

# News from

# BEA

Public Relations

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16th November 1959

## THE BEA COMET STORY

Today (Monday), at the Hatfield, Herts, works of the de Havilland Aircraft Co. Ltd., BEA officially took delivery of its first two jet-airliners, part of its ordered fleet of seven Comet 4Bs.

Tomorrow, the two 530 m.p.h. cruising airliners will be hard at work at Stansted airfield, Essex, preparing BEA's first jet-flying aircrews for regular, scheduled Comet operations throughout Europe and the Middle East. The first passenger-carrying scheduled flights by the new BEA Comets are expected to begin, on an ad hoc basis, within the next two to three weeks.

The speed with which BEA is able to introduce its Comets into revenue-earning service, although they are the Corporation's first pure-jet aircraft, is a tribute to the very thorough development and proving in airline service that the type has received.

BEA's accelerated jet-crew training programme will receive another boost tomorrow (Tuesday) when the newly completed Comet simulator, for the realistic training of BEA aircrews on the ground, is officially handed over by the constructors at the BEA simulator unit at Heston.

Before the full programme of the BEA Comet services is implemented next July, 30 three-pilot jet-crews will have been converted onto Comets and received full route - familiarisation training. Already a nucleus of training captains headed by BEA's Comet Flight Manager Captain G. Greenhalgh, has received its basic instruction in flights in de Havilland prototypes, with 216 Squadron of RAF Transport Command and with B.O.A.C.

The Comet 4B for BEA is Britain's fastest airliner and an annual utilisation rate equal to BEA's hard-worked Viscount fleet is expected to be achieved a few months after entering service.

The planned utilisation rate of 2,400 hours flying a year coupled with the Comet's high cruising speed give BEA's seven-jet fleet a capacity for work, measured in seat-miles flown in

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a year, equal to a considerably larger fleet of BEA's very successful Viscount turbo-prop airliners of which BEA was the pioneer operator.

B E A C O M E T 4 B S E R V I C E S				
ROUTE	JOURNEY TIME		SERVICES A WEEK	DATE OF INTRODUCTION 1960
<u>LONDON TO:</u>	<u>HRS.</u>	<u>MINS.</u>		
NICE	1	45	14	1st May
ROME	2	10	7	1st April
ATHENS	4	40	9	1st April
ISTANBUL	6	30	5	1st April
NICOSIA	6	55	2	1st April
TEL AVIV	7	25	4	1st April
DUSSELDORF	1	05	7	1st May
FRANKFURT	1	15	7	1st July
MUNICH	1	35	2	1st April
ZURICH	1	25	2	14th May
"	1	25	14	1st July
COPENHAGEN	1	40	9	1st May
OSLO	1	55	7	1st May
STOCKHOLM	3	30	7	1st May
WARSAW	2	30	2	1st April
MOSCOW	3	30	2	1st April
MALTA	2	45	1	1st May

# PRESS RELEASE

ISSUED BY THE PUBLIC RELATIONS DEPARTMENT  
HATFIELD HERTFORDSHIRE ENGLAND  
TELEPHONE: HATFIELD 226 CABLES: HAVILLAND TELEX HATFIELD



Monday,  
November 16, 1959.

## Early Delivery of Comet 4Bs to B.E.A.

The two Continental Comet 4Bs being handed over to British European Airways at Hatfield to-day are the first of a fleet of seven ordered by the Corporation. B.E.A.'s initial order for six Comets was announced in September 1957. In August 1959 the order was increased to seven.

The first aircraft, G-APMB, is being delivered nearly two months ahead of schedule whilst the second aircraft, G-APMC to be handed over to-day, is nearly three months ahead of the contract date. The third aircraft, G-APMA, will be delivered before the end of 1959, some two months earlier than promised. This third aircraft is actually the first Comet 4B to be built and it is the aircraft which has done the test flying for the type certificate of airworthiness.

The delivery of the remaining three aircraft of the initial order should be completed by early Spring, well within the contract date.

In a separate statement B.E.A. are announcing to-day their plans for introducing the Comet on to their route network.

