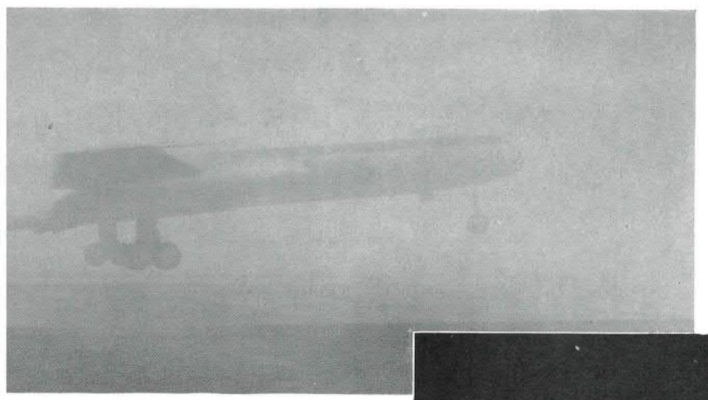
DE HAVILLAND GAZETTE

No. 91 FEBRUARY 1956



Report on the World

THIS New Year issue of the *de Havilland Gazette* appears a full month after the return home of the Comet 3 development aircraft at the completion of its flight round the world, which may now be seen in perspective.

The purpose of the flight, as conceived, planned and executed by de Havilland, was to study the operational performance of the Comet 3, flying strictly in accordance with airline procedure on representative stages of a familiar trade route round the world passing through a wide variety of climatic and other conditions. It was essentially a British Commonwealth circuit of the globe, and the Company looks forward to making further flights embracing other countries and continents.

Mr. Frank Lloyd, Commercial Sales Manager and Contracts Manager of The de Havilland Aircraft Co. Ltd., was the executive in charge of the business aspects of the flight, and Mr. John Cunningham, Chief Test Pilot of the Company, commanded the aircraft. Mr. Peter Buggé was second pilot.

Mr. Cunningham and all aboard were very pleased to fly in B.O.A.C. colours and greatly appreciated the decision of the Corporation to send Captain Peter Cane, who headed the pilots of the Comet fleet in 1952–54, to accompany the aircraft as a member of the crew throughout the tour.

The Company is most grateful for the assistance given by B.O.A.C. at ports of call, and likewise by Qantas Empire Airways, Trans-Australia Airlines, Australian National Airways, Tasman Empire Airways, Canadian Pacific Air Lines, Trans-Canada Airlines the Shell Company and its associates, the Royal Air Force and the Royal Australian, New Zealand and Canadian air forces, as well as the airport and airway authorities throughout the world. Efficient help all round was received from the airway organisation, and the many who contribute to it with ground handling, maintenance, refuelling, meteorology, radio and communications, customs, immigration and other services.

The Company took fullest advantage of the opportunity to demonstrate the aircraft to

English winter fog baulked a 30-hour flight from Hatfield to Sydney. Reckoning 24½ flying hours for the 11,610 statute miles and 5½ hours for the four fuelling halts (Cairo, Bombay, Singapore, Darwin) a departure at 05.00 G.M.T. on Friday, December 2, would have given an arrival at Sydney about 11.00 G.M.T. (9 p.m. locally) on Saturday evening. The fog which prevented a pre-dawn departure on Friday seemed likely to recur several mornings. Therefore, when fog lifted a little towards noon Friday, Cunningham seized the chance to get off. But the crew, having been busy for about 10 hours before take-off, could not safely work the 30-hour flight without sleep so an overnight halt was made at Cairo—which led to a popular Sunday-afternoon arrival in Sydney. These pictures show the preparations at Hatfield and the foggy take-off at 10.54 G.M.T. when visibility was about 300 yards!

Comet 3's Flight

operators, technical authorities, the Press and the public, and this aspect of the flight has of itself proved of the utmost value.

Apart from the circuiting of cities to give as many people as possible a good view of the Comet, the aircraft was flown strictly in accordance with airline technique. The Sydney–Melbourne stage (circling Canberra) and the Toronto–Montreal stage were too short for

". . . leave the hotel at five-thirty a.m., and don't, anybody, keep the car waiting!"

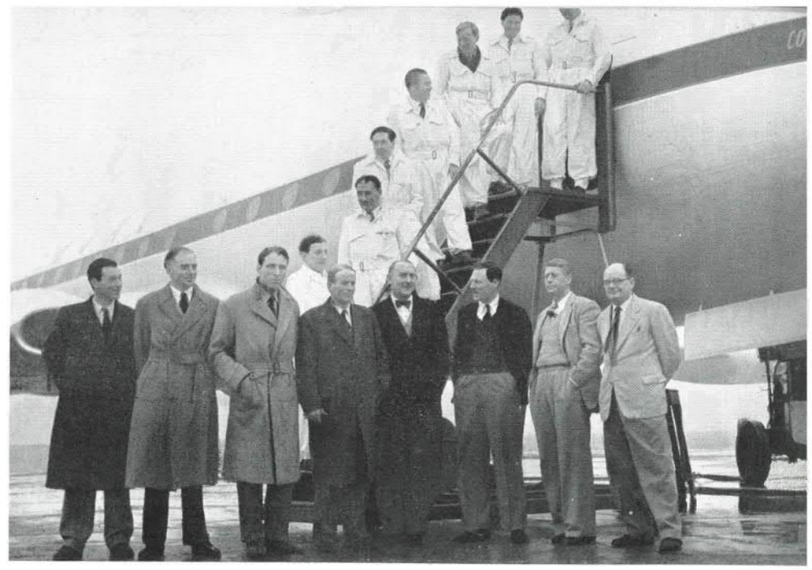
representative flying, and the Melbourne–Perth stage was made unrepresentative by circling Adelaide.

