





GLOBEMASTER

The Douglas C-74

by Nicholas M. Williams

Research Project 7111

Mention the word “Globemaster” to any aviation buff, and he is likely to conjure up an image of the ungainly, venerable C-124 Globemaster II, which faithfully served the Air Force for over 25 years. However, the C-124 was but a metamorphosed version of an earlier, sleeker design—the Douglas C-74 Globemaster. Though few were built, and fewer still served out their metallic lives with operational units, the C-74 Globemaster proved to be a pacesetter among land-based transports in the post-WWII era.

DESIGN HISTORY

The C-74’s origins began in the fire and ice days of Pearl Harbor, when the Japanese attack added a grim urgency to the development of new military aircraft for America’s air forces. Army strategists saw the need for a truly global transport capability with an airplane able to carry large loads over great distances. Officials of the Santa Monica, California, division of Douglas Aircraft Co. also were quick to see this need. Preliminary design studies were begun immediately on an expanded version of the company’s DC-4, then going into production for domestic airlines. The “C-74 Project Group,” as it became known, adopted a design philosophy to produce a straightforward, “no-frills” airplane, able to accommodate at least two of the Army’s T-9 Aero tanks, two 105mm Howitzers and transporting vehicles, or two angle dozers, and simple enough so that it could be put into production with a minimum of delay.¹

The Army Air Corps was contacted early in 1942 to determine their interest in this new airplane, now designated as Douglas Model 415. Head of Engineering Arthur E. Raymond, accompanied by Dr. W.B. Oswald and Project Engineer C.G. Brown, opened sales negotiations with Generals Hap Arnold and Oliver Echols in Washington, D.C. During these negotiations the gross weight of the Wright R-3350-powered airplane was reduced to 125,000 pounds, and redesignated as Model 415A.

Once agreement had been reached, a letter of intent was issued in March 1942 for the procurement of the Model 415A, which now was given the Army Air Force designation C-74. Douglas representatives J.C. Buckwalter and C.G. Brown met with officers of the Army Air Force’s Material Command at Wright Field soon afterward to arrange contract and specification details. A cost plus fixed fee contract of over \$50,000,000 was signed on June 25, 1942, for 50 airplanes and one static test article, although this static test airframe was later changed to one

During early Air Force use, all C-74s were marked only with their “buzz number,” as CN-413 shown here over the Mobile River and docks.
(Air Force)



Northrop A-17, 35-122, fitted with wing gloves which simulated the C-74 wing section. Leading edge propellers were free turning.
(Douglas via Harry Gann)

of the production aircraft when a major portion of the contract was canceled at the end of the war. In all, 14 C-74s were built: AF s/n 42-65402/65415 (c/n 13913/13926), under Contract #AC-27042.

Preliminary performance and weight estimates on the C-74 were being prepared during this period of contract negotiation by the Santa Monica Engineering Department, using a small crew at "Location A" at Douglas' Santa Monica plant. In May 1942, additional personnel were made available for the layout stages of the C-74's design development, while the nearby Westwood Community House was taken over as "Location X" by the C-74 Project Group. This group was relocated into the yet-to-be-finished engineering building at "Location A2" in July 1942, where the final layouts and drawings of the C-74 were prepared.²

In order to speed its delivery to operational units, the C-74 was designed at the outset to be released for the full contract requirements without benefit of an experimental or prototype model. In short, there were no XC- or YC-74 models produced, nor any "A" variants, all being designated C-74-DL aircraft (Douglas Long Beach). Accordingly, all new features on the C-74 were limited to those which could be proven in time to be incorporated in the design. All other design features followed conventional "state-of-the-art" practice.

In late 1942, a test section of the C-74's wing and engine nacelle was fabricated from early production drawings, with wind tunnel tests of the R-3350 engine installation scheduled for December 1942. However, the engine's arrival was delayed until April 1943. In the meantime, it became evident that the Wright R-3350 would not provide the rate of climb needed at altitude for safe over-weather operation. Consequently, in March 1943 a decision was made to use the Pratt & Whitney R-4360 Wasp Major engine, which necessitated a complete redesign of all engine items forward of the firewalls, and partial redesign work on the wing structure, flight controls, and other items along the wing front spar.

The new R-4360 was scheduled to arrive in Oct. 1943, but didn't appear until Dec. 15 of the same year, with the initial engine run-up being delayed until Feb. 2, 1944. To offset the empty weight increase resulting from this heavier engine, the

gross weight of the C-74 was raised to 145,000 pounds.

Many wooden mockups were built of the various components during the early design stages, including a huge full-scale model of the C-74's fuselage, tail section, and port inner wing. This mockup was used to conduct loading tests and to develop the cockpit arrangements and crew accommodations. Films were taken of loading operations using several types of army equipment: T-9E1 tanks, 105mm howitzers and Jeeps, 40mm and 90mm antiaircraft guns, and crated examples of the P-39, P-40, P-47, and P-51. Likewise, many two-dimensional wind tunnel models were constructed to test the C-74's airfoil, flap, and control surface designs. A 1/20th scale wind tunnel model of the C-74 was built, featuring electrically powered motors and movable control surfaces. All C-74 wind tunnel tests were completed by May 1944.

A most unusual series of tests of the C-74's wing design was begun with a three-dimensional wind tunnel model of Douglas' XTB2D-1; fitted with wing "gloves" to simulate an identical wing glove installation planned for a full-size Northrop A-17. After satisfactory completion of tests with the wind tunnel model, an A-17 was equipped with similar metal gloves fitted around its inboard wings, representing a full-scale C-74 wing section. After being flown "as is" from the shop to determine the drag characteristics, the gloves were modified in steps to determine the drag effects of wing smoothness, skin joints, and several drag reducing finishes. The results of these free flight tests established manufacturing tolerances on the C-74 wing, as well as the necessity for some minor detail design changes.³

Delivery of the first C-74 was originally scheduled for December 25, 1943. In time, however, the delivery date was repeatedly postponed for several reasons. Douglas, like other manufacturers, was handicapped by a loss of experienced personnel to the armed forces, and by the low experience level of replacements. The company also introduced two innovations in the preparation of drawings for the C-74: production illustrations for its shop personnel, and the use of full-scale detail and assembly drawings on metal sheets. These newly adopted procedures were costly, both in terms of money and engineering man-hours needed to produce them.

In January 1943, however, the Army requested that a substantial portion of the C-74 Group personnel be diverted to the Long Beach Division's A-26 Tooling Project, and that the C-74 Project be placed on a low priority. By March 1944, although design and drafting work on the C-74 was nearly 100% complete, it had been decided to move the entire C-74 Project Group to the Douglas Long Beach Plant, where the C-74 would be built. Approximately 80 people from the original C-74 Group were transferred to Long Beach (Location C) on March 6, 1944, though the Santa Monica Division continued to supply the C-74 Project with test data on the airplane's components.⁴

Once settled at the Long Beach facility, the C-74 production team used the experience Douglas had gained in building the XB-19 in solving many of the problems of constructing the Globemaster. The assembly jig for the center wing section, for example, was 122 feet long, 22 feet high, and weighed 150 tons, permitting 50 people to work on the structure at the same time. The circular fuselage assembly jigs, nicknamed "ferris wheels" because they could be turned, were 15 feet in diameter, weighed a total of 900,000 pounds, and contained two floor levels for workers.⁵ The first major assembly jig for the C-74 was completed in August 1944, and, despite the fact that work on the



1 Roll out ceremonies for the first C-74, 42-65402, in July 1945. A special ramp was constructed to allow tail to clear the hangar roof. Airplane is natural metal overall with black anti-glare area around cockpit. (Douglas via Paul Stevens)

2 C-74, 42-65402, at the Douglas Flight Test Facility at Los Angeles Municipal Airport, Nov. 1945. (Douglas ES 58210 via Harry Gann)

3 C-74, 42-65402, at Wright Field shows off its built-in elevator. Note crew entry hatch behind nose wheel. (Air Force 31825 AC)

4 The first C-74, 42-65402, appeared at many air shows in 1946, as shown here at Hamilton Field, Calif., in July 1946. (William T. Larkins)

5 The first C-74, 42-65402, in MATS' blue and yellow colors during a stopover in the Azores. (Doug Pirus)





Artist's conception of the civil version of the C-74, the DC-7. Pan American World Airways ordered 26 DC-7s, but these were canceled due to high initial costs. (Pan American Airlines via Richard L. Kruse)

C-74 was not allowed to interfere with the production of higher priority aircraft at Long Beach, the first completed airplane, 42-65402, was rolled out 11 months later in July 1945.

The final C-74 design reflected the experience gained by Douglas engineers on both the DC-4 and XB-19 airplanes, and the thoughts of members of several Army Air Force mockup boards. After reviewing the C-74 mockups, the Army proposed over 125 changes in the design. The most noticeable of these involved placing gun ports in the main cabin windows, blister-type windows at the navigator's and engineer's stations, a change to dual nose wheels, and the substitution of Pratt & Whitney R-4360 engines for the Wright R-3350s previously mentioned.

Not to be outdone by its competitors in the postwar civil market, Douglas showed every intention of adapting the military C-74 into a civil airliner once hostilities had ended. Negotiations were begun with Pan American World Airways in 1944 for the civil model of the C-74, dubbed the DC-7 by Douglas and the "Clipper Type 9" by Pan American.⁶ The airline intended to use the 108-passenger craft for a route expansion program into Latin America, "whisking" passengers from New York to Buenos Aires in 22 hours, or to Rio de Janeiro in just under 20 hours.⁷ Pan Am placed an order for 26 DC-7s in 1944, with the initial cost per airplane estimated in June of that year to be \$1,125,000, and the first delivery expected in October 1946. However, further development of the DC-7 design increased the gross weight to 162,000 pounds, and by November 1944 the unit price of the DC-7 had jumped to \$1,412,488. Due to this high initial cost Pan Am canceled its order in October 1945, opting for smaller transports which could operate more profitably with reduced passenger loads.⁸

Douglas also made a study of the DC-7's expected performance with turboprop powerplants. In August 1946, the DC-7, with a 218,000-pound gross weight and equipped with Wright T-35-1 engines, was projected to have a 2,600-mile range at 352 mph. A stretched version with a 160-inch fuselage extension was expected to gross 230,000 pounds at a slightly reduced speed and range. The initial price tag for this latter version was a whopping \$4,100,000!⁹ After cancellation of the DC-7 concept, another study was begun two years later in order to upgrade the C-74 by powering it with either four Allison XT-40 engines (as

on the Douglas XA2D-1 Skyhawk) using 16-foot contrarotating propellers, or four Pratt & Whitney PT-2D engines driving Hamilton Standard four-blade propellers.¹⁰ Of the two, the Allison engines promised better performance, but by 1948 the idea was considered a "lost cause" even though one YC-124B was built with P&W YT-34 turboprops for a proposed Globemaster II tanker version.

In its final production form, the C-74 Globemaster was for a time the largest land-based transport in the world. With a wingspan of 173 feet, length of 124 feet, and gross weight of 145,000 pounds, the C-74 could carry up to 125 passengers in its 6800-cubic-foot cabin. With an 11,100-gallon capacity in six integral wing tanks, the maximum range of the Globemaster exceeded 7,000 miles. The C-74 was designed for complete self-sufficiency in the field. Nose-mounted auxiliary power units supplied electricity to operate a novel freight elevator and two traveling cranes that ran nearly the entire length of the 75-foot cabin. Engine changes could even be accomplished by using these cranes and a specially designed hoist which fitted to the engine nacelle.

