

= Douglas XCG @-@ 17 =

The Douglas XCG @-@ 17 was an American assault glider , developed by the conversion of a C @-@ 47 Skytrain twin @-@ engine transport during World War II . Although the XCG @-@ 17 was successful in testing , the requirement for such a large glider had passed , and no further examples of the type were built ; one additional C @-@ 47 , however , was converted in the field to glider configuration briefly during 1946 for evaluation , but was quickly reconverted to powered configuration .

= = Design and development = =

With the introduction of the Douglas C @-@ 54 Skymaster four @-@ engined transport aircraft , the United States Army Air Forces , observing that conventional gliders then in service would be an inefficient use of the C @-@ 54 's power and capacity , determined that a requirement existed for a new , much larger assault glider . It was determined that the best solution to the requirement was the conversion of the Douglas C @-@ 47 Skytrain , already in large @-@ scale production , to meet the requirement . The C @-@ 47 could be converted to a glider configuration with minimal alteration to the airframe , and would provide the required capacity .

Trials conducted using a conventional , powered C @-@ 47 , first conducting ordinary deadstick landings , then being towed by another C @-@ 47 , indicated that the scheme was feasible . Therefore , a C @-@ 47 @-@ DL was taken in hand for conversion into a glider , which was given the designation XCG @-@ 17 . The aircraft , formerly a Northwest Airlines DC @-@ 3 that had been impressed into military service at the start of World War II , was modified by the removal of the aircraft 's engines ; the nacelles , containing the landing gear , remained in place , covered with aerodynamically profiled hemispherical domes for streamlining , containing fixed weight to compensate for the removal of the engines . Other equipment , no longer necessary with the conversion to an unpowered configuration , was also removed to save weight ; items removed included the aircraft 's wiring and bulkheads , along with the navigator 's and radio operator 's positions .

= = Operational history = =

The conversion , carried out at Clinton County Army Air Field , was completed on June 12 , 1944 , with the aircraft undergoing its initial flight test shortly thereafter . The flight testing of the XCG @-@ 17 proved that the aircraft was satisfactory ; compared with conventional gliders in service , the aircraft possessed lower stalling and higher towing speeds than conventional gliders , as well as gliding at a significantly shallower angle . Tow tests were conducted using a variety of aircraft ; the most commonly used configuration was a tandem tow by two C @-@ 47s , with the towing aircraft coupled in tandem and the leading aircraft detaching following takeoff . This configuration was dangerous for the " middle " C @-@ 47 , however , and it was determined that a single C @-@ 54 was the optimal tug aircraft .

The XCG @-@ 17 's cargo hold had a capacity of 15 @, @ 000 pounds (6 @, @ 800 kg) ; alternatively , up to 40 fully equipped troops could be transported , these figures being significantly larger than conventional gliders ' capacity . The XCG @-@ 17 was also capable of carrying three jeeps in a single load , or alternatively two 105 @-@ millimetre (4 @. @ 1 in) howitzers . Regardless of the aircraft 's load , no ballast was required to maintain the aircraft 's center of gravity , a trait unique among American assault gliders .

Despite the satisfactory results in testing , however , the aircraft failed the Army 's requirement that it be capable of landing on unimproved fields ; in addition , by the time the evaluation of the XCG @-@ 17 was completed the need for such a large assault glider had passed . The primary role for the glider had been intended to increase the amount of supplies that could be carried to China over " The Hump " ; the war situation had , however , become more favorable and the added capacity an oversized glider would provide was no longer required . No further examples of the type were

produced ; the prototype , its trials complete , was placed in storage , being ferried to Davis @-@ Monthan Air Force Base for disposal in August 1946 .

In August 1949 , the aircraft was sold to Advance Industries , its engines being reinstalled to return the aircraft to powered status in DC @-@ 3C configuration . Some sources , however , indicate that the XCG @-@ 17 was reconverted to C @-@ 47 configuration in 1946 . Following its restoration to powered status , the aircraft was transferred to Mexico , where it remained in civilian service until 1980 .

= = Field conversion = =

Although the XCG @-@ 17 failed to lead to any production of a C @-@ 47 derived glider type , a single C @-@ 47 was converted in the field to glider configuration by the Fifth Air Service Area Command , located at Nichols Field on Luzon in the Philippines , during January 1946 . Carried out in much the same manner as the XCG @-@ 17 , the conversion included octagonally shaped fairings over the engine mountings , with an auxiliary power unit from a B @-@ 24 Liberator bomber being installed .

Referred to as " XCG @-@ 47 " as well as " XCG @-@ 17 " , and named " Nez Perce " , the aircraft undertook its initial flight following conversion on June 17 , 1946 , towed by a C @-@ 54 . The flight tests of the field @-@ converted aircraft proved favorable , and an ambitious flight , towing the aircraft from Luzon to Tokyo in Japan , was planned . This flight was intended to prove the suitability of large gliders to act as an " aerial freight train " for regular transport .

The flight , conducted in late June 1946 , took 11 hours of flight time and included an overnight stay on Okinawa ; covering 1 @, @ 800 miles (2 @, @ 900 km) , it concluded at Tachikawa Airfield near Tokyo . Despite the success of the flight , the " aerial freight train " concept did not catch on ; the aircraft had its engines re @-@ fitted in August 1946 and was returned to service as a normal C @-@ 47 .

= = Operators = =

= = Military (as C @-@ 47 , then XCG @-@ 17) = = =

United States

United States Army Air Forces

= = Civilian (as DC @-@ 3C) = = =

Mexico

Petroleos Mexicanos

= = Specifications (41 @-@ 18496) = =

Data from

General characteristics

Crew : Two (Pilot and copilot)

Capacity : 15 @, @ 000 pounds (6 @, @ 800 kg) cargo or 40 troops

Length : 63 ft 9 in (19 @. @ 43 m)

Wingspan : 95 ft 6 in (29 @. @ 11 m)

Height : 17 ft (5 @. @ 2 m)

Wing area : 987 sq ft (91 @. @ 7 m²)

Empty weight : 11 @, @ 001 lb (4 @, @ 990 kg)

Gross weight : 26 @, @ 000 lb (11 @, @ 793 kg)

Performance

Maximum speed : 290 mph (467 km / h ; 252 kn) max towing speed

Cruising speed : 190 mph ; 165 kn (305 km / h) gliding speed

Stall speed : 35 mph (30 kn ; 56 km / h)

Maximum glide ratio : 14 : 1

Wing loading : 26 @ 3 lb / sq ft (128 kg / m²)