



## TANGANYIKA'S BIG DOUG

The history of the Williamson Diamond Mines DC-4 traced by  
**PAUL HOWARD**

The navy blue and white Douglas DC-4 rose majestically off the runway at Southend at the start of its delivery flight to East Africa – Tanganyika to be precise, now known as Tanzania. It was July 29 1963, and Captain Colin Shedden – a veteran of many years of Bristol Freighter operations with Silver City at Ferryfield – was obtaining his I.C.U.S. during the course of the flight under the guidance of a British United Airways (BUA) captain. The leg today was direct to Cairo, planned for twelve hours. The DC-4 in question was 5H-AAH purchased from BUA who operated it as G-AOXX. It was a late production model (c/n 42931), out of a batch of 79 pure built DC-4s, having originally been delivered new to DDL as OY-DFI in May 1946. She was the only DC-4 flown by BUA not to succumb to conversion to Carvair status, and one wonders if the decision not to convert her was based upon her origin as a true DC-4 and not as a military surplus C-54 Skymaster.

### EARLY SCANDINAVIAN SERVICE

This was a rare breed of DC-4, built new after the end of the war to the order of the Danish national airline DDL – Det Danske Luftfartsselskab. Delivered on May 6 1946, OY-DFI was initially placed into service on the airline's European routes which linked Kastrup Airport, Copenhagen, with London (Northolt), Paris, Oslo, Brussels, Amsterdam, Zurich, Prague and Stockholm. Apart from two DC-4s, DDL also flew eleven DC-3s, two Ju-52s, one Fokker F.XII, one Boeing B-17 and two Focke-Wulf Condors – a varied fleet indeed! However, the long term intention was to operate trans-Atlantic schedules with the DC-4s, and this operation came a step nearer in July 1946 with the formation of a consortium of Scandinavian airline companies which later became Scandinavian Airlines System. The Swedish component of this organisation, S.I.L.A., had been running a regular service between Stockholm and New York with stops at Prestwick and Gander at a twice weekly frequency. This was followed by the official launch of services linking Stockholm, Oslo and Copenhagen with New York on September 16 1946 by Scandinavian Airlines System (SAS). Thus, DDL's DC-4 OY-DFI was now transferred to this route, while in December 1946 the DC-4s also now opened a route across the South Atlantic stretching as far as Buenos Aires in Argentina.

By the summer of 1947, therefore, the DC-4s were flying services to New York from Copenhagen, Oslo and Stockholm via Prestwick and Gander; and from

Scandinavia to Buenos Aires via Geneva, Lisbon, Dakar, Natal, Rio de Janeiro and Montevideo. The latter route was flown once weekly leaving Copenhagen on Saturday mornings and arriving in Buenos Aires on Monday evenings. The crew and aircraft would then rest for 36 hours before beginning the return journey at eight o'clock each Wednesday morning. The route to New York was flown four times weekly, with the flight originating in Stockholm.

Following DDL's absorption into SAS in April 1948, the DC-4 was painted in the airline's livery and named "Dan Viking". As new DC-6s arrived, the DC-4s gave up their prestigious long haul routes and were gradually relegated to maintaining European schedules. Maintenance of the DC-4 fleet was centred at Kastrup, and by 1954 SAS DC-4s only flew short haul and low density routes including a daily schedule linking Copenhagen with Helsinki, a twice daily Copenhagen-Gothenburg-Oslo service, and a twice daily Copenhagen to Hamburg schedule. Occasionally the DC-4s were also used alongside SAS' Saab Scandias on the route linking Oslo with Trondheim and Bodo, but with the acquisition of further DC-6Bs and later DC-7Cs, SAS was able to dispose of its last DC-4s, and in October 1956 OY-DFI was sold to Freddie Laker's airline company, Air Charter.