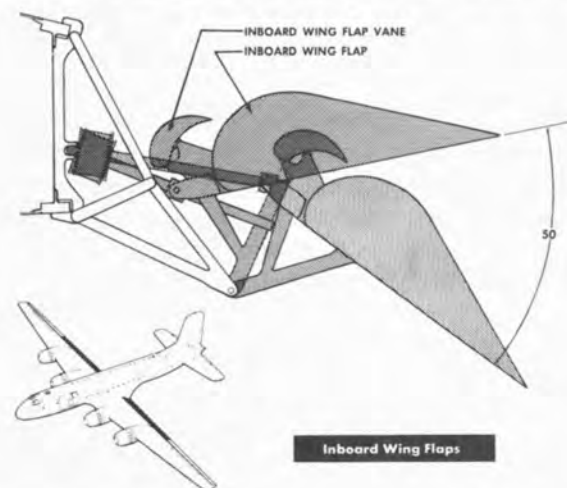
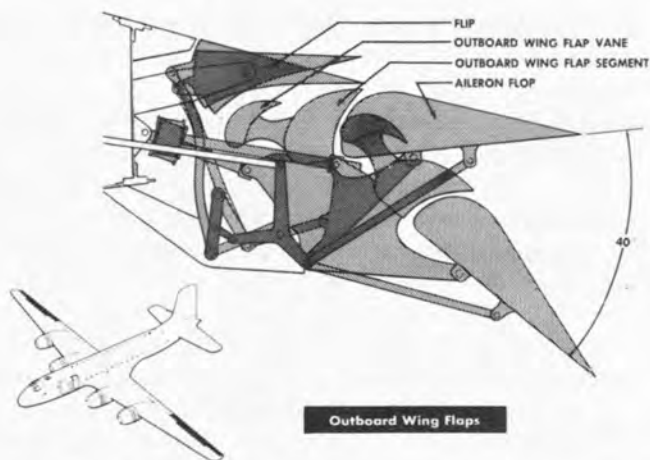
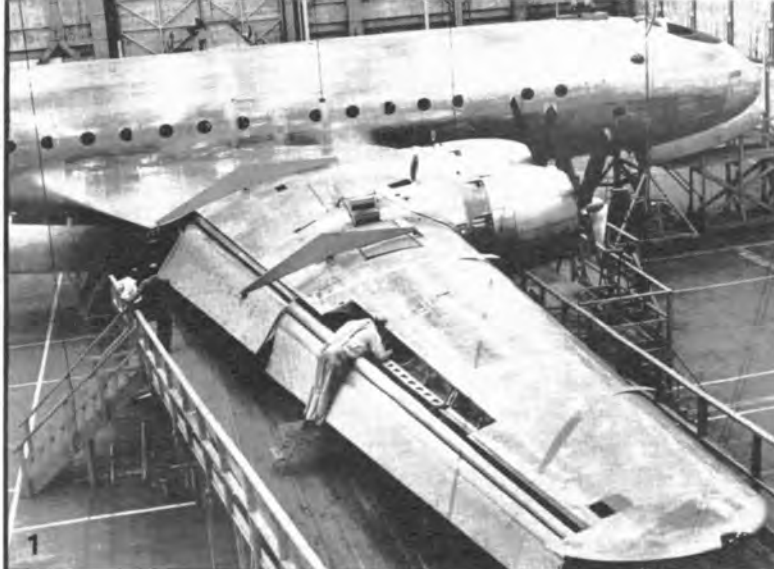
From an aerodynamic standpoint, the Globemaster was a remarkably efficient airplane. The airfoil section used was a semi-laminar flow type which provided low drag throughout the airplane's cruising range. Douglas engineers chose a full span flap arrangement consisting of split flaps under the fuselage center section, double-slotted inboard wing flaps, and complicated triple-slotted "flaperons" on the outboard sections which served both as flaps and ailerons.¹¹ Low drag airfoil sections were used to cover the 16 protruding flap hinges, giving the Globemaster wing a distinctive "toothed" look.

The Globemaster's four Pratt & Whitney R-4360-27 (later -49) engines were equipped with full-feathering, reversible Curtiss electric propellers. These props saved brake wear, shortened the C-74's landing roll, and enabled the airplane to back up for positioning on the ground, a feature which never failed to draw curious looks from spectators wherever the Globemaster went.

The C-74's fuselage was made circular in cross-section to readily adapt it to pressurization at some future time, presumably for reasons of commercial sales. Several construction details in the fuselage permitted relatively easy conversion to cabin pressurization. The placement of cabin windows, for instance, was selected to allow vertical fuselage air ducts to be installed between frames in the vicinity of the wing leading edge.¹²

The Globemaster's unusual "bug-eye" canopies, later used on the XB-42 and XB-43, were chosen more from safety than aerodynamic considerations: producing some drag but giving the pilots a nearly unobstructed 360-degree view. The five-man flight crew was provided with compact quarters, featuring an engineer's station behind the copilot, a radio operator's station behind the pilot, and a navigator's station behind the radio operator. Due to the long-range nature of the Globemaster's mission, a toilet, buffet, and sleeping quarters also were provided for a relief crew.

The C-74 landing gear reflected the design team's philosophy of using existing technology, being patterned after that used on the C-54 (DC-4), but expanded in size. The C-54's nose wheel steering system also was adopted. In a unique departure, the C-74 used hydraulic pressure to retract the gear only. Extension of the landing gear was done simply by releasing the "up" latch



- 1 The C-74's triple-slotted "flaperons" served as both ailerons and flaps, as shown in this photo of the Globemaster production line at Long Beach.
(Douglas via Paul Stevens)
- 2 Cockpit of C-74, 42-65404, with original "bug-eye" canopies. These enclosures gave pilots unobstructed 360-degree view, but made communication difficult.
(Air Force 227306)
- 3 The Globemaster's full span flaps were a "first," and "last," for a Douglas transport, as the advantages were outweighed by the complicated linkages that were necessary.
(Douglas)
- 4 The flight engineer's station on the C-74 was located behind the copilot.
(Air Force 227305)
- 5 The Globemaster's protruding flap hinges were covered by small airfoil sections to reduce drag, although these tended to collect ice at altitude.
(Douglas 572413 via Paul Stevens)



The ill-fated second C-74, 42-65403, at Muroc Army Air Base early in 1946. Note flight test pitot tube on wing and photo reference marks on fuselage. (Douglas via Harry Gann)

and allowing the gear to fall by gravity. Hydraulic gear extension was available in emergencies, but in the event the main landing gear still wouldn't extend, passageways were provided in the wings which gave access to each engine nacelle, enabling a crew member to lower the gear manually. There is no record of this feature ever being used in practice, however.

FLIGHT TESTING

On Sept. 5, 1945, two months after roll out, the first C-74, 42-65402, made its maiden flight with Douglas' famous engineering test pilot, Ben O. Howard, at the controls. Howard, with copilot Johnny Martin, flight engineer Jack Grant, and flight inspector Chris Nielson, roared off from Long Beach Municipal Airport for a leisurely 1 hour, 35-minute flight,¹³ reporting later that the airplane handled "with characteristic ease."¹⁴

Thus began a lengthy period of test flying with the C-74, as the airplane's capabilities were thoroughly investigated. Production testing was done out of Long Beach Municipal (Long Beach Army Air Field), adjacent to the Douglas production line. The more challenging contractor demonstration testing was flown by Douglas Flight Test Division pilots out of Los Angeles Airport and occasionally at Muroc Army Air Field (Edwards AFB). These contractor demonstration flights were made by Douglas engineering test pilots Russell Thaw and George Jansen, both of whom had flown the DC-4 commercial certification tests. The procedure used for most of these contractor demonstrations was to take off from Los Angeles Airport, climb to altitude over the Pacific Ocean a few miles to the west, and fly the test run outside of the shoreline, but within the vicinity of one of several fields in the area. In an earlier series of overload takeoff tests at Muroc, the two had successfully flown the Globemaster at weights up to 172,000 pounds, considerably above the airplane's design gross of 145,000 pounds.¹⁵

Early in August 1946, Thaw and Jansen flew the C-74 to ever-increasing speeds toward the final structural integrity demonstration flight of 372 mph (with a 2-g pullup). The airplane being used for these tests was the second C-74 built, 42-65403. It had been dived to 330 mph and 2 gs on several occasions previously to calibrate the test instrumentation carried aboard, but it remained to achieve the design limit speed of 372 mph.

On Monday, Aug. 5, 403 was made ready for this maximum speed test (its 23rd flight) with the addition of 47,000 pounds of fuel and 4,000 pounds of water ballast, making its gross weight for the test just under 146,000 pounds.¹⁶ After a brief warmup, Thaw left the Los Angeles runway at 1:10 P.M. and climbed toward the west. Also aboard were George Jansen as copilot, Chris Neilson as flight engineer, and Henry Lane acting as an observer. Lane's duties during the flight were to occupy the rear of the cabin where he could monitor the recording instruments and view the engine nacelles and wings for any problems during the dive. As events turned out, Lane undoubtedly had a ringside seat for the most terrifying sight a passenger can have.

After reaching 12,000 feet, Thaw turned the C-74 southeast, heading slightly inland, and at 1:30 P.M. began a shallow (10-degree) dive. As the aircraft accelerated Thaw trimmed it for neutral balance at 275 mph indicated, then again for 350 mph. As the Globemaster passed through 340 mph indicated, it was jolted by a rapid series of vertical oscillations, then continued on as before. George Jansen recalls the incident, "I usually kept my lap belt pretty tight, but there was enough stretch in the belt so that my head came in contact with the canopy when the airplane oscillated up and down. I thought maybe we had hit some light aircraft . . . it was pretty violent! I started looking around the sky, and as I scanned back out my side I could see no outer wing panel outboard of #4 engine, and a big stream of fluid going up over the top of what was now the new wingtip!"¹⁷ Unknown to Jansen at the time was the fact that Thaw, with his hands on the control wheel, felt that there was no aileron or elevator response, and looked back to his left to see an identical situation. Both outer wings had sheared off simultaneously during the rapid cycles of oscillation!¹⁸

With virtually no control over the airplane, there was little choice for Thaw or Jansen, who continues, "As soon as I looked back and saw this I pulled the throttles back, put one foot in the aisle, and reached for my lap belt when Russ said, 'Let's get out of this thing!' I had no idea what he was doing control-wise to keep the airplane level, but it was indeed level, it hadn't changed attitude a bit."¹⁹ Jansen, Neilson, and Lane quickly left the airplane more or less in a group through the belly hatch. Thaw, temporarily distracted and not believing that three people could exit from an airplane so quickly, ran back into the cabin to look for Lane. Satisfied that the three crewmen had indeed bailed out, Thaw removed a window hatch and dived out over the wing.

