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Air-Britain ARCHIVE

The AIR-BRITAIN Civil Aviation Historical Quarterly



CAAC : Civil Aviation Administration of China fleets

Fieseler F 5

Ernest Maund

DH.83 Fox Moth

Farman F.190 series

Reid & Sigrist Desford

AIR-BRITAIN - Founded 1948



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ability and cost.

COVER PHOTO



Illustrating the final part of our DH Fox Moth
histories, the immaculate VH-USJ c/n 4059 is
seen on an evening sortie near Perth-
Jandakot in 2009. (Dave Welch)

**CLOSING DATE for contributions to next
ARCHIVE: April 21st 2012**

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Ernest Maund -
Pretender Pioneer 2012/35
The Farman F.190 2012/43



HEAD-ON VIEW - WHAT IS IT? Number 43

Here we have a cabin biplane with a prominent 7-cylinder radial and a rather complex-looking
windscreen design. The wings are of equal span with no stagger, wire-braced and with linked
ailerons. The rear end is raised on a trestle to put the aircraft into flying position on its sturdy
undercarriage. Full details next time. (via JM Collection)

In this issue . . .

This issue encompasses aspects of civil avia-
tion which cover an entire century! While we
have rarely featured pre-WWI subjects previ-
ously, we were pleased to be offered the
article on **Ernest Maund** in which Philip Jarrett
describes the tribulations of early would-be
aviators, exposes one particular pioneer myth,
and provides an object lesson in examining
"facts" which may not always be what they
seem. We are grateful for the cooperation of
the *Shropshire Star* newspaper in providing
Philip with copies of articles which featured the
claims of the Maund supporters and we trust
that their readership will now be enlightened
once the historical aviation perspective is
revealed.

The Whole Truth series on the **DH.83 Fox
Moth** by Malcolm Fillmore concludes in this
issue, featuring the remainder of the Canadian
production and a full index of all registrations
and serials. Our thanks to Malcolm, to Dave
Welch for a batch of photos including the
evocative cover image, and to all those who
have contributed additional data.

We are pleased that another batch of
Yugoslav registrations appear this time, we
are now approaching the end of the commer-
cial series and readers are reminded that,
while the YU- marks remain in use by Serbia,
we are only featuring pre-1991 registrations
established before the break-up of the Federal
Republic. The now-independent states may
pitch for space in Archive later. Special thanks
are due to Ognan Petrovic for his continued
research and excellent artwork.

Due to Michel Barrière's efforts we continue
the detailed histories of the **Farman F.190**
series and again feature some real pioneer
flights. To acquire a single engined aeroplane
in 1930 and fly off to the far corners of the
(French) Empire took bravery and skill - oh,
and a certain amount of luck!

Unusually, we have two Head-on View sub-
jects this time. The **Reid & Sigrist Desford**
completes the story begun by the Snargasher
in the last issue. The completely new subject is
the **Fieseler F5** about which little seems to
have been written but maybe some readers
can offer to fill gaps in our embryonic listing?

With the designer and pilot Gerhard Fieseler
featured in that particular story, it is entirely
coincidental that his great aerobatic rivals
Michel Détroyat and Marcel Doret also appear
with their respective aircraft in the **French
Register** section of 1930.

Last but not least we have the second part of
the CAAC fleet list in Martin Best's continuing
story of the Development of Civil Aviation in
China. Our thanks of course to Martin for all of
his efforts and also to Ian Johnson for
researching the illustrations for this series.

Airliners in Warpaint should be back next time
and there are other goodies in the pipeline but
don't let any of the above deter you if you have
a pet subject or piece of research that you
would like to see out in the open. This is the
place for it and there is help available in editing
or illustrating the work. All you have to do is to
get in touch!

. . . and in future issues

Having been determined to take early (?)
retirement from this job, the current editor is
pleased that an able replacement has come
forward - not always the way in Air-Britain vol-
unteer circles! Robert Swan will be taking over
the editing and production of *Archive* during
this year, commencing with some aspects of
the next issue. As a dedicated aviation
researcher and with publishing experience as
well, Robert is well suited to the position and
we trust that once he is settled in he will enjoy
his new challenge.

COMPLETE CIVIL REGISTERS: 15

X- UN- YU- YUGOSLAVIA

With thanks to the following for their contributions to this issue:
John Wegg, Vojislav Jereb and Ognjan Petrovic.



The post-war Yugoslavian Civil Aircraft Register (continued)

YU-ALA to ALZ series: 2-engined turboprop aircraft

YU-ALA	Fairchild-Hiller FH-227B	525	27.6.74	Ex N7809M. Panadria, Zagreb 27.6.74; d/d via Prestwick 9.2.75; CoR 1023; damaged (on the ground) taxiing at Zagreb 19.6.77 and w/o; regn cld 28.7.77.
YU-ALB	Fairchild-Hiller FH-227B	528	27.6.74	Ex N7810M. Panadria, Zagreb 27.6.74; d/d via Prestwick 6.11.74; CoR 1024; OCZS, Zagreb 15.11.78; Transadria-ARO (in establishment), Zagreb 28.3.80; regn cld 1.4.80; sold to Atlas Aircraft Sales Corp as N851TA 9.4.80; to PT-LBF TABA Brasil 9.80.
YU-ALC	Fairchild-Hiller FH-227B	532	27.8.74	Ex N7812M. Panadria, Zagreb 27.6.74; d/d via Prestwick 3.3.75; CoR 1025; OCZS 15.11.78; Transadria-ARO (in establishment) 28.3.80; regn cld 1.4.80; sold to Atlas Corp as N852TA 4.80, became F-ODMP Air Polynesie 6.80, to F-GGDM Uni-Air 6.88, w/o near Valence 10.4.89.
YU-ALD	Fairchild-Hiller FH-227B	533	27.6.74	Ex N7813M. Panadria, Zagreb 27.6.74; d/d via Prestwick 20.12.74; CoR 1026; OCZS 5.11.78; Transadria-ARO (in establishment) 28.3.80 although wfu Zagreb by 8.79; regn cld 1.4.80; sold to Atlas Corp as N853TA 4.80; F-ODMR Air Polynesie 6.80; F-GGPN Uni-Air 6.88, F-WQFK Med-Air Int. Sales 12.96, HC-BXC Austro Aereo 5.97.
YU-ALE	Fairchild-Hiller FH-227B	534	27.6.74	Ex N7814M. Panadria, Zagreb 27.6.74; d/d via Prestwick 13.11.74; CoR 1027; Transadria-ARO (in establishment) 28.3.80 although wfu Zagreb by 8.79; regn cld 1.4.80; sold to Atlas Corp as N854TA 4.80, to OO-DTE Delta Air Transport 7.81, F-WFBH(2) Air Nantes 3.90, 5N-ATL Concord Airlines 3.90; dbr on take off from Lagos on 1.4.90, broken up for spares.
YU-ALF	Swearingen SA-226 AT Merlin IVA	AT-062	18.12.78	Ex N5446M, D-IFAD, (F-GBBB), D-IFAD. OCZS 18.12.78; CoR 1189; Transadria-ARO (in establishment) 25.12.79; JAT 28.1.85. Regn cld 15.9.86; sold to Frevag Brussels (used by European Air Transport Belgium), d/d 12.9.86; became OO-VGD, (OY-NPB) 10.91, ntu; OY-FFD 6.93, N548SM 8.93, OY-FFD 10.94, EC-125 11.95, EC-GFK 2.96 current with Flightline.
YU-ALG	Swearingen SA-226 AT Merlin IVA	AT-066	18.12.78	Ex N5455M, D-IBAB. OCZS 18.12.78; CoR 1190; Transadria (in establishment) 25.12.79; JAT 28.1.85; regn

Above: Swearingen SA-226 TC Metro II YU-ALH of Transadria at Zagreb-Pleso airport in 1980. (Dj Bajic via O Petrovic)

Below: FH-227B formerly YU-ALC still in Panavia colours but with white tail and registration N852TA about to be delivered to Atlas Aircraft Sales Corp at Zagreb-Pleso 1980. In the background is SA-226 AT Merlin YU-ALF. (Dj Bajic via O Petrovic)



cld 9.9.86; sold to Frevag, Brussels, d/d 10.9.86, became OO-VGC, (OY-NPC) 10.91 ntu, OY-FFE 6.93, N545SM 8.93, C-FTIX 5.95, N5FY 7.05, EC-JQC 7.06 current with Euro Continental Air.

