vanced areas these cargoes probably alternated). The only drawbacks, inherent in a tail-dragger design, lay in partially obscured forward vision from the cockpit when taxiing and in maintenance, awkward servicing stands being essential for work on the planes' engines. Since no one, as of 1938, had any idea that the Goon would be around for the next four decades nostalgia wasn't a factor when design work began on a replacement intended to eliminate troubles encountered with the Three.

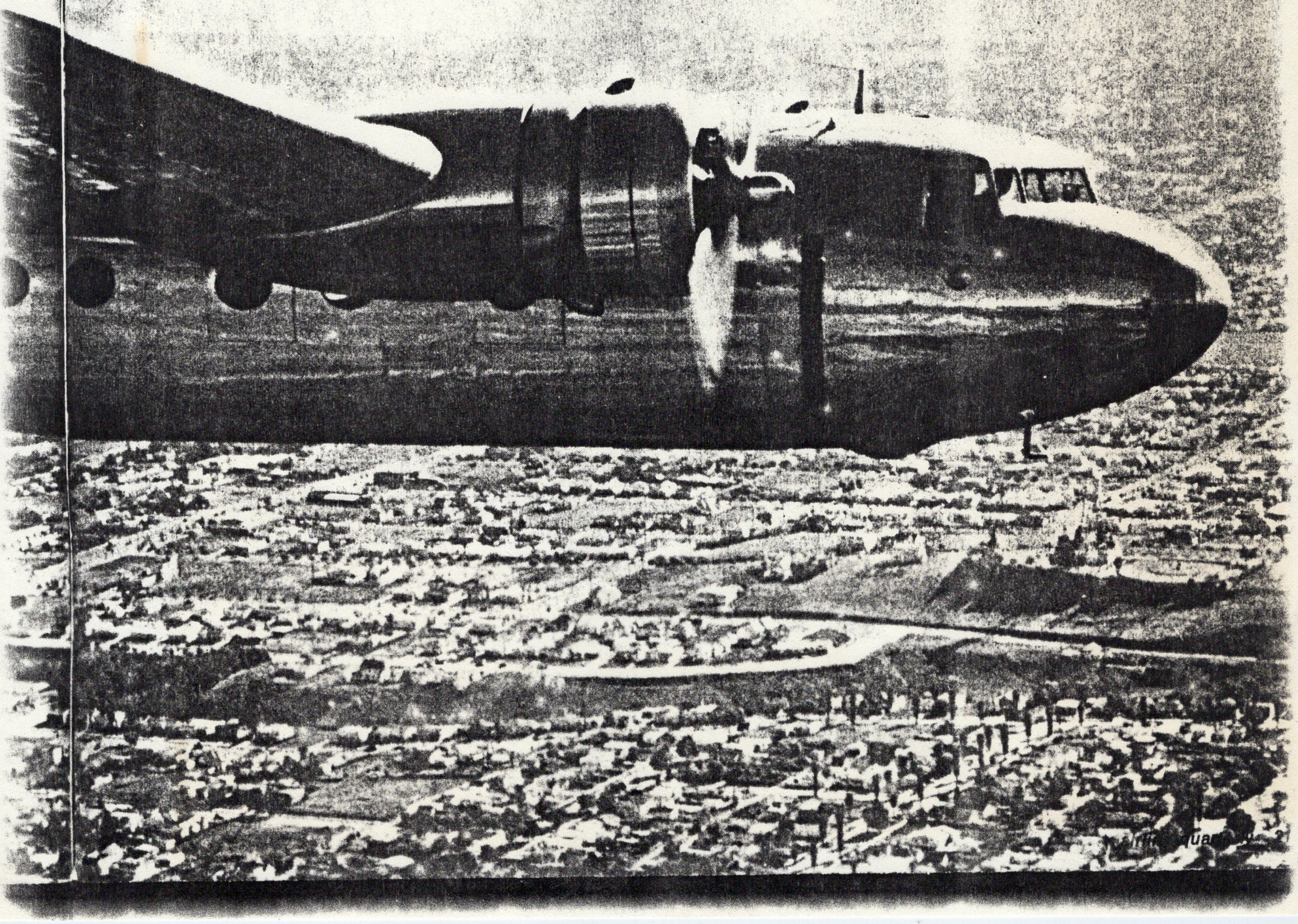
Taking shape in the recently established Douglas plant at El Segundo (or Mines Field, depending on what one felt like calling it) the plane was designated Douglas Commercial Model 5, the four-engined DC-4E with its tricycle landing gear and triple tail already having made its appearance. Although the layout has become internationally familiar today,

Everyone's heard of the DC-4 and DC-6; even the DC-1 and 2 are fairly familiar faces, but how many times have you seen a DC-5? Well, sit back, for you're about to make the acquaintance of this enigma.

YES, VIRGINIA, THERE WAS A DC-5

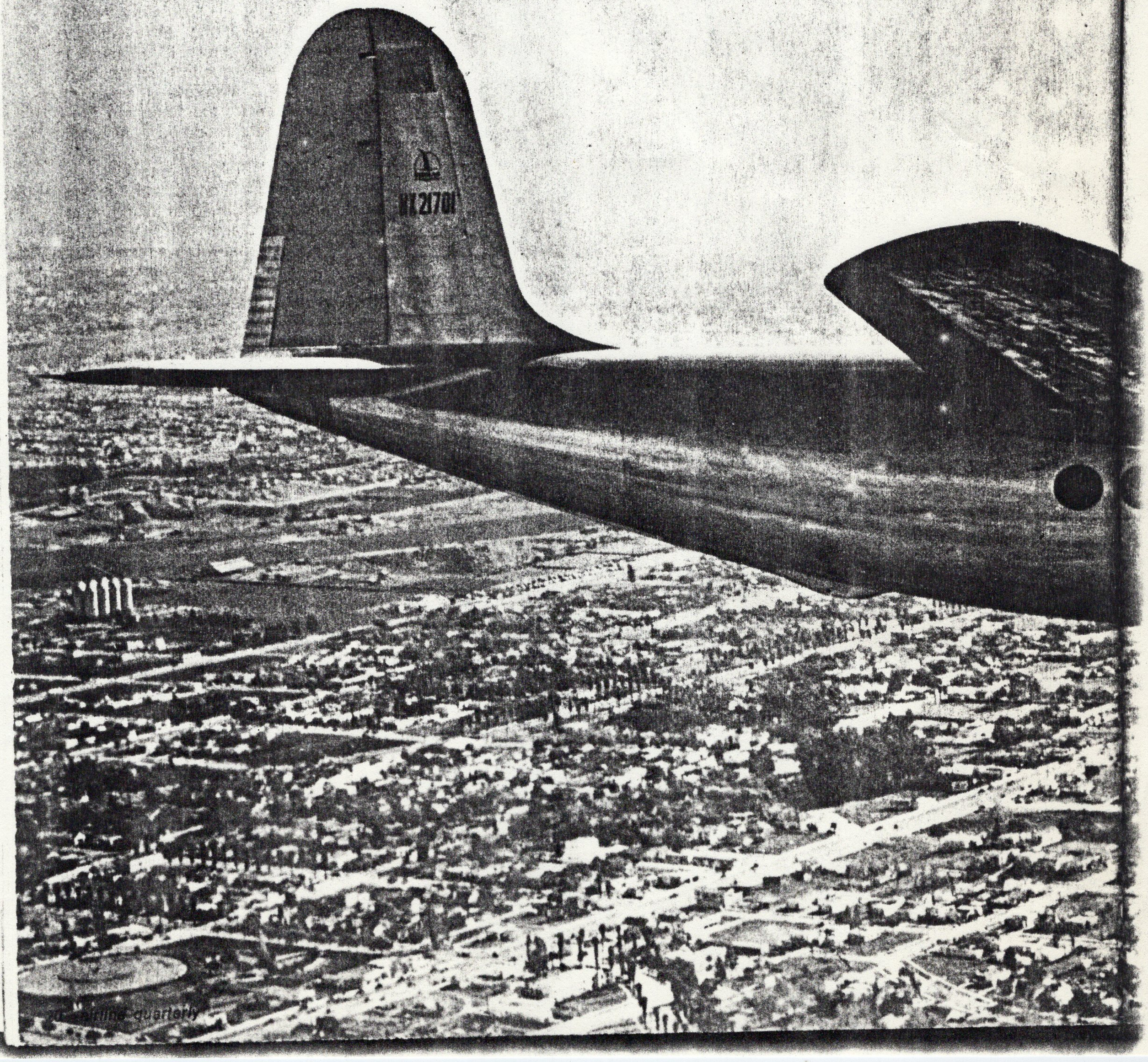
By Robert L. Trimble

PHOTOGRAPHS COURTESY OF McDONNELL DOUGLAS CORPORATION, GENERAL ARRANGEMENT DRAWING BY JOHN BATCHELOR



As far as many aviation buffs, and not a few "authorities," are concerned, there's a genuine gap in the Douglas Company's family tree, falling between the DC-4 and its apparent successor, the DC-6, both of these being large four-engined designs which formed the backbone of the United States' post-war transport fleet. "R3D" barely raises an eyebrow among the military fans while "C-110" is greeted by a blank stare; however both of these, and the missing plane—the DC-5—are literally one and the same. Now, dear reader, settle back and get comfortable, for we are going to take a closer look at this "mystery" plane.

