937th SOONER NEWS

Compiled by the 937th Information Section Special Edition

SOONER GROUP FLIES GLOBEMASTER

TO TOP RANKING IN AIR RESERVE;

MISSIONS CIRCLE ENTIRE GLOBE

The 937th Military Airlift Group home base is Tinker AFB, Oklahoma. The 937th is locally known as the "Sooner Group" and is under command of Col Harry J. Huff, II.

Under Col Huff's leadership the Sooners have become the top C-124 Douglas Globemaster Unit in the Air Force Reserves under the Continental Air Command.

The 937th's gaining command is the Military Airlift Command and the 22nd Air Force.

Our mission is to conduct unit and individual training in accordance with applicable USAF and MAC direction.

Exercise command jurisdiction over ART/Civilian and Reserve Units for the activities of the Air Force Reserve.

Implement CONAC plans and policies in the functional fields of operations, administration, budget, materiel, and reserve personnel.

Maintain a standard of operational effectiveness which will permit the unit to provide air transportation...and long range movement of personnel, equipment and supplies, including air evacution, within and between theatres of operation.

Air Force OC, 28 Sep 66-1200

The Power of....Old Shakey

Old Shakey

Gross, slab-sided and sporting a big nose, she has awful tiny wings and putt-putt engines. But man, she can **really** fly!

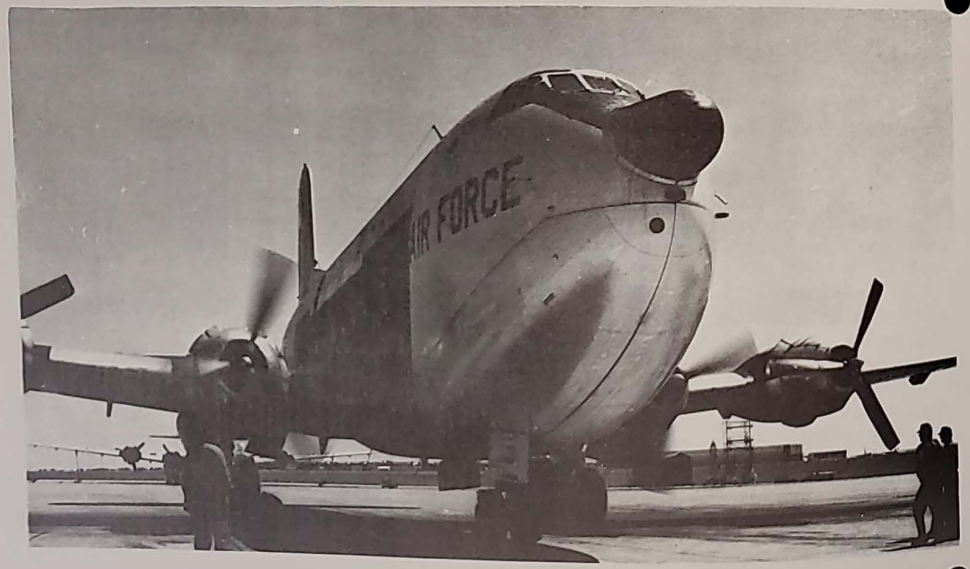
by Col. **RICHARD W. DORFF**
Albrook AFB, C. Z.

FOR five terrible days beginning May 21, 1960, remote southern Chile was slammed by a devil's mixture of earthquakes, tidal waves, avalanches, and volcanic eruptions. Fifty-seven hundred people died. Two million more—a quarter of the population—were left destitute. Incapable of self-recovery, the Chileans appealed for outside help.

Relief came as a massive United States airlift which, by June 1, delivered over 850 tons of relief supplies. Nothing was overlooked. The aircraft disgorged two complete 400-bed Army field hospitals, 113,000 pounds of medical supplies, 15,000 cases of B-rations, 10 helicopters, 140 large tents, tons of communications equipment and thousands of warm blankets.

Although various types of aircraft were used, the workhorse of the Chilean mercy mission was the hulking, snail-paced Douglas C-124 *Globemaster II*. Better known among transport aircrews as "Old Shakey," her nickname belies her phenomenal ruggedness, dependability, and a long history of helping the needy and keeping the peace. Old Shakey has been chugging around the world as a superb instrument of United States policy ever since 1949—the year of her introduction into the Air Force inventory.

The slab-sided, pregnant-guppy-looking Old Shakey is not an "original." She is really the direct offspring of the sleek, cigar-shaped C-74 *Globemaster I*. *Globemaster I* was the first large transport ordered in response to US Air Force and Army requirements for moving heavy ordnance items. Fifty were ordered, but only fourteen were built. Delivery was completed in



In Korea, C-124 is onloaded with equipment during field exercise.

