all occupants; fuel consumption was approximately five gallons per hour less; the fuel system had the characteristics of a one-tank system (five interconnected tanks gravity-fed with a single-point filler); range was approximately 400 miles greater; average cruising speed was 15 miles per hour faster; single-engine performance and control were superior; and dual controls were provided. The L-23 had the advantages of providing aileron trim, the general ruggedness of the airframe, ease of ground handling, and servicing of the low-wing airplane could be done without the aid of special ladders or stands.

As a result of the above, the board concluded that "The YL-26 airplane offers the Army a better solution for its command-executive air transportation mission than does the L-23


In May 1955 the Air Force leased Aero Commander 560 N2724B as an interim Presidential aircraft until the first L-26B could be delivered. The Model 560 is distinguishable from the L-26B by its exposed exhaust augmenter tubes and lack of wing and tail de-icer strips. (Air Force 152982 AC)

President Dwight D. Eisenhower demonstrates the Aero Commander's ease of exit on his Gettysburg farm's 2,200-foot sod airstrip. Note the Model 560's standard interior trim.
(Air Force Photo Courtesy of Bob Cates, Rockwell International)

President Dwight D. Eisenhower and Presidential Pitot Lt. Col. William Draper with the leased Aero Commander 560, N2724B, at Eisenhower's Gettysburg, Pennsylvania farm. (Air Force 158179AC)

airplane." Among its recommendations was the hope that "current production planning provide for the YL-26, or an airplane superior to the YL-26, to replace the L-23 airplane. "[10] Despite these findings, the Army eventually purchased over 200 examples of several models of the Twin Beech, while orders for the Aero Commander amounted to little more than a dozen.

Following this service test, YL-26 52-6217 joined its two sisterships being flown from various East Coast Army airfields as staff transports. YL-26 52-6217 now was based at Davison AAF, Fort Belvoir, Virginia; YL-26 52-6218 was flown out of Walker AAF, Fort Monroe, Virginia; and YL-26 52-6219 was attached to the Aviation Test Board, Fort Bragg, North Carolina.

Lieutenant Colonel (Ret.) Guy R. Claybourn, Jr., flew YL-26 52-6218 for a total of 246 hours while he was attached to the Office, Chief of Army Field Forces (OCAFF), and Continental Army Command (CONARC), at Fortress Monroe, Virginia, from June 1953 to July 1956: "In my opinion Aero Commander YL-26s and the U-9s were the best light twin-engined airplanes that the Army had in the 1950s and 1960s. The controls were well harmonized, the stability was commendable and forward and downward visibilities were outstanding. The combination of these factors made the Aero Commanders very desirable aircraft to fly on instruments. Upward lateral and rear visibilities were nil. When the situation called for it, we would lift the wing on the inside of the turn to clear the area into which the turn was to be made. Ground handling was easy with castoring nose wheel on the early models, and was even better after the retrofit of 'power steering'.

"Passengers liked to fly in the Aero Commanders because of the ease of entry and the downward visibility in flight. I heard that General of the Army George C. Marshall preferred the YL-26 on flights to his retirement home in North Caro-

lina because of the ease of entry and exit.

"Walker Army Airfield at Fortress Monroe, Virginia, was between Chesapeake Bay on the east and Mill Creek Pond close on the west. This proximity to bodies of water, coupled with the boat-like fuselage of the YL-26, frequently prompted the question: 'Can this airplane take off and land on water?'

"Flight operations from both Walker AAF and Davison AAF were limited to 600 to 800 miles from base since commercial air was deemed more cost-effective. Destinations most frequently visited were from Fort Benning, Georgia, Fort Rucker, Alabama, Fort Bragg, North Carolina, to the U.S. Military Academy in New York and 1st U.S. Army Headquarters on Governors Island off the tip of Manhattan. In the 1960s we were obligated to file and fly an instrument flight plan where possible without compromising mission accomplishment.