Donald Douglas' Southern California company had captured a hefty chunk of America's aviation market and deservedly so, with its trio of all-metal twin-engine transports which could fly through anything but a mountain. Easily maintained, unbelievably dependable and built as ruggedly as a bridge the DC-1, 2, and especially the DC-3 — which would still be earning its keep forty years after it first rolled off the Clover Field lines, having earned near-immortality and the name, Gooney Bird—could be found in every "corner" of the world, hauling everything from steer manure to passengers (in some of the less ad-

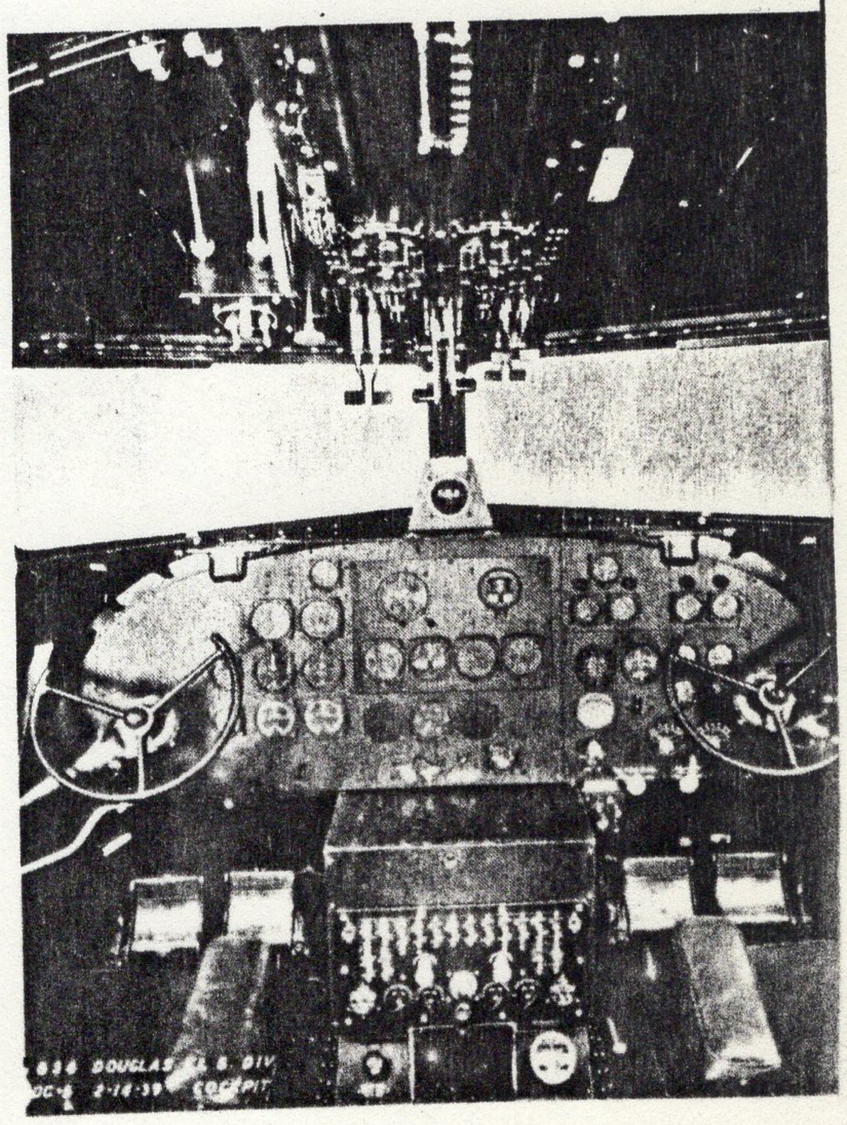


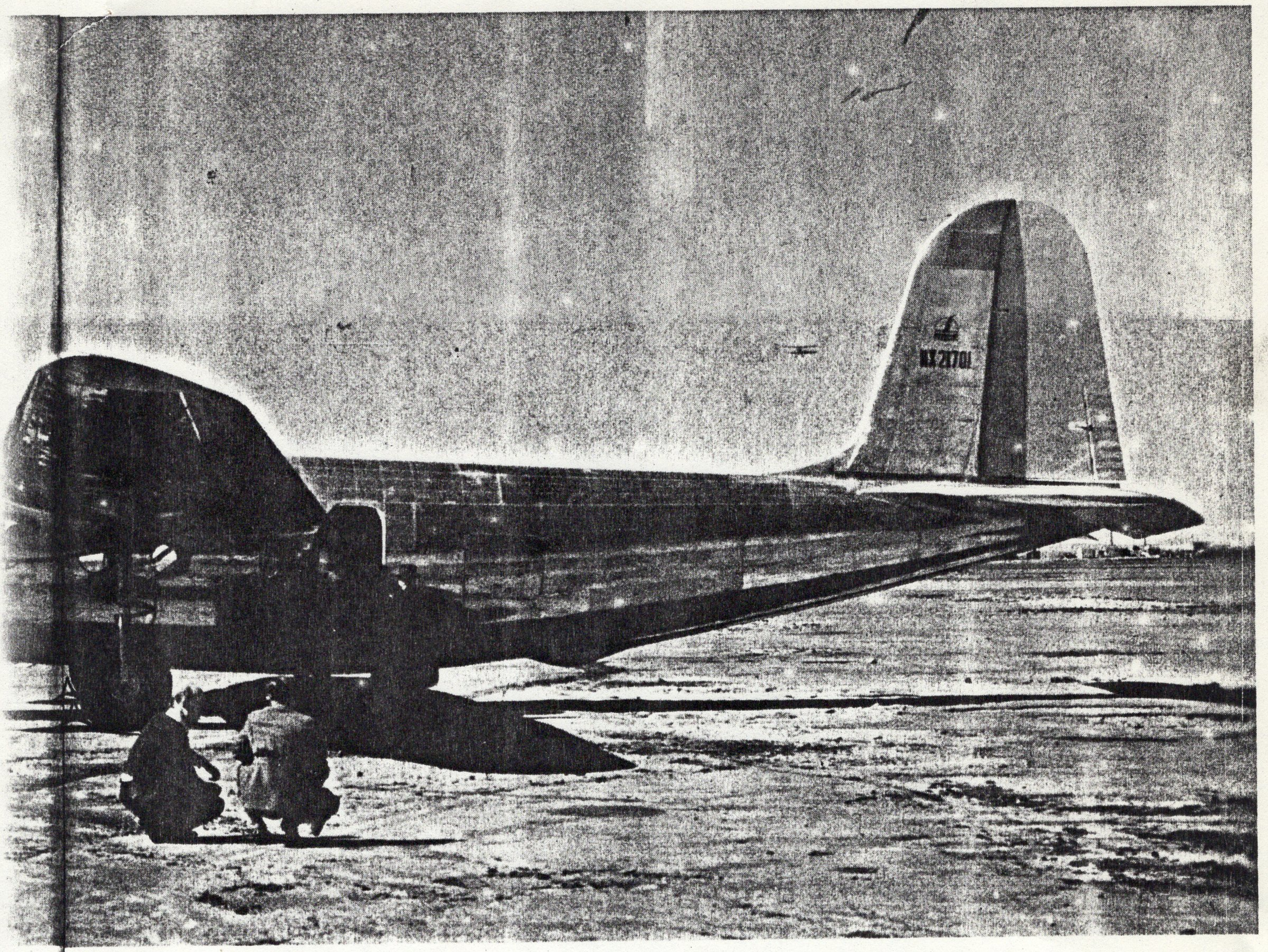


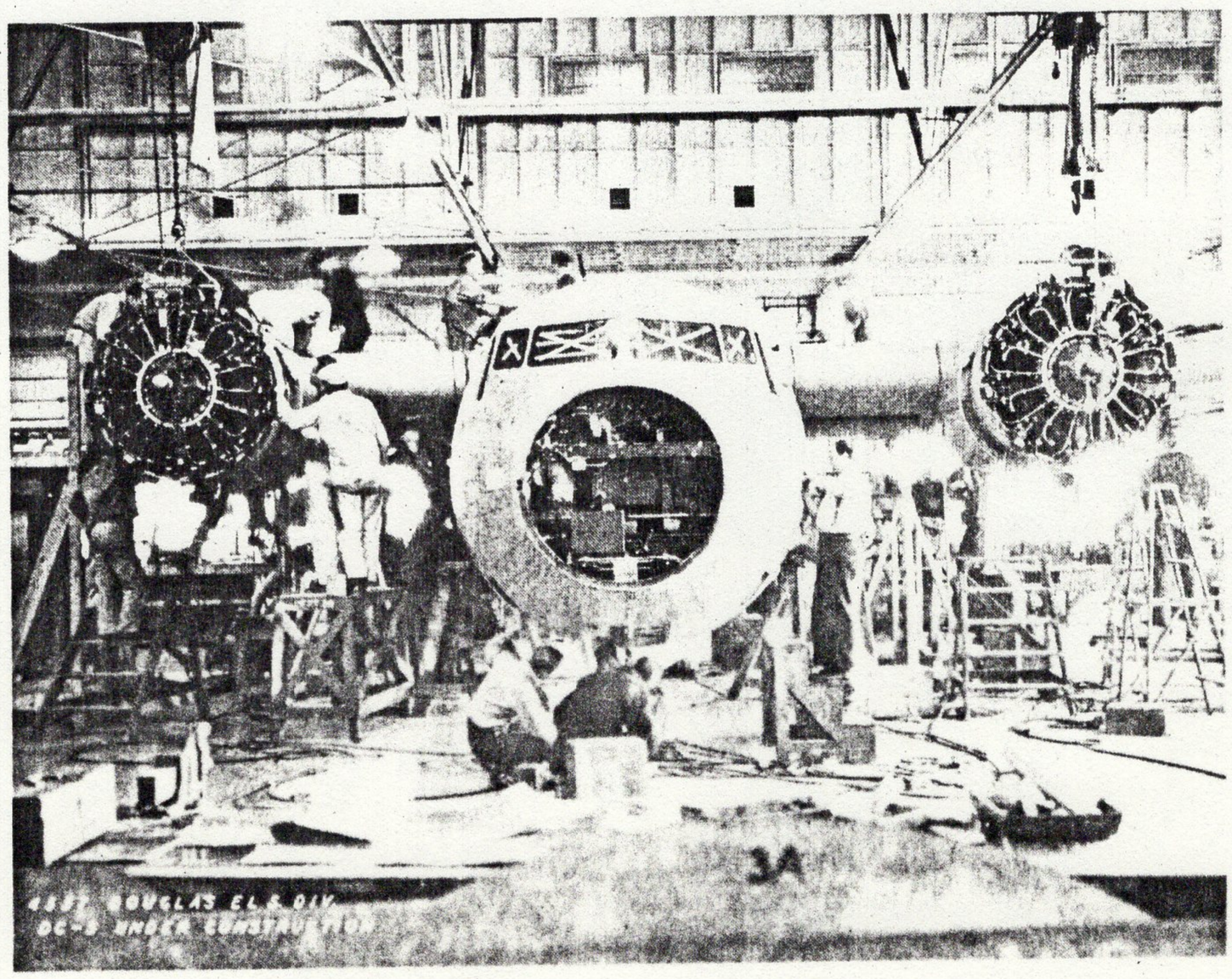


As is apparent, in this view into the cockpit, the plane hasn't been flown yet, since a number of instruments have not even been installed. One object in designing the DC-5 was to eliminate ground-handling problems caused by the DC-3's nose-high attitude, which blocked forward vision. Due to its tricycle landing gear the view from the Five's front office was virtually unobstructed.