Airline pilots, familiar with their respective sectors, who were carried as supernumerary crew members were as follows:—

B.O.A.C. pilot, Captain Peter Cane	All round the world
Qantas pilot, Captain I. D. V. Ralfe	London–Sydney
Qantas Pacific pilot, Captain W. A. Edwards	Sydney–Honolulu
T.A.A., A.N.A., and Australian Department of Civil Aviation pilots	Melbourne–Perth–Sydney
C.P.A. pilot, Captain W. S. Roxburgh (who trained on the Comet 1A three years ago)	Honolulu–Vancouver
C.P.A. Director of Flight Operations, Captain B. Rawson	Vancouver–Toronto
T.C.A. Flight Superintendent of Western Division, Captain A. Rankin	Vancouver–Toronto

The aircraft was equipped with elaborate recording instruments and, in addition to flight and engineering crew, carried observers including a senior aerodynamicist from Hatfield.

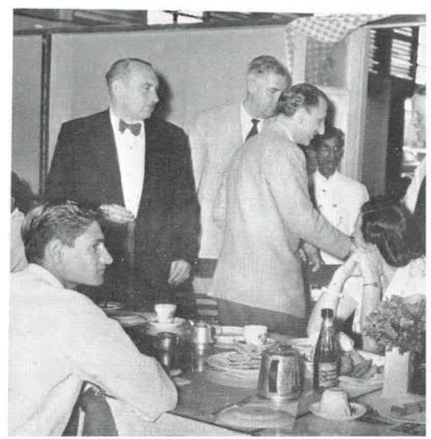
The technical results of the flight have been entirely satisfactory. The performance which the aircraft has achieved has shown that the basis used for the calculations of both the brochure performance of the Comet 4 and the

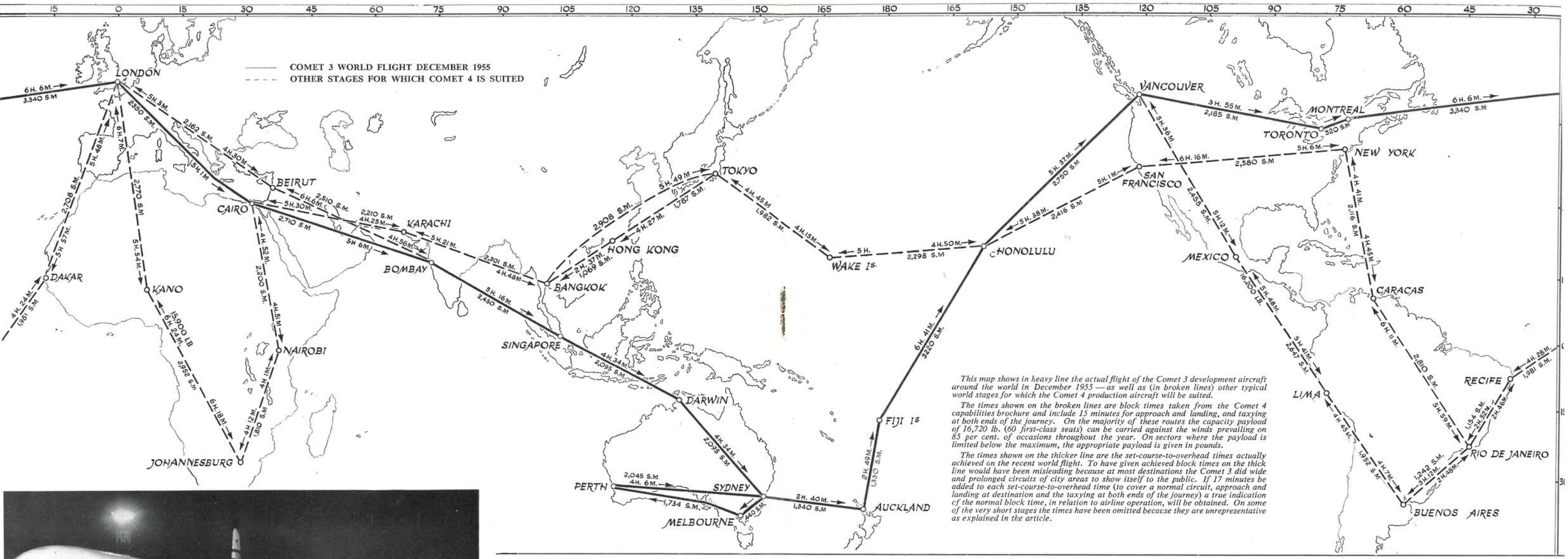


Those on board from Hatfield to Sydney (left to right on the ground): P. F. Mouritz (Technical Sales); P. F. L. Hall (Senior Assistant, Aerodynamics Department); P. O. Bugge (Second Pilot); J. Cunningham (Chief Pilot); F. H. M. Lloyd (Commercial Sales Manager); Capt. A. P. W. Cane (B.O.A.C.); Capt. I. D. V. Ralfe (Qantas); R. W. Chandler (Radio Navigator). On the steps, reading upwards: E. Holley (Rolls-Royce); H. Davies (Inspector); S. F. Borrie (Flight Development Engineer); J. Hamilton (Flight Engineer); J. A. Marshall (Flight Observer); E. Brackstone Brown (Chief Flight Engineer); R. V. Ablett (Flight Engineer).

Cairo: the very different climate 5 hours away from Hatfield. The overnight halt here, 14 hours 15 minutes, turned what might have been a 30-hour journey into one of 44 hours 18 minutes.