YU-ALH	Swearingen SA-226 TC Metro II	TC 279	14.2.79	Ex N5494M. OCZS 14.2.79; CoR 1192; Transadria (in establishment) 25.12.79; JAT 28.1.85; regn cld 20.1.87; sold to Frevag, Brussels, d/d 31.1.87; became OO-VGE, F-GFGE 6.87, C-GIQF 9.89 current with Perimeter Avn.
YU-ALI	Swearingen SA-226 TC Metro II	TC 285	25.4.79	Ex N5653M. OCZS 25.4.79; CoR 1233; Transadria (in establishment) 25.12.79; JAT 28.1.85; regn cld 3.9.86; sold to Frevag, Brussels, d/d 2.9.86, became OO-VGA, F-GFGD(2) 3.86, C-GIQG 7.89 current with Perimeter.
YU-ALJ	Swearingen SA-226 TC Metro II	TC 228	4.6.79	Ex N5655M. OCZS 4.6.79; CoR 1246; Transadria (in establishment) 4.6.79; severely damaged 30.7.79; JAT 28.1.85; sold to Frevag, Brussels, d/d 25.6.87, became (OO-VGI), OO-VGG, F-GGFG 7.87, C-GIQQ 6.89 current with Perimeter Avn.
YU-ALK	Aérospatiale/Alenia ATR-42-300	012A	17.6.87	Ex F-WWEC (F/f 4.4.86), VH-AQC. JAT YU-ALK 17.6.87; lsd pending delivery of ATR-72s; became OY-CIF 8.11.90, F-WQBT 13.12.96, LY-ARI 17.3.97, active with Danu.



Left: ATR-42-300 YU-ALK in standard JAT livery in 1987 showing the Serbian titles on the port side. The ATR-42s were leased pending delivery of the ATR-72 order. (JAT via O Petrovic)

YU-ALL Aérospatiale/Alenia ATR-42-300 019 3.7.87
 Ex F-WWEEF (F/f 6.5.86), VH-AQD. JAT 3.7.87; became OY-CIG 3.12.90, F-WKVB 3.6.08, F-HAAV 5.12.08, active with Atlantique Air Assistance.

YU-ALM Aérospatiale/Alenia ATR-42-300 005 20.5.88
 Ex F-WWEA (F/f 12.12.85), OY-CIA, F-GEDZ. JAT (leased from ATR) 20.5.88; returned to ATR and became F-WGZH 17.7.90; F-GHPZ 18.9.90 (Isd Air Bosna 25.7.99); OY-CIA 1.1.01; F-GHPZ 1.2.02; EI-SLD 3.5.04; LY-OOV 13.6.07, active with Danu as freighter.

YU-ALN Aérospatiale/Alenia ATR-72-202 180 13.7.90
 Ex F-WWEB (F/f 18.6.90). JAT 13.7.90; CoR 1607; wfu 5.92-9.94; JAT Airways 8.8.03; leased to Intair Link 11.03; JAT Airways 11.04, active.

YU-ALO Aérospatiale/Alenia ATR-72-202 186 5.10.90
 Ex F-WWEW (F/f 14.9.90). JAT 5.10.90; CoR 1608; Wfu 5.92-9.94; leased to Air Srpska 1.99; JAT 1.01; JAT Airways 8.8.03; leased to Intair Link 11.03; JAT Airways 11.04, active.

YU-ALP Aérospatiale/Alenia ATR-72-202 189 29.1.91
 Ex F-WWED (F/f 26.9.90). JAT 28.1.91; CoR 1609 (3.5.90); wfu 5.92-9.94; leased to Air Srpska 6.99; JAT Airways 29.10.03; leased to Intair Link 11.03; JAT Airways 11.04, active.

YU-ALR, -ALS Allocated 2003, 2007 respectively to ATR-72s under Serbian register.

YU-ALT, -ALU, -ALV, -ALW, -ALX, -ALY, -ALZ Registrations not used.

YU-AMA to AMZ series: 3 & 4-engine jet & turboprop aircraft

YU-AMA McDonnell Douglas DC-10-30 46981/259 15.12.78
 F/f 9.6.78; JAT "Nikola Tesla" 8.12.78 (leased from Intercredit Corp - ICC) d/d Long Beach - Belgrade 12.12.78; Cor 1098; Cie Balkans Bail Paris 13.03.90; regn cld 31.7.92; became: F-WNBB, F-GNBB 2.8.92, F-OKBB 11.11.93, F-GPVE 20.12.94, N37077 9.9.96; wfu and stored 23.9.01.



Above: McDonnell Douglas DC-10-30 YU-AMA was the first for JAT and is seen here in the autumn of 1978 before entering service. It had a non-standard colour scheme with the cheat line below the windows and a white tail engine nacelle. (JAT Review)



Left: The second DC-10-30 YU-AMB a year later, in standard scheme with blue cheat line through the windows and blue tail engine nacelle. (JAT via O Petrovic)

Right: DC-10-30 YU-AMB was stored during the Balkan war and emerged during 1996 in this JAT Yugoslav Airlines scheme with new 'fire' tail design, company logo and name "City of Belgrade/Beograd". 1940. (Artwork: Ognan Petrovic)



YU-AMB McDonnell Douglas DC-10-30 46988/278 18.5.79 F/f 5.3.79; JAT "Edvard Rusjan" 18.5.79; CoR 1152; Wfu and stored 30.5.92 to 18.8.96; JAT, renamed "City of Belgrade/Beograd" 2.96; with no long-range international routes JAT used this aircraft on European routes, charters and leases always in JAT colours: Nigeria Airways 7.2.97 to 1.3.97, Travel Service 6.01, UN Congo Mission 6.02, Macedonian 6-7.02, Cubana 2-5.03, Ghana Airways 20.8.03 to 24.9.03. Last flight Belgrade to Nimes 24.6.05, regn cld 25.6.05; sold to Thameside Aero Spares Ltd. UK, 4.8.05; scrapped by TAT at Nimes.

YU-AMC McDonnell Douglas DC-10-30 46578/131 9.5.88. F/f 30.10.73, ex HB-IHD. JAT 9.5.88 (dry lease from Electra Aviation 2.5.88); CoR 1562; wfu 6.92; regn cld 30.7.92; became VR-BMP 1.93, (ZS-NPZ), N228NW (7.7.95), N228PR 11.12.02. Wfu and stored by 3.03.

YU-AMD McDonnell Douglas DC-10-30 46554/84 24.5.89 F/f 24.1.73; ex N1349U, PH-DTE, N130FA, SE-DFG, LN-ALN. JAT 24.5.89 lsd from Intercredit Corp; CoR 1582; became N821CC 27.11.91, V2-LEA 13.11.92, (OO-LEA), OO-PHN 17.6.94, 9G-PHN 13.5.96, (F-GHPN) 5.00, 9G-PHN 6.00 Ghana Airways. Impounded Rome 30.6.03 and broken up there 2006.

YU-AME McDonnell Douglas MD-11 48607 Not built, regn. cancelled. [Believed originally reserved for c/n 48436/483 which was reallocated to N1768D 4.92, to N584FE 10.97.]

YU-AMF McDonnell Douglas MD-11 48608 Not built, regn. cancelled [Believed originally reserved for c/n 48437/506 which was reallocated to N272WA 4.93.]

YU-AMG McDonnell Douglas MD-11 48609 Not built, regn. cancelled. [Believed originally allocated to c/n 48483, not built.]

YU-AMH McDonnell Douglas MD-11 48582 Not built, regn. cancelled.

YU-AMI, -AMJ Allocated 2004 and 2006 under Serbian register to Ilyushin IL-76s.

YU-AMK to YU-AMZ Registrations not used.

Note: JAT Yugoslav Airlines briefly used four DC-10-30s with foreign registrations: TU-TAL c/n 46890/77 (leased from Air Afrique) 8.2.85 to 15.11.86; OO-SLA c/n 47906/115 (Sabena) 17.6 to 31.10.86; OH-LHA c/n 47956/181 (Finnair) 16.4.87 to 31.10.88; PH-MBN c/n 46924/218 (Martinair) 9.87 to 31.10.87.

YU-ANA to ANZ series: 2-engined jet aircraft

YU-ANA McDonnell Douglas DC-9-82 48047/998 14.8.81 F/f 15.5.81; Inex Adria Aviopromet (IAA), Ljubljana d/d 11.8.81; CoR 1344; crashed into mountain during approach, Mont St. Pierre near Ajaccio, Corsica 1.12.81; regn cld 30.12.81; w/o. T/t 663 hrs.