Although the DC-5 could hardly have been considered luxurious, accommodations were adequate. The door in the aft bulkhead led to toilet and a baggage compartment, access to this being through a hatch in the left side of the fuselage.

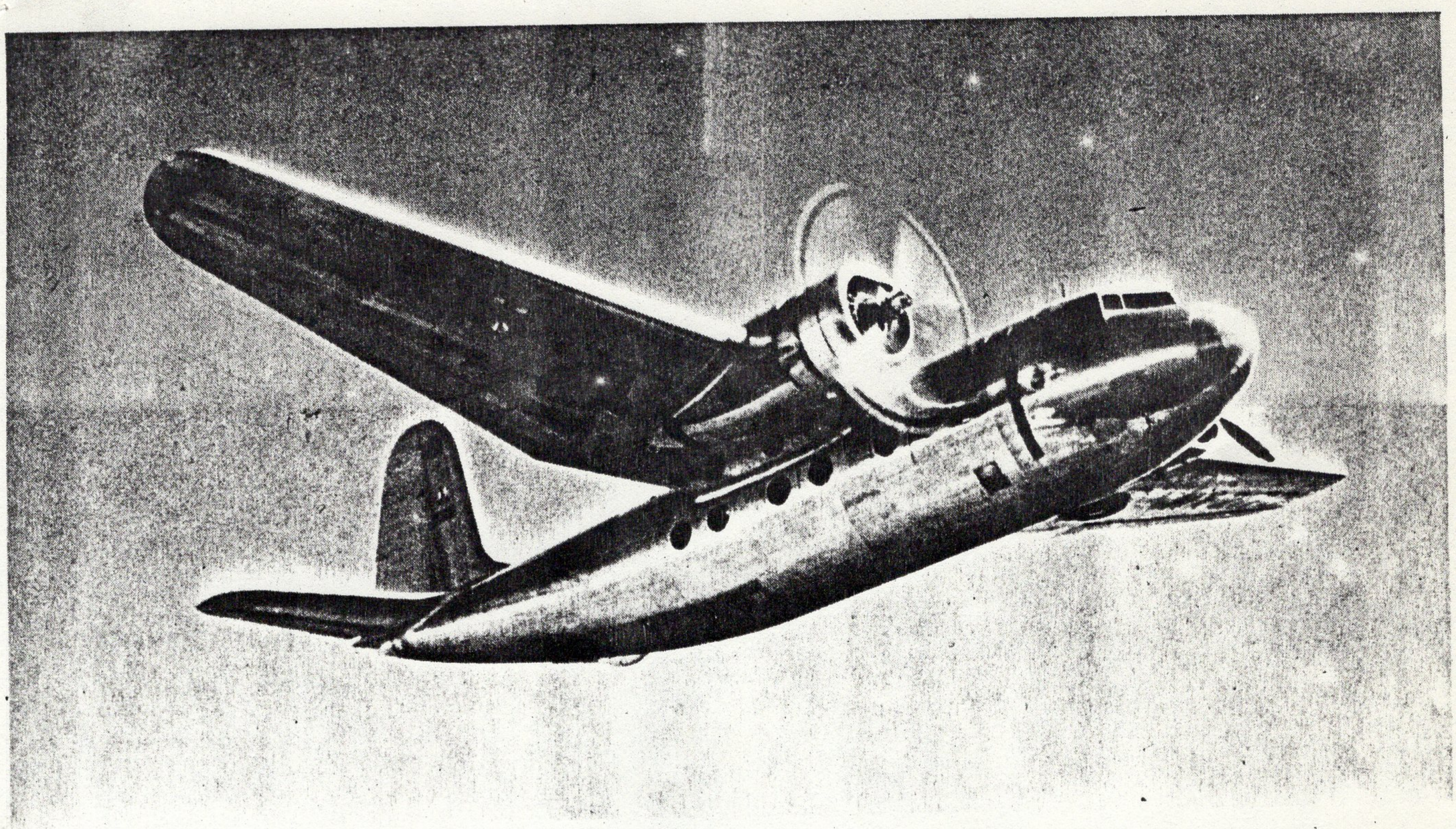




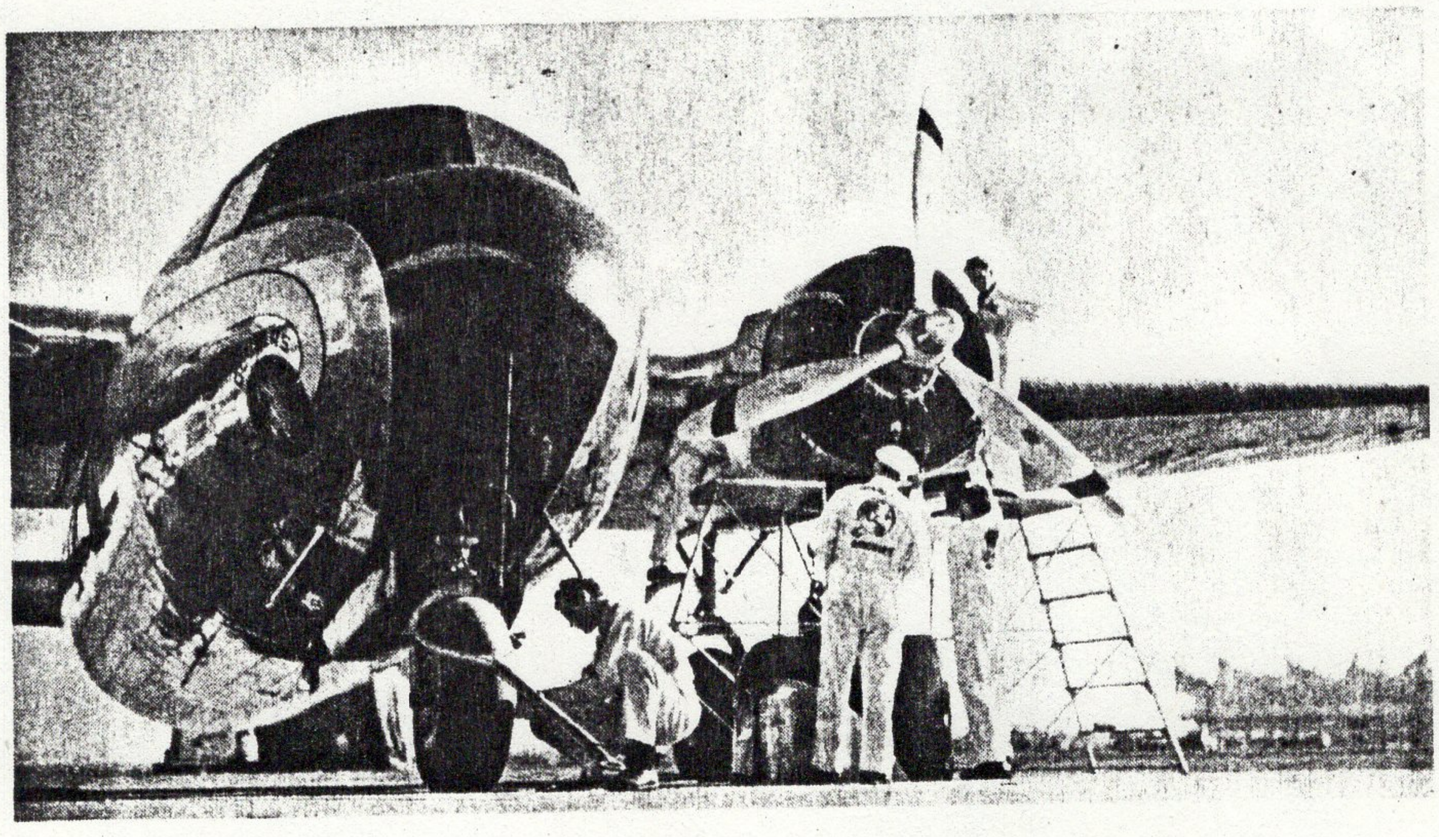


Photographed five days before its maiden flight from Mines Field, the DC-5 carries an experimental-category license, as shown by the "NX" prefix. The plane was designed to carry eighteen passengers, seated in pairs on either side of a narrow center aisle.

The DC-5 prototype, Douglas serial 411, was built at El Segundo (or Inglewood, or Mines Fiéld, the choice of name is yours) as a replacement for the DC-3. Although production was suspended after only a dozen had been completed the plane can be described as the first commercial transport with tricycle landing gear.



One of the tests carried out on the DC-5 involved its ability to operate on a single engine. According to company publicity it could still climb at 240 feet per minute with one shut down; it obviously would fly in this condition.