The Continental Comet 4B, designed for short and medium-range operation, is six and a half feet longer than the Intercontinental Comet 4 and the wing span is less by seven feet. It has a greater cabin volume than the Comet 4 but the fuel-tank capacity is less in accordance with its intended Continental role. For B.E.A. the aircraft will be fitted with 86 seats, for 22 first-class and 64 economy-class passengers. Other interior arrangements accommodating up to 102 passengers are possible.

The Comet 4B has a cruising speed of 530 m.p.h., and its maximum still-air stage length is more than 2,500 miles.

Further details of the performance of the Comet 4B and of the other Comet 4 variants, together with some background information and the list of Comet orders, will be found in the supplementary notes attached.

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November, 1959.

## The Comet

### Supplementary Information

The Comet is the most thoroughly developed, tested and proven jet airliner in the world. Behind it is a unique fund of military and civil operational experience and it has already achieved a record of reliability and safe operation which is unsurpassed by any other jet airliner.

The robust nature of the Comet's structure has been well demonstrated during service with the airlines and its high speed is attained without sacrificing its good handling qualities. It approaches and lands more slowly than many propeller-driven airliners and it is easier and safer to fly than other jet airliners which attain a slightly higher speed at the expense of aerodrome performance and handling qualities.

The Comet's Avon engines, backed by the accumulated experience of Rolls-Royce, have behind them more than 2½ million hours of Avon experience. The Avon RA 29 Mark 524, the Comet 4 engine, entered service with B.O.A.C. with an approved overhaul life of 1,000 hours, a figure which was without precedent for a new turbine engine starting its commercial career. During the first year of operation (in which there was no case of an engine failing in flight) the overhaul life has twice been increased, and now stands at 1,600 hours. Because of the high speed of the Comet an overhaul life of 1,600 hours is equivalent to at least a 2,400-hour life on a piston engine.

The first Comet 4s went into service in October 1958 and by the middle of November 1959 the aircraft of B.O.A.C. and of Aerolineas Argentinas had covered some 14,000,000 miles in about 30,000 flying hours.

The reliability of the Comet has already been convincingly demonstrated. In the first twelve months of operation on the North Atlantic with B.O.A.C. the Comet 4 has maintained an outstandingly high rate of punctuality, better indeed than that achieved by any other B.O.A.C. aircraft on these routes. B.O.A.C. have stated that the Comet was largely responsible for a 40 per cent. increase in the Corporation's Atlantic passenger traffic during the Summer of 1959.

The Comet's record during its first year of service goes far to justify the prediction that the aircraft will easily achieve an annual utilisation of 4,000 hours - about eleven hours flying every day throughout the year.

With its high speed and a degree of passenger comfort not hitherto achieved by any airliner, the Comet offers the prospect of high load factors combined with a cost of operation comparable with the best contemporary propeller-driven aircraft. In fact, the Comet can pay its way with fewer passengers than any other medium-range jet airliner offered to-day, but even on routes where the traffic is far from heavy the Comet, because of its moderate size, can operate at an attractive

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service frequency without the penalty of low load factors. This attribute, and the Comet's ability to operate from medium-sized airfields as they exist to-day, combine to provide a vehicle of great operational flexibility and exceptional profit-making capacity.

Official tests have shown that the Comet's remarkable take-off and climb performance, coupled with the efficient noise suppressors fitted to the Rolls-Royce Avon engines, enable the Comet to operate in and out of airfields with no more noise than is customarily developed by current piston-engined airliners.

#### Summary of Comet Facts

##### The Comet 1

The first Comet 1, with four de Havilland Ghost engines of 5,000 lb. thrust, made its maiden flight on July 27, 1949. Comet 1s were operated by B.O.A.C. from May 2, 1952, until the aircraft were withdrawn from service in April 1954. Comet 1s were also operated by Air France, Union Aeromaritime de Transport and Air Transport Command of the Royal Canadian Air Force. During this period Comet 1s flew more than 13,000,000 miles in commercial service.