As Jansen, Neilson, and Lane deployed their back pack parachutes they found themselves floating down at 7,000 feet over Torrance, about a mile inland from the shore. Thaw was slightly lower and further inland. Jansen relates, "Once my chute was open, I wound up facing away from the flight path of the airplane, so I tried to get the thing maneuvered around to where I could see. As soon as I saw it all I could think of was, 'Boy! I wish I was back in it doing whatever could be done,' because the airplane was headed toward a populated area. The Globemaster had turned left about 15 degrees, and then slowly went into a right turn."²⁰ The C-74 continued on a steepening 180-degree right turn, fortunately avoiding the residential areas of Torrance. It finally sliced through several 110,000-volt, high-tension lines before crashing in a huge ball of flame in an oil field near Avalon Blvd. and 220th Streets.²¹ Although assorted debris from the sheared wings rained down upon West Torrance, the crash caused no injuries and only moderate damage to the oil field.²²



1 C-74, 42-65406, during an air show fly-by at Long Beach Municipal Airport with both left engines feathered.

(Peter M. Bower's Collection A51543)

2 Front view of C-74, 42-65405, at Wright Field shows the Globemaster's clean lines.

(Air Force 45077 AC)

3 The Globemaster's full span flaps enabled the airplane to take off and land over a 50-foot obstacle in less than 3,000 feet.

(Air Force)

4 C-74, 42-65405, at Wright Field before airplane was destroyed during structural testing.

(Air Force 18-WP-210207 courtesy of National Archives)

5 C-74, 42-65410, showing the streamlined fairings covering the Globemaster's 16 flap hinges.

(Douglas via Harry Gann)

AIR FORCE SERVICE—1946 OPERATIONS

On Sept. 9, 1946, the Headquarters of the Continental Division of the Air Transport Command activated the "C-74 Project" and "C-74 Squadron," which were attached to the 554th AAF Base Unit located in Memphis, Tenn. Temporarily commanding the new squadron was Maj. Lorris W. Moomaw. Col. George S. Cassady, who eventually was to command the new squadron, was put in charge of the project. Cassady had been checked out on the C-74 at the Douglas factory earlier, and, in August 1946, four Army Air Force pilots were sent to Wright Field to receive flight training on the Globemaster. These men, Capt. John Nichols, Sam Whiteside, Walter Huddleston, and Harold Shubrick, formed a nucleus of officers who trained later squadron pilots on the new C-74.

The C-74 Squadron mission was threefold: 1) To establish a flight program which would accumulate 300 hours of service time on the Globemaster's R-4360-27 engines in the shortest possible time; 2) to gather and record all technical data from tests performed on the C-74; and 3) to train sufficient crew members and aircraft mechanics with which to conduct these tests.²⁶

Anticipating the use of 10 Globemasters, the C-74 Squadron planned for a "general shakedown" of the aircraft by using them on nonscheduled, nonstop, transcontinental freight flights on the Fairfield-Suisun to Washington run. These flights were intended strictly for cargo, as the aircraft had not as yet been cleared for passenger operations. Additionally, a detailed survey was scheduled to formulate plans for the future use of the C-74. The C-74 Project Traffic Officer was assigned to evaluate the loading characteristics of the C-74, the functioning of loading and tie-down equipment, and to recommend modifications or specialized equipment needed for loading operations. Squadron personnel also would evaluate the C-74's general flight characteristics, as well as establish emergency procedures, and report on maintenance difficulties. Air Material Command was especially anxious to see the results of the C-74 Squadron's use of the Globemaster, as the R-4360 engine was earmarked for the B-35 and B-36, both of which recently had begun prototype flight testing.²⁷

Fifteen flight crews were assigned to the C-74 Project. Although it was acknowledged that "the aircraft is actually easier to fly than the C-54 and the pilot and copilot have even less to do,"²⁸ the minimum qualifications for a prospective C-74 pilot were: 2,000 hours total military flying time; 250 hours first pilot time on the C-54, B-29, or C-69; 500 hours total as first pilot on a four-engine airplane; 200 hours of night flying; and 75 hours of instrument time. Due to the complexity of the flight engineer's job, only the most qualified men were considered for this assignment.

On Sept. 13, 1946, Col. Cassady and a crew flew to the Douglas Long Beach plant in a C-47 to pick up the first Globemaster. After two check flights the C-74, 42-65406, was flown back to Memphis in 7 hours 20 minutes on the 19th. On the 25th, Maj. Moomaw flew the airplane to Washington, D.C., for a demonstration, the first of many the squadron was asked to give. During this demonstration a hydraulic failure occurred, and the airplane and crew returned to Memphis the next day.

The first mission to befall the C-74 began on the 3rd of October when 406 was flown to Mitchel Field and back, delivering 21,600 pounds of miscellaneous office furniture and equipment.



C-74 410 shows why the design was aerodynamically clean, with its tightly cowled R-4360 engines, sleek fuselage, and twin "bug-eye" canopies. (Douglas C22255-9)

Douglas obviously received a few days of bad press from the incident, as the public was not ready to accept the fact that the wings could fall off of a Douglas airplane.²³ Nevertheless, the wings *had* failed, and Douglas immediately restricted high-speed flight in the Globemaster and launched an investigation into the cause of the crash. A series of wind tunnel tests was conducted in the NACA/Ames 16-foot tunnel located at Moffett Field, Calif. As "porpoising" of the airplane was the suspected cause of the wing failure, a full-scale, partial-span C-74 stabilizer and elevator, equipped with strain gauges, was tested.

The cause of the crash soon was traced to the C-74's elevators. Since the control surfaces on the C-74 were quite large, a "flying tab" arrangement was used to move the elevators in order to reduce control forces. The control wheel deflected small tabs located on the elevator trailing edge, which in turn deflected the elevator surface for the desired control. It was discovered that the elevator rib spacing of 13 inches allowed the fabric to "balloon" in front of the tab at high speeds.²⁴ This changed the airflow over the flying tab, causing it to move, which caused the fabric to take on a different shape, overbalancing the tab the other way, and so forth. Thusly, the out-of-control elevator oscillation caused the C-74 to porpoise violently, forcing the wing failure during a negative-g cycle. Fortunately, the wings failed not only symmetrically, but in the same cycle. If it had happened otherwise, the Globemaster would quickly have rolled over, trapping at least Neilson and Lane in the cabin, and undoubtedly causing more damage on the ground. By doubling the ribs on all control surfaces, Douglas remedied the C-74's high-speed problems, and the airplane was able to reach its design limit speed requirements with no further complications.

Between October 1945 and April 1947, Douglas delivered a total of 12 C-74 Globemasters to the Air Force. Not included in this number was the second C-74 which had crashed before being acquired, and the fourth airframe, 42-65405, which was canceled and diverted to a static test article on Aug. 6, 1946. Between August 1946 and November 1948, virtually every component on 405 was tested to destruction at Wright Field to determine their ability to withstand design loads.²⁵ As most of the C-74 production order had been canceled, these 12 Globemasters embarked on service lives quite unusual, both with the Air Force and afterward.

The Globemaster's gross takeoff weight was over 138,000 pounds. From the 4th through the 12th of October, 406 delivered three additional loads of office equipment and furniture to Mitchel Field from Memphis and Topeka, Kansas, on one flight grossing nearly 146,000 pounds.

With only four Globemaster missions from Memphis to its credit, the 554th AAF Base Unit was suddenly deactivated, and the C-74 Squadron was transferred to the 1103rd AAF Base Unit at Morrison Field, West Palm Beach, Florida. Presumably, this action was due to the fact that the runways at Memphis were not stressed to take the large gross weight of the C-74. By October 15, all personnel had arrived at Morrison Field, and the squadron was assigned to the east end of Hangar No. 1. Commanding the unit at this time was Col. George Cassady.

On October 24, C-74 406 was flown to Marietta, Georgia, to pick up 10 Jeeps to be used by the C-74 Squadron. Each Jeep was loaded by driving it onto the C-74's elevator platform and lifting it into the cabin. Little difficulty was encountered in loading or unloading the 25,000-pound payload. C-74 406 flew several more cargo runs in November before being flown back to the Douglas Long Beach plant on December 1, carrying a crew to pick up a new C-74. This second squadron C-74, 42-65411, did not become ready for several weeks, arriving at Morrison Field after the first of the year.

1947 OPERATIONS

On Jan. 6, 1947, Col. Cassady attended a meeting with Air Transport Command staff in Washington, D.C., which resulted in assigning the C-74 Squadron the task of transporting cargo and passengers to Albrook Field, Panama. Two weekly trips were scheduled, on Mondays and Thursdays. Maj. Moomaw flew to Panama on the 6th to make a preliminary survey of the route, the facilities at Albrook Field, and at the alternate field at Rio Hato. C-74 406 made the first trip to Panama on Jan. 7, with Col. Cassady as airplane commander.

With the arrival of C-74, 42-65409, on Jan. 19, the C-74 Squadron had three aircraft with which to supply Panama. However, by the end of January a backlog of over one million pounds of cargo awaited to be shipped as the C-74s now began experiencing engine problems with their R-4360s. C-74 406 was left at Miami on the 17th of January for three days awaiting a new engine, while 411's return from Albrook was delayed by engine trouble early in February. Consequently, the three squadron C-74s were grounded for engine modifications during the first two weeks of February as a result of a meeting held at Wright Field concerning the problem. Meanwhile, two new Globemasters, 42-65412/413, arrived at Morrison Field during February, bringing the squadron total up to five aircraft.

Flight operations with the Globemaster resumed on the 17th when 406 flew to Panama from the Miami Air Depot with a payload of 28,000 pounds. On Feb. 27, a record cargo load of 31,000 pounds was carried by a C-74 from Morrison Field to Borinquen Field, Puerto Rico. The nonstop flight covered 1,032 miles in 3 hours 55 minutes, and was optimistically said by the Army to be "the largest payload carried by any aircraft at that time."²⁹ In the first four months of operations, the main difficulty experienced by the C-74 Squadron was that operating crews and terminal loading personnel were still thinking in terms of the smaller C-54. Oftentimes, not enough trucks or equipment were provided to efficiently load or unload the Globe-



Douglas C-74, 42-65408, of the 1260th ATS in 1948.

(Air Force 49320 AC)

masters.³⁰ Additionally, the squadron had successfully accumulated 300 hours on the C-74's R-4360-27 engines, but problems persisted with these units.

On March 14, 1947, the organization of the C-74 Squadron was radically changed when the unit was divided into the 21st and 22nd Air Transport Squadrons (Provisional), 2nd Air Transport Group (Provisional), attached to the 1103rd AAF Base Unit at Morrison Field. Although the reorganization caused some problems due to equipment and parts shortages, it was hoped that the move would improve morale and operating efficiency. Another nomenclature change was made when it was discovered that a mistake had been made in the assignment of squadron and group numbers. The Atlantic Division of the Air Transport Command had been authorized only odd numbers for the first numeral in its designation of Air Transport Groups and Squadrons. Thusly, on May 7, 1947, the 21st and 22nd ATS (Prov) were redesignated the 31st and 32nd ATS (Prov) respectively, of the 3rd Air Transport Group (Prov).³¹ The C-74 Squadron's mission also was divided between the two new squadrons by August, with five C-74s being assigned to the 31st ATS (Prov) and four to the 32nd ATS (Prov). Each squadron eventually operated a number of C-47s and C-54s on scheduled flights, as well as their Globemasters.³²

In order to reduce operating costs, the Army Air Force also made plans to close Morrison Field, sending both the 31st ATS and 32nd ATS to Brookley Field, near Mobile, Alabama. To avoid the disruption of flights into the Caribbean, each unit sent half its personnel to Brookley while the remaining half continued operations at Morrison Field. As the last flight ended at Morrison Field, the new squadrons at Brookley were ready to take over the next.