Bombay (Santa Cruz Airport) figures in the two photographs below. The fuelling and feeding here kept the aircraft on the chocks 1 hour 48 minutes. In the restaurant Mr. J. R. D. Tata, President of Air India International shakes hands with Mr. Cunningham, with Mr. Lloyd and Mr. H. G. Rice, de Havilland Regional Manager for the Far East, in the background.





This map shows in heavy line the actual flight of the Comet 3 development aircraft around the world in December 1955 — as well as (in broken lines) other typical world stages for which the Comet 4 production aircraft will be suited.

The times shown on the broken lines are block times taken from the Comet 4 capabilities brochure and include 15 minutes for approach and landing, and taxying at both ends of the journey. On the majority of these routes the capacity payload of 16,720 lb. (60 first-class seats) can be carried against the winds prevailing on 85 per cent. of occasions throughout the year. On sectors where the payload is limited below the maximum, the appropriate payload is given in pounds.

The times shown on the thicker line are the set-course-to-overhead times actually achieved on the recent world flight. To have given achieved block times on the thick line would have been misleading because at most destinations the Comet 3 did wide and prolonged circuits of city areas to show itself to the public. If 17 minutes be added to each set-course-to-overhead time (to cover a normal circuit, approach and landing at destination and the taxying at both ends of the journey) a true indication of the normal block time, in relation to airline operation, will be obtained. On some of the very short stages the times have been omitted because they are unrepresentative as explained in the article.

Singapore is where these two night photographs were taken. The aircraft was at chocks here for 1 hour 45 minutes to refuel. In the lower picture John Cunningham shakes hands with Group Captain H. Birch, Qantas Manager at Singapore.

flight planning data for the prototype Comet 3 was correct.

In exterior form and drag the Comet 3 is identical with the Comet 4 going into production. The Comet 4 will differ in having slightly larger wing-nacelle tanks than the Comet 3, but the form and installation of these larger nacelles has already been developed on the Comet 3, and the only difference in the nacelles " worn " by the Comet 3 on this world flight is an internal one — their actual fuel capacity was less than it will be. This will make a difference of 450 Imperial gallons, so that the total usable Comet 4 tankage will be 8,750 Imperial gallons.

The only other difference in the performance of the Comet 4 will be that which results from the higher thrust and lower fuel consumption of the Rolls-Royce Avon RA29 engines with which it will be fitted. The thrust will be 10,500 lb. compared with 10,000 lb. in the Comet 3, and the specific consumption will be appreciably improved.

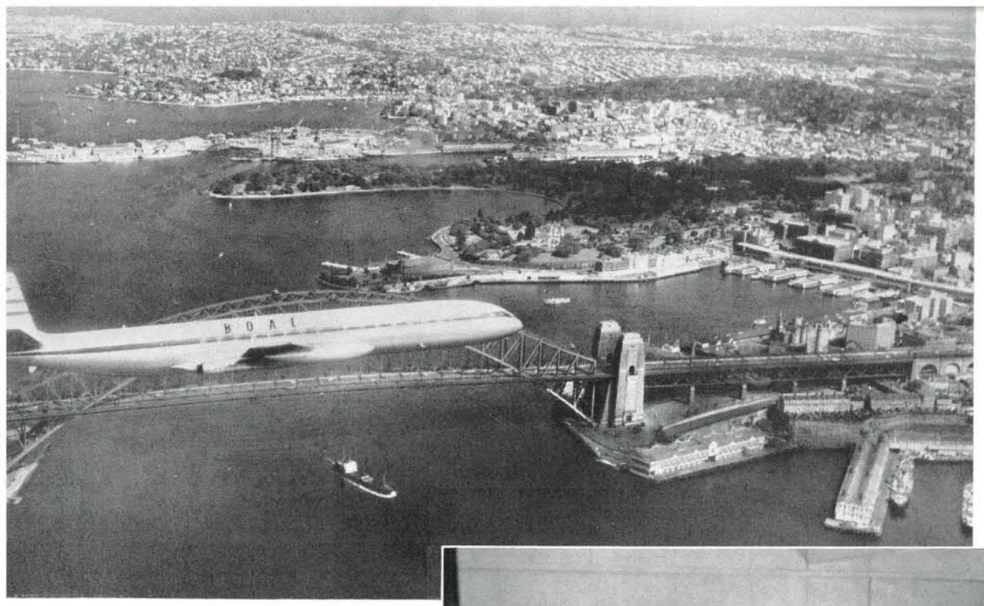
The capabilities of the Comet 4 have thus been established in the de Havilland trials of the Comet 3 during 1954 and 1955, and the brochure on the Comet 4 was compiled a few months ago with full confidence that it would be borne out in the production aircraft. This brochure was circulated to world carriers at the time of the S.B.A.C. Display in September, 1955.

A great deal has been said about " brochure-manship," and designers have not resented it because no-one knows better than they how difficult it is to estimate — for the purpose of serious sales negotiations — the performance, the economy and the " controllability and airfield behaviour " of a large jet airliner that has not yet been built, tested and developed. Unexpected problems are certain to arise on flight test. Not only will they affect the final figures in a way that cannot be foretold, but the time that will be taken up in solving the problems and its effect upon delivery dates cannot be forecast. All designers recognise this.

In the case of the Comet 4 the brochure problem is a different one altogether, in that the Comet 3, on which the brochure was based, is a developed and measured aircraft.