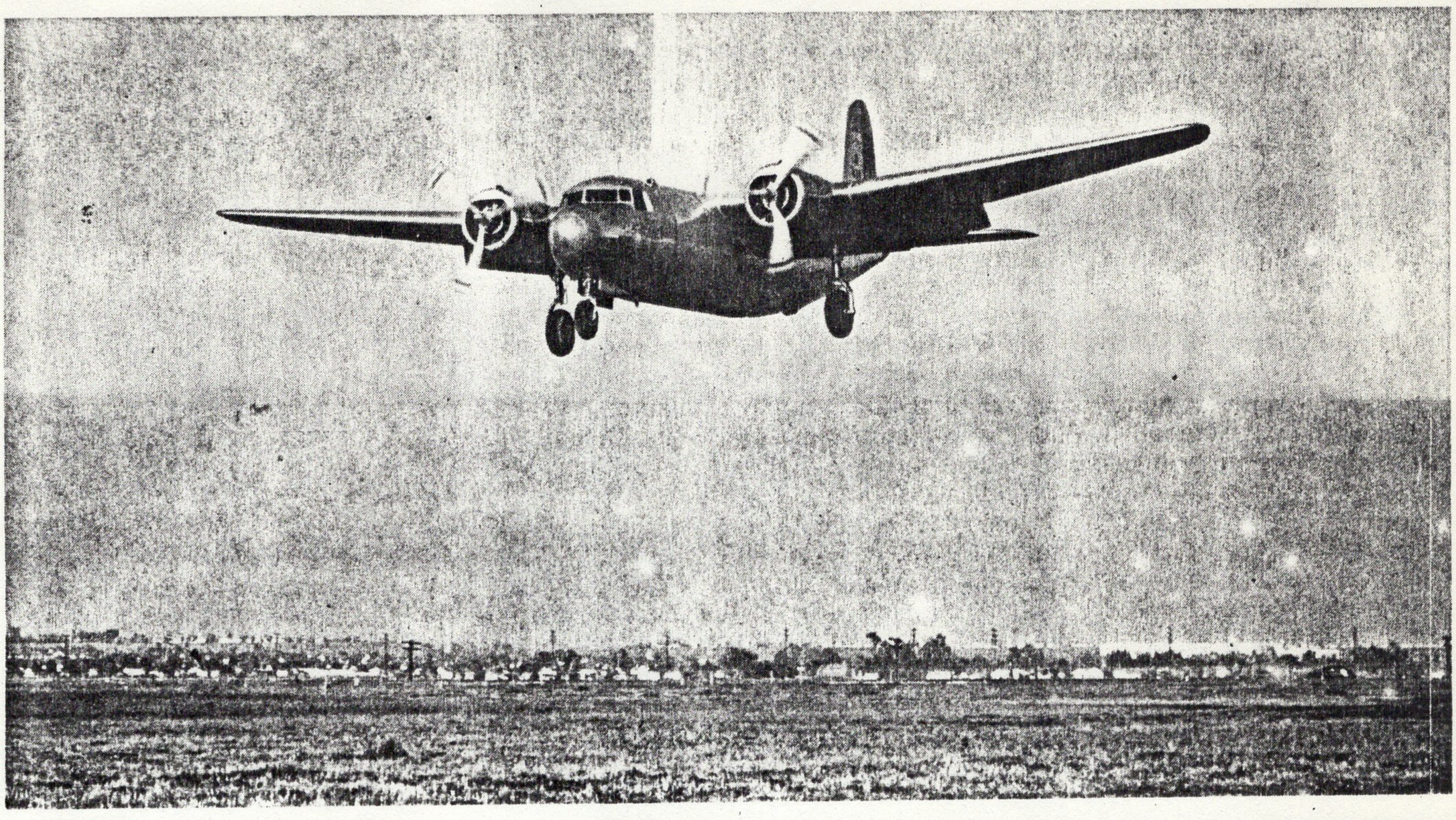


A crew working on the prototype's port Wright 1,000 hp R-1820-44 convincingly demonstrates the ease with which the plane could be serviced and maintained. As a comparison with earlier photographs shows, there have been some major changes in the plane's markings, with airline-style paint trim and a greatly enlarged company trademark. The engine cowling and exhaust stacks have also been modified, several different configurations being tried.

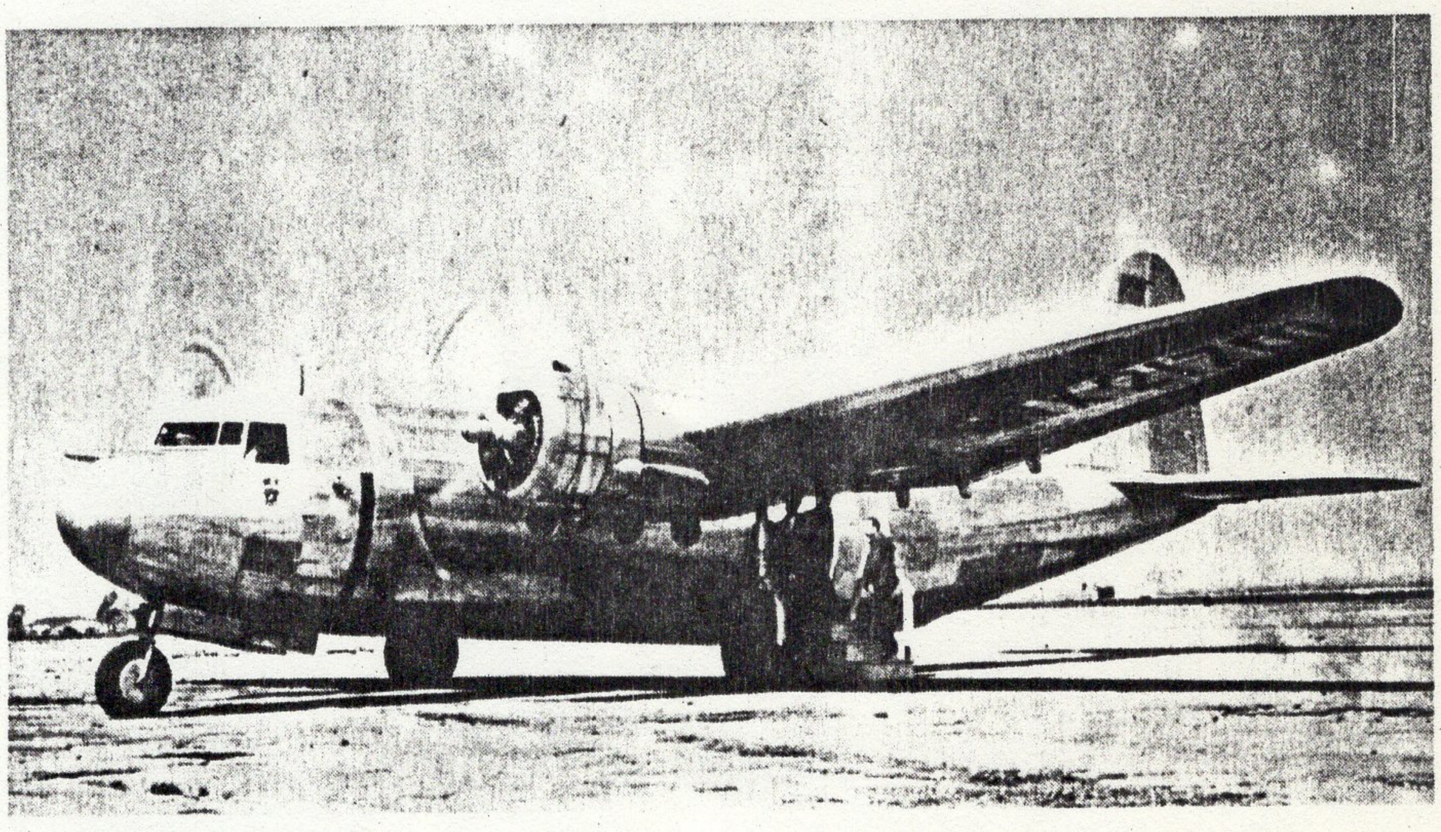
in 1938 it represented a revolutionary change, for the high-winged DC-5 rode close to the ground for ease of entry, loading, and servicing. Originally eighteen passengers were to be carried, this being increased to twenty-four in the limited run of production aircraft by the addition of two more side-by-side seats. While not sybaritically luxurious, the plane's layout was comfortable and fairly roomy. Despite its departure from the then-traditional configuration, Douglas' reputation was such that firm orders for a dozen DC-5s had been placed before the prototype even left the factory. A domestic carrier, Pennsylvania Central (which would be renamed Capital, then incorporated into United Air Lines) wanted six; two were heading south to Colombia's *Sociedad Colombo-Alemana de Transportes Aereos,* ancestor of today's AVIANCA; while the remaining four were for the Netherlands' *Koninklijke Luchtvaart Maatschappij.*

After the usual ulcer-producing gestation period, when nothing goes right and deadlines were yesterday, the first DC-5, Douglas serial 411, experimental license NX21701, duly made its debut and lifted off from Mines Field on February 20th, 1939, with company test pilot Carl A. Cover at the controls. As is the case with every new type it suffered from a few problems, the most serious being an overweight condition which reduced both performance and payload, but at the time no one felt that these were serious. A bit of redesigning and detail refinement would take care of them in time. Some instability had cropped up, countered by incorporating fifteen degrees of dihedral in the horizontal tail, which initially had been virtually dead flat. Additionally the engine cowlings were revised, several exhaust stack arrangements being tried, but these changes were made after the first of KLM's aircraft had been completed, the alterations then being retrofitted.

Whatever its potential virtues, the DC-5 lost out to Time, for on Septem-



Seen here early in its test program, the prototype has just crossed the boundary fence and is settling towards Mines Field's only runway. Aviation Boulevard is visible in the background, making it easy to locate the spot precisely if your tastes run to "then and now" comparisons.