"One sort of an amusing incident occurred in connection with the servicing of a YL-26 at a USAF base. The pilot gave instructions for refueling and checking the oil level. To check the oil level in a YL-26 engine, one had to open a sheet metal door on top of the nacelle, reach in and remove the dip stick. If additional oil was required, the oil was poured into the dip stick opening. The transient alert crew motored up with a 200-gallon oil truck, opened the cowling access door and proceeded to 'add' oil but didn't know to remove the dipstick first. When the Army aviator returned, his YL-26's main landing gear wheels were in puddles of excess oil that had coated the engines on the way through the cowling."[11]

The three YL-26s continued to operate from various East Coast Army airfields throughout the 1950s. After the Air Force had procured their own L-26s to transport President Eisenhower to his farm in Gettysburg, Pennsylvania, the famous "Gettysburg Airlift," Army YL-26s frequently supplemented the Air Force Aero Commanders by transporting dignitaries and Secret Service agents to the farm. Following implementation of the Tri-Service aircraft designation system in 1962, the Army aircraft were redesignated as U-9As, although at least 52-6217 was photographed carrying a "YU-9" designation. During their service lives the YL-26s were retrofitted with a number of items found on the later Model 560/680 Aero Commanders, including the steerable nose wheel previously mentioned, new three-bladed propellers, and improved avionics.

At some time during the 1960s, U-9A 52-6217 was flown by the Kentucky Army National Guard. The airplane remained in service until 1980, when it was placed on display at the Boone National Guard Center in Frankfort, Kentucky. This Aero Commander later was sold through the General Services Administration to Southwestern Michigan College, Dowagiac, Michigan, where it has been used as an instructional airframe. U-9A 52-6218 is now on display at the U.S. Army Transportation Museum, Ft. Eustis, Virginia. U-9A 52-6219 served as a staff transport during the late 1960s and early 1970s at the Army Staff College in Lawrence, Kansas. The airplane can be seen today on display at the Army Aviation Museum, Fort Rucker, Alabama.

**Air Force L-26B/L-26C/U-4A/U-4B 55-4634/4648—**Following the Army's purchase of three YL-26s (as well as three similar aircraft bought for the Republic of Korea Air Force), Aero

Design continued to make sales overtures to the U.S. Air Force. Early in June 1954, Aero Design made a request to the Air Force's Real Estate Branch for permission to demonstrate the Aero Commander at "a large number" of Air Force bases. It appeared that the head of the Real Estate Branch was about to approve the request, but Headquarters USAF denied it, citing three reasons: the Air Force didn't have a requirement for this type of aircraft at the time; development of requirements should be through prescribed Headquarters USAF channels rather than through pressure from the field; and approval of Aero Design's request would "establish a poor precedent" and be wasteful of the time of field personnel. However, it also was recognized by Headquarters that a number of Aero Commander demonstration flights could be made anyway as base commanders could approve one flight entry to their fields at their discretion.[12]

A study was subsequently made by the Air Force in the fall of 1954 to consider a replacement for the Beech C-45 as a light, twin-engine, 4 to 6-place transport to be used for combat readiness training, air attache and Special Air Mission (VIP) use. Several light twins were considered, but it was felt that no airplane then available offered a great enough improvement over the C-45H to warrant new procurement, even though it was recognized that the C-45 had marginal single-engine performance and that the airplane could not be used in severe instrument weather.[13] An Air Force Council recommendation that no further consideration be given to the procurement of the Aero Commander was approved by the Chief of Staff on November 11 and the Assistant Secretary of the Air Force (Materiel) on November 22, 1954.[14]

Concurrently, while the Air Force was showing no interest in buying the Aero Commander for itself, it was acting as the procuring agency for one L-26A to be used by the Laotian government. The airplane was an "off-the-shelf Model 560 delivered in May 1955.[15]

In the spring of 1955, the Air Force finally was persuaded to come around to Aero Design's way of thinking when a requirement was established for a "light 4 to 5-passenger twin-engine transport for use within a short radius of the Washington area."[16] The principal force behind this requirement was the White House, as President Dwight D. Eisenhower had recently purchased a farm in Gettysburg, Pennsylvania. As the trip from Washington, D.C., to Gettysburg took two hours by car, President Eisenhower asked his pilot, Air Force Lt. Col. William Draper, to look into the possibility of using a light aircraft to fly him into the farm's 2,200-foot grass airstrip.[17] This was to be a precedent-setting decision, as the Secret Service had insisted for years that all Presidential aircraft have four engines for safety's sake. Since the President and his family would be using the airplane, it was felt that one aircraft would be needed for the Presidential party and another for the accompanying Secret Service personnel. Further, in order to ensure that two aircraft were available at all times, it was expected that four aircraft would be needed to meet the requirement.

Further discussions were made with the Special Air Mission (SAM) Group, located at Washington's National Airport and tasked with providing air transportation for military and governmental VIPs as well as the White House. It was discovered that the SAM Group had many requests for VIP transportation involving only one or two persons to destinations within a short radius of Washington, D.C. These requests were met by using the large, twin-engined Convair C-131Ds, so the economies of operating a light twin here as well were obvious.