Above: Boeing 737 YU-AND in original JAT bare metal colour scheme at Heathrow 28.8.88. (John Black)

Below: YU-ANF in the new JAT colour scheme, 10.94. (JAT)



YU-ANB McDonnell Douglas DC-9-82 48048/1005 9.9.81 F/f 11.6.81; Inex Adria Aviopromet (IAA), Ljubljana 19.9.81; CoR 1345; wfu 1.11.81-15.5.83, leased to Martinair Holland as PH-MBY 25.10.81; returned to IAA as YU-ANB 17.3.83; Adria Airways 3.86; regn cld 26.12.91; became SL-ABA 26.12.91, S5-ABA 20.3.93, SX-BBV 31.3.95, N802VV 4.2.96, (OK-LFO), N802VV, N804RA 21.7.98, N801NK 5.99; scrapped, regn cld 16.6.05.

YU-ANC McDonnell Douglas DC-9-82 48087/1035 7.4.82 Ex (N307RP), (N308RC), N19B. F/f 18.11.81. Inex Adria Aviopromet (IAA), Ljubljana 2.4.82; CoR 1383; Adria Airways 3.86; Croatia Airlines 3.5.91; Adria Airways 10.91; regn cld 26.12.91; became SL-ABB 26.12.91, S5-ABB 20.3.93, SX-BBW(2) 30.3.95, N803VV 4.2.96, (OK-LFN), N805RA 17.2.98, N803NK 8.5.95; stored; cld 24.4.07.

YU-AND Boeing 737-3H9 23329/1134 31.7.85 F/f 12.7.85; JAT d/d 31.7.85; CoR 1462; mortgage to Chemco Equipment Finance Ltd. London 23.10.85; lsd Australian Airlines 30.9.89; Ansett Airlines 15.11.89; JAT 5.1.90; Air Afrique 1.9.98; JAT 17.4.00; JAT Airways 3.03; Bellview Airlines 27.9.06; JAT Airways 7.4.07; active.

YU-ANE Tupolev Tu-134A-1 63165/5609 8.4.80 Former Tu-134 modified to Tu-134A-3; Aviogenex (Generalexport) Belgrade 8.4.80; CoR 1282; regn cld 13.11.84; returned to Soviet Union 12.12.84; became CCCP-65564 then RA-65564.

YU-ANF Boeing 737-3H9 23330/1136 15.08.85. F/f 31.7.85; JAT 15.8.85; CoR 1463; mortgaged to Chemco Equipment Finance Ltd. London 23.10.85; JAT Airways 3.03; Aero Contractors of Nigeria 16.2.05; returned to JAT Airways 10.9.06; active.

To be continued . . .

The Whole Truth

The DH.83 Fox Moth

Malcolm Fillmore

Part 3



DE HAVILLAND CANADA PRODUCTION (continued)

- FM31 **CF-DJE** regd [CofR 3788/A1308] 12.7.46 to The Steel Co of Canada Ltd, Hamilton, Ont. Regd [CofR 6239] 26.7.47 to G Rioux, Noelville, Ont. Regd [CofR 6401] 4.9.47 to O & M Air Service Ltd, Sudbury, Ont. Regd 17.9.48 [on name change] to Sudbury Airways Ltd, Sudbury, Ont. Crashed on to ice covered Indian Lake, Ontario 8.2.49; 2 passengers killed. Regn cld 4.50.
- FM32 **CF-DJG** regd [CofR 3857/A1367] 2.8.46 to Photographic Survey Co Ltd, Toronto. Ran into obstruction and sank whilst taxiing for take-off from lake 100 mls S of Goose Bay, Labrador 11.8.47. Regn cld 19.7.50.
- FM33 **CF-DJF** reserved .46 but NTU. Reportedly shipped to India. Regd **VP-RAY** [.51] to Zambesi Airways Ltd, Livingstone. Rereg **VP-YLK** .54. Regd .55 to J D Allen, Mongu. Regd **ZS-CFR** 17.4.57 to Aerial Farming Services, Rand. Regn cld 9.10.62. Rereg **ZS-CYW** 3.63 to O H James. Crashed nr Baragwanath 28.11.64; James and 2 passengers killed.
- FM34 **CF-DJD** regn appln 12.11.46 by Gowganda Timber Co Ltd, New Liskard, Ont. Damaged 10.1.47 when it fell through ice. Salvaged but dbf 26.1.47 when its tent caught fire. Never formally regd.
- FM35 **CF-DJJ** regd [CofR 5522/A1953] 15.11.46 to J L E Gauthier, Seven Islands, PQ. Capsized in storm whilst moored on Lac Matapeda, PQ 22.10.47. Regn cld 2.48.
- FM36 **CF-DJK** regd [CofR 5746/A2120] 5.5.47 to McAvoy Diamond Drilling & Development Co, Yellowknife, NWT. Crashed on landing Gordon Lake, NWT 27.11.47.
- FM37 **CF-DJL** regd [CofR 4074/A1521] 8.10.46 to McAvoy Diamond Drilling & Development Co, Yellowknife, NWT. Crashed Coffey Lake, Alberta 27.4.47 after engine failure. Regn cld 7.47.
(Note: On DH stand at Toronto International Air Show 9.46).
- FM38 **CF-EXW** regd [CofR 5536/A1967] 18.11.46 to James N Stevenson, Amos, PQ. Reportedly badly damaged Ruperts House River, James Bay 30.8.47; repaired. Regd [CofR 7464] 28.9.48 to R B Lee, Oskelaneo, PQ. Regd [CofR 8967] 6.5.50 [back] to James N Stevenson, Montreal. CofA lapsed 19.7.51. Regn cld 22.3.60.
- Above:** C/n FM42 as G-AOJH circa 1958 operating from Birkdale Sands (Southport) with Harry Paterson to supplement the joyriding efforts of Giro Aviations's G-ACEJ. (Dave Partington)
- FM39 **CF-DJM** regn allotted .47 to De Havilland Aircraft of Canada Ltd [but NTU]. Regd **VT-CLT** 21.2.48 to Nalanda Airways Ltd, Patna. Crashed .51.
- FM40 **CF-DJN** regd [CofR 5748/A2122] 19.5.47 to Chamberlain Management Ltd. Regd [CofR 8004] 14.4.49 to Newfoundland Airways Ltd. Wrecked in wind storm 11.11.49. Regn cld 20.12.49.
- FM41 Regd **AP-ABN** (CofR 40) .47 to Mr Atta-ullah, Lahore. CofA lapsed 10.12.48. Wfu and regn cld 6.2.61.
- FM42 Regd **AP-ABO** (CofR 41) .47 to Northern India Flying Club, Lahore; later renamed Lahore Flying Club. CofA lapsed 22.12.48-30.7.54. Regd (11.53) to Mr Ghulamullah, Lahore in u/s condition. Regd .54 to Flt Lt W Banach, Lahore. Flown to Southend ex Karachi 24.9.55 and for sale by W S Shackleton Ltd. Regn cld 29.3.56. Regd **G-AOJH** (CofR R5133) 29.3.56 to Blackpool & Fylde Aero Club Ltd, Squires Gate. Roaded 21.9.57 to Ringway for overhaul. Cld 28.9.57 & regd 4.10.57 to Henry [Harry] Paterson, Cheadle; op by North West Air Services, Ringway; later Speke/Birkdale Sands, Southport. Overhauled at Sherburn and CofA issued 4.3.58. CofA lapsed 14.3.62. Cld 6.4.63; CofA renewed 8.4.63 & regd 16.4.63 to John Shepherd Lewery, Southampton (based Thruxton); to Blackpool .66 (based Squires Gate; later Barton); to Poole (based Shoreham; later Hurn). Sold .89 to Victor Gauntlett and to Cliff Lovell 22.10.89 for major overhaul at Coombe Bisset. Regd 4.5.90 to Proteus Petroleum Aviation Ltd [Victor Gauntlett], Goodwood. Regd 8.7.91 to Robert Marshall Brooks, London W9 [as nominee for Gauntlett Family Trust]; based Booker. Regd 18.4.97 to Torquill Patrick Alexander Norman, London NW1 (based Rendcomb). Regd 8.7.97 to Alexander Jesse Norman, t/a Norman Aeroplane Trust, Rendcomb. Regd 15.1.03 to Connect Properties Ltd (Kenneth Fraser), Abingdon [based Kemble].
- FM43 Regd **AP-ABP** (CofR 42) 4.48 to Eastern Pakistan Flying Club, Dacca. Damaged beyond repair in storm Dacca 26.3.55. Regn cld 10.10.55.
- FM44 Regd **AP-ABQ** (CofR 43) 4.48 to Karachi Aero Club. Struck by Auster J/5 12.6.51 and presumed badly damaged – location unknown. Regn cld 1.4.53.