The DC-5 was easier to enter and leave than any of its contemporaries, a point which had been kept in mind throughout its design period and one which would appeal to potential buyers, for this eliminated the need for elaborate and expensive boarding ramps which could only be used with a limited number of aircraft.

ber 1st German forces invaded Poland from the west while Soviet units attacked from the east; two days later Great Britain declared war on Hitler's regime, and the United States government was finally forced to take a realistic look at its own defense posture. Isolationist elements had been trying desperately to preserve this nation's jealously guarded neutrality, but the presence of aggressively expansionist tyrannies both in Europe and Asia made this policy increasingly difficult to maintain. Accordingly military contracts were let or rewritten and expanded, in part to cover orders from friendly European governments, the DC-5's lines being usurped to build additional Dauntless dive bombers for the Navy and Marines. The dozen transports *were* completed, but in this struggle for *lebensraum* the Clunk came out the winner.

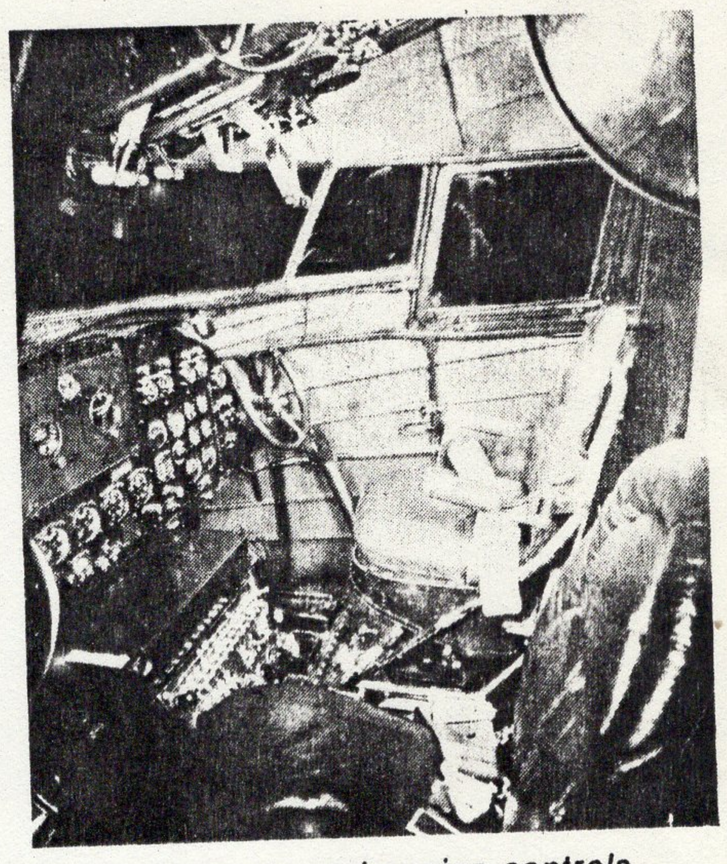
Relicensed following certification, NC21701 was bought by William E. Boeing, who'd quit as president of the aircraft company he'd started back in the Teens at Seattle. Remodeled, the plane now seated only sixteen, and was named *Rover* by Boeing, anticipating Hugh Hefner's *Big Bunny* DC-9 by thirty-odd years. In due course KLM took delivery of its planes, the war in Europe giving the quietus to plans to use them on Continental routes; two apiece were tagged for service in South America and Southeast Asia. Registered PJ-AIW and AIZ, named *Wakago* and *Sunbird* respectively, the first pair arrived at Willemstad, Curacao, in May of 1940; AIW used one of Douglas' alternate layouts to carry twenty-two passengers while AIZ seated eighteen, a cargo bay having been created in the forward fuselage. Once in their new home the two planes spent the next year shuttling busily between Willemstad and fields in Surinam and Venezuela.

The remaining duo travelled out to Java by sea, taking up residence under the corporate wing of KLM's Far East subsidiary, *Koninklijke Nederlandsch-Indische Luchtvaart Maat-*

schappij, where they gamely showed the flag alone until, in June of 1941, their stablemates arrived. *Wakago* and *Sunbird* had flown up from Curacao to Douglas' Santa Monica plant, where they were overhauled and then dismantled for crating, and shipped west aboard a freighter; on their arrival they traded their Guiana "PJ" registrations for East Indies "PKs," becoming PK-ADC and ADD to the early birds' ADA and ADB.

Neither Penn nor SCADTA were to see their anticpated aeroplanes, for the government stepped in and impressed all seven remaining Fives, transferring them to the Navy and Marine Corps for use as utility transports under the basic designation, "R3D." Bureau of Aeronautics B-series serial numbers 1901 through 1907 inclusive were assigned, but '01's military career ended as soon as it had begun, the plane crashing at the factory on a check flight on June 1st, 1940, and burning out. R3D-1s, 1902 and '03 were luckier, arriving at their first duty station, NAS Anacostia (now part of Andrews AFB, located just outside the Capital) two days apart the following month.

Picking up the balance as R3D-2s, the Marines divided their charges between the coasts, 1904 and '05 going to a utility squadron, VMJ-2, which shared NAS San Diego with the Navy's blue-jackets. Here they were joined by 1907, attached to Marine Air Base Group 2, while 1906 flew east to join VMJ-1 at MCAS Quantico, Virginia. '06 and '07 put in their time in the ZI, or Zone Interior, being used to train Marine



The instruments and engine controls were laid out a bit differently in KLM's aircraft, as a comparison with the prototype's cockpit shows.

WAKAGO incorporated a number of retrofitted modifications, the result of NC21701's flight test program. Most obvious is the changed tail group, the horizontal stabilizer being given a 15-degree dihedral to improve stability, but the nacelles have also been altered as have the exhaust stacks.

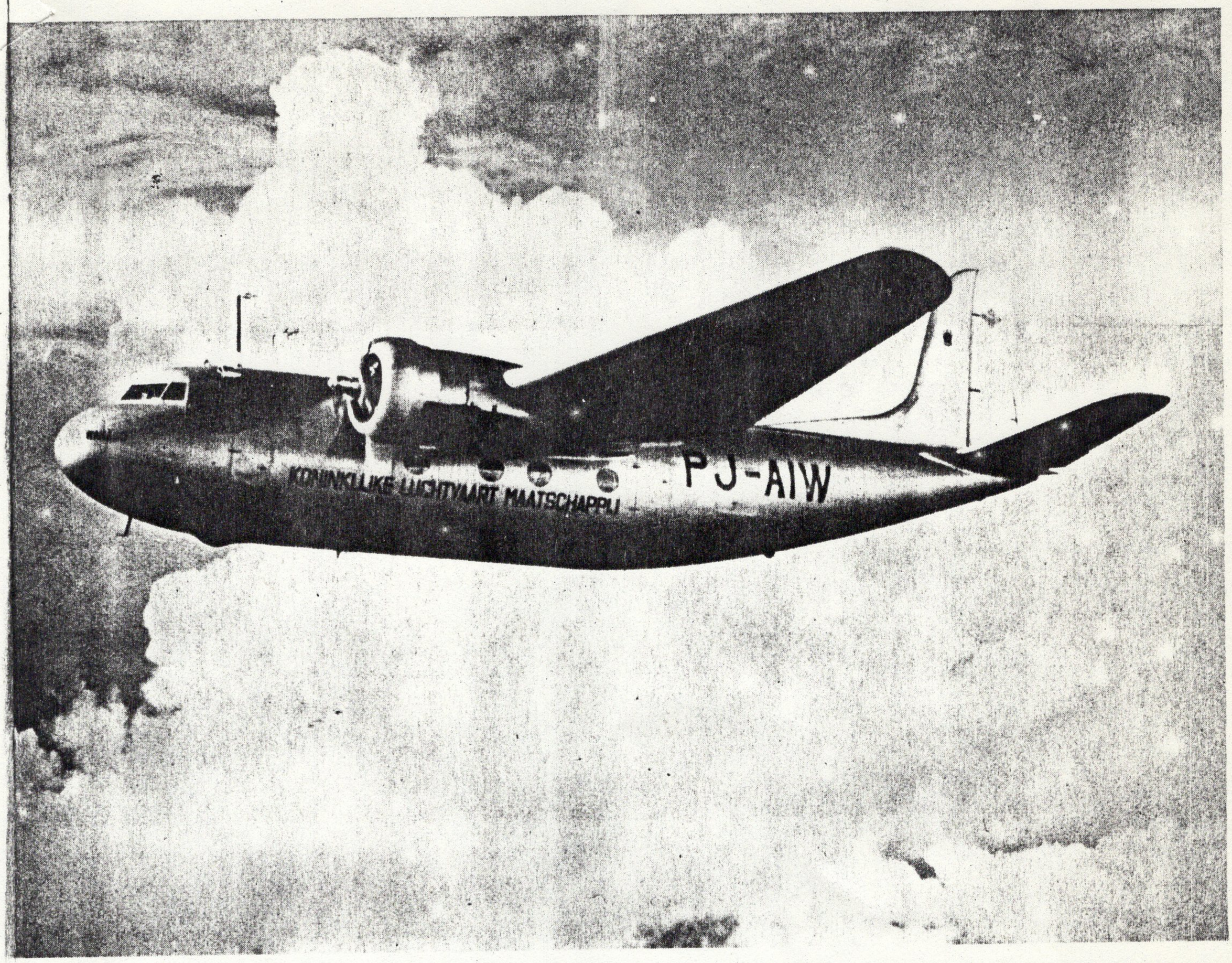
Following its flight tests the DC-5 was relicensed, and was bought by William E. Boeing, who had resigned as president of his Seattle-based aircraft company. Remodeled internally to seat sixteen people the plane was named ROVER and used by Boeing as his personal transport—effectively an Art Deco Big Bunny a la Hugh Hefner.