In response to these requirements the Air Force made still another study of available twin-engine light aircraft which would provide acceptable single-engine performance, the ability to operate from a 2,000-foot sod airstrip, high cabin comfort, low cabin noise levels, good visibility and ease of

The Headquarters Command, 1100th Operations Group, at Boiling AFB was assigned L-26B 55-4640 to provide VIP and administrative transportation. The Aero Commander is shown taxiing with a full load of VIPs and with da-glo bands painted on its nose, tail and wing tips.
(Robert L. Stuckey Courtesy of J.H. Weathers, Jr.)

The red, white, and blue emblem of the U.S. Army Ground Forces is repeated on the tail and propeller spinners of YL-26, 52-6218, in this 1953 photo.
(Courtesy of E.M. Sommerich Collection/Peter M. Bowers Collection)

entry and exit. Four aircraft were evaluated: the Aero Commander 560, Cessna 310, Beech Twin Bonanza, and Piper Apache.

The Air Staff concluded that the Aero Commander best met these requirements, and the Presidential pilot, Lt. Col. Draper, who had previously flown three of the four aircraft considered, concurred with this decision. A memorandum was subsequently sent to the Secretary of the Air Force recommending the immediate procurement of six Aero Commanders, whose unit cost, including installation of "special flight instruments," radio and de-icing equipment, was expected to be approximately $77,000.[18] The Secretary of the Air Force, obviously impressed with the logic of the Air Staff's proposal, instead approved the purchase of 15 Aero Commanders on May 10, 1955. Air Force contract AF33(600)-30549 called for the purchase of 15 Aero Commander Model 560As, designated as L-26Bs, 55-4634/4648, with the first delivery scheduled for July 1955. Six of these L-26Bs were to be assigned to the 1254th Air Transport Group, Military Air Transport Service, for SAM operations, while the remaining nine Aero Commanders were to be flown by Headquarters Command. All aircraft were to be based at Boiling AFB, except one which would be hangared at Washington National Airport for Presidential use.

A conference was held on May 10th at Air Force Headquarters to implement the Chief of Staff's directive to purchase 15 L-26Bs.[19] However, during a Pentagon conference on May 16th in which Headquarters USAF Procurement Directive 55-248 was issued, Major W.W. Thomas, representing the White House, stated that the White House wanted to have an Aero Commander available on or about May 23rd for orientation, checkout, test missions, and actual VIP missions until delivery of the first production aircraft.[20]

A standard Aero Commander 560, N2724B, soon was leased from Aero Design and delivered on the 24th to the 1254th ATG, MATS, at Washington National Airport. The first Presidential flight aboard the airplane occurred on June 3rd. N2724B was painted in one of Aero Design's standard optional schemes, No. 4, Baltic Blue and Polar White, with "U.S. Air Force" painted on each engine nacelle and the national insignia applied to the fuselage, although it retained its civil registration throughout its short service with the Air Force. While some sources claim that this leased Aero Commander 560 was designated a YL-26A, 55-3815, no evidence has been uncovered indicating that the airplane ever carried this military designation or serial number.

Two days after the delivery of N2724B, Lt. Col. Draper requested that a study be made to determine the most appropriate paint scheme for the yet-to-be-delivered first L-26B. Draper's concern was for the difficulty in spotting small aircraft around large airports, such as National Airport where the Presidential Aero Commander would be operating.[21] The 15 L-26Bs originally had been ordered with natural aluminum exteriors and green interior upholstery. However, the Chief, Aircraft Division, directed on June 7, 1955, that all L-26Bs be delivered as the leased Model 560, i.e., with Baltic Blue and Polar White exteriors and blue interior fabric and trim.

A conference was held at Air Materiel Command Headquarters on May 31st to develop a maintenance and supply support plan for the L-26B. It was estimated that an additional $300,000 in funding would be needed to purchase items peculiar to the L-26B, such as the GO-480-D1A engines and propellers, while more common items would be drawn from Air Force stocks.

It also was recognized that a civilian contractor would be needed to provide overhaul facilities for these engines. Southwest Airmotive of Dallas was already under Air Force contract to provide engine overhaul, but the conferees were uncertain whether this contractor could overhaul this type of engine. A contractor also would be needed to provide maintenance and overhaul of the aircraft itself, one located within an hour's flight from Washington, D.C., if possible.