### OPPORTUNE PURCHASE

DC-4 OY-DFI was initially ferried to Stansted for overhaul by Aviation Traders, another Laker company, and her acquisition by Air Charter was particularly opportune as there was a great demand for both trooping and freight aircraft spawned by the looming Suez crisis. Thus, OY-DFI was soon prepared for service and was registered G-AOXX to Air Charter on October 15 1956, and after a test flight at Stansted was awarded her British C of A on November 4. The ink could hardly have been dry on her airworthiness certificate when she undertook her first revenue earning service, and after completing a short ferry flight to Southend she took on board a party of 64 British servicemen and under the command of Captain Chamberlain she lifted from Southend's newly laid hard runway shortly before midnight on November 4 bound for Malta and Nicosia. Air Charter's other Skymasters, G-ANYB and G-AOFW, had been flying

*DC-4 G-AOXX, devoid of titles, at Gatwick Airport in 1963 just weeks prior to her sale to Williamson Diamond Mines as 5H-AAH. (Brian Stainer via Peter R. Keating)*



DC-4 OY-DFI in S.A.S.' later white top livery operating a service to London Airport's historic North Side Terminal on January 18 1954.  
(Peter R. Keating)

almost daily between Southend and Malta and Cyprus carrying British troops since Monday October 1 1956 when G-ANYB had flown the first service.

The entry into service of G-AOXX allowed G-AOFW to temporarily return to Berlin for other work, and G-AOXX remained flying services between Southend, Malta and Cyprus for the remainder of the year. Departure from Southend was normally of a nocturnal nature, with the aircraft returning two days later. Named "Golden Fleece" in Air Charter service, G-AOXX enjoyed a trouble free early service life, and by the end of the year had completed a total of 23 round trips between Southend and Malta.

This work continued into 1957 with little variation until the operation of her final Malta to Southend sector on the evening of April 12 1957. Three days later under the command of Captain MacKenzie she flew 39 scheduled passengers from Southend to Ostend in place of a Bristol Wayfarer, and on April 16 she departed from Southend en-route to Brindisi and a long haul government charter flight that is believed to have taken her to Australia. She returned to Southend via Brindisi on April 30, only to leave again via Brindisi on May 1 carrying 56 passengers. Returning to Southend on May 18, she resumed work on the Southend to Malta and Nicosia trooping run that same evening. Subsequently, apart from short periods undergoing maintenance at Stansted, G-AOXX remained operating several times weekly to Malta and Nicosia until October 4 1958 when she flew Air Charter's final trooping service over this route.

With the closure of this trooping service, G-AOXX transferred her operating base to Stansted, and from here she was mainly engaged in operating govern-

ment sponsored trooping and supplies flights to RAF bases in Libya, Malta and Cyprus. She returned to Southend briefly on November 27 1958 carrying 59 passengers inbound from Brindisi, and departed again two days later on a trans-Atlantic charter via Shannon. Returning via Gander to Southend on December 15, she was carrying 31 passengers under the command of Captain Chamberlain. However, the bulk of her flying was now carried out from Stansted alongside Air Charter's few surviving Avro Tudors and new Bristol Britannias.

Southend-based once more by the spring of 1960, G-AOXX was once again engaged in government work, arriving at Southend on April 19 inbound from Malta and points east with six tons of Ministry of Aviation equipment. She departed again for RAF work from Lyneham on the next day, and having hauled freight to Singapore, returned once again to Southend on April 28. A week later, on May 5, she was loaded with a massive 10,297 kg consignment of Ministry of Supply stores, and a very heavily laden DC-4 struggled into the air from Southend at 0819 that morning bound for Adelaide via Benina under the command of Captain Couch. The round trip to Australia on this occasion took nineteen days with the aircraft returning with a 3½ ton load of Jindivik pilotless drones and other MoS equipment. In complete contrast to the sophisticated nature of her previous cargo, G-AOXX uplifted a 6½ ton consignment of livestock at Southend on May 25 and flew the animals to Munich.