Above: ZK-APT c/n FM48 at Greymouth in the 1950s when it was used to carry cargoes of whitebait. (via JM Collection)

Right: After years of storage and a major reconstruction, ZK-APT is now flying again as seen at North Shore in 3.10. (Dave Welch)



Above: ZK-AQB c/n FM49 was fitted with a larger than standard coupé canopy. (via JM Collection)

Below: The Croydon Aircraft Company has been restoring ZK-AQB to flying condition after many years' work. It is seen here at Mandeville in February 2006 approaching completion. (Dave Welch)



Above: Another Canadian-built Fox Moth to reach New Zealand was FM50 ZK-AQM shown visiting Wanganui when operated by the Hawera Aero Club. It is now in the UK to become G-CGUO. (via JM Collection)



FM45 Regd **AP-ABR** (CofR 44) 4.48 to Northern India Flying Club, Lahore; later renamed Lahore Flying Club. CofA lapsed 23.4.54. Regn cld 9.10.64 as unserviceable and beyond economic repair.

FM46 Regd **AP-ABS** (CofR 45) 4.48 to Karachi Aero Club Ltd. Crashed on landing Country Club Aerodrome, Karachi 28.5.54. Regn cld 4.5.55.

FM47 **VT-CPM** for Northern India Flying Club; ntu. Regd **AP-AAM** (CofR 13) .47 to Northern India Flying Club, Lahore. Renamed Lahore Flying Club. Damaged in collision with another aircraft taxiing 3.3.52. CofA lapsed 29.7.52; regn cld 8.2.55. Regd 9.56 to Lahore Flying Club. Regd .57 to Karachi Flying Club Ltd, Karachi (also quoted as Government of Sind, Karachi). CofA lapsed 13.12.57. Active [31.3.59] per KAC return. Regn cld 60s as maintenance and operation of aircraft considered uneconomical and unsafe.

FM48 Regd **ZK-APT** 19.11.47 to Marlborough Aero Club, Omaka. Assembled and ff in NZ 12.11.47; CofA issued 24.11.47. Damaged on landing Bluff Station, Kaikoura Ranges 7.3.48 and later torn from moorings & blown over cliff in gales and wrecked. Recovered by pack horses to Clarence River and then by raft and road to Rongotai for rebuild. Badly damaged in crash at Waiau, North Canterbury 29.3.51 when dropping

fencing material; pilot Patrick Reid unhurt. Repaired at Harewood and reflow 26.7.51. Sold 10.56 & regd 27.11.56 to Henry J Buchanan, t/a West Coast Flying School, Greymouth. Regd 27.6.57 to Coast Aviation Ltd, Greymouth. Damaged u/c and lower main spar when struck tree stump on landing Arawhata River 10.11.58; flown out for repairs. Open storage (.61/.62) and ferried to Omaka 9.62 for major overhaul but condemned by CAA. Sold to Phoenix Aviation, Gore (unconfirmed). Sold to T B Furse (unconfirmed). Sold .63 for £75 to G S [Stan] Smith, Auckland. Original wood structure transferred (post .72) to Museum of Transport & Technology; Auckland in exchange for DH.84 ZK-AXI; reported on display .86 and in store 4.01. Regn cld 3.12.91. Parts still stored by G S [Stan] & G A (Gilly) Smith, Dairy Flats [8.94 & 98; 4.03] pending rebuild. Complete rebuild commenced .06 and regd 7.4.09 to G S & G A Smith, Dairy Flat. Reflow and CofA issued 23.6.09.

FM49 **ZK-AQB** regd 25.11.47 to Auckland Aero Club; dd 13.10.47. Regd 17.12.55 to Tauranga Aero Club. Regd 17.4.59 to J Paterson, Motiti Is. Regd 1.1.61 to W Paterson, Motiti Is. Forced landed after take-off Motiti Island 28.6.72; badly damaged during salvage. Sold 26.10.72 to D K Lilico, Auckland for rebuild. Sold 15.10.76 to Myles P Robertson, Dairy Flats, Auckland; still under rebuild [86]. Regn cld 20.5.91. On rebuild .96 by Croydon Aircraft Co, Mandeville for John Eaton.

FM50 **ZK-AQM** regd 2.12.47 to F M (or D H) McCarthy, Patea, Taranki. CofA issued 17.12.47. Operated by Hawera Aero Club .48. Crashed when overshoot on landing Otautu farm strip, near Patea 27.9.53 and fell into Patea River; 2 passengers killed. Regn cld 21.4.54. Remains under rebuild by Myles Robertson, Dairy Flats .78. On rebuild [98] by P Taylor, Auckland. Sold to R I [Ron] Souch, Southampton, UK and regd **G-CGUO** 11.5.11

FM51 **VT-CLU** regd 21.2.48 to Nalanda Airways Ltd, Patna. Crashed on landing Forbesganj, Purnea 27.11.53. Regn cld .54.

FM52 **VT-CLV** regd 21.2.48 to Nalanda Airways Ltd, Patna. Regn cld pre .90.

FM53 **ZK-ARQ** reserved 23.3.48 for De Havilland Aircraft Co of NZ Ltd. Aircraft not completed and sold as spares to Leavens Bros. Fate unknown but reported to Barrie area. *Note: Jim Lawson was building a "new" Fox Moth from Tiger Moth components in .84 at Manurewa; intended to be regd ZK-ARQ, although reported as still under construction by him .96, quoting c/n FM.53 but probably the new "authorised by DHC" airframe c/n FM.55. Nearing completion of rebuild .96 [& .98] by John Brough.*

FM54 Rebuild of CF-API c/n 4000 by Leavens Bros Ltd with new DHC fuselage. Regd **CF-EVK**, [CofR 8805/A3283] 19.5.50 to Leavens (Northern) Ltd, Larder Lake, Ont. Regd [CofR 13858] 10.2.55 to J P Gauthier, Montreal. Regd [CofR 17370] 25.2.58 to Lorenzo Lavoie, Amos, PQ. Badly damaged on landing Val d'Or 6.6.59. Destroyed by fire Amos, Quebec .60.

FM55 see FM28

INDEX

PAKISTAN

AP-AAM FM.47
 AP-ABN FM.41
 AP-ABO FM.42
 AP-ABP FM.43
 AP-ABQ FM.44
 AP-ABR FM.45
 AP-ABS FM.46

CANADA

CF-APF 4037
 CF-APG 4038
 CF-APH 4050
 CF-API 4000
 CF-APO 4052
 CF-ATV 4011
 CF-ATX 4049
 CF-AVE 4095
 CF-BFI FM.1
 CF-BFI" FM.21
 CF-BNH FM.10
 CF-BNI FMC2
 CF-BNK FMC3
 CF-BNL FMC4
 CF-BNM FMC5
 CF-BNN FM.6
 CF-BNO FM.7
 CF-BNP FM.8
 CF-BNQ FM.9
 CF-BNR FM.11
 CF-BNS FM.12
 CF-BNV FM.13
 CF-BNW FM.14
 CF-BNX FM.15
 CF-BNY FM.16
 CF-DAB-X FM.1
 CF-DIQ FM.17
 CF-DIR FM.18
 CF-DIS FM.19
 CF-DIT FM.20
 CF-DIU FM.21
 CF-DIV FM.23
 CF-DIV(2) FM.20
 CF-DIW FM.22
 CF-DIX FM.24
 CF-DIY FM.25
 CF-DIZ FM.26
 CF-DJA FM.27
 CF-DJB FM.28
 CF-DJB(2) FM.7
 CF-DJC FM.29
 CF-DJD FM.34
 CF-DJE FM.31
 CF-DJF FM.33
 CF-DJG FM.32
 CF-DJJ FM.35
 CF-DJK FM.36

CF-DJL FM.37
 CF-DJM FM.39
 CF-DJN FM.40
 CF-EVK FM.54
 CF-EXW FM.38
 CF-SAL FM.30
 CF-YPM 4033
 C-GQHN FM.7
 RCAF Instructional Airframe
 A135 4094

Notes: Two were "on rebuild" by Ron Jackson, Alberta [.96].
 An unidentified DH.83C was reported as stored in Saskatchewan [.96].

GERMANY

D-2408 4039
 D-OSTA 4061

SPAIN

EC-W15 4066
 EC-W19 4073
 EC-W20 4074
 EC-W21 4075
 EC-W22 4076
 EC-W23 4087
 EC-AEI 4087
 EC-AVA 4066
 EC-VVA 4087
 EC-1E 4073
 EC-2E 4074
 EC-3E 4075
 EC-4E 4076

Spanish AF
 30-147 4087

IRELAND

EI-AAP 4003

FRANCE

G-ACBO c/n 4036 was probably operated in France under British marks.