Finally, MATS personnel indicated their general unhappiness with a number of items on the L-26B they felt needed to be changed: seat covers, the gray instrument panel color, cockpit and canopy covers, fire extinguishers, numerous small cabin furnishings, and the need to have 87 octane gasoline available at Washington National Airport as well as the airplane's civilian radios, which were termed "unsuitable."[22]

In fact, throughout June and July 1955 both the 1254th ATG and Headquarters Command representatives spent considerable time in trying to determine suitable military crystal frequencies for the L-26B's civilian radios, even pressing to replace the Aero Commander's civilian Lear avionics equipment with military-compatible Collins gear. An effort was made to provide an all-weather capability for the L-26Bs. The Wright Air Development Center recommended outfitting the Aero Commanders with carburetor air temperature gauges, windshield wipers, an alcohol-spray windshield anti-

An immaculate YU-9, 52-6219, parked on the general aviation ramp at Love Field, Dallas, in 1966. (Clay Jansson, Courtesy of Robert Esposito)

The U.S. Army Aviation Board flew YU-9, 52-6219, in the early 1960s. The airplane is shown at Love Field, Dallas, Texas, in 1962 with extensive areas painted in da-glo. (John H. Heyer)

Army YL-26, 52-6219, is shown at Davison Army Air Field, Fort Belvoir, Virginia, in January 1953. Note leak in the airplane's propeller hub. (Army SC413309)

icing system, and replacement of the "icex" propeller anti-icing coating (which tended to disappear after only several minutes of operation) with a liquid system of propeller ice removal.[23] This latter effort was disapproved inasmuch as the L-26Bs were only intended as "short range liaison aircraft with minimum weather capability."[24]

Air Force and Aero Design representatives met at the Bethany, Oklahoma factory from July 26-28, 1955, to conduct a contract technical compliance inspection of L-26B 55-4634. The inspection team found 27 discrepancies or shortages on the airplane, all of which were quickly rectified.[25] The representative of the Office of the Inspector General, however, submitted a list of 23 requirements related to flight safety, including shoulder harnesses for all occupants, stronger seat attachments, fire detection and extinguishing systems for the engines, windshield wipers, an oxygen system for crew and passengers, and numerous smaller items.[26] As any changes had to be kept to a minimum in order to meet the established delivery schedule, most of these concerns were temporarily shelved for further study although a few eventually were incorporated into the last two aircraft in the contract.

Finally, the first L-26B, 55-4634, was accepted by the Air Force on July 29th, although it was not actually delivered until August 2nd, the day following the delivery of the second L-26B, 55-4635. This delivery schedule called for two additional aircraft to be received in August, three each month from September through November, with the final two aircraft in the contract to be delivered in December 1955.[27] As delivered, the L-26B weighed 3,900 pounds empty and 5,500 pounds gross, and had two Lycoming GO-480-D1A geared, six-cylinder opposed engines delivering 275 takeoff horsepower each. The 560A had a wingspan of 44 feet, length of 35' 5" and height of 14' 9". Outwardly, unlike the leased Model 560, the L-26B's exhaust augmenter tubes were buried within the engine nacelles, and the wing, stabilizer and tail leading edges were covered with black de-icing strips.

Upon its delivery, L-26B 55-4634 replaced the leased Model 560 as a Presidential aircraft. Over the following year the airplane made 10 round trips to Eisenhower's farm in Gettysburg, as well as carrying other foreign dignitaries to meetings with the President. On August 15, 1955, the L-26B was flown to Denver, Colorado, to act as a standby aircraft while President Eisenhower was vacationing there.[28]

Following this trip to Denver, the Presidential pilot, Lt. Col. Draper, made a request through MATS to Headquarters, Air Materiel Command, to alter two L-26Bs on the current contract by re-engining them with supercharged 0-480 powerplants, citing "safety in operating the L-26 in and around the Rocky Mountain area" as his reason for the request. Evidently, Lt. Col. Draper had test flown a new supercharged Aero Commander 680 while in Denver, and felt the added performance was needed to meet this "unanticipated mission requirement.

Aero Design, responding to a September 6th request from Headquarters, Air Materiel Command, forwarded performance data on their new Model 680.[30] By early February 1956, specifications had been drawn up for reconfiguring the last two aircraft in the contract, 55-4647/4648, to the Aero Commander 680 Super standard, redesignating them as L-26Cs. The two L-26Cs were to be powered by geared, supercharged Lycoming GSO-480-A1A6 engines delivering 340 takeoff horsepower each. With increased fuel capacity of 230 gallons the aircraft weighed 4,330 pounds empty, while gross weight climbed to 7,000 pounds. The L-26Cs could cruise at 165 kts, had a service ceiling of 24,300 feet and a maximum range of 1,215 nm.[31] Approval of the contract change was granted in March 1956,[32] and the two L-26Cs were delivered the following month, four months after delivery of the last L-26B, 55-4646, on the contract.