This world voyage has given the chance — at an early stage in the marketing phase of the Comet 4 — to verify the capabilities publicly along world routes for which it is suited, for which it was designed, and with the great benefit of having on board

Sydney: 24 hours 24 minutes' flying time from Hatfield. Twenty thousand happy Australians greeted the Comet at Mascot (Kingsford Smith Airport) on Sunday afternoon, December 4. Enthusiastic children led a break-through onto the field, and the Comet, when on finals, was asked to circle Sydney again while the runway was safely cleared. The crowd surged round the aircraft as it came to rest. To get a gangway and vehicles through a water hose was used as a last resort, but the uniformed operator really hadn't the heart to spray those pretty frocks. Everyone laughed, and cheered. Australians want jets, and would like British ones — but on merit only.



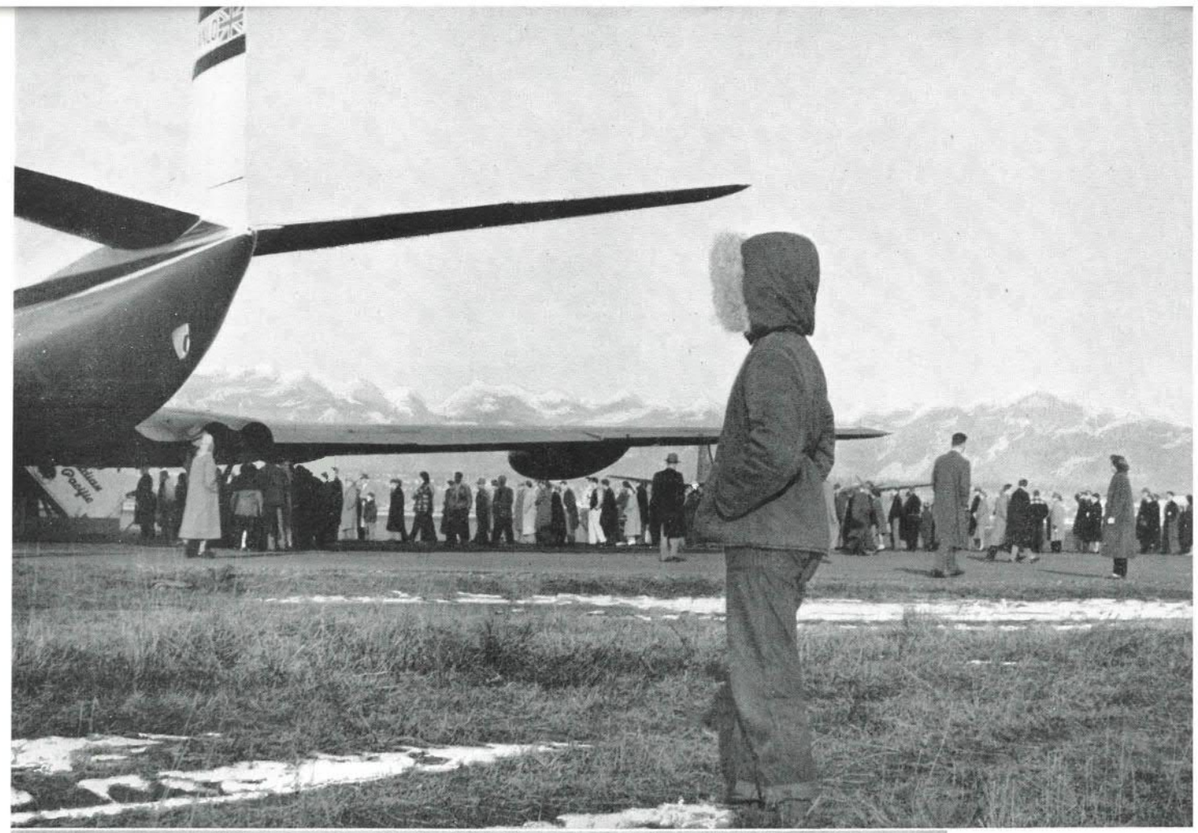
Sydney Bridge: a lovely picture taken from an R.A.A.F. Meteor by Mr. W. Brindle of the Australian News and Information Bureau and organised with the help of Mr. George Farwell. The two pictures below show the Sunday press conference at Sydney, when the crew were introduced by Mr. Alan Murray Jones, Chairman of the Australian de Havilland Company. The children in the small picture are Patricia Byrne, daughter of Mr. John Byrne, director of D.H. Australia, Robert Brain, son of Mr. Lester Brain, managing director of the company, and Roderick Harvey-Bailey, son of the Manager of the Rolls-Royce Company of Australia.

skilled senior pilots familiar with the stages flown.

One aspect of operation which the flight has brought out is the small effect of winds upon the punctuality of a jet airliner. With this may be mentioned the more realistic weather forecasts due to the shorter period of forecast.

The performance, fuel consumption and all-round economics of the aircraft on every stage of the world flight have been within very close tolerances of the flight planning data. The complete figures are being discussed with operators and the whole system and detail of calculation are available to them. In this *Gazette* article it will suffice to say that the Comet 4 will carry 60 first-class passengers with baggage and freight (capacity payload 16,720 lb.) over stage lengths of about 3,000 miles; alternatively, 76 tourist-class passengers with baggage and freight (capacity payload 19,300 lb.) over stage lengths of 2,700 miles.

Auckland, New Zealand: The pictures above and below were taken during the midday halt on Tuesday, December 13, when some fifty people were given a flight around North Island.



Hawaii and Vancouver: These two pictures express the contrast of climates which by Comet are less than six hours apart. Comet members had a swim at Waikiki before a dawn take-off and were in Vancouver for lunch, despite putting their watches on two hours. The Comet as well as its crew had been willing victims to hula charms. The snow-capped Rockies towered behind Vancouver City.