April 1947. The C-74 could take a 25-ton cargo, but had serious deficiencies in handling bulk. The tubular fuselage would not take the largest field guns and vehicles. Like the older C-54, loading was high off the ground and aft of the wing section. A rear section platform elevator helped, but fell far short of desired direct ground-level loading.

Although the basic specifications for the C-124 were issued in November 1947, the need for a follow-on to the C-74 really crystalized with a single *Globemaster I* assigned to the Berlin Airlift. A study in October 1948 showed that 68 C-74s could haul the 4,500 tons needed daily in Berlin. The same tonnage would require 178 C-54s or 899 C-47s! The difference in flying hours, maintenance support, and base support requirements were just as spectacular.

The opportunity for promoting high-level interest came with Secretary of the Air Force Stuart Symington's visit to Germany during the Christmas holidays in 1948. Gen. William H. Tunner, the airlift commander, laid the problem and the solution before Secretary Symington. He was impressed and, as reported in General Tunner's book, *Over the Hump*, ". . . carried on from there in exhaustive detail, encouraging and improving numerous refinements and improvements. The final result was . . . the famous C-124 *Globemaster*."

The most difficult design problem was making room for very large vehicles while increasing troop and litter space. Large vehicles called for greatly increased headroom. Troops and patients called for less headroom and more floor space. Douglas engineers first made an exhaustive study of military hardware dimensions. The study completed, they concluded that the C-74 would provide the basic airframe for reconfiguration as the newly designated YC-124 *Globemaster II*.

Sliced Down the Middle

Douglas started with C-74 No. 5, originally delivered in September 1946. Mr. S. S. Kreisler headed the preliminary design group which used the basic C-74 tail, wing, and engine configuration. "Reconfiguration," however, is barely the word for the surgery performed on the sleek fuselage section. Figuratively speaking, Douglas sliced lengthwise through the tubular C-74, raised the roof, and added a second story. The new second floor was collapsible and could be stored on board.

With the floor stored, the C-124 could boast of a main cargo compartment about 12 feet wide, 12 feet high, and 77 feet long. Effective volume was over 10,400 cubic feet. Main deck area was 924 square feet. The new craft could haul heavy ordnance items such as maintenance trucks, 155mm Long Tom field guns, road graders and the like. Installed, the floor added enough area to provide for a total capacity of 200 troops or 127 litter patients and 31 attendants. The floor space of the two decks is the equivalent of a good-sized three-bedroom home.

An 11- by 12-foot panel was cut out of the nose-belly section and hydraulically operated clamshell doors and latches were installed. Opened, the clamshells revealed an integral, hydraulically operated loading ramp. Extendable in 40 seconds, the ramp inclined only 17 degrees and permitted direct loading of items up to 50,000 pounds. Non-self-propelled loads could be pulled in by integral pulleys and external winches, also part of the on-board equipment.

Other features included a wing passageway for direct access to the engines while in flight, retention of the C-74 electrically powered 92- by 158-inch rear platform elevator, two 16,000-pound-payload traversing hoists on overhead tracks, and the elimination of external jacks and struts for loading.

The Douglas people say that other than normal bugs expected in a new airplane, production was exceptionally smooth. They attribute their good fortune to the fact that Old Shakey was a product of evolution rather than a complete departure from any aircraft then in existence. Still, the gross changes made in the C-74 frame were bound to create some new problems.

Company technical papers noted that, "the design and fabrication of the two noncircular main fuselage frames located at the wing spars presented a troublesome problem because of their large size." The 12- by 12-foot frame problem involved working aluminum alloy extrusions,

Globemaster II is also known as "old droop nose," the "aluminum cloud," and other flattering names.

the largest having a cross-sectional area of about 4½ square inches.

Douglas untied this knot by bending the extrusions to an approximate shape on a stretch form press. A second operation refined the shape. Lastly, the huge frames were heated and machined to remove excess weight.

The first of the new series, YC-124, was built only to be re-equipped with modified engines and re-designated the YC-124A. The YC-124A first flew in November 1949, and was officially delivered to the Air Force in May 1950.

Operational tests and activity also revealed trouble areas. Early models developed nose wheel shimmy. This was traced to the independently rotating wheels. Adoption of a co-rotating type nose gear with both wheels splined to a common axle eliminated the shimmy. The same models also showed that locating the wing heaters in the wing proper created difficulties and crowded the internal inspection wing walkway and nacelle area. The heaters were moved to wingtip pods.