Long-range work became a speciality of this DC-4, and although her final destination is unknown, on June 10 G-AOXX departed from Southend on a night flight bound for Dakar in Senegal with Captain Cobden in command. She eventually returned to Southend via her

In Air Charter service our featured DC-4 carried the name "Golden Fleece", and is seen at Southend shortly after entering service with the airline.  
(Peter R. Keating)

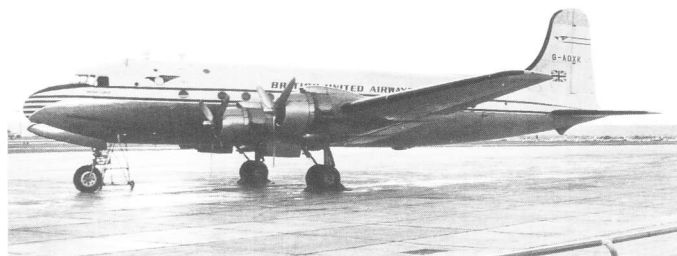


old base at Copenhagen on Monday June 20. This aircraft clearly possessed a supreme payload capability, uplifting 10,270 kg of government freight at Southend on June 21 and flying it direct to Benina and onwards to Adelaide. Such flights were commonplace, and the formation of British United Airways following the merger of Air Charter and Hunting-Clan on July 1 1960 did little to alter her way of life. Although her Air Charter titles, and later her entire livery, gave way to British United's colours, the work remained the same.

Captains Scorgie, Cobden, Paton, Andrew, Webber, Lane, Rawlins, Emmett and many others all commanded BUA's DC-4s on their regular missions from Southend to Adelaide, with round trips taking in the order of a fortnight. Having returned from a service to Australia on September 22 1960, G-AOXX was pressed into service on a meat airlift on the afternoon of September 24 flying 19 tons from Rotterdam to Southend aboard two flights, followed by six further sorties over the next three days. Between December 29 1960 and January 7 1961, G-AOXX flew several livestock charters from Southend to Munich carrying pigs. However, following the operation of a Malta to Southend MoS flight on March 8, she was ferried to Hurn on March 10 for overhaul after more than four years of almost continuous service with Air Charter and BUA.

Her overhaul took some four months, and she returned to Southend refreshed from her sojourn on the south coast and ready for further flying on July 11. Her return to service was not made on the long haul run to Australia - quite the contrary - instead she flew four round-trip passenger schedules on the BUA/Channel Air Bridge service linking Southend with Ostend. Alongside BUA's newly acquired DC-4 G-AREK, she carried many thousands of holidaymakers over this route, and such was the popularity of the service that on occasions three BUA DC-4s would fly the schedule simultaneously. Indeed, on Thursday August 3 1961 three BUA DC-4s took off in quick succession from Ostend - with G-AOXX leading the trio piloted by Captain Howard, followed closely by G-APID flown by Captain Cobden and G-AREK in the care of Captain Lane. They flew across the Channel just three minutes separating all three aircraft before arriving at Southend with over two hundred passengers on board the three flights. On some days the DC-4 would complete up to twelve revenue sectors, and yet her reliability was almost legendary.

This intensive work continued until October 1961, when G-AOXX once again returned to the operation of ad-hoc Ministry of Defence flights from Southend. These ended on May 2 1962 when G-AOXX returned to Southend from Malta, and after a maintenance check she resumed operation of the Southend to Ostend passenger schedule on June 2. For the summer of 1962, BUA's DC-4s also carried newspapers on early morning flights from Southend to Brussels, Dusseldorf and Hannover, and G-AOXX undertook this task for the first time on Monday July 2. By the end of the summer, the DC-4s were only flying newspapers from Southend to Dusseldorf and Hannover on Saturday nights, and this service was generally



*For several months after the formation of British United Airways in July 1960, DC-4 G-AOXX soldiered on in a hybrid livery consisting of her Air Charter cheatline with the new airline's titles. (Stephen Piercey Collection)*

flown by G-AOXX, which was allocated few other tasks, and even this service was suspended after one final operation by G-AOXX on November 18 1962. She flew a charter from Southend to Malta on November 23, returning home four days later, a passenger charter from Southend to Renfrew on December 11 in company with G-AOFW, while on December 13 and 21 she completed flights to Hamburg and Hannover respectively. Christmas holidaymakers saw a revival in the fortunes of the Southend to Ostend schedule on December 23 and 26, with G-AOXX flying four round trips.