Fiji: The two photographs to the left show that the South Seas welcome was neither cold nor arid. Leis were delightfully showered upon all the Comet fliers as they disembarked at Nandi. Left to right, between ladies Captain Cane, Mr. Cunningham, Mr. Bugge and Mr. Lloyd.

These stage lengths take into account allowances for a continuous headwind of 50 m.p.h., and all the normal fuel reserves to cover take-off, *en route* contingencies, landing, stand-off over destination and a diversion of 200 miles. The optimum cruising mach number (ratio to the speed of sound) is 0·74. This is equivalent to 500 m.p.h. in the conditions normally met with in airline operation. The maximum take-off weight of the Comet 4 is 152,500 lb.

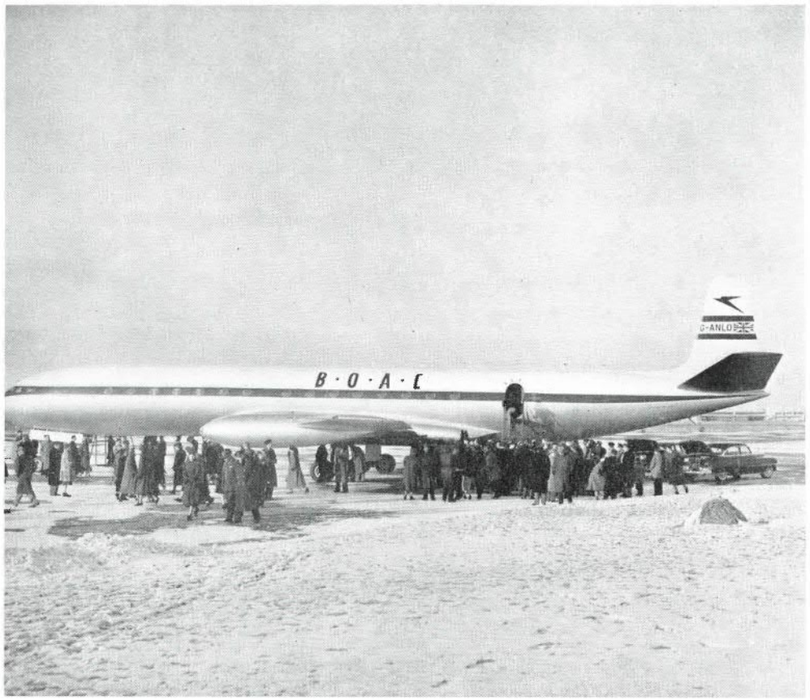
At the end of the Cairo–Bombay stage (2,710 statute miles) some 2,900 Imperial gallons of fuel remained in the tanks, sufficient for a further three hours' flying. At the end of the Fiji–Honolulu stage (3,210 miles) 1,250 gallons of fuel remained, sufficient to fly a further 1¼ hours. At the end of the Montreal–London stage (3,350 miles) on December 28 enough fuel remained in the tanks to circle London for an hour at low level and then, if diverted, to fly to Prestwick, 330 miles away, and there safely circuit and land.

Honolulu Airport is portrayed at the time of the Comet's arrival there on Tuesday, December 13. (The new day there bore the same date as the day that had been left behind in Fiji, the other side of the international date line). The Hawaiian hills are typical of the volcanic structure of many Pacific islands. The fine military hospital on the lower slopes is a local landmark.

Now, if the first technical asset of the world flight was performance the second certainly was serviceability. The de Havilland and Rolls-Royce Companies had expected that the aircraft and its engines would demonstrate a higher standard of serviceability than could any other airliner in the world to-day. On the airframe side this is because of the vast amount of development work put into the Comet design before the first flight and in the 6½ years since then, including 30,000 hours of airline service. On the engine side it is because of the enormous amount of development that has gone into the Avon engine, including 500,000 hours of service experience, and because the essential characteristics of the continuous-burning turbine made for an altogether new standard of reliability.

This expectation was fully borne out in the course of the world flight. In the 27,000 miles of route flying from London to Montreal (plus a few thousand miles of local demonstration flights) there were no flight snags whatever and no hold-ups whatever; and in the course of the inspections, the normal schedule of which was strictly adhered to, all that had to be done was (1) to change a fuel-pipe seal which was seeping slightly due to having been cut on assembly, and (2) to change a refuelling actuator. Each engine used about two pints of lubricant in some 75 hours and 35,000 miles. Except that the fog in London on December 2 had set the programme back by just one day, as far as Montreal no departure had to be made from a schedule which had been drawn up before leaving Hatfield. The technical fault, to do with the attachment of the jet pipe of No. 3 engine, which prevented the Atlantic flight on the night of December 21, was a small one which can be easily corrected. It need never recur, either on the production Comet 4 or even on this development Comet 3 aircraft. The fault was rectified without recourse to any of the spare parts which as a precaution had been sent from England.