It should be noted here that the Air Force previously had sought an even faster version of the Aero Commander. During contract negotiations for the 15 L-26Bs in June 1955, the Air Force had "prevailed" upon Rufus Amis, President of Aero Design, to "dust off some preliminary design data on a jet version of the Aero Commander.' '[33] The Air Force's hope was that if the proposal looked promising, Aero Design might be encouraged to build a prototype which could be purchased by the Air Force as an "off-the-shelf" VIP aircraft.


Aero Design submitted a proposal for the jet-powered Aero Commander in September 1955. The airplane was a remanufactured L-26B with J69-T-9 turbojets housed in underwing pods, with the main landing gear now attached to the fuselage and retracting rearward aft of the cabin. The airplane was estimated to have a cruising speed of 218 kts at 90 percent power at 25,000 feet, with a range of 810 nm. Aero Design quoted the cost of converting two L-26Bs at $451,000.[34]

However, the Air Force was looking for an airplane that could cruise at 400 kts at 40,000 feet with a minimum 1,000-mile range. As the cost for conversion was three times what the Air Force originally had paid for the L-26Bs—aircraft they already owned—their interest in the proposed Aero Commander jet VIP airplane quickly evaporated.

By spring 1956, all 13 L-26Bs and the two L-26Cs had been delivered to the Air Force and were distributed thusly:

The 1254th ATG, MATS, had eight aircraft assigned: L-26B 55-4634 was with the 1298th ATS(SM) at Washington National Airport to fly the President until the arrival of L-26Cs 55-4647 and 55-4648 in April 1956. The 1299th ATS(SM) had five L-26Bs assigned to it (55-4635/4636/4637/4638/4639) at Boiling AFB, Washington, D.C., to transport cabinet-level VIPs. When the two L-26Cs were received by the 1298th ATS(SM), L-26B 55-4634 was gained by the 1299th ATS(SM) on June 12th, and L-26B 55-4635 was transferred to the 1100th Operations Group.

The Headquarters Command, 1100th Operations Group at Boiling AFB, was assigned fourL-26Bs (55-4640/4641/4642/4644) to provide unscheduled VIP and administrative flights, and for combat readiness training. The Headquarters, USAF Administrative Pool at Boiling AFB had L-26Bs (55-4643 and 55-4645). When L-26B (55-4635) was gained by the 1100th Operations Group, L-26B (55-4644) was transferred in.

Headquarters, Air Research and Development Command at Friendship International Airport, Baltimore, Maryland, was assigned one L-26B (55-4646) attached to the 6590th SUT Group.[35]

While all of the L-26s provided important transportation for governmental and military VIPs, the Presidential aircraft naturally attracted the most attention. L-26B (55-4634) participated in the "Greenbrier Air Lift" to White Sulphur Springs, West Virginia, on March 26, 1956, when President Eisenhower met with foreign and American dignitaries. When the two L-26Cs replaced the L-26B, L-26C (55-4647) was designated as the Presidential aircraft while 55-4648 served to transport Secret Service agents. The Presidential L-26s participated in the "Gettysburg Airlift" in the fall of 1955 when President Eisenhower was at his Gettysburg farm recuperating from a heart attack, and again in July 1956, after the President's operation, when the L-26C was fitted with a bed to carry Eisenhower to his farm. Eisenhower reportedly was delighted to fly aboard the Aero Commanders. A pilot himself, having soloed in World War II, the President occasionally took the controls of the L-26s during flights to and from his farm.

W.W. "Tommy" Tomlinson flew the Presidential Flight L-26Cs beginning in June 1956, as well as many of the L-26Bs while attached to Headquarters, USAF, in the Pentagon through September 1961: "Many of these Gettysburg trips were flown with very short notice. Whenever the President stayed at Gettysburg, we kept an aircraft and crew on alert at National Airport, and also scheduled two 'mail runs' a day. We often moved staff people and appointments back and forth. On big visits, such as Chancellor Adenhauer of Germany and his staff, we got support from the Army Aero Commanders at Fort Belvoir and had as many as 12 Aero Commanders working."[36]

The Inspector General's flight safety concerns with the Air Force L-26s finally were resolved in the spring of 1956. Aero Design estimated in February that three months would be needed to complete the detail engineering, two months to

fabricate kits, and one month to install, test, and deliver each modified aircraft.[37] As Aero Design did not have a security agreement to provide the proper factory security during the modifications to these VIP aircraft, it was recommended that Lockheed Air Service perform the actual modifications. A total of $100,000 was authorized for kit fabrication and installation,[38] which was accomplished by cycling through three aircraft at a time over the remainder of the year.