On March 14, 1947, a 21st ATS C-74, 412, was flown to Pope Field for inspection and flight testing by the Troop Carrier Command to determine the Globemaster's adaptability as a troop carrier. An inspecting board of six officers gave 412 a thorough ground inspection, then flew the airplane for 17 hours to determine its flying characteristics during formation flying and simulated parachute supply drops. Although the board's general impression of the airplane was favorable, it concluded that the C-74 would not make a suitable paratroop platform. The Globemaster was then flown to Randolph Field, Texas, for an inspection by Air Evacuation personnel, who seemed impressed with the C-74's built-in elevator and the ease with which patients



The main cabin of the C-74 was 75 feet long and had a 6,800-cubic-foot capacity. Twin electric cranes rode on overhead rails. The cargo elevator is in front of Jeeps. (Douglas by Lawrence Kronquist)

could be lifted aboard. Finally, 412 was flown to Langley Field, Virginia, on the 26th for an additional inspection by Troop Carrier Command representatives.³⁵

On May 11, 1947, C-74 42-65409 of the 31st ATS flew from Morrison Field to Churchill, Manitoba, to assist in cargo operations on the "Beetle Project" to Cambridge Bay, Victoria Island, Canada. Apart from a five-day trip to Westover Field, Mass., for parts, the C-74 operated under Arctic conditions from May 12 to June 1. However, due to poor weather only one flight was made from Churchill to Cambridge Bay, with a total flying time of 3 hours 20 minutes. As a result of these Arctic operations, it was felt that the C-74 could satisfactorily land on ice and operate in cold weather provided that: 1) a sufficient supply of parts was available; 2) the aircraft was moved at least every 24 hours to prevent flat spots from developing on the tires; 3) strut pressures were checked frequently; and 4) all fuel, oil, and hydraulic lines were winterized to prevent leakage due to contraction. The only complaint the crew had about the Globemaster's cold weather performance was that the vertical stabilizer de-icing system was inadequate.³⁴

In the fall of 1947, a "Phase I" factory modification program was begun to convert the C-74s to R-4360-49 engines, the first Globemaster so modified arriving at Brookley on Sept. 22. Although the hoped-for Phase II fuselage modifications to increase the airplane's 145,000-pound gross weight limit had not yet been approved, this did not stop the squadrons from exceeding the limit on at least several occasions.

For the remainder of 1947, the 31st and 32nd ATS settled into routine operations, with regularly scheduled flights being made into the Caribbean with their C-47s and C-54s. The C-74 continued to operate on a "special mission" basis, several of these flights demonstrating the unique value of large transports. A 32nd ATS C-74, 42-65410, airlifted over 40,000 pounds of burlap sacks on one flight for use as sandbags during a flood in Florida. In July, a 31st ATS Globemaster carried two large lifeboats to Goose Bay, Labrador. Each boat was 27 feet long, 8 feet wide, and weighed 20,000 pounds, too large for any other available Air Force transport. The following month, another trip to Goose Bay was made by a 31st ATS C-74, this time carrying

18,000 pounds of pipe and two C-64 Norseman wings. The Globemaster then made several shuttle runs to Coral Harbor, Southampton Island, to deliver parts for a diesel generator that had been thought too bulky to be moved by air. The C-74 rounded out its mission by delivering 12 C-54 engines to Kelly Field, Texas, which had been picked up at Westover Field, Mass. One messy mishap occurred during a September flight to Canada when, north of Great Falls, Montana, a large bird came through the windshield of the Globemaster. The pilot received minor facial cuts, but the airplane was repaired and it continued on with its mission.³⁵

Operations were interrupted briefly during September when a hurricane hit the southern area of the U.S. All flyable aircraft were moved north, while C-74, 42-65410, was flown to Floyd Bennett Field on the 17th to transport two Coast Guard helicopters into the hurricane area for rescue work. The mission was a success, although 410 received major damage to its flaps when it landed on the water-filled runway at New Orleans.³⁶

1948 OPERATIONS

The year 1948 began with preparations being made for regular passenger flights with the C-74. Major items needed for this new task were the installation of airline-type seats and a galley. However, the group's operations with the Globemasters were curtailed for some time due to problems with the gyrosyn instruments and the control surfaces, most of which had to be recovered.

On a March 15 flight from MacDill AFB, Florida, to Fairfield-Suisun AFB, Calif., a special waiver was made to carry seven passengers on the trip. This was reportedly the first time that passengers had been (legally) carried aboard the C-74. The first authorized regular passenger flight was made from Brookley Field to Panama on March 21, with 19 passengers aboard C-74, 42-65413. Passengers were restricted at this time to male military personnel with provisions for parachutes.³⁷

A joint Air Force-Douglas conference was held on May 3 at the Douglas Long Beach plant to consider several changes to the C-74's canopy and cockpit design which had been requested by 3rd Air Transport Group personnel. During the three-day conference, the members viewed a cockpit mockup of the C-74, finally recommending that the Globemaster's "bug-eye" canopies be replaced with a conventional enclosure. These "Phase III" canopy modifications were begun early in 1949. However, many suggested changes in instrument placement, nose wheel steering, trim and auto-pilot control location were planned to be corrected on the C-124 mockup.³⁸

BERLIN AIRLIFT OPERATIONS

On June 1, 1948, the Air Force's Air Transport Command merged with the Naval Air Transport Service to form the Military Air Transport Service (MATS), with the responsibility for supplying the National Military Establishment and other government agencies with a worldwide strategic air transport service. In this reorganization, three major air transport divisions were formed: the Pacific Division, Continental Division, and Atlantic Division. The Atlantic Division, of which the C-74 squadrons were a part, had its operational jurisdiction extended from the East Coast of the United States across the Atlantic Ocean to Europe and North Africa, and in the Mediterranean and Caribbean areas.³⁹ The 1103rd AF Base Unit was redesignated as the 521st



1 All Air Force C-74s underwent a "Phase I" factory modification program in 1947-8, to fit them with uprated R-4360-49 engines. C-74s 407 and 408 are shown at Long Beach early in 1948.

(Douglas C-20422-2 via Harry Gann)

2 Only one C-74 participated directly in the Berlin Airlift, 42-65414, although several additional Globemasters hauled C-54 engines and cargo into Germany in support of "Operation Vittles." 42-65404 is shown at Rhein-Main AFB undergoing an engine change as crew clears away the heaviest snowfall of the winter.

(Air Force 5238)

3 Formation flights in the C-74 must have been rare. In foreground is C-74, 42-65408, with modified canopy, while 42-65409 in background still has "bug-eyes." MATS markings are blue and yellow; tail band is blue with white letters and yellow trim.

(Douglas C 204-55-3)

4 C-74, 42-65414, at Westover AFB, Mass., a major stop on transatlantic flights.

(Doug Pirus)

5 C-74, 42-65409, operated by the "C-74 Squadron" of the Air Transport Command.

(Brian Baker)





Air Transport Group, with the 31st and 32nd ATS becoming the 17th and 19th Air Transport Squadrons, respectively.

Just three weeks later, the Russians issued a Cold War challenge to MATS by closing all land routes into the divided western sectors of the city of Berlin. On June 25 the Air Force was requested to airlift 25 tons of supplies into Berlin. It responded the next day with over 80 tons, thus beginning what was to become the largest single airlift operation in history. Not widely known is the fact that the C-74 played a small but significant part in the success of this allied airlift, soon to become known as "Operation Vittles."⁴⁰

The 521st ATG received instructions on July 10 to supply three of their C-54s for the Berlin Airlift. In a secret report,⁴¹ it was proposed that two C-74s, modified to the 165,000-pound gross weight limit, be used on a once-weekly flight to Germany carrying much-needed R-2000 engines for the airlift C-54s. Use of the Globemasters was calculated to save the government nearly \$130,000 over the cost of a contract carrier. However, due to the group's Caribbean commitments and a lack of modified C-74s, only one Globemaster was used directly in the airlift. In early August, the 521st ATG received instructions to ready one of its Globemasters for a special mission into Germany. As the specified C-74, 42-65414, was undergoing modifications at Long Beach, a crew was sent to the Douglas plant to return the airplane. On August 11 the C-74 was flown to Westover AFB, finally arriving at Germany's Rhein-Main Airfield on the 14th. On the 17th, 414 landed at Berlin's Gatow Airfield carrying 20 tons of flour, and for the next six weeks flew 24 missions into the city, delivering 1,234,000 pounds of supplies.⁴²

Several airlift records were set by 414 during Operation Vittles, as the Globemaster averaged over 38,000 pounds of

C-74, 42-65406, flew operationally for two years before being converted to a YC-124A in 1949. Compare size of C-74 with B-17 and C-47 in background. (Air Force courtesy of *The MAC Flyer*)

cargo for these missions. On Air Force Day, Sept. 18, the C-74 flew six round trips into Berlin hauling a total of 250,000 pounds of coal, setting a new Airlift Task Force utilization record by flying 20 hours during the 24-hour effort.⁴³ The Globemaster participated in a unique way during the construction of a new airfield at Tegel, in the French sector of Berlin. Large construction equipment was needed to build new runways, but the equipment, including a rock crusher, was too big for even the Globemaster to accommodate. Consequently, the machinery was cut into pieces by welding torch at Rhein-Main, loaded aboard the C-74, and flown into Tegel for reassembly.⁴⁴

C-74 414 returned to Brookley AFB on Sept. 26, after six weeks of Vittles flights. The Globemaster had performed admirably during its airlift operations, but it became clear that the need for a single C-74 was not great enough to justify continued flights into Berlin. Although the Russians reportedly complained that the Globemaster could be used as a bomber (via the open elevator well), the fact that the runways were not stressed for the Globemaster's weight, and that the C-74 was incompatible with the airlift's tight air corridor scheduling were other factors considered in its withdrawal.

General William H. Tunner, Commander of MATS and a longtime proponent of the "25-ton transport," summed up the significance of the Globemaster's participation in the Airlift:

"The lessons we've learned from the Airlift are tremendously important . . . we've proved concretely here some important things we believed all along; that the future of military air transport is in the big aircraft.

"A task force made up of 68 C-74s could haul the 4,500 tons needed in Berlin each day. It takes 178 C-54s to do the same job,



YC-124A, 42-65406, after being converted from C-74, was tested for four years, re-engined with R-4360-35As, and redesignated YC-124C. (Air Force 39685 AC courtesy of Air Force Museum)

or 899 C-47s. With the C-74s you would only have to make 5,400 trips a month to maintain your tonnage average, where the C-54s must fly in 13,800 times or the C-47s 39,706. The economy runs all the way through. In the C-74 you would need only 16,200 hours of flying time a month, compared to 42,888 in the C-54s or 158,824 in the C-47s. Look at crews. One hundred and eighty C-74 crews could do the job where we need 465 for the C-54s and 1,765 for the C-47s. The same ratio in maintenance—2,700 C-74 maintenance men could accomplish the job that would require 4,674 on the C-54s, and 10,588 on the C-47s. And finally, you could fly the C-74s on 6,804,000 gallons of fuel, compared to the 8,577,600 needed by the C-54s, or the 14,294,000 the C-47s would need.