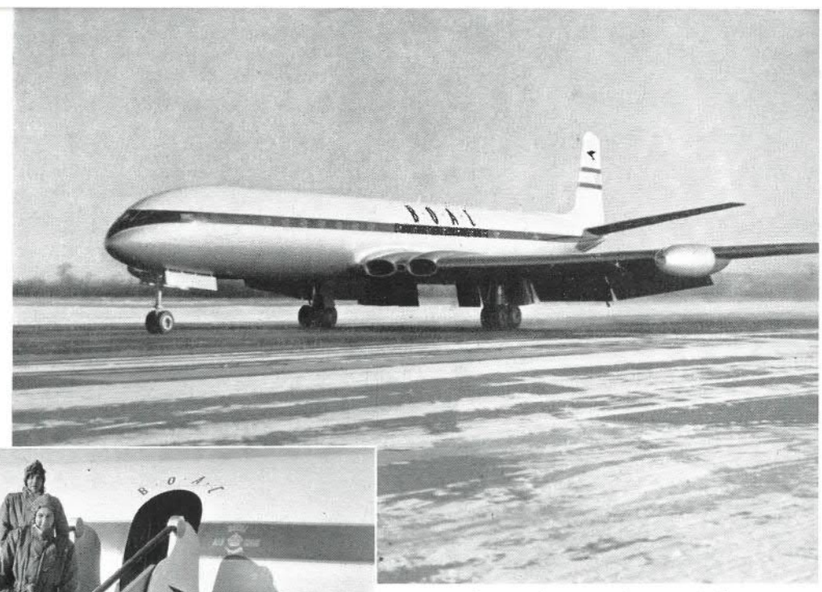
The third aspect of the Comet which has at last been made plain to the world as a direct outcome of the flight is its airfield behaviour. The crew on this flight were surprised to find that in some parts of the world, notably Hawaii, the public and even the aviation community



Toronto had hard frost and a clear sky when the Comet landed at Downsview, by the new de Havilland factory, on Sunday, December 18, after a four-hour flight from Vancouver, to be greeted by a family gathering of D.H. people with Mr. Philip C. Garratt at their head.

seriously thought that a jet airliner would need a long runway, would climb at a flattish gradient over the city of departure, causing a noise nuisance, would circuit, approach and land rather fast, would be unbearably noisy when standing and manœuvring in front of the terminal building, and might even scorch the paving! Technical people in Honolulu really thought that special regulations might be needed to keep people a considerable distance away from the jet engine intakes and effluxes during ground running. One newspaper referred to the efflux as "a blast as hot as a blow torch," and said that "the danger-point behind a jet engine is 100 yards."

The de Havilland Company has always



Montreal, December 20, and minus 15 degrees Fahrenheit. Quebec was having a chilly snap of weather a little early in the winter. Some of the crew posed to show off their (English-designed) windcheaters; left to right: Messrs. E. Brackstone Brown, H. Davies, J. Hamilton, E. Holley and R. V. Ablett.

stated that the Comet was designed to use runways and airport facilities as they exist, and has emphasised that a low wing loading was specified so as to be sure of a short take-off and steep climb and a low landing speed with a short landing run. However, it is clear to all these people now. The sight of the Comet landing on the short runway at Honolulu (7,000 feet long), pulling up within 3,000 feet and turning off at the intersection, impressed the observers of the Hawaiian Aeronautics Commission. They were surprised to see ground staff standing and walking quite close behind the aircraft's tail while all four engines were running fast enough to start the wheels rolling away from the parking bay. They were astonished to learn that the fully loaded Comet 3 or 4 climbs after take off far more steeply than modern piston-engined airliners; the maximum allowable gross weight (or in effect the payload) on some of these is decided by their ability to meet take-off and climb requirements.

London Airport, December 28: Sir Geoffrey de Havilland, founder of this Enterprise, whose foresight and inspiration during the closing years of the 1939–1945 war brought the first jet airliner into being, was accompanied by Sir Miles Thomas, the progressive chairman of B.O.A.C., when he greeted the Comet 3 home after its 30,000-mile circuit of the globe. Past the memorial to Alcock and Brown, first men ever to fly the Atlantic non-stop, the two gentlemen walked out to the Comet as its Avon engines stopped after a direct crossing of 3,350 miles from Montreal made in 6 hours 8 minutes from set-course to overhead at London, 10 minutes longer from chock-to-chock. On the steps they are seen with Mr. John Cunningham, Mr. Peter Bugge, Capt. A. P. W. Cane (B.O.A.C.), and Mr. E. Holley (Rolls-Royce). In uniform is Mr. C. H. Bizzell (B.O.A.C.), and behind him is Mr. G. Jones (de Havilland) who boarded the aircraft on its arrival.

The Comet can satisfy these without restrictions at airports up to about 8,000 feet in altitude. To those who have been misled by Press accounts, especially in U.S.A., during the past two or three years, this world flight must have made it plain that the Comet is "house-trained."

A great many people were given rides in the Comet, in local flights of 60 to 90 minutes from Sydney, Melbourne, Perth, Auckland, Honolulu, Vancouver, Montreal and Hatfield; also parties were carried from Sydney to Melbourne, circling Canberra, and from Toronto to Montreal. In all about 600 people were given passenger rides.

It was a pity, from the point of view of these passenger demonstrations, that in such important details as the galley, wardrobes, and toilets, which are spacious and efficiently designed, the furnishings were incomplete, and a detail which has not yet been developed in the Comet 3 is the cabin air-conditioning system, which can easily be noisier than the engines; this will be practically silent in the Comet 4.

A misapprehension which the world voyage must have eliminated concerns the purpose for which the aircraft is designed. At every port of call the crew have had to explain that the Comet 4 is complementary to rather than competitive with the American conception of a jet airliner. It is smaller than the American jet airliners which are promised. Those aircraft, arising from a U.S. Air Force requirement for a flight-refuelling tanker, are aimed at long-range operations with high traffic density, especially the coast-to-coast service across the United States and the non-stop connection between New York and European capitals.

de Havilland designers had as their main aim the other trade routes around the world. On these the traffic is less dense and most of the centres of trade and industry are 2,000 to 3,000 miles apart. Designed to fit these conditions, the Comet has a world-wide suitability. It is, in fact, universally useful on world routes except for the one case of the non-stop service between New York and European capitals, on which it will need to make one halt on the westbound flight.

This North Atlantic route is exceptional in two respects: it has exceedingly heavy traffic, especially in the summer months, and it experiences strong westerly winds, especially in the winter months. These conditions call for an exceptionally large aircraft if the flight is to be made without ever stopping between European capitals and New York.