UNITED KINGDOM

G-ABUO 4000
 G-ABUP 4001
 G-ABUT 4002
 G-ABVI 4004
 G-ABVJ 4006
 G-ABVK 4005
 G-ABWB 4007



Above: C/n 4052. CF-APO operating on floats from a Canadian lake, had a straight-sided sliding canopy and built-up top decking to seal the cockpit closure. (R Stewart via Dave Welch)

G-ABWD 4009
 G-ABWF 4008
 G-ABXS 4015
 G-ABYO 4012
 G-ABYR 4017
 G-ABZA 4014
 G-ABZD 4026
 G-ABZM 4018
 G-ABZN 4022
 G-ACAJ 4033
 G-ACBO 4036
 G-ACBZ 4040
 G-ACCA 4041
 G-ACCB 4042
 G-ACCF 4046
 G-ACCS 4044
 G-ACCT 4047
 G-ACCU 4048
 G-ACDD 4033
 G-ACDZ 4054
 G-ACEA 4055
 G-ACEB 4058
 G-ACEC 4059
 G-ACED 4064
 G-ACEE 4065
 G-ACEI 4068
 G-ACEJ 4069
 G-ACEX 4056
 G-ACEY 4057
 G-ACFC 4053
 G-ACFF 4060
 G-ACGB 4062
 G-ACGN 4063
 G-ACGW 4067
 G-ACID 4039
 G-ACIG 4072
 G-ACIY 4077
 G-ACKZ 4083
 G-ACRK 4090
 G-ACRU 4089
 G-ACSW 4091
 G-ADHA 4097
 G-ADNF 4024
 G-AEPB (note)
 G-AFKI 4003
 G-AOJH FM.42
 G-BFOX (note)
 G-CGUO FM.50
 E.10 4028
 E.10 4090
 (unconfirmed)

G-AEPB Regd [CofR 7433] 5.11.36 to Essex Aero Ltd, Maylands [but based Stapleford], quoting c/n "134". Identity unknown. Despite a CofA application dated 14.9.38, this was not proceeded with and the regn was cld 11.38 as sold.

G-BFOX Regd 13.2.78 to Mike C Russell, R W E Lake, A D Raby & D W Brabham t/a Fox Moth Syndicate and quoting c/n "FM.99". This was intended to be a new -build Fox Moth using unidentified components. Regd 6.3.81 to R K J Hadlow, Bedford but project abandoned. Regn cld 2.9.91 by CAA.



Above: G-ABWB c/n 4007 seen here at Renfrew, still wears the basic Hillmans Airways colour scheme although it was transferred as new in 1932 to Scottish Motor Traction Co whose initials 'SMT' appear on the lower cowling. (via George Jenks)



Left: J-BBJI was the prototype Gasuden KR-1 Chidori-go copy of the DH.83 Fox Moth, featuring a Gasuden Jimpu 150 hp radial engine. (via JM Collection)

UK Military

X2865	4054
X2866	4056
X2867	4005
X9299	4072
X9304	4002
X9305	4060
AW124	4055
AX859	4053
DZ213	4077
MA954	(Note)
MA955	(Note)
MA959	4088
2583M	4053
2613M	4060
2614M	4072
4078M	4055

MA954 was unidentified, impressed 31.10.42 and used by 3rd TAF Communications Sqn, Comilla 1944. Soc 31.7.44.
MA955 was unidentified, impressed 31.10.42 and used by Bengal CU and later by 3rd TAF Communications Sqn, Comilla. Soc 31.7.44.

SWITZERLAND

CH-344	4009
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JAPAN

Four DH.83s were sold to Japan. The first two (4013, 4016) may have been used by Japanese Aerial Transport Co, one of which was probably regd **J-BIEG**. The second two (4079, 4080) were probably operated by the Japanese Army.

J-APBE c/n unknown [possibly 4013] Regd [32] to Kuantung Province Bureau Police Dept, Manchoukou; named "Shirataka" [White Eagle]; modified with enclosed cockpit. [Fitted with Gipsy III No. 3442]. To Financial Section of Administration Dept 19.2.37. Regn cld 5.39?

A Japanese copy, the Gasuden KR-1 Chidori-go [Plover], powered by a Gasuden Jimpu 150hp radial [copy of AS Mongoose], was built in 1933/34. Seven were built by the Tokyo Gas & Electric Industry, including Prototype **J-BBJI** [c/n 1] [ff 23.12.33], **J-BBKI** [c/n 2; regd G Matsukata 6.34]; **J-BBMI** & **J-BBNI** [the latter two both being operated by NKYKK '34]. Three were operated by Japan Aerial Transport Co [Nippon Koku Yuso Kenkyusho], Sakai City, Osaka. Two were deld to Taiwan National Defence Volunteer Association. Two were deld to Manchurian Coast Guard, Eikou.

NORWAY

LN-ABP	4018
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ARGENTINA

R241	4070
LV-HBA	4070

USA

N83DH	4097
NC12739	4026
N12739	FM.7

AUSTRIA

A-129	4061
OE-STA	4061

BELGIUM

OO-ENC	4033
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BRAZIL

Five DH.83s were delivered to the Brazilian Navy in 1932/33 and coded I-3-H-92 to I-3-H-96. They were c/n's 4027-4031. Also known later codes are **3-D-5** & **3-D-9** Also in 1941, 2 to FAB as **PT-MT 0016** & **PT-MT 0017**.

SWEDEN

SE-AFL	4022
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EGYPT

SU-ABA	4022
SU-ABG	4024

AUSTRALIA

VH-AAA	DHA.6
VH-AAX	4059
VH-AAZ	4089
VH-ABQ	4024
VH-ABU	4047
VH-BYA	DHA.6
VH-CAS	DHA.6
VH-CCH	4044
VH-GAS	DHA.6
VH-GAV	4047
VH-RAL	4039
VH-UAL	4039
VH-UBB	4090
VH-UDD	4063
VH-UQM	4010
VH-UQP	4020
VH-UQQ	4021
VH-UQR	4017

VH-UQS	4019
VH-UQU	4051
VH-URI	4084
VH-USJ	4058
VH-USL	4096
VH-UTF	4039
VH-UTY	4041
VH-UUS	4044
VH-UVL	4015
VH-UZC	4048
VH-UZD	4040
VH-UZL	4064
VH-UZS	DHA.5

RAAF

A41-1	4047
A41-2	4015
A41-3	4044
A41-4	4048

NEWFOUNDLAND

VO-ABC	4093
VO-ADE	4094

KENYA

VP-KBH	4036
VP-KDS	4035

NORTHERN RHODESIA

VP-RAY	FM.33
VP-RCE	4023

SOUTHERN RHODESIA

VP-YAD	4034
VP-YAK	4035
VP-YBD	4023
VP-YBM	4036
VP-YLK	FM.33
VP-YLS	4023

FIJI

VQ-FAT	4033
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INDIA

VT-ADZ	4032
VT-AEA	4043
VT-AEB	4045
VT-AEJ	4071
VT-AEM	4078
VT-AEN	4081
VT-AEQ	4082
VT-AFB	4086
VT-AFI	4088
VT-AFT	4091
VT-AFZ	4092

Right: C/n 4035 VP-KDS looking somewhat ungainly balanced on an oil drum following its undercarriage collapse at Entebbe which took place in March 1952. (Robert Clare coln. via Rod Simpson)

Meanwhile, Ken Smy confirms that as **ZS-AEW** it was regd to the Johannesburg Light Plane Club before being impressed 5.40 as **1413** with the SAAF. It served with No.61 (Comms) Sqn in 8.40, No.2 Air School Randfontein 12.12.44, to No.15 Air Depot 24.4.45 then sold back to the Johannesburg club 11.2.46 as **ZS-AEW** and sold to Kenya, being regd **VP-KDS** on 16.1.47.





Left: VT-AEM was c/n 4078 and spent its entire pre-war career with Indian National Airways. It was photographed at Heinze Basin in Burma on 12.11.35, the two gentlemen shown being named as Messrs Arthur and Aquino. This may be one of the possible candidates for the unidentified impressments MA954 and MA955 in India in 1942.