Having flown to Gatwick on January 6 1963 for possible charter work to Germany which never materialised, G-AOXX returned to Southend on January 12. She was promptly withdrawn from service, and remained idle until test flown by Captain Cartlidge on May 31 1963. She made a brief return to BUA service on June 1 flying a passenger charter from Gatwick to Basle followed by a "Golden Arrow" passenger schedule from Gatwick to Le Touquet on June 2, after which she returned to Southend. She flew further Gatwick to Le Touquet services on June 16, and her final ever BUA flight was a Le Touquet to Gatwick schedule flown on the evening of June 22. Ferrying to Southend on the next day, she was then prepared for delivery to her new owner, Williamson Diamond Mines in East Africa.

#### A NEW CONTINENT AND A NEW ADVENTURE

G-AOXX was soon ready for Williamson Diamond Mines, and this would be the largest aircraft ever delivered to the company. Now registered 5H-AAH, the DC-4 arrived in Cairo on July 29, and after a night stop in the Egyptian capital, 5H-AAH continued her ferry flight on to Entebbe the next day (planned at 10 hours) for customs entry into East Africa. From there the short hop over Lake Victoria to run into Mwadui, the Williamson mining site, was undertaken. Taxying up to the hangar on arrival, Captain Shadden closed down the four Pratt & Whitney Twin Wasps - 5H-AAH had arrived.

*DC-4 G-AOXX at Southend in full BUA livery following her four-month long overhaul at Hurn in 1961. (Peter R. Keating)*







*An impressive array of cloud formations pass by as 5H-AAH cruises steadily along over Tanganyika.*

The mine site at Mwadui, located eighty miles south of Lake Victoria and situated on a plateau 3,870 feet AMSL in Shinyanga District, had been developed by Dr. J.T. Williamson over the post war years and produced diamonds of excellent quality (12 carats from 100 tons of gravel was the measure). The site became the third largest town in Tanganyika, employing over 3,000 national personnel along with over 300 expatriates and 60 Asians. An airfield was constructed within the mine complex, which had up till now, been home to an Anson, Beaver, and two DC-3s - one of which was disposed of to East African Airways (VR-TBJ) following the arrival of the DC-4. A hangar had been constructed for minor maintenance, while fuel was railed in from the coast, along with heavy stores, but was frequently unreliable.

Williamson had always believed in his company having their own aircraft in order that he could control his requirements to suit the business. Considering the logistics of the site, being independent was the only way to ensure availability when you needed it. Thus, 5H-AAH settled down to a fixed roster of twice weekly flights from Mwadui to Nairobi, and once weekly to Dar es Salaam on the coast. The composition of these flights varied, but normally carried personnel and stores. Depending on demand, perishables and personnel were accorded priority, with a combi configuration of fifteen rows of twin seats offering ample comfort along the port side, plus 9,000 lb of cabin freight on the starboard side. If the rail service was held up, additional cargo would be uplifted.