Heroic Aircraft

Old Shakey is heroic in every detail. Wing span is 174 feet and length 130 feet. She towers 48 feet high and straddles a wheel base of 29 feet. Old Shakey can carry 11,300 gallons of fuel and 330 gallons of oil. Design gross weight was first reported as 175,000 pounds. She can haul a 25-ton load 850 statute miles and return nonstop, or about 1,700 miles one way. Old Shakey has, however, gotten off with 194,500 pounds gross weight and carried 35 tons at lesser ranges. Big as she is, Old Shakey can do 300 mph at 20,000 feet.

Equipping the Air Force got into high gear with the first of 204 C-124As delivered in May 1950. Finally, the C-124C emerged with distinctive "bubble-nose" radome, new search radar, new engines, increased fuel capacity, increased payload, and other navigational improvements. The last of 243 late models was delivered on May 9, 1955, for a total of 448 airplanes.

First sight of Old Shakey is something to exercise your imagination. You are sure that the puny wings and small engines will not keep her in the air. But Old Shakey has confounded many people on this score. Take the case of Maj. Theodore S. Roosevelt, transport pilot.

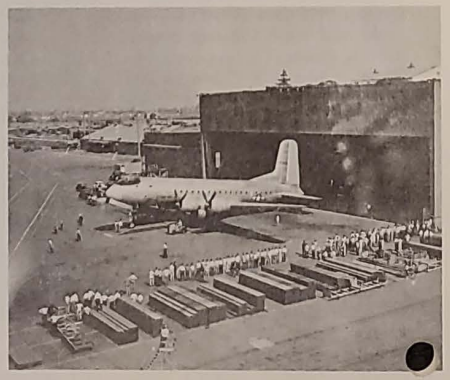
July 14, 1955, found then Captain Roosevelt cruising along at the midpoint between Hawaii and California. The passengers were 179 members of the US Army 187th Regimental Combat Team. Old Shakey had lifted from Hickam AFB at 0530 hours for a routine 12-hour flight to Travis AFB. Six hours out and the gauges all checked. It was a fine day and the crew and troops settled down for the remaining half of the flight. Suddenly, No. 3 engine developed trouble and quit.

Captain Roosevelt quickly checked and was satisfied that the remaining three engines were in good order. The soldiers were reassured and gradually settled down again. All went well for 30 minutes. Then No. 4—on the same side—also quit.

As Roosevelt explained, "the bird was made to perform well on two engines, one on each side. But this was two out on the same side. We were carrying a considerable load. And no one had flown a C-124 that far on two before. We immediately cut airspeed to 170 and took her down to 3,000 feet to take advantage of more favorable winds. The copilot had a real ch[illegible] fighting the bird, which was trying to skew around in a circle. She stayed up, though."

Everything not required for safety was heaved overboard. The Air Force, Coast Guard, and Navy sent 10

Early model C-74 Globemaster I provided basic airframe for development of two-decked Globemaster II.



assorted aircraft to mother Old Shakey home or to assist in rescue in case of ditching. The liner *Luraline* watched from below.

Old Shakey was down to 1,500 feet crossing the coast. Travis was closed because of weather, so Roosevelt headed for Hamilton. He blew some tires on landing, but delivered all aboard safe and sound.

Major Roosevelt can also vouch for Old Shakey's ruggedness. Take the time he landed on a far northern ice runway newly-built for servicing the air defense DEW line.

"Well," the major said, "this was something new for our crew. It was very cold. The ice runway was so hard and smooth that traction was almost impossible—but we didn't know about that. We set the bird down, tried to stop, and nothing happened! That was bad enough, but then this tremendous gust of wind caught us broadside. That big airplane just blew off the runway like a Piper Cub! She finally stopped some way off the strip."

We asked about damage and the problem of getting the plane out.

"Oh," Roosevelt laughed, "that is the amazing thing about this old bird. We had some relatively minor damage. But we just cranked her up and taxied around until we got back on the runway."

Finally, Roosevelt had the dubious honor of learning that Old Shakey is big enough to hide stowaways. During an en route stop in the Azores, a crewman heard a baby cry in the supposedly empty airplane. A search uncovered the German wife of an American airman and their 10-month-old child. The airman, determined to get his family into the States, had hidden them in a large box stacked among the regular cargo. They could not enter the States and could not remain on Portuguese territory. The legal aspects of the case frayed crew and international nerves before being solved.

These experiences only mirror a thousand other similar images of Old Shakey. Her logbooks read like a modern day Odyssey. Her travels began with the dispatch of a test C-124 to Japan in 1950. Old Shakey hauled 35,000 pounds of hand grenades to Korea and returned with 165 wounded soldiers the same day. She also tested Douglas' capability statements by lifting 50,000 pounds of cargo and then 200 fully equipped troops on another day.

Extracts from an imaginary diary would show just how much the old girl got around.