(The Late W/Cdr C E F Arthur via Michael Jones)

VT-AGI	4062
VT-AJW	4083
VT-AKV	4007
VT-CLS	FM18
VT-CLT	FM39
VT-CLU	FM51
VT-CLV	FM52
VT-CPM	FM47

YUGOSLAVIA

UN-SAK	4014
YU-SAK	4014

NEW ZEALAND

ZK-ADC	4025
ZK-ADH	4085
ZK-ADI	4097
ZK-AEK	4033
ZK-AGM	4085
ZK-APT	FM48
ZK-AQB	FM49
ZK-AQM	FM50
ZK-ARQ	FM53
ZK-ASP	4097

RNZAF

NZ566	4097
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SOUTH AFRICA

ZS-ADE	4003
ZS-ADE	4014
ZS-ADH	4023
ZS-AEW	4035
ZS-CFP	4023
ZS-CFR	FM33
ZS-CYM	(Note)
ZS-CYW	FM33

ZS-CYM was reserved in about 1962 for an unidentified Fox Moth; it may have been c/n 4035.

SAAF 1413	4035
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Right: The non-flying replica of c/n 4097 ZK-ADI, built by Max Dowell and others to commemorate the role of Air Travel (NZ) Ltd and local pilot Bert Mercer, on display in its own building at Hokitika airport. It was photographed on 17.10.11 together with topic work done there by local schoolchildren.
(Dave Hughes)

FOX MOTH FEEDBACK:

C/n **4023** Was marked "ZS-ADH FOX MOTH" on the starboard side, obviously with DHSA.

C/n **4035** See SAAF history in caption to VP-KDS on opposite page.

C/n **4044** VH-UUS was being rebuilt by the Chiliner Brothers at Murwillumbah, noted in February 2011.

C/n **4093** and **4094** Both aircraft were used by virtually all departments not just those quoted. They were administered by the Department of Public Utilities. The meteorological flights were performed by the Fairchild VO-AFG and began on 4.7.36. Fox Moth VO-ADE was used only as a stand-in only in early 1939.

C/n **4094** "Newfoundland Government Air Services" does not appear in any official documents but "Internal Air Service" appears from 1938. Military history, from official sources: CofA lapsed 31.10.40; used for the Banting rescue effort 24.2.41; inspected 4.3.41, airworthy but wfu before CofA renewed. Last flight 8.3.41 then stored at Gander. Internal Air Service formally terminated 31.5.41. Assigned to No.21 EFTS, Chatham, NB 28.7.41 as instructional airframe A135 but transfer and conversion cancelled 31.7.41 as no longer required by the EFTS. Taken on charge at Eastern Air Command 11.9.41 as "Insts" (which it did not become) and assigned to Edmundston High School, NB; shipped as far as Botwood to await onward transfer but on 4.11.41 its export was prohibited by the Newfoundland Government under terms of an agreement with Canada dated 17.4.41 concerning removal of material from air bases without UK and Nfd Government permission. Aircraft returned to Gander to be used for flying practice and various civil mercy and military rescue flights, still as VO-ADE, until 2.5.42. Category officially changed to "Service" 31.7.42. Assigned 1.8.42 to RAF Ferry Command, Dorval, for rescue and reconnaissance although it never left Newfoundland. Test flown after rebuild 11.12.42. Flew regularly until damaged 22.2.44 in pilotless take-off at Gander Bay, 37km north of Gander. Repaired and flown back to Gander 16.3.44. Rebuild started but presumed not completed. Board convened 14.5.45 to consider Fox Moth and write-off recommended due to unserviceable condition. Designated Cat E (Write-off) as result. Soc 24.10.45 as returned to Newfoundland Government.

C/n **FM1** The block CF-BFF to BFQ was allocated to DHC in mid-1937 but there is no record of CF-BFI then being used. Thus CF-DAB-X was allocated to DHC for FM1 on 14.11.45. The DoT then told DHC to use up all their pre-war allocations before a new one could be issued, so CF-BFI was allotted on 22.11.45. First flight was on 5.12.45 as CF-BFI-X piloted by George Turner according to Fred Hotson's book "The De Havilland Canada Story"

C/n **FM6** Date of sale from Sabre Industries to R S Grant should read 18.2.70.

C/n **FM7** Cancellation date of CF-BNO should be 21.8.61, not 7.10.61.

Thanks to Ken Smy, Dave Hughes, Terry Judge, Dave Welch & Malcolm Fillmore. A few more items to follow.



The Reid & Sigrist R.S.3 Desford

HEAD-ON VIEW No.40

(continued)



Development of the R.S.1 Snargasher having been overtaken by World War Two, the company returned to the drawing board in 1944 with a design for a simplified twin-engine trainer of very similar appearance. Reid & Sigrist had operated a number of Flying Training Schools during the war and doubtless incorporated experience gained in those into the new design.

This was the R.S.3 Desford, a wooden oval-section monocoque fuselage with twin tailplane and a one-piece two-spar wooden wing on which were mounted two 130 hp Gipsy Major I engines and a fixed undercarriage. As on the R.S.1, slotted flaps and ailerons were set below and behind the trailing edge. The wing contained two 22-gallon fuel tanks between the engines and wing roots which could be swung down on hinged panels. As a further aid to maintenance the lower sec-

Above: The R.S.3 Desford Trainer G-AGOS sits lower than the R.S.1 although it is of similar size and the flaps can be seen to extend beneath the centre section. (Aeroplane via JM Collection)

tions of the engine cowlings, when removed, allowed easy access to the entire inverted Gipsy Major units. A number of strategically-placed inspection panels on the aircraft were also intended to improve maintenance access.

As an ab-initio and intermediate trainer the Desford offered excellent visibility for the trainee, seated forward in the large tandem cockpit equipped with full blind flying instrumentation beneath a one-piece sliding canopy. The prominent pitot mast was moved from below the nose to the top, ahead of the windscreen.



Above: Seen during test flying in late 1945, the Desford demonstrates its large clear-view canopy which would slide back on external rails. The 'P' marking for Prototype is painted ahead of the registration and the fuselage roundel is blanked out. (Aeroplane via JM Collection)



Left: The R.S.3 Desford Trainer banks to the right and shows its slotted flaps and ailerons, the wing being set lower on the fuselage than that of the Snargasher. (Aeroplane via JM Collection)

Below: G-AGOS in level flight with the undercarriage oleos fully extended. The excellent visibility for the trainee pilot who would normally occupy the front seat is immediately obvious. Most of these air-to-air photographs appear to date from December 1945 during the development and testing period. (Aeroplane via JM Collection)



Above: Flying overhead, the Desford Trainer clearly shows the slotted flaps extended beneath the fuselage, space for a belly tank under the centre section, and its civil registration and military roundels worn together under the wings. (Aeroplane via JM Collection)

Almost imperceptibly smaller but noticeably lighter than its predecessor, the Desford was fully aerobatic and while it provided somewhat lower performance maxima on two 130 hp engines than the Snargasher's two 205 hp units, these could be enhanced by the use of Gipsy Major 10 or 30 series engines. Its role could also be varied to that of a small transport by the use of a belly tank which would allow a considerable increase in range.

Dimensions and performance:

Span:	34 ft	10.6 m
Length:	25ft 6 in	7.77 m
Height:	8 ft 3 in	2.47 m
Wing area:	186 sq ft	17.28 sq m
Empty weight:	2,413 lb	1,094 kg
All up weight:	3,300 lb	1,497 kg
Maximum speed:	162 mph	261 km/hr
Cruising speed:	148 mph	238 km/hr
Range:	460 mls	740 km
Rate of climb:	1,100 ft/min	5.6 m/sec
Service ceiling:	17,700 ft	5,400 m

The R.S.3 prototype was registered as Desford Trainer G-AGOS c/n 3 in late May 1945 (CoR no.9622) and first flew on 9.7.45. Its CofA (no.7335) valid from 10.1.46 was issued on 30.5.46.

Although extensively tested and evaluated at the RAE, the Desford did not enter production. Its potential as a low-cost trainer for developing markets was unfortunately never realised - there was, after all, a glut of wartime surplus trainers available.



Above: Clearly visible in this side view are the large nose-mounted pitot, mass-balanced ailerons, strut braced tailplane and the bumper ahead of the tailwheel for rear fuselage protection. (Aeroplane via JM Collection)

Right: The nose in close-up shows the name "Desford" and the installation of the Gipsy Major engines with their large drop-down cowlings for ease of maintenance. (Aeroplane via JM Collection)

Bottom: G-AGOS became VZ728 for the prone pilot trials at the RAE, Farnborough. (via JM Collection)



G-AGOS was eventually sold to the Air Council to be modified for prone pilot research and its civil registration was cancelled on 25.5.49. The forward section of the cockpit was removed and the windscreen moved aft to the former instructor's position, the sliding canopy being shortened. The forward fuselage was extended to accommodate the prone pilot's position, a rather bulbous glazed nose and a pair of teardrop shaped side windows being fitted. This increased the length of the aircraft by a foot in total to 26 ft 6 ins (8.07 m).