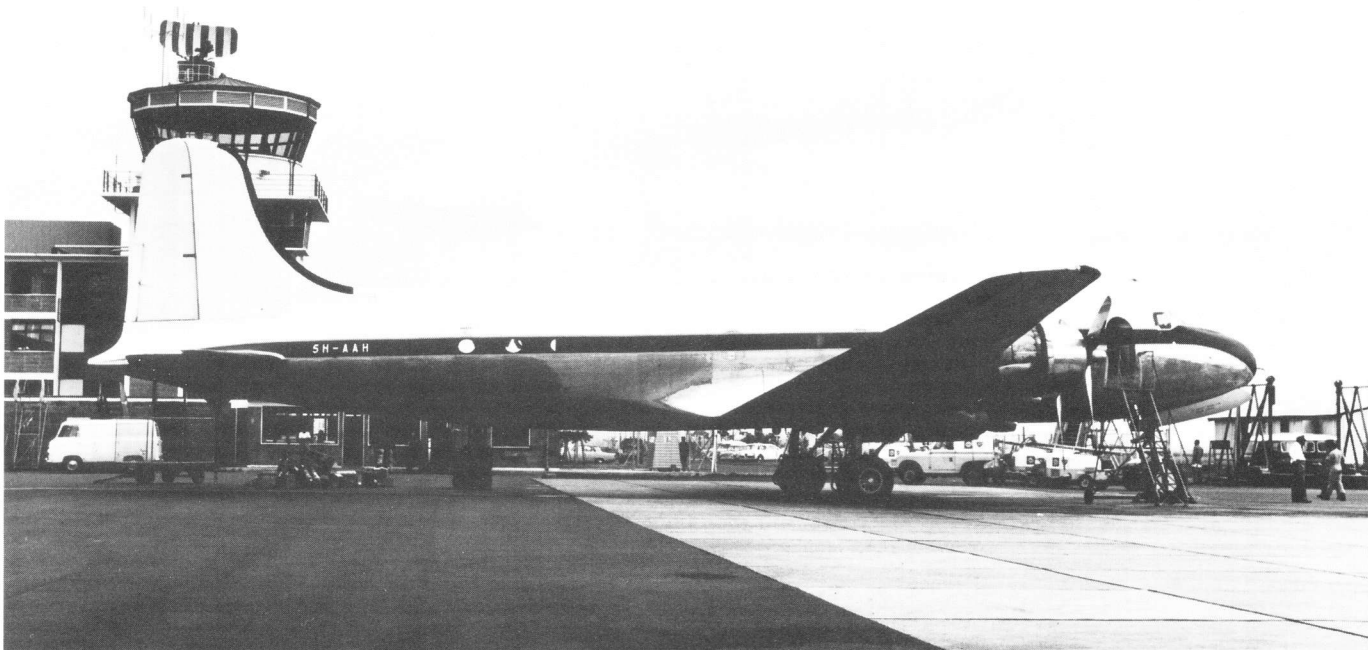
A sample flight would require an 0630 departure from the mine, usually lightly loaded on the outbound leg. Shedden, one of three captains (called 'Mwarusha-

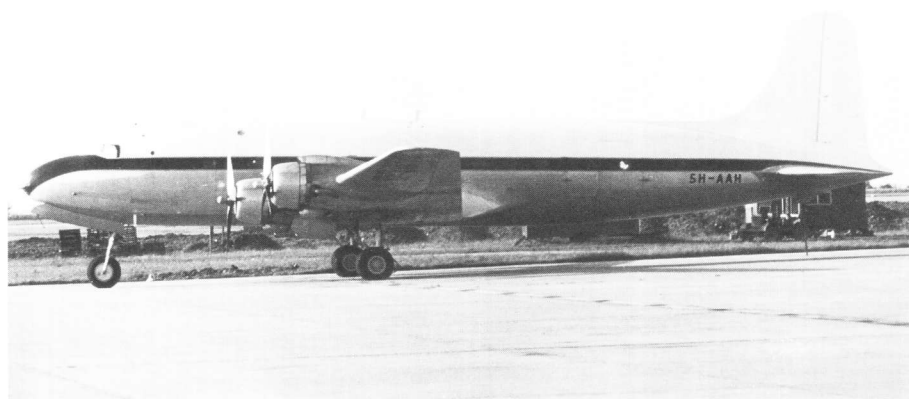
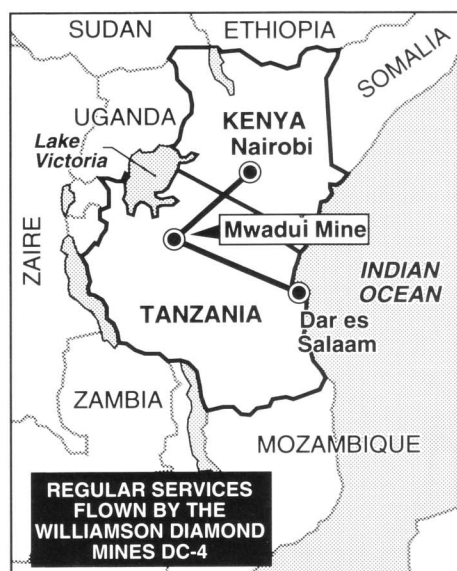
Hewani" in Swahili, literally translated meaning "he who causes to leap through the air") would have a qualified flight engineer as co-pilot, an arrangement approved by the civil aviation authorities, provided that the flight engineer had a PPL with a minimum of 40 hours flying experience, and subject to the flight being categorised as private - which all Williamson operations were. After take-off, 5H-AAH would swing over Alamas (Swahili for diamond), a village so named because of the washoff area of the mine, and set course 057° for Nairobi, a comfortable one hour 30 minute flight. Climbing to a level of 11,000 feet for a 178 knot cruise, the DC-4 would fly over the Serengeti Game Park abeam the DC-3 strip of Serengeti, before descending over the impressive Rift Valley which contains several lakes, and into Nairobi's Embakasi Airport. During the turn-round, perishables would be loaded along with other 'must ride' items and personnel assembled. Unless maintenance was required on the aircraft, carried out by EAAC engineering, and necessitating an overnight stop, the agents would turn the aircraft round in the same day, and the DC-4 would return to Mwadui. Alternating during the two Nairobi rotations per week, was a return trip to Dar es Salaam. Again, personnel would be carried, but the payload mainly consisted of cargo having arrived from shipping at the port of Dar es Salaam.