##### The Comet 2

The Comet 2, a larger and more powerful version with four Rolls-Royce Avon RA 9 engines, first flew on August 27, 1953. This version entered service with Transport Command, Royal Air Force, in June 1956, since when a fleet of ten R.A.F. Comet 2s have flown more than 24,000 hours on routine services and special flights ranging from London eastward to Australia and westward to Christmas Island in the Pacific. Many important passengers have been carried, notably Her Majesty Queen Elizabeth and His Royal Highness Prince Philip, who flew from Marham to Leuchars and back to London Airport on June 4, 1957.

##### The R.C.A.F. Comets

The two Comet 1As (4 de Havilland Ghost engines) now in service with the R.C.A.F., have between them flown more than 2,500 hours with Air Transport Command. Among many other special flights they have made numerous journeys between Canada and Europe.

##### Special Comets for Engine Development

Two special Comet 2Es, each fitted with two Rolls-Royce Avon RA 29 engines of the Comet 4 type, were operated by B.O.A.C. first starting in September 1957 on engine development flights mainly on the route between London and Beirut, later in May 1958, on an intensive programme of Trans-Atlantic familiarisation flying which was concluded in July 1958; altogether nearly 4,000 flying hours have been logged on the two Comet 2Es.

The Rolls-Royce Avon RA 29 Mark 524 engine was granted a full Normal Category approval by the Air Registration Board in March 1958, and it entered service with B.O.A.C. with an initial overhaul life of 1,000 hours. This has now been increased to 1,600 hours.

##### The Comet 3

The Comet 3 aircraft, only one of which has been built - G-ANLO - first flew on July 19, 1954. This version was employed in development flying for the Comet 4 and it was progressively modified in many important respects to conform to the Comet 4 standard. In February 1957 it was refitted with the RA 29 engines of the Comet 4 type and was able to accomplish something like 80 per cent. of test flying necessary to obtain a Certificate of Airworthiness for the Comet 4. During the Summer of 1958 the Comet 3 was again modified to approximate Comet 4B configuration by

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a reduction of 7 feet in the wing span. In this form, as the Comet 3B, the aircraft was engaged on development flying for the Continental Comet 4B, for British European Airways.

#### The Comet 4 Variants

The first Comet 4 flew on April 27, 1958, and the delivery of the first two aircraft to B.O.A.C. took place ahead of schedule on September 30. B.O.A.C. Comets inaugurated the world's first jet service between London and New York on October 4. B.O.A.C. has subsequently extended its Comet services to Montreal, Hong Kong, Japan and Australia.

The Comet is now offered in three forms to cover different operational roles, the long-range Intercontinental Comet 4, designed to carry 56 to 81 passengers on stages of up to about 3,000 miles, the short and medium-range Continental Comet 4B, able to carry up to 102 passengers and intended primarily for economical operation on routes of from 400 to 2,500 miles in length, and the Comet 4C, for those route patterns which can take advantage of the high capacity fuselage of the 4B but require a range capacity more nearly approaching that of the Comet 4.

In addition to the 10 Comet 2 aircraft (Rolls-Royce Avon jet engines) of the Royal Air Force (Transport Command) and 2 Comet 1A aircraft (de Havilland Ghost jet engines) of the Royal Canadian Air Force, there are now 39 Comet 4, 4B and 4C airliners in service or on order. These comprise 19 Comet 4s for B.O.A.C. (16 delivered), 7 Comet 4Bs for B.E.A. (deliveries commenced 1959), 6 Comet 4s for Aerolineas Argentinas (3 delivered), 2 Comet 4s for East African Airways (1960 delivery), 2 Comet 4Bs for Olympic Airlines, Greece (early 1960 delivery), and 3 Comet 4Cs for Mexicana Airlines (deliveries commence shortly).