"Later, as we flew more and more tonnage into Berlin, the superiority of the 25-ton transport became more and more obvious. With one plane which could do the work of three, all of our major problems would have been proportionally reduced. If we had had a full fleet of the Douglas C-74s for the Airlift, we would have been able to deliver 8,000 tons daily using only two bases in West Germany and one in Berlin."⁴⁵

On Oct. 1, the 521st ATG was again redesignated, this time as the 1601st ATG, Atlantic Division, Military Air Transport Service, made up of two operational squadrons: the 1259th ATS flying C-54s, and the 1260th ATS equipped with the C-74s.

On Oct. 4, a regularly scheduled C-74 flight to Germany was inaugurated, hauling C-54 engines and parts in support of the Berlin Airlift. Called the "Goliath," this flight supplemented the group's other regularly scheduled C-47 and C-54 flights, carrying cargo and passengers between Brookley AFB and Frankfurt, with stops at Westover AFB and the Azores Islands. The tempo of these Globemaster flights increased from four in October to 14 in January 1949, and 16 in February. Other regularly

scheduled Globemaster flights at this time included the "Panamanian," from Brookley to Albrook Field, Balboa, Canal Zone, and the "Puerto Rican," from Brookley to Ramey AFB, Puerto Rico and return.

Early in November 1948, another MATS first was achieved by an Atlantic Division C-74 when the first nonstop transatlantic flight was made between Westover AFB and Shannon, Ireland. Covering 2950 statute miles, the flight had been diverted to Shannon due to poor weather over Germany. A few days later, on Nov. 6, the first Globemaster to land in England touched down at Burtonwood. On Dec. 1, Brookley AFB was designated as a Port of Aerial Embarkation, enabling the C-74 Goliath flights to be rerouted on a more southerly run through Bermuda and the Azores. However, flights occasionally were scheduled through Westover AFB when insufficient cargo was available at Brookley.⁴⁶

YC-124A GLOBEMASTER II CONVERSION

As a direct result of observations made during the C-74's participation in the Berlin Airlift, the Air Force became convinced of the need for a transport capable of carrying bulky objects.⁴⁷ Douglas also had come to this conclusion, and so plans were made to convert one C-74 to a prototype of the new transport.

In June 1948, C-74, 42-65406, with some 700 flight hours to its credit, was removed from MATS service and flown to the Douglas Long Beach plant for conversion to the C-124. A new double-deck fuselage was built around the original C-74 wing, featuring large nose-mounted clamshell doors and loading ramps built into the fuselage structure. By slightly modifying the empennage and landing gear, and using much of the C-74's



YC-124C, 42-65406, at old Air Force Museum, Patterson Field, Ohio. (Air Force courtesy of Air Force Museum) On May 16, 1949, a



record 75 passengers plus a crew of 12 were carried on a transatlantic flight to England by a 1260th ATS C-74. (Air Force 37811 AC)

original equipment, Douglas saved thousands of hours of engineering and development time on the project. The novel C-74 elevator was retained, as were its R-4360-49 engines.

This airplane, redesignated as the YC-124A Globemaster II, made its first flight on Nov. 27, 1949. It was fitted with water ballast tanks and flown for 350 hours during stability and control testing programs over the next four years. In July 1954, all test equipment was removed, and the refurbished YC-124A was returned to the Air Force for regular transport duties.⁴⁸ This airplane later was re-engined with 3,800-horsepower R-4360-35As and redesignated YC-124C.⁴⁹

In November 1957, the YC-124C was flown from Kelly AFB to Patterson Field, Ohio, where it was accepted by the Air Force Museum.⁵⁰ When the Museum moved to Wright-Patterson AFB, it was realized that the Globemaster II could not be moved due to bridges along the seven-mile route, so the airplane was turned over to the base for disposition.⁵¹ Unfortunately, this historic airplane was destroyed in 1969 during fire-fighting practice.⁵²

CRUISE CONTROL PROGRAM

At the time of the formation of the first C-74 Squadron, a cruise control program was requested to determine accurate fuel flow and horsepower measurements for a given rpm setting. However, the R-4360-27 engines then powering the Globemaster did not have provisions for automatic lean mixture, and the program was never begun. When the -49 engines were fitted to the C-74 during the first modification phase, a new cruise control program was started, but calibration problems caused a two-month delay. Finally, several local and Caribbean flights were made using various power settings and speeds in order to prepare preliminary cruise control charts. Little usable data was gathered, however, as the aircraft used were not properly equipped for cruise control research, and due to severe engine vibrations in the 1700-1900 rpm range.

Finally, on May 24, 1948, Atlantic Division Headquarters authorized the use of one C-74 for cruise control research, along with the necessary modifications.⁵³ A bubble tank was installed in C-74 412, and its instruments were carefully calibrated. Douglas aerodynamicists were brought in to accompany these

flights, which began on Jan. 23, 1949, on a regularly scheduled cargo run to Panama. Several round-trip flights were made between Mobile, Panama, and Puerto Rico, ending on Feb. 1 with a local flight to calibrate the airplane's instruments. Everett Teach, now a retired lieutenant colonel, was one of the pilots during the program. He remembers, "At the conclusion of the cruise control flights, it was necessary to calibrate the airspeed indicators for accuracy. It was desirable to do this as close to sea level as possible to eliminate the need for altitude correction. This was quite a thrilling part of the test! It was done over the ship channel in Mobile Bay leading out into the Gulf of Mexico. The ship channel markers were accurately located and followed a straight course for a 10-mile stretch. We flew at a theoretical altitude of one wingspan above the water [about 200 feet] at varying indicated airspeeds up to the point of METO power, which yielded a speed of about 240 mph indicated!"⁵⁴ As a result of these flights, accurate cruise control charts were prepared for both the C-74 and C-124 programs. The C-74's average fuel consumption dropped from over 500 gallons per hour to 450-475 gph, while using greater horsepower settings and higher cylinder head temperatures.⁵⁵

1949 OPERATIONS

Although the C-74 had been in service for over two years, 1949 was a particularly noteworthy year for Globemaster operations, with several records being set for speed and tonnage carried. On Jan. 24, C-74 413 completed a record 84-hour round trip to Germany, although actual flying time was only 42½ hours.⁵⁶ On May 16, a C-74 carried 75 passengers plus a crew of 12 to England—at the time the largest military passenger load to fly the Atlantic.⁵⁷ Six months later, on Nov. 25, C-74 414, dubbed THE CHAMP by its crew, flew the Atlantic with a record 103 people aboard, setting down in Marham, England, 24 hours after takeoff from Brookley AFB.⁵⁸ The Globemasters continued to operate on regularly scheduled "Goliath" flights to Germany, carrying high-priority engines and parts for Berlin Airlift C-54s, and mail, passengers, and medical patients across the Atlantic. The "Panamanian" and "Puerto Rican" flights into the Caribbean were flown exclusively by the C-74 until Septem-



The new canopy had a central panel which opened forward and overhead sun blinds. (Douglas C 20444-2) C-74, 42-65408, was the first

Globemaster to be modified with a new "greenhouse" canopy. Long Beach Airport in the background. (Douglas C 20444-3)

ber, due to the demand for the Group's C-54s on the Berlin Airlift.

The sight of the huge Globemasters had become commonplace to many Europeans as a result of these Goliath flights, but the C-74 frequently could draw crowds, as Everett Teach recalls: "On a flight filed from Prestwick to Frankfurt, it became necessary to divert to Paris when the weather went below minimums. We landed at Orly Field and were directed to park on the ramp. Quite a crowd gathered as they had never before seen such a huge plane. The climax came when we reversed the props and backed up to the edge of the ramp to let the tail overhang the sod area. No Frenchman had ever before seen an airplane back up, and they couldn't quite believe it."⁵⁹

During this period, the 1260th ATS used a partial crew staging system on its Goliath route, whereby part of the crew was left at Lagens Field, Azores, while replacements who were left on a previous flight were picked up.⁶⁰ On the return trip to Mobile, the entire crew was reassembled at Lagens. Until April 1949, a westbound crew also was staged at Bermuda.⁶¹

A shortage of spare parts for the C-74 began to be felt early in 1949. A C-74 Mobile Maintenance Crew was formed in February, which helped the situation somewhat. This crew was equipped to deal with most maintenance problems, being dispatched to a downed Globemaster with tools and parts, and returning on the next available C-74 flight. Additionally, complete flyaway kits were assembled and shipped to the various route and turnaround stations. However, this parts shortage caused the number of scheduled C-74 flights to be kept to a minimum throughout the year.⁶²

On March 7, the first C-74 to undergo the Third Phase Modification Program—replacing the Globemaster's bug-eye canopies—was returned from the Douglas factory with a new, and much-welcomed "greenhouse" type enclosure. Everett Teach echoes what must have been the Air Force pilots' majority opinion on the Douglas innovation: "The 'bug-eyes' were one feature that I did not care for. Communication between crew members had to be carried on over the interphone system, although, after reaching cruising altitude and setting up the autopilot, the pilot and copilot seats could be rolled sideways and the pilot and copilot could see and converse with each other beneath the struc-

ture separating them."⁶³ The new canopy featured a central hatch which was hinged and could be opened while on the ground, and sun blinds which could be extended over the pilots' heads. The remaining Globemasters were so modified throughout 1949, the final ship being completed in October.⁶⁴

Late in October, still another MATS organizational change redesignated the 1601st ATG to the 1703rd ATG, and jurisdiction for the group was transferred to the Continental Division of MATS. The 1260th ATS now functioned as a "utility squadron," with C-74 operations varying from time to time in response to MATS cargo requirements.⁶⁵ At an October 26 meeting at Continental Division Headquarters, it was decided to hold monthly meetings in the future to determine the operational status of the 1260th ATS C-74s in order to plan the following month's utilization rate. The C-74 Goliath flights to Europe continued via routes controlled by the Atlantic Division, but with Continental Division crews. On Dec. 1, Col. George S. Cassady, who had commanded the C-74 Squadron and Group since their inception in 1946, was relieved by Col. Glen R. Birchard as C.O. of the 1703rd ATG. Commanding the 1260th ATS was Lt. Col. Verne Bivin.

1950 OPERATIONS

In response to the 1260th Air Transport Squadron's new status as a "utility squadron," two new regularly scheduled routes were added to its duties early in 1950. "The Hawaiian" was a once-weekly, round-trip flight between Brookley AFB and Hickam AFB, Hawaii, with one stop at Fairfield-Suisun AFB, Calif., the only Pacific flight operated by the Continental Division. "The Jonathan," operating three times a week, connected Brookley AFB and Anchorage, Alaska, with intermediate stops at Kelly AFB, Texas, McClellan AFB, Calif., and McChord AFB, Wash. This flight was discontinued, however, on June 1st. The Group's old C-74 Goliath run was reduced to a once-weekly flight between Brookley and Rhein-Main, Germany. This flight was discontinued briefly beginning on Feb. 1, but was resumed again on June 1 with intermediate stops now made at Chicopee Falls, Mass., and Terciera, Azores.⁶⁶

The North Korean attack against the Republic of Korea on June 25 began another supporting phase of the C-74's career.