Within a month of the DC-4's arrival, a requirement for a major piece of machinery in the form of a 20,900 lb twelve-stage water pump for an exploratory shaft was needed on site. With much haste, the DC-4 was despatched to Johannesburg to collect the said item. With valuable assistance forthcoming from SAA cargo, the pump was dismantled (the largest piece weighed 7,000 lb), and loaded within half a day on board the DC-4. However, in order to conform with weight regulations, take-off had to be delayed until two o'clock in the morning to obtain temperatures consistent with the optimum performance of the DC-4 at its 73,800 lb gross weight, Johannesburg being 5,000 feet AMSL. The successful completion of this assignment, along with the savings made as a result of Williamson's own method of transport, probably paid for the DC-4 in this one flight. Such were the economies of scale in the sixties.

Averaging once every twenty five days, the DC-4 would fly to Dar es Salaam with the 'Golden Eagle', the diamonds from the mine. This flight was normally accompanied by armed security guards, who watched over the gemstone laden suitcases until safely signed over to agents in Dar es Salaam, for onward carriage to Europe. Other charters included extra flights to Dar es Salaam to collect cylinders of oxyacetylene, carried only by air because of rail delays. This item was heavily used on site, and had to be flown in when shortages occurred. Procurement of mining equipment, spares and additional tooling, took 5H-AAH around Southern Africa, including trips to N'dola in Zambia, Salisbury in Rhodesia, and

*Still sporting her basic British United Airways cheatline, the Williamson Diamond Mines DC-4 5H-AAH awaits loading at Nairobi Airport on April 20 1964.*  
(Peter R. Keating)





Williamson's DC-4 5H-AAH at Castle Donington on July 6 1974 when she returned to the UK for overhaul with Field Aircraft Services. (George Jenks via P. Keating)

Stanleyville in the Congo. The advantages of having an aircraft of this capability was well realised. The DC-4 had eight fuel tanks, and an additional tank containing 25 gallons of oil for extended range operations, so endurance was never a problem.

In fact, Captain Shedden recalls that the DC-4 was a joy to fly. It could take maximum weight, and still offer over six hours of range. Using BOAC and BUA cockpit procedures, the captain really only steered and 'poled' the aircraft, leaving throttles to his co-pilot/flight engineer. It was virtually impossible to make a bad landing in the DC-4, he recalls, being naturally modest of his own capabilities. The DC-4 elevators being very heavy, the recommended landing procedure was to close the throttles, take a two-handed grip of the control column and walk backwards into the cabin, says Shedden, rather tongue in cheek! Start up was manual, six blades turned the No.2 eyeballed by the skipper, as the co-pilot set throttles and mixture, turn starter booster pump, primer switch - then watching it cough then catch, enveloped in pure 100% smoke. The co-pilot would watch the rpm readings before repeating the procedure for No.3 and so on. The prime means of navigation was by use of the ADF, the aircraft having two pods behind the astrodome on the forward roof - a nostalgic touch modernised on the surviving veterans today.

Nose-wheel steering was simple, and was comfortably handled within three minutes of practice. After the flight engineer completed the engine run-ups, came the roll, with rudder becoming effective at 51 knots and the wings beginning to create lift at around 91 knots, depending upon weight. Climb was usually rated at 500 feet per minute at around 140 knots, while cruising speed varied from 178 to 202 knots. The DC-4 offered a useful landing weight of 64,174 lb.