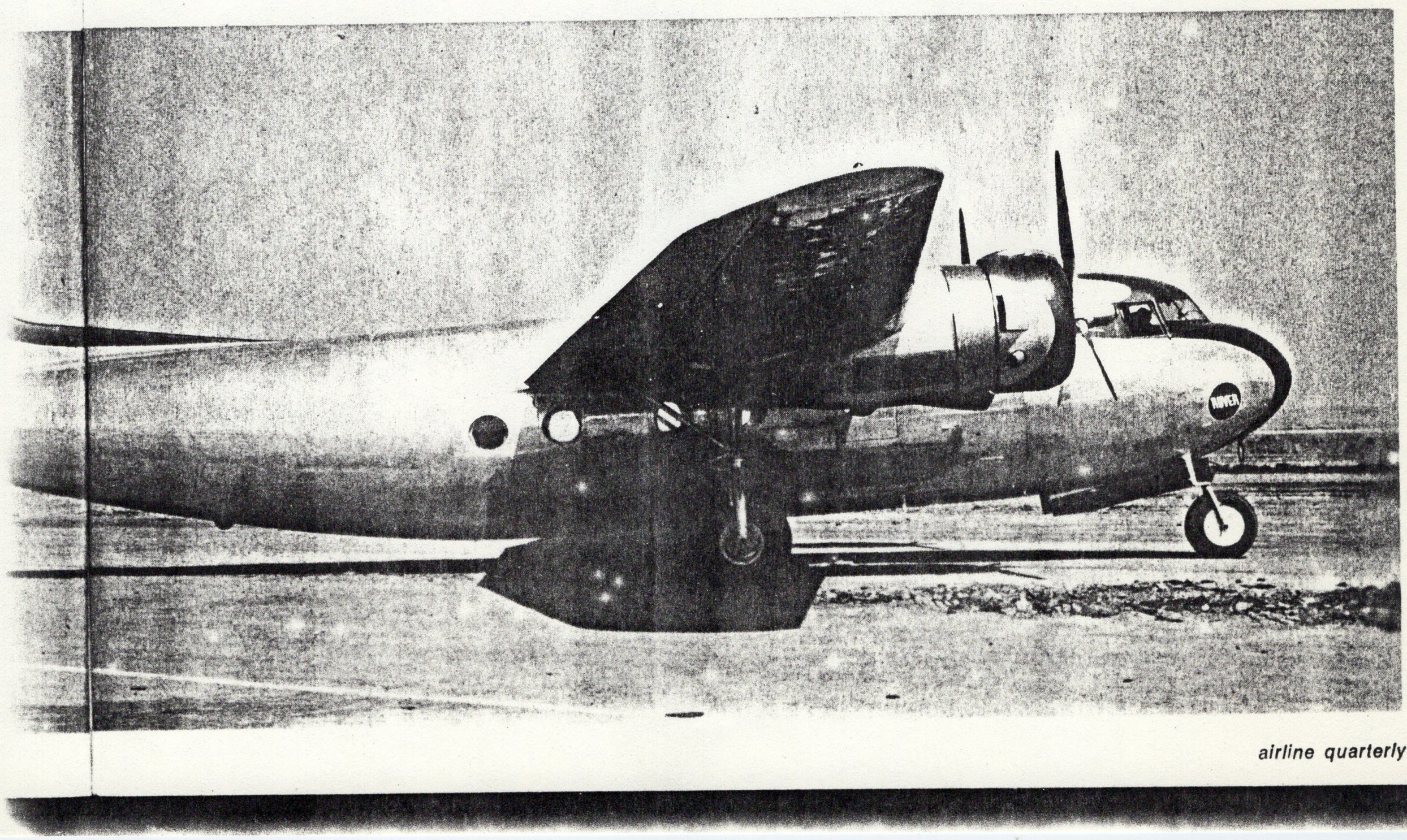


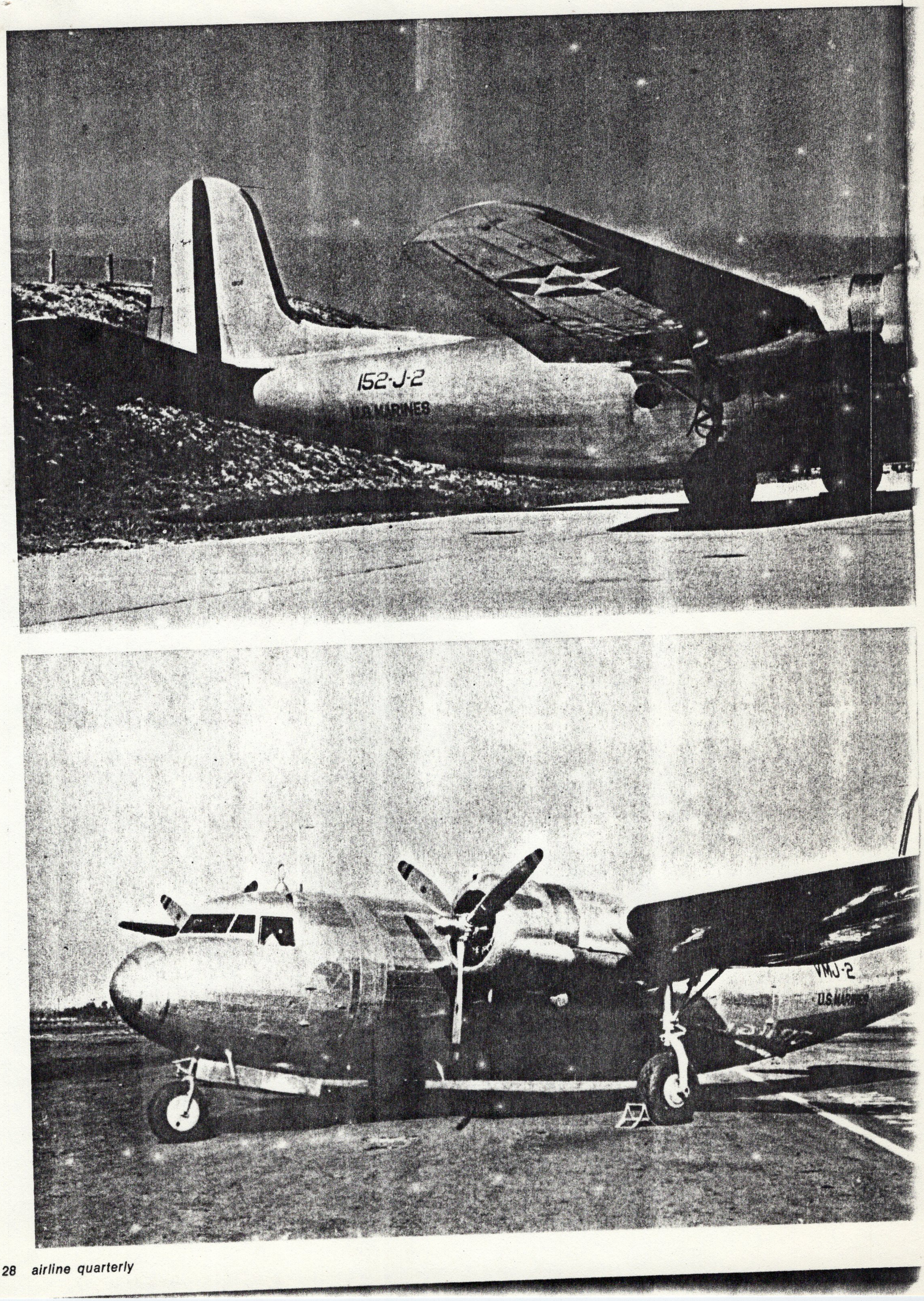
THE TWELVE DOUGLAS DC-5s

MODEL	DOUGLAS NO.	REGISTRATIONS	REMARKS
DC-5	411	NC-21701; BuAer 08005	Originally delivered to William Boeing; to USN as R3D-3 2 Feb. 1942; probably lost off Australia due to enemy action, 1943.
DC-5-510	424	*KLM: PJ-AIW; PK-ADC; USAAF 44-83230	Destroyed in landing accident, Australia, 1942.
DC-5-511	426	KLM: PJ-AIZ "Sunbird"; PK-ADD; Australia National Airways VH-CXC; VH-ARD; USAAF 44-83231; "Bali Clipper"	The last known DC-5. Sold to Israel, engines, instruments removed; air frame probably junked; c.1955.
DC-5-511	428	KLM: PK-ADA	Captured 9 Feb., 1942; test flown by Japanese, 1943-44.
DC-5-511	430	KLM: PK-ADB	Destroyed by enemy bombing, probably early 1942.
R3D-1	606	BuAer 1901	Crashed Mines Field, Calif., 1 June 1940.
R3D-1	607	BuAer 1902	Delivered NAS, Anacostia, 6 July, 1940; to NAS, San Diego, 28 July 1941; NAS, New York, 25 Oct. 1941; retired 31 Jan. 1946.
R3D-1	608	BuAer 1903	Delivered NAS, Anacostia, 8 July 1940; to NAS, San Diego 3 March 1941 May 1943; to Pacific; believed to have been used briefly by Gen. MacArthur; retired 31 Jan. 1945.
R3D-2	609	BuAer 1904 (USMC)	Assigned VMJ-2, 10 Sept. 1940; 7 Dec. 1941, assigned to CINCPAC, based Australia; crashed Jan. 1942, on island off Australian coast under enemy submarine fire. Stricken from inventory 31 Jan. 1942.
R3D-2	610	BuAer 1905 (USMC)	Assigned VMJ-2, San Diego, 14 Sept. 1940; 24 Nov. 1941, to Commander, Air Battle Force, Pearl Harbor; to VMJ-252 (formerly VMJ-2); back to Pearl Harbor 18 Oct. 1942; NAS, Alameda, 2 Nov. 1942; 29 April 1943, to USMC Air Detachment, San Diego; 15 Nov. 1943, USMC Air Base Group 2, San Diego; June 1945, to MCAS, El Toro with same unit; retired 31 Oct. 1946.
R3D-2	611	BuAer 1906 (USMC)	Delivered to VMJ-1, Quantico, Va., Sept. 1940; flown entirely in Z.I. support service; retired 31 Oct. 1946.
R3D-2	612	BuAer 1907 (USMC)	Delivered Oct. 1940, USMC Air Base Group 2, San Diego; flown in Z.I. support service; retired 31 Oct. 1946.