A summary of the principle weights and performance figures for the Comet 4 variants is given below:-

Series		4	4B	4C
Number of passengers		60-81	72-102	72-102
Engines		Avon RA.29	Avon RA.29	Avon RA.29
Static Thrust	lb.	10,500	10,500	10,500
Span	ft.	115	108	115
Length	ft.	111.5	118	118
Height	ft.	29.5	29.5	29.5
Wing area	ft. <sup>2</sup>	2,121	2,059	2,121
Total tankage	Imp. gall.	8,900	7,800	8,900
Maximum A.U.W.	lb.	162,000	158,000	162,000
Capacity payload	lb.	16,800-20,290	19,630-24,610	19,630-24,610
Corresponding seating		60 81	72 102	72 102
Maximum still-air stage length with first class capacity payload and reserve fuel	st.mls.	3,225	2,570	2,820
Corresponding seating		60	72	72
Normal cruising speed	m.p.h.	500	530	500
Cruising altitude range	feet	28,000-40,000	20,000-38,000	30,000-39,000

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16th November 1959

## FIRST COMET 4Bs HANDED OVER TO BEA

At the handing over ceremony of the first Comets to BEA at the de Havilland Aircraft Company's airfield at Hatfield, Herts. today (Monday) Lord Douglas of Kirtleside, Chairman of BEA, said:

"The handing-over of the first Comets to BEA is a notable event. It marks the entry of the world's first turbo-prop airline into the pure-jet business. BEA has now been flying turbo-props for more than 6½ years. Although I believe that we shall continue to operate aircraft of this type for many years yet - in the shape of the Viscount, Vanguard and Herald - it became clear about three years ago that the world-wide orders which had been placed for jet airliners would force BEA also, for competition reasons, into acquiring some of these aircraft. The Comet 4B, a short-haul development of the world's first jet airliner, was our logical choice. Rather more than two years ago we accordingly ordered a small fleet of Comets, the first of which are being handed-over today.

"On our longer and more competitive international routes, where speed is of greatest importance, it is clear that we must have a pure-jet aircraft if we are to maintain BEA as the leading European airline. This is where the Comet comes in. Seven Comet 4Bs - the most tested and proven jets in the world - are to be used by BEA, first on the routes to Rome, Athens and the Middle East and later also to Warsaw, Moscow, Scandinavia and various other points in central Europe. No less than 18 cities will be linked by BEA Comet by July 1960.

"The Comets - like the Vanguards - will have mixed-class interior layouts. This will enable us to provide first-class accommodation for those prepared to pay for it, while pursuing our main aim of lowering the price of air travel, so as to offer it to an ever-increasing proportion of the public. BEA's low fares policy will, in fact, be carried a stage further next year

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as our new excursion fares come into force. These are to be 15 to 20 per cent lower than existing fares.

"As a result of an agreement with BEA, Olympic Airlines of Greece have also ordered two Comets. We shall be jointly operating our Comets on many Mediterranean routes as an integrated fleet and I think this arrangement will prove of great benefit to both airlines.

"I have recently been delighted to see signs of reviving airline interest in the Comet. Sales of this magnificent aeroplane are, indeed, now approaching the fifty mark. I believe this revival is well founded; the Comet offers many things which are beyond the capabilities of the big American jets. Its moderate size, excellent aerodrome performance and less critical noise characteristics are considerable attractions to operators on all but the busiest long-haul trunk routes.

"I trust and believe that the Comet - in spite of the tragic set-back in its early years - will yet achieve wide success. Such a triumph over difficulties will greatly enhance the reputation of British aircraft and will be a just and well-deserved reward to the de Havilland Enterprise for their faith in pioneering the world's first jet airliner.



# ROLLS-ROYCE LIMITED

AERO ENGINE DIVISION



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PRESS INFORMATION For Release . . . . . Immediate . . . . .

The Rolls-Royce Avon has an impressive record of service during the first year of operation.

The Avon RA.29 Mk.525, power unit of the de Havilland Comet 4B for British European Airways, differs from the Mk.524 only by the substitution of stainless steel for titanium in some stator blades of the compressor.

The Avon RA.29 has already established itself as a power plant of the highest reliability. In the first year of operations during which 86,000 engine hours were flown in de Havilland Comets, there has not been a single engine failure leading to loss of power in flight.

The overhaul life which had been approved at 1,000 hours before entry into service increased to 1,600 hours in a year. During this period the routine maintenance amounted to less than 4 man minutes per flying hour. For the Avon no scheduled component changes or internal inspections are required between overhaul.

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