C-74 taking off from Turner AFB, Georgia, on July 4, 1952, in support of a historic first mass jet flight across Pacific by 31st Wing F-84G Thunderjets to Yokota AFB, Japan. (Air Force 46614 AC)

From July 1 to December, the Globemasters logged over 7000 hours in flights to Hawaii, hauling troops and high-priority cargo westward toward the Korean War and returning eastward with wounded GIs. In December alone, 40 flights were made to Hawaii by the C-74s as they flew on an "in commission" basis, rather than on a set schedule. In seven months, from July 1950 to January 1951, the Globemasters moved 2,486 patients, 550 passengers, and 128,000 pounds of cargo from Hawaii to the U.S., while hauling just under a million pounds of cargo westward.⁶⁷ These figures, coupled with the fact that, since 1946, the C-74 had flown over six million miles and 31,000 flying hours without a single injury to crewmen or passengers, give testimony to the Globemaster's reliability.

1951-1952 OPERATIONS

The year 1951 saw the continuation of the C-74's use in a utility role. With utilization rates averaging over 10 hours a day, the highest of any aircraft in the 1703rd ATG, the Globemasters were flown on widely scattered routes in addition to training and transition flights. During May, the 1260th ATS made 28 scheduled flights to Tripoli and three to Iceland. One return trip from Keflavik, Iceland, to Brookley AFB was made nonstop in just under 19 hours!⁶⁸ However, the Group continued to experience a shortage of parts, which became especially acute after the first C-124 arrived from the factory on Oct. 6, joining the 1258th ATS.⁶⁹ This made the 1703rd ATG the service testing agency for both the C-74 and the C-124 Globemasters.

During January and February 1952, 1260th ATS C-74s made 26 round trips to Tripoli, 18 flights to Casablanca, and seven to Ramey AFB, Puerto Rico. In late February, two flights to Tripoli were extended to Khartoum to transport a team of 28 scientists and technicians so that they could record an eclipse of the sun.⁷⁰

Maintenance problems on the C-74s worsened throughout 1952, with a severe shortage of parts for the propellers and engines. The Group received authorization from Continental Division Headquarters on January 9 to reduce the C-74's utilization rate to six hours per day, allowing for an increase in needed maintenance hours.⁷¹ Somewhat interestingly, the 1703rd ATG, now commanded by Col. Clair A. Peterson, made a comparison of the average payloads carried by the three heavy transports then being used on the run between Westover AFB and Lages

Air Base, Azores. The C-74s averaged 15 tons, compared to 10 tons for the C-124 and 12½ tons for the C-97. It should be pointed out, however, that the C-97 and C-124 were experiencing the same teething problems that all new service aircraft suffer, and so restrictions were put on their allowable payloads.

On July 18, the squadrons of the 1703rd ATG were once again redesignated, this time the 1260th ATS becoming the 6th ATS. Col. Grover J. Dunkleberg relieved Col. Peterson on Aug. 1, 1952, as the 1703rd ATG Commander.

Through the remainder of 1952, the 6th ATS C-74s continued their logistic support flights to North Africa, the Middle East, Europe, the Caribbean, and within the U.S. Additional support was given to both the Tactical Air Command (TAC) and the Strategic Air Command (SAC). In July, two Globemasters were used by TAC to support the first F-84 flight across the Pacific Ocean to Japan. One C-74, carrying maintenance personnel, equipment, and spare parts, preceded the jets on each leg. The other Globemaster carried a similar load but remained at each takeoff point until after the last jet had departed, then followed behind to the next stop.

Over the next year, SAC used C-74s to replace Medium Bombardment Groups on temporary duty in England and North Africa with similar Groups in the U.S. In 43 missions from September to the following June, Globemasters carried personnel, unit records, equipment, and spare parts across the Atlantic in a minimum of time by staging crews along the route.⁷² In October, one C-74 was used briefly at Kelly AFB, Texas, for an evaluation of disposable oxygen masks for passengers. Four types of masks were tested during three one-hour flights, each of which carried 30 passengers at 15,000 feet.⁷³ Throughout 1952 the 6th ATS operated with a shortage of skilled mechanics, as 133 departing airmen were replaced by only 50 people, none of whom had previous experience on the C-74. This trend was to continue for the remainder of the Globemaster's Air Force service life.

1953-1955 OPERATIONS

The final three years of C-74 Globemaster operations saw the gradual lowering of the airplane's utilization rate, an increase in "downtime" caused by a shortage of parts, and an increase in maintenance man-hours due to an influx of untrained personnel. The Globemasters were used extensively on support flights to North Africa, the Caribbean, and within the U.S., although the utilization rate had dropped to a little over three hours a day.⁷⁴ Concurrently, the Group's C-124 utilization rates climbed to over four hours as Globemaster IIs of the 3rd ATS took over an increasing share of their predecessor's routes.

The C-74 began to show its weariness in several ways. Late in 1953, C-74 414 was grounded due to a mysterious severe vibration during flight. By interchanging two engines and balancing all four propellers, the airplane was pronounced fit to continue flying. After receiving a flying safety award in October 1953, the C-74's record was marred by an inflight fire which occurred a year later, on Nov. 26, 1954. Shortly after takeoff, smoke and flames poured from the Globemaster's No. 1 engine. Although the crew was able to extinguish the fire and land the airplane safely, the mishap, combined with another fire aboard a 6th ATS C-74, significantly lowered the squadron's utilization rate.⁷⁵

A 1703rd ATG staff study of the problem was conducted in



1 A 6th ATS C-74, 42-65410, on Iwo Jima in July 1952. Vertical tail band and tail cone are red. (Harry W. Greene)

2 C-74, 42-65412, at Douglas Santa Monica plant with radar nose and mysterious mottled paint appearance. (Douglas SM 172741 via Harry Gann)

3 Crew of 6th ATS C-74 unloads equipment for 31st Strategic Fighter Wing F-84Gs after a nonstop transatlantic flight from Turner AFB, Georgia, to Nouassuer AFB, French Morocco, on Aug. 21, 1953. (Air Force 48590 AC)

4 C-74s, 42-65409/410, at Turner AFB, Georgia, before departing for Yokota AFB, Japan, on July 4, 1952. (Air Force 46617 AC)



C-74s and crews of the 6th ATS merged with 3rd ATS C-124s before the C-74s were refired late in 1955, as shown by C-74, 42-65411 and C-124C, 51-101. (Air Force courtesy of Bob Brooks)



MATS applied a sun-reflective white paint to most C-74s during their later years, as shown by 42-65413 at the Douglas Long Beach plant in May 1955. (Douglas C28707-12)

March 1954, and a summary of its findings, titled "C-74 Modernization," was forwarded to Continental Division Headquarters for consideration.⁷⁶ However, by late 1954 it was recognized that the deterioration of the C-74's components was progressing more rapidly than the Group had predicted, and plans were made for the eventual retirement of the Air Force's only fleet of Globemasters.⁷⁷

At some time during the final few years of the C-74's service life, the Air Force modified three of its 11 C-74s (42-65411/412/414) with the addition of search radar units mounted in the nose. Little is known about these modifications, though it is interesting to note that none of these radar-equipped Globemasters was chosen for later civil operations in Europe.

By 1955, the C-74's maintenance man-hour requirements were so high that a two-hour daily utilization rate was requested and approved.⁷⁸ A program was begun in the spring to cross-train C-74 pilots and engineers on the C-124, in preparation for the C-74's retirement. In the last six months of the C-74's operational life, 6th ATS Globemasters flew 45 scheduled and special trips to Europe, North Africa, South America, and the Middle East, carrying over six million pounds of cargo, nearly one million pounds of mail, and 1,750 passengers.⁷⁹ However, the C-74s were grounded twice in this last six months due to failures in their fuel selector valves and elevator pins. The airplane's size presented problems even at the end, for on a special flight to Atkinson Field, British Guiana, to deliver engines to a downed C-54, a crew member had to chop down several palm trees for space to taxi out to the runway.⁸⁰

Before the end of June, the C-74s and crews of the 6th ATS (Heavy) merged with the 3rd ATS and were flying operationally with them. Finally, on July 1, 1955, the 6th ATS (HV) was deactivated, and its C-74s and air crews were officially transferred to the 1703rd ATG's 3rd ATS (HV). On Nov. 1, the C-74s were placed in flyable storage at Brookley AFB, while the Group waited for instructions as to the disposition of the Globemasters.⁸¹

In the first three months of 1956, the 11 C-74s were removed from MATS inventory and flown one by one to Davis-Monthan AFB, Arizona, for permanent storage. Fittingly, the last Globemaster to make this flight was piloted by the same man who

accepted the first C-74 for the Air Force nine years previously. George S. Cassady, now a Brigadier General, had been attending the Continental Division Commander's Conference when he learned that "his baby" was making its last flight.⁸² On March 31, after receiving special permission to make the flight, Brig. General Cassady flew this last C-74 Globemaster to a well-deserved retirement in the Arizona sunshine.⁸³

CIVIL OPERATIONS

Upon arriving at Davis-Monthan AFB, the C-74s, unlike today, were "mothballed" simply by "pickling" the fuel and hydraulic systems, and by covering all windows with a sun-reflective sealant. Over the following three years the Globemaster's fabric control surfaces deteriorated rapidly, but the dry Arizona heat retarded any substantial metal corrosion.

In the spring of 1959, the 11 C-74s were put up for bid as being surplus to the government's needs. The top bid received was from a Cleveland, Ohio, firm, Akron Dynamics, which bought the airplanes "for a Cuban party."⁸⁴ In fact, the Cuban party turned out to be no less than Fidel Castro, who reportedly expressed interest in buying four of the C-74s.⁸⁵ Akron Dynamics hired Hamilton Aircraft Co. to prepare one Globemaster, N8199H (42-65408), and fly it to Cuba for Castro's inspection. The C-74 was test flown on March 20, 1959, and departed the following day for Cuba with Ralph Johnson, formerly with United Airlines, as pilot, Lee Evans, a Sundt Construction Co. pilot, flying right seat, and George Bosley, Chief Pilot for Hamilton, acting as flight engineer. A fourth crew member on the flight was Gerald B. Juliani, vice president of Hamilton.⁸⁶ Apparently, Castro considered Akros Dynamics' \$400,000 asking price a little steep, for the airplane returned a few days later unsold.

Two months later, this first civil C-74, N8199H, was seized by federal agents in a gun-running plot on May 22, 1959. Ten men and a woman were arrested at Miami International Airport just minutes before they were due to take off aboard the C-74, which had been loaded with \$28,000 worth of rifles and ammunition. It was believed the group was involved in a counterrevolutionary



The remaining 11 C-74s were transferred to Davis-Monthan AFB, Arizona, in 1956, where most of them eventually were scrapped. (Air Force 172524)



C-74, 42-65411, shows signs of fabric deterioration at Davis-Monthan AFB. (Duane Kasulka via Arnold Swanberg)

attempt against Cuba, to be launched from the Dominican Republic.⁸⁷

The Globemaster was stored at Miami from May 1959 until approximately September 1962, when it was sold and flown to Oakland, California. This airplane and three additional C-74s were the only Globemasters to receive civil registrations. The remaining seven C-74s were put up for auction at Davis-Monthan AFB on April 17, 1962, under Invitations for Bids (IFB) 62-30. Many bids were received from across the country, but the average offer barely exceeded the Air Force's estimated scrap price, and no award was made for the sale.⁸⁸ These seven C-74s were retained at Davis-Monthan until 1965, when they were sold for scrap and destroyed.⁸⁹

Once at Oakland, N8199H was reconditioned by Sierra Aviation Services for a new foreign charter freight carrier, Aeronaves de Panama, S.A., which was operated by Air Systems, Inc. Shortly after the departure of N8199H for Panama, two additional Globemasters, N3181G (ex-42-65409) and N3182G (ex-42-65404), arrived at Oakland from Ontario Airport, California, where they had been stored for some time.