*Note: There has been confusion surrounding the registration of the four KLM DC-5s. When the aircraft were ordered, it was assumed they would see service in Europe. Hence, KLM reserved a block of registrations and names which were never used due to the outbreak of World War II. The unused designations were: PH-AXB, "Auk"; PH-AXB, "Shellduck"; PH-AXE, "Duck" and PH-AXG, "Blacktailed Godwit." In 1940, KLM transports stationed in Dutch Guiana carried the "PJ" prefix; those assigned to Dutch East Indies service of KNILM, KLM subsidiary, carried "PK."

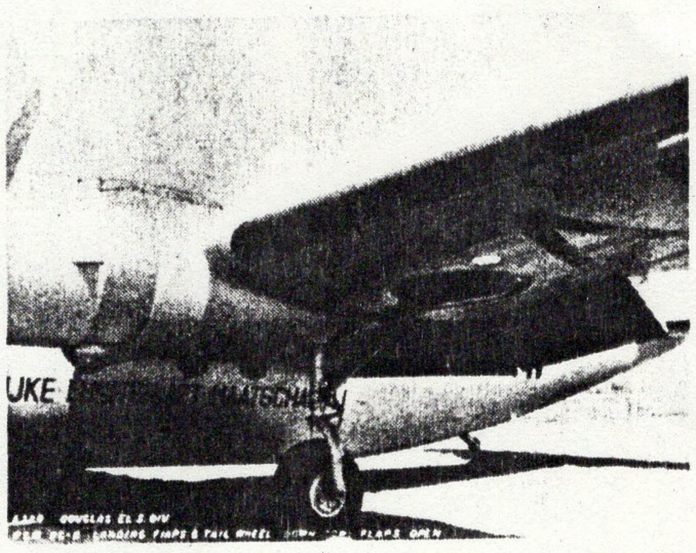

KONINKLIJKE LUCHTVAART MAATSCHAPPIJ
PJ-AIW


FOKKER

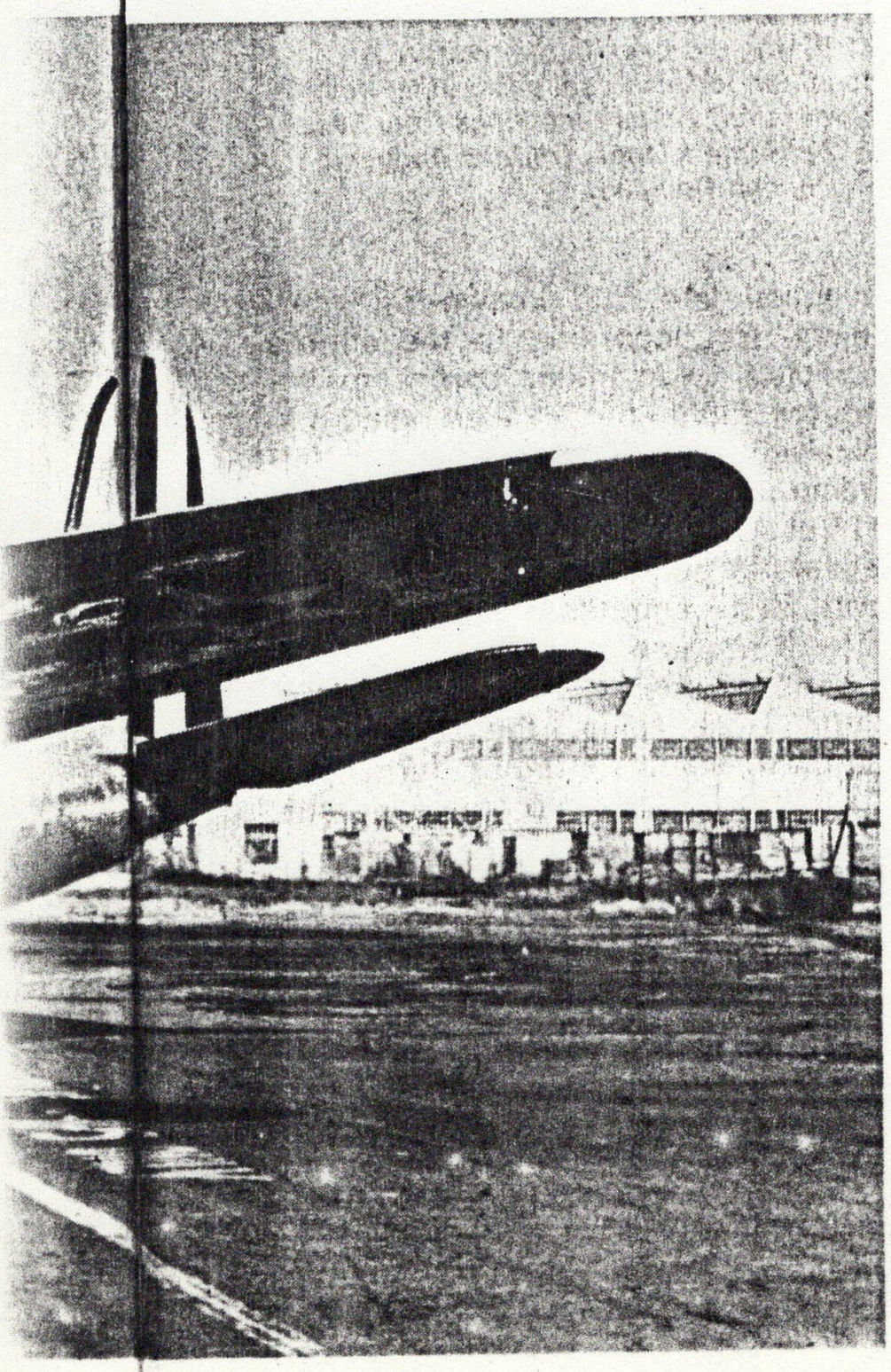

152-J-2
U.S. MARINES



Seven DC-5s, which had been ordered by Pennsylvania Central and SCADTA, were taken over by the government and, designated R3Ds, served with the Navy and Marine Corps. Bureau of Aeronautics serial 1906, a Dash Two, went to VMJ-1, based at MCAS Quantico, Virginia in 1940; prior to the outbreak of war with Japan this squadron was redesignated VMJ-152 in the course of the Corp's rapid expansion, and these are the markings the plane carries here.



The only civilian customer to take delivery of its airplanes, the Netherlands' KLM had ordered four planes for its European routes, but these were used instead in South America and the Far East. In this detail view of the first of these, Dutch Guiana-registered PJ-AIW—named WAKAGO—we can see how the main gear retracted outboard into its bays; also visible is one of the plane's two landing lights and the bumper wheel which protected the aft fuselage in the event of a hard landing.



Two of the other R3D-2s, BuNos 1904 and 1905, were assigned to VMJ-2, based at NAS North Island, across the bay from San Diego; as was common practice in prewar days the planes were delivered in full squadron markings, one of them seen here on the ramp at El Segundo prior to joining its unit.

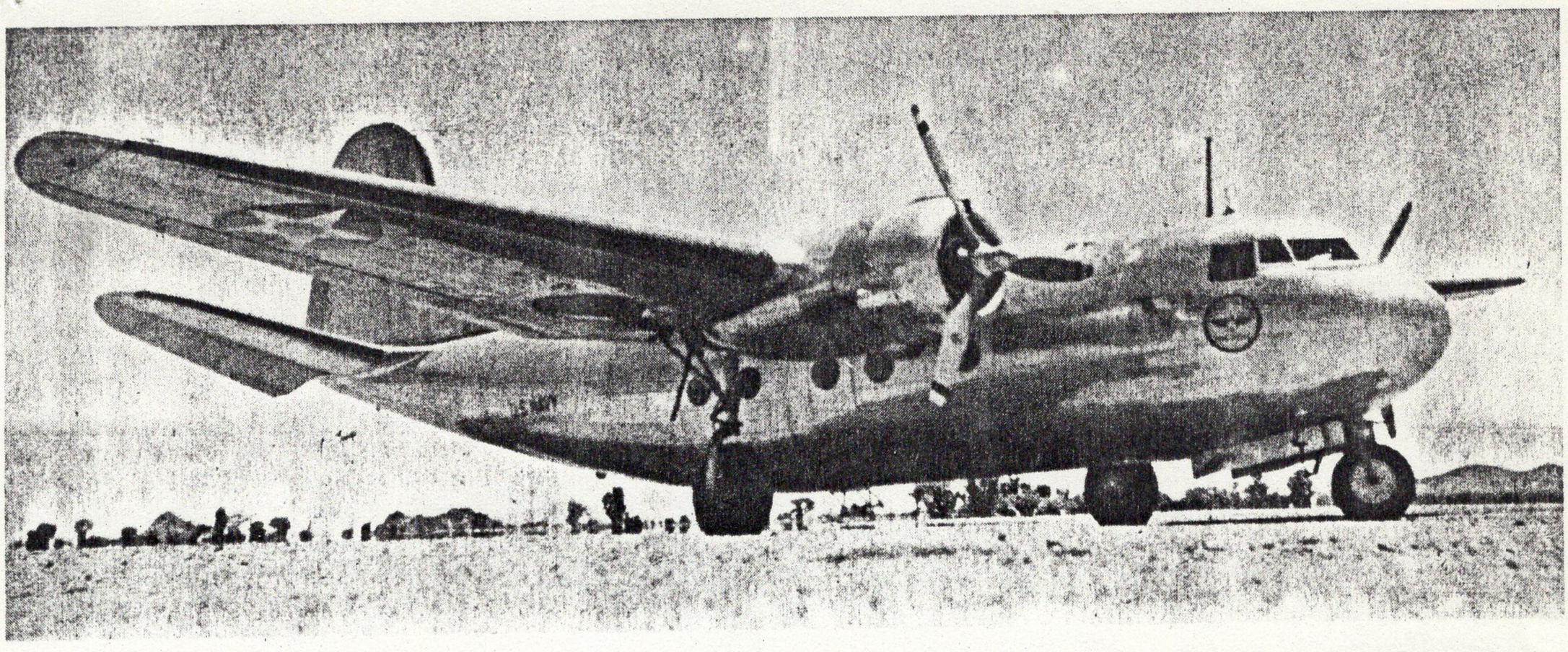
paratroops, haul VIPs, carry mail and supplies, and doing all the other humdrum jobs the vast majority of their human counterparts had to put up with for four endless boring years. Surviving unscathed, without even the odd drunken brawl to break the monotony, both planes were officially withdrawn from service on October 31st, 1946, with no prospects but a quick trip to the nearest scrap yard.