Now known as the R.S.4 Bobsleigh, the aircraft, which had been allocated the RAF serial VZ728 on 10.9.48, was first flown in its new form on 13.6.51 piloted by Sqd Ldr A G Bullimore. It arrived at the RAE on 23.8.51 and after the prone flying trials at Farnborough, which ended in 1954, the Bobsleigh was despatched to 15MU at Wroughton on 3.3.55.

It was then purchased by Air Couriers Ltd with a new role in mind, and they restored it to the register as G-AGOS on 17.1.56. It was given a Ferry Permit to Croydon on 16.2.56 for delivery to the new owners. The Gipsy Major 1s had been replaced with 145 hp Gipsy Major 10s, boosting maximum speed to 176 mph (283 km/hr) and cruise performance to 166 mph (267 km/hr). Further conversion work followed to prepare the aircraft for photographic survey and film work after which, with a new CofA dated 8.1.58, it was sold via W S Shackleton Ltd to Capt John Crewdson's Film Aviation Services at Croydon.



Registered on 5.3.58 to Crewdson himself, ownership of G-AGOS reverted to Air Couriers on 1.9.58. On 4.7.61 it passed to T H Marshall at Christchurch and then to J Forbes-Nixon of Bournemouth on 31.7.62. It was shortly registered to Kemps Aerial Surveys of Southampton / Thruxton on 12.8.62 but after eleven years it went into private ownership with E N Grace at Redhill on 25.6.73. At this time it adopted a military-style camouflage colour scheme complete with its former VZ728 serial. Needless to say it had never worn camouflage during its relatively short military career.

On 11.11.74 G-AGOS was registered to Sir W J D Roberts and joined his Strathallan Aircraft Collection at Auchterarder. When that Collection was broken up the Bobsleigh was sold on 8.10.81 for £5,000 and went to Perth, then onwards to the Leicestershire Museum of Science and Technology. It had had a number of Permits to Fly and extensions, the last of which expired on 28.11.80 and the registration was cancelled as WFU on 9.11.81. The Leicestershire Museum unfortunately has insufficient space to display its various assets and G-AGOS/VZ728 is stored at their Snibston Discovery Park facility at Coalville.

Contemporary publicity at the time of the Desford Trainer launch indicated that Reid & Sigrist were to develop a 4-5 seat luxury version with Gipsy Major 31 engines which would have competed with the Miles Gemini. Nothing came of this and, as we now know, the R.S.4 designation that was quoted was later to be applied to the Bobsleigh.



Above: Tony Smithson of W S Shackleton, on the wing, hands over the aircraft documents to Capt John Crewdson of Film Aviation Services, in the cockpit. The new owner's company crest is applied on the Bobsleigh's nose. (Aeroplane via JM Collection)



Left: G-AGOS seen in the titles of Kemps Aerial Surveys during a visit to Newcastle-Woolsington on 28th September 1963 (via JM Collection)

Below: The Bobsleigh ended its flying career wearing a spurious RAF camouflage scheme and the serial VZ728 used for its prone pilot testing. (via JM Collection)



The Development of Commercial Aviation in China

PART 14B

Civil Aviation Administration of China



MARTIN S BEST, CHINA HISTORY RESEARCH GROUP

In this issue we continue the CAAC fleet list which began in the Winter 2011 edition of Archive:

Boeing 707-3J6B/C

reg.	model	c/n	date	operator/fate
B-2402	3J6B	20714	23Aug73	CAAC 1st fleet, to China Southwest 26Nov88
B-2404	3J6B	20715	17Sep73	CAAC 1st fleet, to Air China 01Jul88
B-2406	3J6B	20716	15Apr74	CAAC 1st fleet, to Air China 01Jul88
B-2408	3J6B	20717	10May74	CAAC 1st fleet, to China Southwest 10Aug85
B-2410	3J6C	20718	12Nov73	CAAC 1st fleet, to China Southwest Nov83
B-2412	3J6C	20719	22Nov73	CAAC 1st fleet, to China Southwest 28Nov83
B-2414	3J6C	20720	13Dec73	CAAC 1st fleet, to Air China 01Jul88
B-2416	3J6C	20721	14Jan74	CAAC 1st fleet, to Air China 01Jul88
B-2418	3J6C	20722	26Feb74	CAAC 1st fleet, to China Southwest Nov83
B-2420	3J6C	20723	19Mar74	CAAC 1st fleet, to Air Chin 01Jul88

[AF89 p.9; ATDB; Ballantine & Tang; Pither pp.124, 145, 149, 398-399; SEA90 p.8; WAFH79 p.5]

Boeing 737-200/300

reg.	model	c/n	date	p/i	fate
B-2501	2T4	22802	22Feb83	N6009F	CAAC Guangzhou, to Xiamen Airlines Apr91
B-2502	2T4	22803	22Feb83	N6018N	CAAC Guangzhou, to China Southern Jul90

Above: Taking the classic approach, CAAC Boeing 707-3J6C B-2416 on finals for Hong Kong-Kai Tak. (Ian D Johnson collection)

B-2503	2T4	22804	1Mar83	N6038E	CAAC Guangzhou, to China Southern Jul90
B-2504	2J6C	23065	14Oct83		CAAC Guangzhou, to China Southern Jul90, returned to lessor
B-2505	2J6C	23066	8Dec83		CAAC Guangzhou, to China Southern Jul90, Xiamen Airlines Dec91
B-2506	2T4	23272	25Mar85		CAAC 1st fleet, to Air China May88, to Air Great Wall Apr95
B-2507	2T4	23273	2Apr85	N5375S	CAAC 1st fleet, to Air China May88, to Air Great Wall Apr95
B-2508	2T4	23274	9Apr85	N6067U	CAAC 1st fleet, to Air China May88, to Air Great Wall Apr95
B-2509	247	23188	Jan85	N240WA	CAAC Guangzhou, to China Southern 1Jul90, Xiamen Airlines Dec90, returned to lessor
B-2510	247	23189	Jan85	N241WA	CAAC Guangzhou, to Xiamen Airlines Feb88, Crashed Guangzhou 2Oct90
B-2511	2T4	23443	5Oct85	N1785B	CAAC Chengdu, to China Southwest May88, China Southern Jul90, returned to lessor
B-2512	2T4	23444	12Oct85	N1790B	CAAC Chengdu, to China Southwest May88, China Southern Jul90, Xiamen Airlines Nov94
B-2514	2T4	23445	18Oct85	N1791B	CAAC Chengdu, to China Southwest May88, China Southern Jun91, returned to lessor
B-2515	2T4	23446	4Nov85	N1792B	CAAC Chengdu, to China Southwest May88, China Southern Jul91, Xiamen Airlines Sep94
B-2516	2T4	23447	19Nov85	N5573B	CAAC Chengdu, to China Southwest May88



Left: Boeing 737-2T4 B-2502 taxiing at Kai Tak in the 1980s.
Above: Night view of Boeing 747SP-J6 B-2442 taking on passengers.
Below: B-2803 was one of only three Boeing 757s operated by CAAC.
(all: Ian D Johnson collection)

B-2517	3W0	23396	12Dec85	N5573K	CAAC Kunming, to Yunnan Airlines May88
B-2518	3W0	23997	8Mar86	N1791B	CAAC Kunming, to Yunnan Airlines May88
B-2519	3Z0	23448	17Dec85	N5573P	CAAC Chengdu, to China Southwest May88
B-2520	3Z0	23449	25Jan86	N1789B	CAAC Chengdu, to China Southwest May88
B-2521	3Z0	23450	26Feb86	N1790B	CAAC Chengdu, to China Southwest May88
B-2522	3Z0	23451	10Jul86	N5573K	CAAC Chengdu, to China Southwest May88
B-2524	25C	24236	2Aug88	N5573B	CAAC Guangzhou, to Xiamen Airlines Oct92
B-2529	3L9	22735	4Mar91	N164PL	CAAC Guangzhou, to Xiamen Airlines Oct92
B-2531	3J6	23302	15May86	N1792B	CAAC 1st fleet, to Air China May88
B-2532	3J6	23303	19Jun86	N5573B	CAAC 1st fleet, to Air China May88
B-4008	3T0	23839	Jun88		CAAC Govt.
B-4009	3T0	23840	Jun88		CAAC Govt.
B-4020	34N	28081	Sep95		CAAC Govt.
B-4021	34N	28082	Sep95		CAAC Govt.