Let us glance at some of the other regions crossed by the Comet 3 in its recent circuit. It has shown that the journey between London and Sydney (nearly 12,000 statute miles) can be made within 30 hours, including four halts at important traffic junctions. Only 24½ hours would be spent in the air and no stage would be much longer than 5 hours. It has demonstrated the usefulness of the Comet on trans-Australian routes, for instance by bringing Perth and Sydney (2,045 miles) within about 4 hours of each other. The Pacific Ocean, with its vastness, is well suited to the Comet 4. A full load can be carried between Vancouver and Honolulu (2,750 miles) in 5 or 6 hours, between San Francisco and Honolulu (2,420 miles) in less time. Honolulu and Tokyo (4,280 miles) are connected in less than 10 hours of flying time, with a halt at Wake. The long stage between Fiji and Honolulu (3,220 miles) can on many occasions be flown non-stop.

The Comet 4 is excellent for trans-Canadian or trans-American non-stop services. By covering the short stage from Vancouver to Toronto (2,185 miles) in 4 hours it has even shown that a Toronto businessman could make a day return trip to Vancouver without hurry or fatigue and have some hours in Vancouver city. It will cross Canada between Vancouver and Montreal (2,290 miles) with full load in 5½ hours westbound, 4¾ hours eastbound. It is equally suitable for linking Canadian cities with South American cities.

Contemplating the world routes on which traffic is not so dense as it is from coast to coast across U.S.A. or across the North Atlantic, it may be expected that as the traffic builds up over the years operators will prefer to increase the frequency with a moderate-sized airliner rather than to employ larger vehicles less frequently. It is well known in the airline business that frequency means almost as much to travellers as speed. Later still, when end-to-end traffic eventually becomes heavy enough to justify a larger airliner flying with minimum refuelling halts, those intermediate centres of trade and traffic will still need to be served, affording a continued employment for the 3,000-mile vehicle, capable of carrying 60 to 80 passengers, for many years to come.

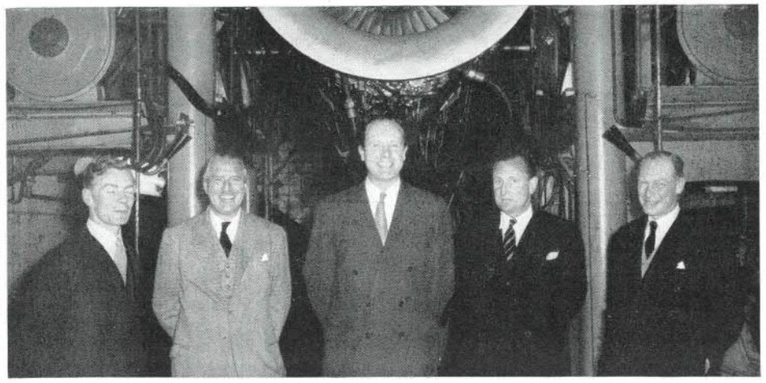
Even on the North Atlantic crossing, with its special conditions, the Comet 4, which should be in service before larger jet airliners, will provide the most comfortable and speedy operation despite its necessary one-hour halt on the westbound flight. At the present pace of British jet-engine development specific consumption may well improve, yielding the opportunity for a superior capability on the North Atlantic without recourse to a very large aircraft.

Indeed the remarkable progress which has been made by British jet engines is one of the outstanding facts in the whole outlook of air transport, and great confidence is derived from the development history of the Rolls-Royce Avon engine which powers the Comet 4. It is employed in many of the latest aircraft types and has half a million hours of operational service behind it.

Likewise a wealth of hard-earned experience, the only experience of a jet passenger liner in public service, is built into the new Comet. The Comet has had six years of continuous development flying, including 30,000 hours or 13 million miles of airline duty. There is no short cut to such invaluable knowledge as de Havilland and the British Overseas Airways Corporation have gained during these years, and all of it is built into the new Comet 4.

Without doubt jet propulsion is about to revolutionise the standards of world travel. Its two outstanding qualities are speed and comfort. Its speed of over 500 miles an hour virtually halves the journey time. Its comfort arises from the fact that the jet airliner flies extremely high, in the region of the smoothest passage, and it employs virtually vibrationless power. A long inter-continental journey is cut down to a very few hours, and the comfort and quietude and perfect air-conditioning of the aircraft make the journey seem even shorter still. One arrives without the sense of having travelled.

THE PARLIAMENTARY SECRETARY TO THE MINISTRY OF SUPPLY VISITS HATFIELD



On Friday, November 4, Mr. F. J. Errol, M.P., visited de Havilland at Hatfield. He is seen here (centre) in the Gyron engine test bed; with him in this group are (left to right): Mr. N. Johnson, private secretary to Mr. Errol; Mr. I. S. Jehu, C.I.E., Chief Information Officer, Ministry of Supply; Mr. H. Buckingham, Engine Company business director, and Mr. C. S. Thom, Aircraft Company business director.

DOVE DELIVERIES

Recent Dove deliveries included HB–LAS for the Swiss Federal Air Office, G–AODV for the Shell Petroleum organisation in U.S.A., and CS401, the first of two machines for the Royal Ceylon Air Force. HB–LAS was handed over to representatives of the Swiss Federal Air Office in this country; G–AODV was delivered to New York by Messrs. C. Webb and H. Clements of Fleetway Inc., flying via Keflavik, Bluie West One, Goose and Montreal; CS401 was flown out to Colombo by Mr. G. H. Pike, de Havilland test pilot.