On April 24, 1956, one of the Presidential L-26Cs, thought to be 55-4648, took off from Washington National Airport for a routine engineering flight test. With only 23 hours on the engines, one of the airplane's engine crankshafts suddenly failed in flight, causing explosive disintegration of the engine. The engine failure released a large amount of oil into the nacelle. As the oil flowed through the nacelle and out the exhaust augmenter tubes, it atomized and ignited, causing excessive torching as it exited the exhaust. Before the L-26C could be landed, the flaming oil burned off the rear section of the engine nacelle. While the accident was blamed on a defective nitriding process during heat treating of the crankshaft, which Lycoming corrected immediately, stainless steel doublers were attached to the nacelle adjacent to the exhaust end of the L-26C's augmenter tubes to prevent recurrence of future burning of the nacelles.[39]

By the fall of 1956, the Air Force had been operating the L-26 for over a year and apparently was happy with its purchase, the troublesome civilian radios notwithstanding. A September 5th meeting of the Transport Committee of the Aircraft and Weapons Board resulted in a message being sent to all Air Force commands requesting their requirements for "conventional powered light utility transport aircraft," with the L-26, Cessna 310 (L-27) and Twin Beechcraft (L-23) being mentioned as possible replacements. The response from various commands indicated a need for 549 aircraft to replace the B-25, B-26, L-20, C-45, and C-47 types then in wide use. Of this number, the requests for 144 aircraft were considered to be the most valid. Interestingly, it was reported that "Almost without exception, the commands expressed a preference for the L-26 aircraft over the L-23 or Cessna 310.' '[40] In retrospect, perhaps an earlier cost analysis for the purchase of 100 L-26Cs, made the previous month where the cost including spares averaged over $109,000 per airplane,[41] dissuaded the Air Force from considering any future purchases of the Aero Commander. The Air Force did procure 10 additional Aero Commanders for the U.S. Army, but instead opted to buy more than 150 new or remanufactured Beech L-23s and 80 new Cessna L-27s during the next two fiscal years for its own needs.

An accident which caused the grounding of all L-26s occurred on November 20, 1956, when L-26B (55-4643), reported elsewhere as destroyed in a factory fire and never delivered, crashed at Boiling AFB and was written off. The resulting investigation uncovered chafed fuel cells in the airplane, attributed to a loose fuel cell clip hanger, and the fact that pilots of all L-26s were using higher than the recommended 87 octane fuel in their aircraft, which was burning the exhaust valves "to a dangerous degree."[42] All L-26s subsequently were grounded until new exhaust valves could be installed, as nine other aircraft were found to have burned valves.

Once in service, logistical support for the Air Force L-26s was assigned to the Oklahoma City Air Materiel Area (OCAMA). Oklahoma City "kept its eyes open" for problem areas in operating the aircraft, and discovered some "visual speed control" and stall warning deficiencies, the latter "alarming both passengers and pilots on President Eisenhower's L-26s."[43] Lt. Col. Draper requested that a stall warning system developed by the Flight Instrument Company be installed in the two L-26Cs. This was soon approved by the Wright Air Development Center, and the system was installed by Lockheed Air Services.

The L-26's civilian radio equipment continued to frustrate the Air Force. All L-26s were restricted from IFR (Instrument Flight Rules) flight on November 22, 1956, because of the inadequate communications equipment.[44] Radio modifications to all Air Force L-26s were approved by Headquarters, MATS, and the Air Materiel Command, with an estimated date of completion being June 1, 1957.[45] However, while the two Presidential L-26Cs were sent to the Aero Design factory beginning on February 17, 1957, for unspecified "radio work," it is doubtful whether any significant radio modifications were made to any of the Air Force's L-26Bs at this time.