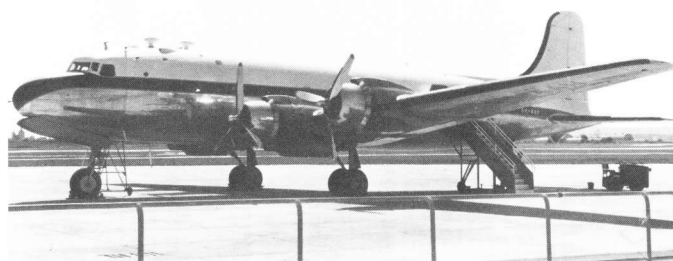
Periodic maintenance requirements in Africa were handled by East African Airways' engineers, with line maintenance being handled by Williamson's flight engineers. A package of spares was always carried on board 5H-AAH. Once a year, a trip to Aviation Traders at Southend was performed for heavy maintenance, with the aircraft arriving back at Southend for overhaul for the first time on June 8 1964. She departed again on June 30, and returned again in later years. The routing northbound generally followed a midnight departure for Entebbe to clear customs, then on to Khartoum and Malta (13 hours) for an overnight stop. From Malta the DC-4 would fly direct to Southend where she would spend three weeks being worked on. However, 5H-AAH was a well looked after aircraft that rarely suffered any major problems. There was a minimum of engine out situations, Shedden personally relates, the few times he can recall such a situation, it was not a problem. A re-trim and loss of 10 knots being the outcome, and press on!

#### OTHER WILLIAMSON OWNED AIRCRAFT

The remaining DC-3 (VR- later 5H-TBI), DC-4 and Beaver were joined later in the sixties by a couple of de Havilland Doves. Captain Shedden ferried one of these from the UK via Tangier, the Canary Islands, Mauretania and most of West Africa during a lay-up of 5H-AAH at Southend. The trip in the Dove took seven days, instead of two, because of political problems at the time, prohibiting transit of Egyptian airspace on the normal ferry route. The Beaver, VR-TBB, was used to

service the sub mine at Buhemba, 130 miles from Mwadui, the site surrounded by hills. The Beaver was ideal due to the short field performance required - the landing ending on what was a fairway on the local golf course. Williamson had an enormous ongoing geological programme at the time, and a Cessna 182 was also on the books.

After Williamson died, a percentage interest in the mine reverted to the Government, who in turn approved the take-over by De Beers of Anglo American fame. This resulted in the name Tanzania Diamond Merchants being applied. An interesting political incident happened around that period which involved the DC-4. The army rebelled against the Julius Nyerere Government and sent shock waves throughout the country. The management of the mine was somewhat concerned as the events unfolded - Williamson's mine would be a prize bargaining chip in any round of pawn dealing. The Royal Navy happened to have an aircraft carrier on exercises in the area and despatched it to Dar es Salaam (meaning 'haven of peace'), rather ironically, and landed marines to quell the rebellion. At this time, the DC-4 was en-route, the two hour 30 minute leg to Dar es Salaam crossing the Masai Steppe, when word was passed that the airport was secure - a precautionary landing had been envisaged depending on real time/information. The DC-4 was in complete freight configuration and had no seats. It was immediately commandeered by the Royal Marines to transport eighty of their finest up country to Tabora, to secure key locations. It didn't take long for Sholto-Douglas and his team to get the rebellion under control. Some starshells and thunderflash applications had the rebellious army scattering in all directions in full panic mode. A few messages in Swahili to 'surrender' followed by 'Fire One', 'Fire Two', soon had the situation under wraps.



DC-4 5H-AAH early on in her Williamson service. (P. Gates Collection via Paul Howard)

Captain Shedden finally left his beloved DC-4 after five years of flying her for Williamson and migrated to Australia for a career with the legendary Bush Pilots Airways in Queensland as its Chief Pilot. Perhaps not the excitement of Africa, but nevertheless a new challenge in the northern reaches of Australia's vast bush. The DC-4 continued to be operated by the mine until replaced by a Hawker Siddeley 748 in 1977, when it was sold as N39430 although it never left Africa. It was then registered in neighbouring Zaire as 9Q-CPM, where it was last heard of.....