EXTENDED ENGINE OVERHAUL PERIOD FOR HERON OPERATORS

For some months now Heron operators have been able to run their Gipsy Queen 30 Mk. 2 engines for 1,000 hours between overhauls. Considerable experience has already been built up on engines running for this period, and their condition has been such that several operators are now running trial extensions up to 1,200 hours on one engine on each aircraft.

A PROPELLER COMPANY APPOINTMENT

Mr. C. R. Burgess, M.B.E., A.F.R.Ae.S., who has been Sales Manager of de Havilland Propellers Ltd. since July, 1945, is appointed a Director of the Company from December 1, 1955.

Mr. Burgess joined de Havilland as a Trade Apprentice in 1928. On completion of his apprenticeship in 1933 he left the Company to broaden his experience of the industry and worked as a licenced engineer on joy-riding and air circus aircraft in the Channel Islands and India. In 1934 he returned to this country as engineer-in-charge of maintenance on the Jersey Airways fleet of D.H.84 Dragon aircraft: this work was carried out at Heston Aerodrome by Airwork Ltd.

Later in the same year Mr. Burgess rejoined de Havilland as aircraft and engine field service engineer in South America. In 1935 he returned to England and joined the newly-formed de Havilland Propeller Division, becoming the first propeller service engineer. In 1936 he was appointed assistant service manager.

At the outbreak of war, Mr. Burgess became propeller service manager: he was responsible for the organisation of the Company's two propeller overhaul factories and for field maintenance at home and overseas. During this period he was also repair co-ordinating officer on behalf of the Directorate of Repair and Maintenance, Ministry of Aircraft Production. In this capacity he assisted with the organisation of new propeller repair depots sponsored by the M.A.P. and co-ordinated overhaul problems and spares supplies to all depots in this country and abroad which repaired de Havilland or Hamilton Standard propellers. For this work, which took him to the theatres of war in North Africa, the Middle East and the Far East, Mr. Burgess was awarded the M.B.E. He has always been concerned with the operators' end of de Havilland products, and has visited over fifty countries in the course of his service with the Company.

In 1945, upon his appointment as sales manager to the Propeller Company, Mr. Burgess became responsible for the sales, field service, repair and technical publications departments. His directorship comes during a period of rapid expansion of the Propeller Company: for, in addition to the design and production of propellers for modern aircraft, particularly turbine-powered aircraft, the Company is most actively engaged in work on guided weapons, turbo-alternators, radar scanners, and cold-air units.

AN ENGINE COMPANY APPOINTMENT

It was announced on November 30, 1955, that Mr. M. G. Ash, M.B.E., A.C.A., had been appointed a Director of the de Havilland Engine Company Limited.

Mr. Ash, who was educated at Sedbergh, was articled to Peat Marwick & Mitchell in London and qualified as a Chartered Accountant in 1936. In 1937 he left England to become company accountant of the Calcutta branch of Imperial Chemical Industries Limited and, with the outbreak of hostilities in 1939, he joined the Indian Army and was commissioned in the 3rd Battalion of the 14th Punjab Regiment.

After a tour of duty in the Middle East in which he served as Brigade Intelligence Officer, Mr. Ash attended the Staff College at Quetta and was later posted to General Slim's Fourteenth Army in India and then in Burma where he became a lieutenant-colonel serving as G.S.O.1 (operations) in 4 Corps. For his work in the campaign which culminated in the recapture of Rangoon, Lieutenant-Colonel Ash was mentioned in despatches and made a Member of the Order of the British Empire. He retired from the Indian Army in 1945 and was appointed secretary of the de Havilland Engine Company in 1946 in succession to Mr. B. J. Birkle.

In recent years Mr. Ash has played an increasingly important part in formulating the financial policy of the Company and his appointment comes at a time when the Gyron, Gyron Junior, and Spectre, the outcome of many years of intensive development effort in the jet and rocket engine fields, can be expected to provide a growing source of business.

LONGER LIFE FOR THE AMBASSADOR'S DE HAVILLAND PROPELLERS

The Air Registration Board has approved an increase from 1,250 to 1,500 hours in the overhaul life of the de Havilland propellers fitted to the Ambassador inter-city airliners, the "Elizabethans" of British European Airways.

These are four-bladed hydromatic feathering propellers of 16 ft. diameter: their overhaul life was originally set at 400 hours, but this figure has been steadily increased since the first of B.E.A.'s fleet of aircraft went into service in March, 1952.

HACK CHIPMUNK

The Hack Trophy, a gold Grecian Bowl presented by W/Cdr. Hack, R.A.F. (retd.) for annual competition between the 17 University Air Squadrons of Great Britain and Northern Ireland during their summer camps, was won in 1955 by the University of Birmingham Air Squadron.

The competition is based on flying tests which include aerobatics and general handling, and cadets representing each year of training are tested. The ground examination, which forms part of the competition, is taken by all Squadron members. All the tests are conducted by the Home Command Examining Unit.

The photograph shows Cadet Pilot D. H. Taylor, one of the Birmingham members tested, entering a Squadron Chipmunk.

HOLDING COMPANY APPOINTMENTS

The Board of De Havilland Holdings Limited has appointed Mr. C. B. White as Secretary and Mr. C. C. Taylor as Chief Accountant of that Company.

The Board of The De Havilland Aircraft Company Limited has appointed Mr. P. R. Phillips as Secretary and it has been arranged that Mr. W. D. Rennie, who is at present Chief Accountant of The De Havilland Engine Company, should join The De Havilland Aircraft Company as Chief Accountant early in 1956. Until Mr. Rennie takes up his new position Mr. C. C. Taylor will continue to act as Chief Accountant of the Aircraft Company.