Most of the Air Force L-26Bs remained in the Washington, D.C. area through 1960 as Special Mission aircraft, administrative transports, and "combat readiness" trainers for Pentagon staffers. Author and longtime Society member Colonel John A. deVries, a former Air Force pilot who was assigned to the Pentagon in 1959, relates his experiences while flying these "pool" Aero Commanders: "I was assigned as a Lieutenant Colonel to the Directorate of Operational Requirements, Headquarters USAF in July 1959. As a current Senior Pilot (10 years as a pilot; 1,500 total hours), I was required to get my four hours each month (and 100 hours per year) in some sort of aircraft. Two bases supported HQ USAF pilots: Andrews AFB (jet-qualified) and Boiling AFB (conventional airplane drivers). Since I only had a couple hundred hours in T-33s, and the jet program was pretty well filled by higher time pilots, I was assigned to Boiling for flight support. Boiling had three types of aircraft available for administrative pilots: the U-4, the C-117 and the U-3 'Blue Canoe.' The U-4 program had the fewest pilots assigned, so I opted for it.

"My first flight in the U-4 took place on the 25th of August 1959 and I qualified in the bird the next day after five hours of dual instruction. Boiling had 14 U-4s assigned. Two were reserved for the 'Presidential Flight.' When Kennedy was elected, those two aircraft were put in the administrative pool but they remained 'untouchable' by the average Pentagon pilot. They were more or less reserved for 'the high-priced help.'

"Like Ike's U-4s, the 12 U-4s we flew were strictly 'off-the-shelf Aero Commanders. Everything about the birds was civilian, most particularly their radios. Communication radios were VHF and only tuned to the civilian bands of frequencies. Operating U-4s in the Washington Center area was 'no


L-26B 55-4635 was first assigned to the 1299th Air Transport Squadron (Special Mission) at Boiling AFB where it served as a transport for cabinet-level VIPs. The Aero Commander is shown during an acceptance flight over Oklahoma in 1955.

(Aero Design Photo by Wayne Entrekin, Courtesy of Rod Absher)

sweat' because the controllers knew their serial numbers and would treat them as civilian birds. But other centers, hearing an Air Force call, would assume Air Force radio frequencies. A *lot* of extraneous radio conversation was caused by lengthy explanations to controllers that we only had civilian frequencies.

"We could live with the non-standard radios because the U-4s were plush by Air Force standards: leather seats and carpet on the floor. We flew the U-4s in uniform. The only concession to flying clothing was to wear a flying jacket!

"Another concession to the civilian nature of the U-4 was the instrument flying 'hood'. For a while, we used polarized sheeting behind the pilot's side of the windshield. Together with cross-polarized glasses, we could simulate instrument conditions in the cockpit. You could see the instruments but the windshield was 'opaque' if you were wearing the glasses. The system was abandoned because the windshield shielding obscured the view of the right-seat 'safety pilot' and, even on a sunny day, not enough light penetrated the cockpit to see the instruments reliably. So the Air Force purchased the civilian-type strap-on hoods. Made of translucent plastic, the hoods were long, visor-like affairs that hung on your head and gave you 'tunnel vision'. It was enough to see the bare instruments, but it led to a lot of the 'needle-ball-and-peek' system of instrument navigation.

"The usual 'mission' for Pentagon flyers in the U-4 was a four-hour cross-country flight: two hours out and two back. Most frequently, we were called on to deliver high-priority paperwork to bases and commands (TAC, Air University) in the east. Sometimes we carried passengers, usually inspection teams, or people on leave. I remember delivering an inspection team to Westover AFB, Massachusetts, an SAC base at the time. Apparently, the word about the inspection filtered down to the base so when we landed we were parked on the periphery of the field. We went through the whole security schmear: Jeeps with machine guns and, 'Get out of the airplane and lay on the ground!' The crazy radios had alerted Base Ops that we were a Washington U-4!

"Frequently, I'd show up at Boiling, meet my copilot (usually a friend because the U-4 program never did get very big), and file a clearance for an East Coast Air Force base. After checking over the bird—a very easy process because it sat so low that you could look into the engine intakes and hand-turn the tiny three-bladed props—we'd crank up. Although it wasn't required at the time, we'd always file an Instrument Flight Rules flight plan. There were a couple of reasons for this. First, Washington was a *very* congested area to fly in, and the IFR flight plan assured they'd be looking out for you on radar. And, second, we'd pick an en-route flight level that had a high probability of including clouds. On IFR we could barrel through the cumulus and log 'weather time', which was a lot better than playing with the polarizers or plastic-tunnel hoods to meet instrument flying requirements.