Heading both Air Systems and Aeronaves de Panama was Orvis M. Nelson, one of the most colorful men in the history of American aviation. A former Kelly Field graduate and United Air Lines pilot, Orvis Nelson had formed Transocean Air Lines in 1946, building it into the world's largest contract air carrier.⁹⁰ When government regulations and financial problems caused Transocean's collapse in the early 1960s, Nelson somehow arranged financing for the Aeronaves de Panama venture and began building another empire.

Although the C-74s were in questionable shape, Air Systems had the aircraft reconditioned and painted in similar red and white fleet colors, with the name HERACLES on their fuselages in large red letters. The C-74s were assigned the following Panamanian registration numbers:

HP-367 (42-65408, ex-N8199H)

HP-379 (42-65409, ex-N3181G)

HP-385 (42-65404, ex-N3182G)

The Globemasters were registered in Panama as a "flag of convenience" due to the time it would have required to gain Approved Type Certification for U.S. operations, and due to the

lower tax levels and registration charges which existed in Panama. A fourth C-74, 42-65412, N3183G, reportedly operated by Air Systems, Inc., and owned by the Pan American Bank of Miami,⁹¹ was flown to Long Beach Municipal Airport, where it sat until being dismantled late in 1964.

By March 1963, all three Air Systems C-74s had been ferried to Europe to begin charter flights. With a few experienced ex-Transocean pilots and personnel, Orvis Nelson ran the Aeronaves de Panama fleet as he had done in the early days of his former airline. No written routing orders were made, for example. Rather, each airplane's flight crew made all decisions as to the route used, depending on the weather, cargo being carried, condition of the airplane, and so forth. Flight clearances and arrangements for ground assistance were made in advance by contacting all stations en route where the Globemaster might conceivably land.

Maintenance on the airplanes was subcontracted to two Danish charter operators: Flying Enterprise and SAACO, both of Copenhagen. However, in the absence of any published maintenance or airworthiness requirements for the C-74, and with a shortage of skilled staff in Copenhagen, Air Systems planned to move their operations to Turin, Italy, for these services. As it was, most routine maintenance performed on Aeronaves de Panama's Globemasters was done by the flight crews and Air Systems' Superintendent of Maintenance, a Mr. M. Avilla. With the addition of the second two Globemasters to Air Systems' European operations, maintenance appears to have been marginal, at best.

Most of Air Systems' charter work spanned all of Europe and Asia, transporting ships' parts to Europe, horses to Singapore, and cattle to the Mid East.⁹² A regular ferry service between Copenhagen and Teheran carried pedigree cattle, with calf, for the establishment of a national herd. For these flights, the floors of the Globemasters were covered with plywood and canvas, which in turn was covered with peat and hay. The cattle were tethered in up to eight rows, seven or eight to a row, with scaffold tubing separating each group.

So it was on the night of Oct. 9, 1963, when C-74, HP-385, landed at Marignane Airport, Marseilles, France, on a flight from Tirstrup, Denmark, to Riyadh, Saudi Arabia. Aboard were



The first civil C-74, N8199H (42-65408), at Miami after confiscation by federal agents for gun-running attempt. (Courtesy of Dick Phillips)

a crew of four (all being American employees of Air Systems), two animal handlers, and a cargo of 56 pedigree Jersey cows (in calf) and four bulls. After approximately 2½ hours on the ground for fuel and oil servicing, HP-385 departed Marignane at 3:48 in the morning on a positioning flight to Dhahran. However, the Globemaster unaccountably overshot the turnoff point by some two miles. The aircraft then began a sharp turn, clearing a 700-foot hill, but lost altitude and struck a limestone cliff, disintegrating completely.

The loss of HP-385 and its crew prompted authorities to suspend all Aeronaves de Panama flights out of Copenhagen, and the airline, along with Air Systems, transferred operations to Turin. Eventually, Air Systems went out of business, its personnel reportedly escaping to London in a DC-7B to avoid payment of various airport fees.⁹³

HP-367, the gun-running airplane again in trouble with the law, was abandoned by Air Systems at Malpensa Airport, Milan, Italy, finally being dismantled in August 1972.⁹⁴ HP-379 also was left derelict at Milan, but by late 1969 the airplane had been moved to Turin (Caselle), where it was painted in the fictitious colors of the Communist Chinese Civil Aviation Airlines Corporation for filming of the movie, *The Italian Job*. Once again derelict at Turin, the airplane was put on display for some time, but was damaged by fire on June 11, 1970. During subsequent salvaging operations on Sept. 24, the Globemaster suddenly exploded into flames, killing two workers, giving the Globemaster story a sad, ironic twist in being the last deaths caused by the C-74 in its 25-year history.

Were it only for the fact that the Douglas C-74 was a minor offshoot in a famous series of transport aircraft, or that the design was a little-produced forerunner of the ubiquitous C-124 Globemaster II, the Globemaster might well deserve to be written off as an insignificant historical oddity. But the C-74, though small in number, served the Air Force admirably for a decade of reliable, record-setting performance, accumulating nearly 100,000 hours of accident-free service . . . truly a pacesetter among the postwar giants.

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C-74 HP-379 on display at Turin, Italy, in June 1966. (J. Magendie)

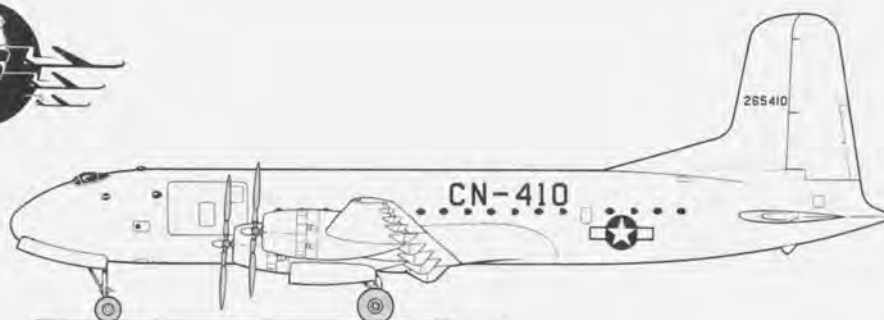
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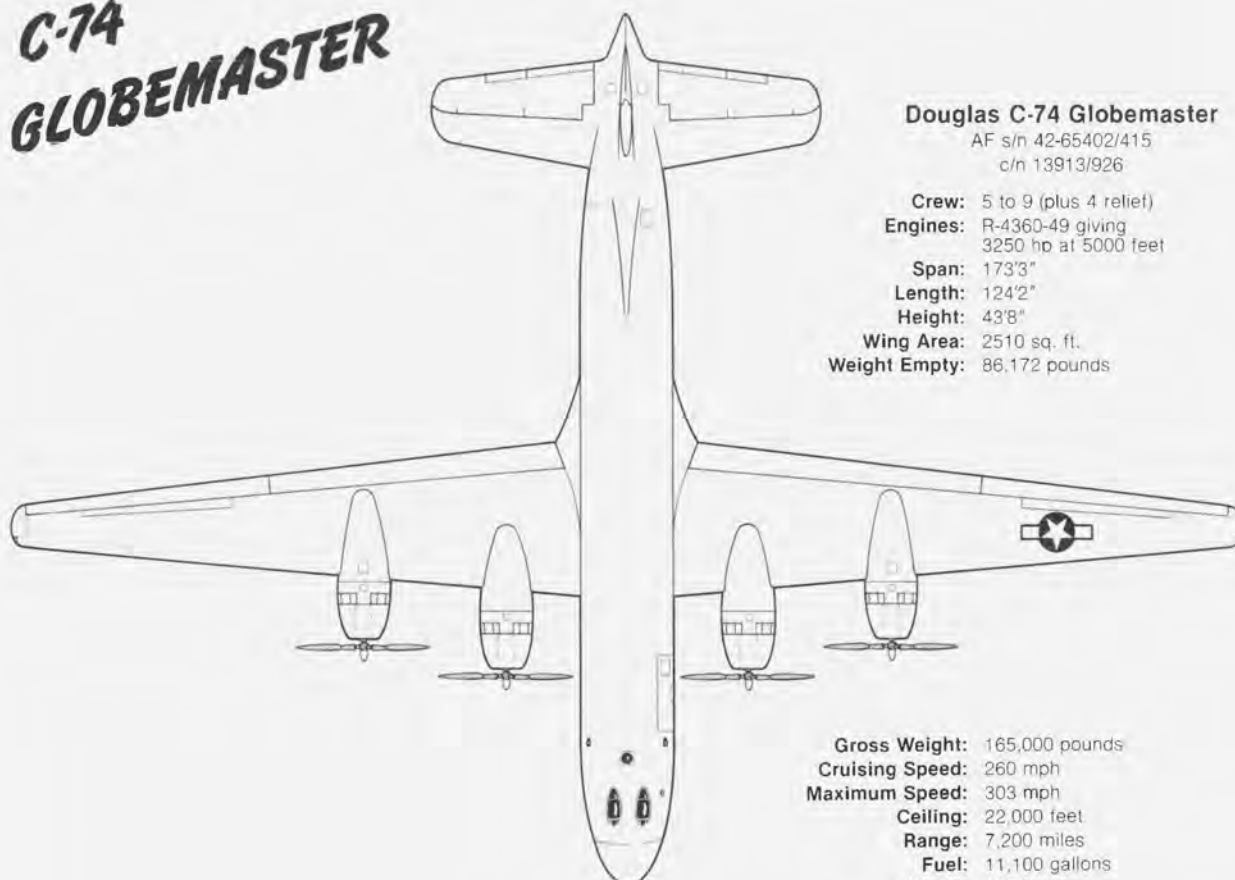
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C-74 GLOBEMASTER



Douglas C-74 Globemaster

AF s/n 42-65402/415
c/n 13913/926

Crew: 5 to 9 (plus 4 relief)

Engines: R-4360-49 giving
3250 hp at 5000 feet

Span: 173'3"

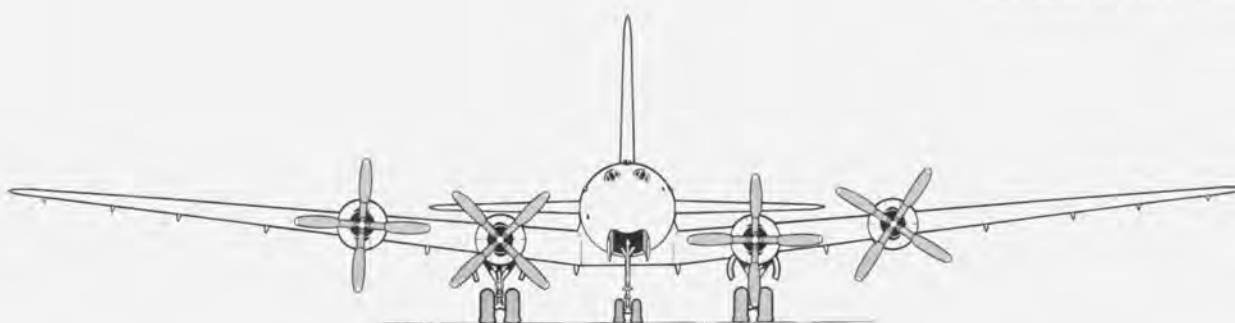
Length: 124'2"

Height: 43'8"

Wing Area: 2510 sq. ft.