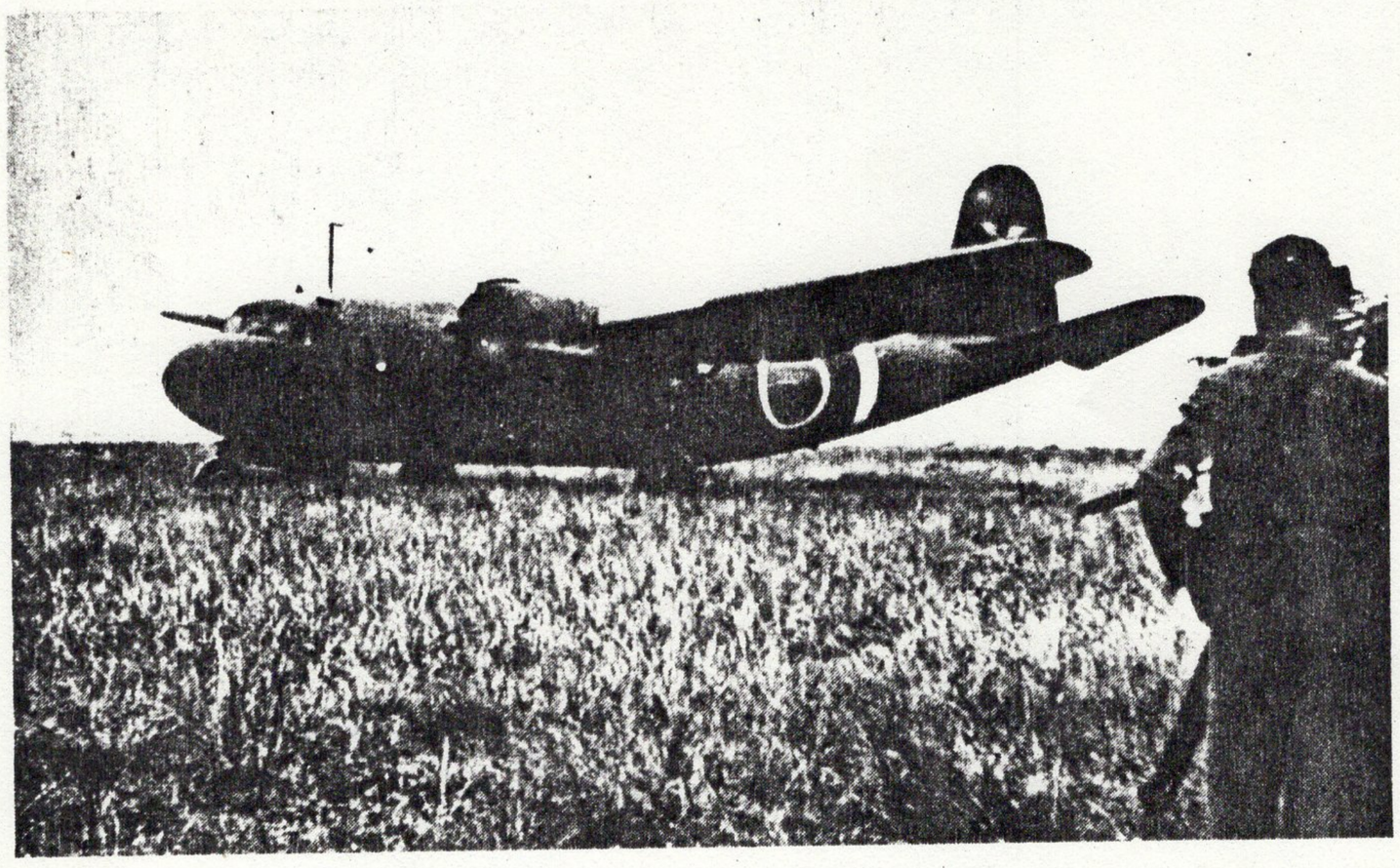
Out of the seven impressed R3Ds only three left the States. 1905 was the busiest, bouncing back and forth between the Mainland and Pearl Harbor, but '03 wound up "somewhere in the Pacific," where it supposedly was used at times by "Dugout Doug" MacArthur as his personal chariot. '04 gave its all off the coast of Australia when, having been transferred to CINCPAC as a hack for the brass, it was damaged by antiaircraft fire from a Japanese submarine and crashlanded on a small island. Patriotism prompted Bill Boeing to give *Rover* to the Navy; designated the sole R3D-3 and assigned serial 08005 *Rover's* exact fate seems to have been lost in Washington's Laberynthian files, but one story is that it, too, fell victim to "slant-eye perfidy" sometime in 1943, again in the vicinity of Australia. A wartime rumor had it that a DC-5 was lost while flying a cargo of gold, so perhaps these planes are one and the same; in any event it's possible that *Rover* was picked off by a head-hunting Zero pilot down from New Guinea to see what he could collect.

As everyone knows, Java was not the healthiest place for an Occidental to be as 1941 drew to a close. Oil and rubber provided all the justification necessary for the Sons of Heaven to declare war on a long-since conquered Netherlands on January 11th, 1942. KNILM's DC-5s were used to evacuate refugees from Java, an air strike on the field at Kemajoran on February 9th damaging ADA and destroying ADB. ADC and ADD made their way to safety in Australia where they were taken over by the Army Air Force as C-110s, this eventually being regularized on June 14th, 1944, when the designations became official under the terms of Contract AC 6838, serials 44-83230 and '231 being assigned. (A third C-110 was included, incidentally, serial 44-83232 or '233; although it cannot be identified with certainty, this *might* have been *Rover*.) ADC's reprieve was a short one, however, for it was destroyed in a landing accident shortly after is arrival. Now the last of the Dutch DC-5s remaining in friendly hands, ADD (our old acquaintance *Sunbird*) flew for the balance of the war under the aegis of Australian National Airways, on support missions inside the country with the temporary license VH-CXC; more on its subsequent career anon.

Back in Java the Japanese, who'd been collecting examples of enemy aircraft throughout their advance for comparison testing and technical evaluation, came upon lame-duck ADA and its ruined companion; stripping the latter of everything usable they put ADA back into the air and flew it, in full Japanese Army Air Force markings, from bases back in the Home Islands during 1943. Again, records are virtually nonexistent, and were it not for a few photographs of the plane in Japanese hands there would be no evidence at all of this phase of its brief history.

At war's end five of the DC-5s were still in one piece, excellent





One of two Navy R3D-1s (a third was destroyed in a crash before it was delivered) Buno 1903 was transferred from its first duty station, NAS Anacostia, to San Diego during the spring of 1941. In May of 1943 it staged west to the war zone for use as a staff transport, and is reported to have been used by MacArthur. Withdrawn from service in 1945 the plane vanished from the records without trace.

In the course of their assault on Dutch forces defending Java and Sumatra the Japanese damaged KNILM's PK-ADA and destroyed its sister, ADB. The plane was duly swept up by advancing ground forces and, using parts salvaged from ADB, was put back into airworthy condition for technical evaluation, being flown in full military markings from bases in the Home Islands. (Hideya Ando, via McDonnell Douglas)

testimony to their dependability, but with thousands of surplus aircraft flooding the civilian market there was no need for yet another propdriven transport, particularly one which couldn't even go into production until new tooling had been made, lines set up, and crews hired. With peace contracts had been immediately cut back radically or cancelled outright, factories were closed, and workers laid off to fight with hundreds of thousands of discharged veterans for the handful of available jobs, so even if it had laid golden eggs the DC-5 was doomed. The four R3Ds—1903 never returned from the Pacific Theater, having been retired on January 31st, 1945—were written off the books at their respective stations, 1902 at NAS New York on January 31st, 1946, while '05 was tricked instead of treated at MCAS El Toro on Halloween as '06 and '07 had been.

Of the lot only the Dutch orphan, still plying its trade Down Under, had any sort of future to look forward to. ANA had returned the plane to the Army but when it learned that their plans extended no farther than chopping *Sunbird* up the airline bought it back, entering it onto the Australian civil register as VH-ARD. In 1947 *Sunbird* changed hands again, ANA selling it to the newly organized New Holland Airways; renamed *Bali Clipper* it was put to work hauling emigrants from Italy to new homes in Australia, spending a year as the *Garlicliner* before New Holland in turn unloaded it. Retracing its path to Europe it stopped over briefly in Sicily before beginning the haul across the Med to its new home, settling onto the runway at Haifa in the newly-emerged Jewish state of Israel. Predictably its activities are shrouded in conjecture, but there is a story that it was used as a jackleg bomber against unreconciled Arabs of diverse stripe, its stores simply being rolled out the loading door by a judicious shove from a crewman's foot. Even it's eventual fate isn't known with certainty, for according to the source selected it was either never registered for flight, but instead used exclusively as a ground instruction airframe in the Airline Technical School at Tel Aviv—which means the bomber tale is pure fabrication—*or,* stripped of its engines and instruments after it became unservicable through a lack of spares, it was left to go derelict at Haifa, the abandoned carcass eventually being turned, as though by magic, into pots and pans.

Today, whatever their individual fates, the only proof that there ever was such a creature exists in the form of photos and yellowing records, tucked away somewhere in McDonnell-Douglas' cavernous storage facilities. So, carry this magazine with you when you visit your favorite bar; edge conversation around to the subject and you may be able to win some free drinks by betting someone that, yes, there really *was* a DC-5.