Japan 1954: 500 French troops wounded in the battle of Dien Bien Phu evacuated to the United States and then on to France.

Lebanon 1958: 5,500 tons of cargo and 5,400 troops airlifted to Beirut to keep the peace.

Morocco 1960: 371,000 pounds of shelters, cots, and bedding delivered to Agadir. Refugees left homeless by earthquakes evacuated.

Brazil 1960: 50 trees, one from each state, flown from Miami to the new city of Brasilia as a good will gesture.

Cambodia 1961: Rains and floods create havoc and contaminate the drinking water. Old Shakey delivers four cranes weighing 44,380 pounds each and a D-7 Caterpillar tractor weighing 40,300 pounds.

British Honduras 1961: Hurricane Hattie tears Belize to shreds. Airlift delivers mobile radio equipment, generator units, a jeep, a 2 1/2-ton truck, a water trailer, and fuel for British helicopters.

Egypt 1961: Four C-124s haul 15 tons of insect killer to fight an invasion of army worms and other pests destroying the cotton crop.

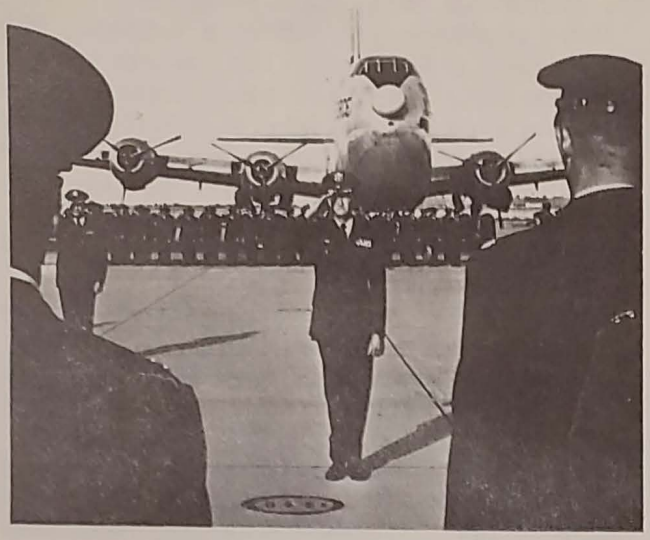
Tanganyika 1962: 55,000 natives isolated by floods are threatened by starvation. Old Shakey flies 77 missions and drops 1,543 tons of corn for food.

Laos 1963: The Tom Dooley hospital is desperately short of drugs. Donated supplies are picked up at Travis AFB and delivered in Bangkok.

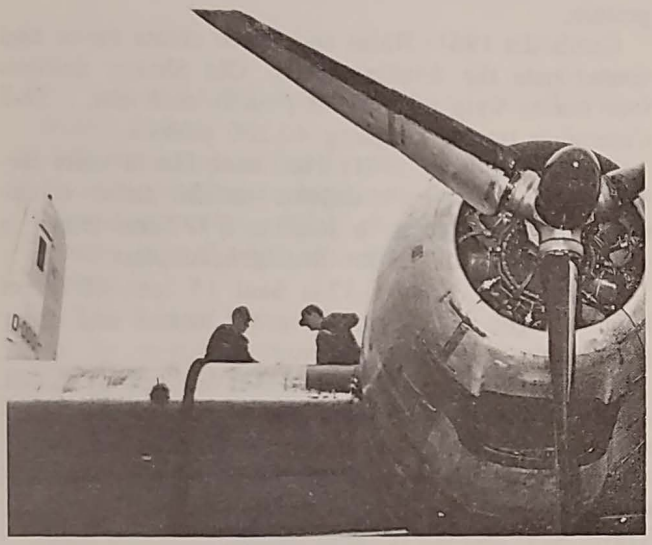
The list goes on: vital supplies to an ice floe island at the North Pole, supply runs to the South Pole for Operating Deep Freeze, cheering a bleak Christmas by hauling toys to Berlin, an earthquake disaster mercy lift to Iran, and support activity in the Cuban crisis. Military exercises Checkmate, Long Thrust, Southern Express, Tidal Wave, and Big Lift come and go. Old Shakey hustles anything, anywhere, anytime.

But Old Shakey's days are numbered. The exotic jets are rolling off the line. The C-141 *Starlifter* is already crowding for room. The yet-to-come C-5A heavy logistics transport will probably end C-124's active-duty career. So a giant step in air progress will end an era.

Be that as it may, transport crewmen for years to come will gather around to reminisce about the days of the big lady of the skies. She was gross and slab-sided and had a big nose. She had awful tiny wings and putt-putt engines. But man, Old Shakey could fly, she *really* could fly.




HOME OF THE 937TH SOONER GROUP




U.S. AIR FORCE