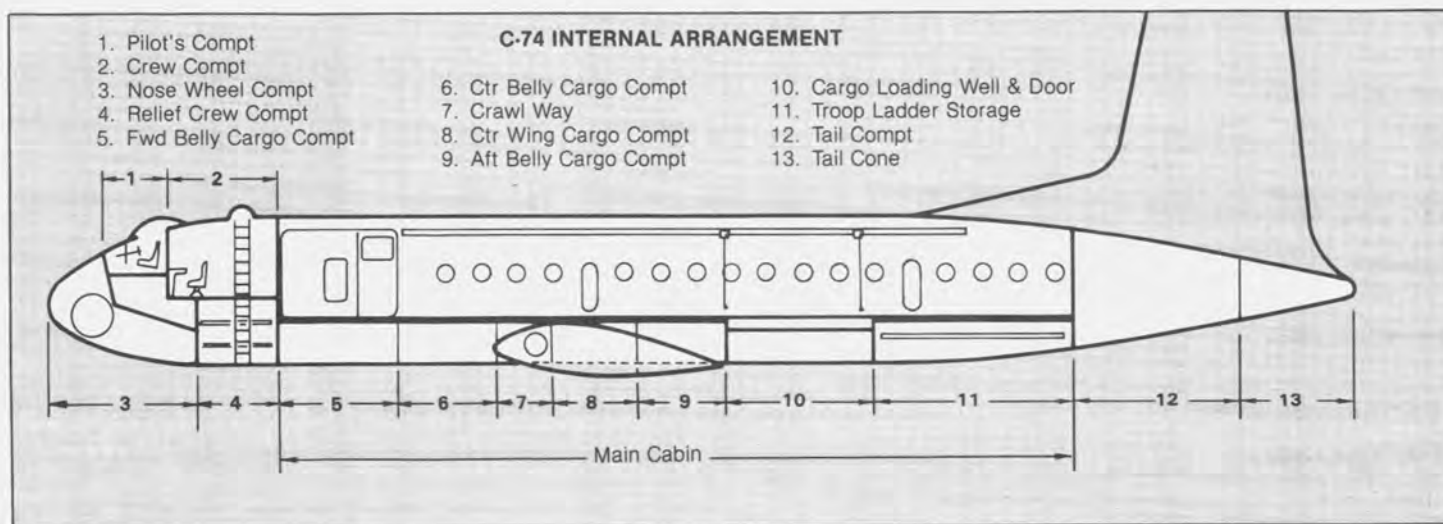
Weight Empty: 86,172 pounds

Gross Weight: 165,000 pounds
Cruising Speed: 260 mph
Maximum Speed: 303 mph
Ceiling: 22,000 feet
Range: 7,200 miles
Fuel: 11,100 gallons
Cargo: 125 troops
115 litters
50,645 pounds at 2,100-mile range
72,160 pounds maximum cargo load



C-74 GLOBEMASTER SQUADRON LINEAGE								
C-74 Squadron	C-74 Squadron	21st ATS (Prov)	31st ATS (Prov)	17th ATS	1260th ATS	1260th ATS	6th ATS	3rd ATS (HV)
		22nd ATS (Prov)	32nd ATS (Prov)	19th ATS				
		2nd ATG (Prov)	3rd ATG (Prov)	521st ATG Brookley AFB Mobile, Ala.	1601st ATG Brookley AFB Mobile, Ala.	1703rd ATG Brookley AFB Mobile, Ala.	1703rd ATG Brookley AFB Mobile, Ala.	1703rd ATG (HV) Brookley AFB Mobile, Ala.
554th AAF Base Unit Memphis, Tennessee	1103rd AAF Base Unit Morrison Field, West Palm Beach, Fla.	1103rd AAF Base Unit Morrison Field West Palm Beach, Fla.	1103rd AAF Base Unit Morrison Field West Palm Beach, Fla.					
Continental Division	Atlantic Division	Atlantic Division	Atlantic Division	Atlantic Division	Atlantic Division	Continental Division	Continental Division	Continental Division
Air Transport Command	Air Transport Command	Air Transport Command	Air Transport Command	Military Air Transport Service	Military Air Transport Service	Military Air Transport Service	Military Air Transport Service	Military Air Transport Service
USAAF	USAAF	USAAF	USAAF	USAF	USAF	USAF	USAF	USAF
Sept. 9, 1946	Oct. 15, 1946	March 14, 1947	May 7, 1947	June 1, 1948	Oct. 1, 1948	Oct. 1949	July 18, 1952	July 1, 1955

C-74, N8199H (42-65408), in Aeronaves de Panama colors after re-conditioning at Oakland in early 1963. White top, red nose, fuselage stripe, tail band, and natural metal lower fuselage. (Earl Holmquist)





C-74s, 42-65404 (N3182G) and 42-65409 (N3181G), at Ontario, Calif., late in 1962.
(Courtesy of R.W. Harrison)



C-74 HP-379 sitting light and high at Copenhagen-Kastrup Airport in Dec. 1962. Aircraft was used to ferry cattle from Denmark to Mid East.
(Bo-Goran Lundkvist)

SUMMARY OF C-74 GLOBEMASTER SERVICE

42-65402 c/n 13913

First C-74 flight—Sept. 5, 1945
First C-74 delivery—Oct. 1945
Retired with 9,168 hours—Nov. 1, 1955
Scrapped at Davis-Monthan AFB, Ariz.—1965

42-65403 c/n 13914

Delivered to Air Force—April 30, 1946
Crashed during contractor demonstration flight—Aug. 5, 1946
Reclamation complete—May 23, 1947
Total hours—19.25

42-65404 c/n 13915

First C-74 delivered with 165,000 lb. gross weight—May 26, 1948
Retired from Air Force service with 8,612 hours—Nov. 1, 1955
N3182G Akros Dynamics—1959
HP-385 Aeronaves de Panama—1962
Crashed at Marseilles, France, with 8,901 hours—Oct. 9, 1963

42-65405 c/n 13916

Accepted and delivered to Air Force—June 6, 1946
Canceled and diverted to static test article—Aug. 6, 1946
Destroyed during static tests at Wright-Patterson AFB—1946-1948

42-65406 c/n 13917

First flight—Sept. 1, 1946
First aircraft to C-74 Squadron—Sept. 19, 1946
First C-74 mission—Oct. 3, 1946
Returned to Douglas for conversion to YC-124A—June 1948
First flight as YC-124A—Nov. 27, 1949
Refurbished and returned to Air Force—July 1954
Received in Air Force Museum—Nov. 1957
Destroyed during firefighting practice—1969

42-65407 c/n 13918

Used in engine calibration tests—Dec. 7, 1948
Retired from Air Force service with 5,952 hours—Nov. 1, 1955
Scrapped at Davis-Monthan AFB, Ariz.—1965

42-65408 c/n 13919

First C-74 to undergo Third Phase canopy modifications—Jan. 18, 1949
Retired from Air Force service with 8,496 hours—Nov. 1, 1955
N8199H Akros Dynamics—1959

Requisitioned at Miami in gun smuggling plot—May 22, 1959
HP-367 Aeronaves de Panama—1962
Requisitioned at Milan-Malpensa, Italy—March 11, 1964
Derelict at Milan, Italy—early 1968
Dismantled at Milan, Italy—August 1972

42-65409 c/n 13920

Third aircraft delivered to C-74 Squadron—Jan. 19, 1947
Used in "Beetle Project" cold weather operations—May 12/June 1, 1947
Retired from Air Force service with 9,502 hours—Nov. 1, 1955
N3181G Akros Dynamics—1959
HP-379 Aeronaves de Panama—1962
Requisitioned at Turin, Italy—March 1964
Used in movie *The Italian Job*—1969
Damaged by fire while in storage—June 11, 1970
Exploded during dismantling operations—Sept. 24, 1970

42-65410 c/n 13921

Highest utilization rate by C-74 (7:22 hours)—December 1951
Retired from Air Force service with 8,858 hours—Nov. 1, 1955
Scrapped at Davis-Monthan AFB, Ariz.—1965

42-65411 c/n 13922

Second C-74 delivered to C-74 Squadron—January 1947
Retired from Air Force service with 9,033 hours—Nov. 1, 1955
Scrapped at Davis-Monthan AFB, Ariz.—1965

42-65412 c/n 13923

Delivered to C-74 squadron—Feb. 1947
Evaluated by Troop Carrier Command—March 14, 1947
Cruise control tests—Jan. 23/Feb. 1, 1949
Retired from Air Force service with 5,825 hours—Nov. 1, 1955
N3183G Akros Dynamics—1959
N3183G Pan American Bank of Miami—1963
Dismantled at Long Beach—1964

42-65413 c/n 13924

Delivered to C-74 Squadron—Feb. 1947
First authorized regularly scheduled passenger flight—Mar. 21, 1948
Set round-trip record from Brookley to Germany—Jan. 24, 1949
Retired from Air Force service with 8,362 hours—Nov. 1, 1955
Scrapped at Davis-Monthan AFB, Ariz.—1965

42-65414 c/n 13925

Only C-74 used directly in Berlin Airlift—August 14/Sept. 26, 1948
Set monthly air time record of 182 hours—April 1949
Set record from Brookley to Marham, England, with 103 aboard—
Nov. 18, 1949
Retired from Air Force service with 8,835 hours—Nov. 1, 1955
Scrapped at Davis-Monthan AFB, Ariz.—1965

42-65415 c/n 13926

Last C-74 delivered—April 1947
Retired from Air Force service with 9,231 hours—Nov. 1, 1955
Scrapped at Davis-Monthan AFB, Ariz.—1965

ABOUT THE AUTHOR

Nick Williams' lifelong interest in aviation stems from the fact that he was born and raised in El Segundo, California, a mile from Los Angeles International Airport. After receiving an AA degree from El Camino College, Nick spent four years in the Navy as an Electronics Technician (ATN2) with VR-21, flying aboard C-118 and C-130 aircraft, resuming his studies in 1970 at California State University, Long Beach.

A teacher by profession, Nick devotes his spare time to serving on the Society's Board of Directors, and as Co-Chairman of the Editorial Committee, Research Project Coordinator, and Advertising Manager. He also is researching several other aircraft types for *Journal* articles: Douglas' C-118/R6D-1 and A-24, the Aero Commander 520/560/680 series and their military versions, and Convair's two YC-131C transports. He and his wife Linda live in Cypress, Calif., and can be reached at: P.O. Box 751, Cypress, CA 90630.