"After boring twin holes through the atmosphere for two

to two and a half hours, we'd land, have a hamburger and coke at the flight line 'greasy spoon', and file back to Boiling. If we'd timed it right, we'd take off at sunset and log night time (another AFR 60-2 minimum yearly flying requirement). Night navigation on the East Coast is simple: just fly between the light blobs until one looks like Washington! Actually, navigation in the U-4 was very easy because of the VOR-ILS radio. Tuning was digital so flying out a radial onto one of the next VOR stations was easy. But the important factor was that the single VOR installation in the bird *always* worked, as did the automatic radio compass.

"Happily, the U-4 was a particularly good instrument airplane. It could be flown 'on the gauges' by a single pilot with a great degree of facility. It was stable and transitioned smoothly from attitude to attitude. Once set up for an approach, it didn't require a lot of thrashing to hold it in a controlled descent. Power changes were smooth, and there were enough horses to get you out of trouble. And it was the easiest airplane to land I ever flew. That is, after I got used to the landing attitude. Just before touchdown the big idea was to put the bird into a position where you thought you'd 'rub your butt' on the concrete, and the U-4 would, literally, land itself. There was only about a foot and a half between the seat and the ground when the U-4 was sitting on its tricycle gear; it felt like riding a Flexible Flyer sled to taxi the bird.

"In October of 1960 I opted to take Lt. Col. John Demont from Boiling to Otis AFB, Massachusetts, as he had business there. In the U-4, Boiling to Otis was a one-hop flight of about two and a half hours. It was IFR outbound, but Otis was clear. I delivered Lt. Col. Demont and headed back to Washington at dusk, alone. As I proceeded south the weather deteriorated severely and, over New York, I began to pick up some light rime ice. Winds at altitude (about 8,000 feet) were full of shears and it was very bumpy. It was dark, I was picking up ice, and the U-4 was dancing all over the sky. After three hours of thrashing through the murk with headwinds, I arrived over Washington only to find out that Boiling was way below minimums! Fog, with high winds, had closed the field and I was diverted to Andrews AFB. All of the desk jockeys were clawing to get on the ground so Washington Center told me to hold on the Andrews VOR at 6,000 feet. Although the U-4 wasn't yet flying on the fumes, I slowed the bird down and entered the holding pattern. The wind was so strong that I had to hold a 40° drift correction to maintain the holding track! To add to the misery, it began to snow. Flying the bird, I couldn't take time to stick a flashlight out the window to check on the ice accretion so I hit the prop de-icers (isopropyl alcohol) and the wing de-icers every 10 minutes or so. After about an hour's worth of holding, I began to get 'antsy'. The pitot tube iced up for a while and I wasn't getting any airspeed indication at all; I had to fly strictly by power and attitude until the pitot heat cleared the pipe. While I held, Andrews began to drop toward minimums and the five hours of gas were almost gone.

"Happily, it was my turn for an approach attempt. Washington Center turned me over to Andrews Approach . . . after a discussion of the frequency problem (new controller!). The lower-level winds diminished as I descended in zero-zero conditions. I requested a GCA-monitored ILS approach to Andrews to act as a double check of the final approach. Because the U-4 was so stable, I was able to lock the ILS needles on the localizer and glide path with only a 15° 'crab'. The only comment from the GCA unit controller was 'On course, on glide-path' until I got to minimum. Since I didn't have enough gas to go anywhere else, I continued the approach. The high-intensity approach strobe lights became visible just before I passed the field boundary and the controller was in the process of saying, 'Take it around,' when I saw the runway center lighting off to the right. With everything 'hanging out' (gear and flaps), I did a hard right and hard left S-turn and got the bird aligned with the runway. The landing was anticlimactic, but it was a good one. In Base Ops I learned that I was the last pilot to get into Andrews that night. When I touched down, the weather was 100 feet and

Army YU-9, 52-6218, on display at the Army Transportation Museum, Fort Eustis, Virginia. (Courtesy of Robert F. Dorr)

Aero Commander L-26B 55-4636 is shown at Boiling AFB, Washington, D.C., in September 1955, 12 days after its delivery to the 1299th Air Transport Squadron (Special Mission). (Air Force 154741 AC)

The Aero Commander L-26Bs sat low to the ground on their tricycle landing gear, as shown in this front view of 55-4636 at Boiling AFB. Washington, D.C., in September 1955. (Air Force 154737AC)

l/8th of a mile visibility—well below the 200 feet and 0.5-mile visibility that were Andrews' minimums![46] •

## TO BE CONTINUED

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