Non-CAAC 737s not included.
 [AF89 p.9; ATDB; Ballantine & Tang]

Boeing 747-2J6B/SP-J6

reg.	model	c/n	date	p/i	operator/fate
B-2438	SP-J6	21933	Jun92		Air China
B-2440	243B	19732	20May85	N358AS	CAAC 1st fleet (leased) to N747BL Dec85
B-2442	SP-J6	21932	29Feb80		CAAC 1st fleet, to Air China Jul88
B-2444	SP-J6	21933	26Jun80		CAAC 1st fleet, to Air China Jul88
(B-2446)	SP-J6	21934	-NTU		to N1304E, B-2452
B-2446	2J6M	23071	20Dec83	N1781B	CAAC 1st fleet, to Air China Jul88
B-2448	2J6M	23461	10Dec85	N60668	CAAC 1st fleet, to Air China Jul88
B-2450	2J6M	23746	28Mar87	N6018N	CAAC 1st fleet, o Air China Jul88
B-2452	SP-J6	21934	r/r 1Jan88	N1304E	Air China Jul88
B-2454	SP-27	22302	r/r 1Jan89	N1301E	Air China Jul88
N1301E	SP-27	22302	29Dec82	(N1608B)	to Air China Jul88
N1304E	SP-J6	21934	23Sep80	(B-2446)	CAAC 1st fleet, r/r B-2452 1Jan88

Air China 747-4J6s, etc. not included.
 [AF89 p.9; ATDB; Ballantine & Tang; SEA90 p.8; TAHS; WAFH79 p.5]

Boeing 757-21B

reg.	c/n	date	p/i	operator/fate
B-2801	24014	22Sep87	N1792B	CAAC Guangzhou, to China Southern
B-2802	24015	27Oct87	N5573B	CAAC Guangzhou, to China Southern
B-2803	24016	7Nov87	N5573K	CAAC Guangzhou, to China Southern

Non-CAAC 757s not included.
 [AF89 p.9; ATDB; SEA90 p.9; TAHS]



Boeing 767-2J6ER

reg.	c/n	date	p/i	operator/fate
B-2551	23307	8Oct85	N6065Y	CAAC 1st fleet, to Air China Jul88
B-2552	23308	29Oct85	N60659	CAAC 1st fleet, to Air China Jul88
B-2553	23744	4Mar87	N60659	CAAC 1st fleet, to Air China Jul88
B-2554	23745	12Mar87	N6009F	CAAC 1st fleet, to Air China Jul88
B-2555	24007	27Jun88	N60668	CAAC 1st fleet, to Air China Jul88

Non-CAAC 767s not included.
 [AF89 p.9; ATDB; SEA90 p.8]

British Aerospace 146 Series 100

reg.	c/n	date	p/i	operator/fate
B-2701	E1019	5Sep86	G-XIAN	CAAC Xian, to China Northwest Airlines 1May88, China Civil Avn Museum 2005
B-2702	E1026	14Oct86	G-5-026	CAAC Xian, to China Northwest Airlines 1May88
B-2703	E1032	21Nov86	G-5-032	CAAC Xian, to China Northwest Airlines 1May88
B-2704	E1035	13Dec86	G-5-035	CAAC Shanghai, to China Eastern Airlines 1May88
B-2705	E1068	24Jan87	G-5-068	CAAC Shanghai, to China Eastern Airlines 1May88
B-2706	E1071	17Feb87	G-5-071	CAAC Shanghai, to China Eastern Airlines 1May88
B-2707	E1076	17Apr87	G-5-076	CAAC 1st fleet, to Air China 1May88
B-2708	E1081	19Jun87	G-5-081	CAAC 1st fleet, to Air China 1May88
B-2709	E1083	15Jul87	G-5-083	CAAC 1st fleet, to Air China 1May88
B-2710	E1085	6Aug87	G-5-085	CAAC 1st fleet, to Air China 1May88

[AF89 p.9; ATDB; Ballantine & Tang; DAK 11Oct2011; SEA90 p.9; TAHS]

Britten Norman BN2-26 Islander

reg.	c/n	date	p/i	operator
B-3901	2203	Jun89	G-BOME	CAAC IASC, Guangzhou, to China Southern Apr91
B-3902	2204	Jul89	G-BOMF	CAAC IASC, Guangzhou, to China Southern Apr91

Right: BAe 146-100 B-2704 of CAAC letting down into Kai Tak. CAAC operated ten of the type, none are still in service but one is now housed in the China Civil Aviation Museum near Beijing Airport. (Ian D Johnson collection)



B-3903	2208	Oct89	G-BPLP	CAAC IASC, Guangzhou, to China Southern Apr91	217	Wuhan	"44-7800" to PIAAF
B-3904	2210	Oct89	G-BPLS	CAAC IASC, Guangzhou, to China Southern Apr91	?	Canton	"7915" to PIAAF
B-3905	2211	Feb90	G-BPXR	CAAC IASC, Guangzhou, to China Southern Apr91	?	Chongqing	

[MM 15Dec2003, MM 18Apr2005 x 2]

[Ballantine & Tang; SEA90 p.10]

Canadian Vickers OA-10A Catalina

f/n	c/n	date	p/i	fate
501?	CV-386	1951	VR-HEV	unknown

[Legg p.140]

Convair 240-14

f/n	c/n	name	p/i	fate
401	131	Beijing	XT-610	preserved Changping Museum as XT-610 Nov89

[Gradidge p.145; MM 15Dec2003]

Curtiss C-46 Commando

f/n	c/n	name	date	p/i	fate
201	?				
202	?				
203	?				
204	Shanghai	Dec50			to PIAAF
205	Shanghai 2	Dec50			to PIAAF
206	Shanghai 3	May51			to PIAAF
207	Shanghai 4	May51			to PIAAF
208	Shanghai 5	May51			to PIAAF
209	Shanghai 6	Aug 51			to PIAAF
210	Shanghai 7	Aug51			to PIAAF
211	Shanghai 8	Aug51			to PIAAF
212	Shanghai 9	Aug51			to PIAAF
213	Shanghai 10	Aug51			to PIAAF
214	Guangzhou			"7915"	to PIAAF
215	Tianjin				to PIAAF
216	?	TBC			

De Havilland Canada DHC-2 Beaver

Five Beavers were presented to China by Pakistan in 1972. [SAH] These aircraft were cancelled from the Pakistani (AP-) civil aircraft register on 30 June 1972. [SEA79 p.16]

f/n	c/n	date	p/i	fate
891	1610	Mar72	AP-AVB	China Aviation Museum, Beijing
?	1619	Mar72	AP-AVC	Scrapped 1975
?	1631	Mar72	AP-AVD	Scrapped 1975
?	1635	Mar72	AP-AVF	Scrapped 1975
?	1626	Mar72	AP-AVH	Scrapped 1975

[CF 29Jun2007; MSB 29Jun2007; SAH]

De Havilland Canada DHC-6 Twin Otter 300/310

reg.	srs	c/n	date	p/i	fate
510, B-510	300	564	4Jun79	C-GNZT	CAAC IASC, to Flying Dragon Airlines Jan81, r/r B-3504 Oct84
512, B-512		563	18Apr78	C-GNOE	CAAC IASC, to Flying Dragon Airlines Jan81, r/r B-3501 Oct84
514, B-514		565	18Apr78	C-GNOF	CAAC IASC, to Flying Dragon Airlines Jan81, r/r B-3502 Oct84
516		602	9Apr79	C-GQWJ	CAAC IASC, to Flying Dragon Airlines Jan81, r/r B-3503 Oct84
B-3505		817	19Feb85	C-GGSS	CAAC Urumqi, to China Xinjiang Jun91
B-3506		821	15May85	C-GGPB	CAAC Urumqi, to China Xinjiang Jun91
B-3507		823	21Jun85	C-GGWA	CAAC 2nd fleet, to China General Jul91

Right: The first four DHC-6-300 Twin Otters that were delivered to China were for geophysical survey. Wearing Canadian test marks C-GNZT-X on the fuselage and '510' on the wing, c/n 564 shows off its survey equipment. (via JM Collection)





Left: After acquiring four Trident 1s from Pakistan, CAAC ordered thirty-three Trident 2s and two Trident 3s. B-270, which was tested and delivered as G-BAJM, was the second of the Trident 3Bs, which featured a stretched fuselage and larger wing.
(via JM Collection)

B-3508	824	11Aug85	C-GGWB	CAAC 2nd fleet, to China General Jul91	B-260	2E	2167	19Mar75	G-BABU	CAAC Shanghai, w/o 27Feb83 Fuzhou, China	
B-3509	826	5Sep85	C-GGWC	CAAC 2nd fleet, to China General Jul91	B-261	2E	2165	r/r Jun80	B-256	CAAC Shanghai, r/r B-2208 May85	
B-3510	310	548	Jun85	PH-EMA	CAAC 2nd fleet, to China General Jul90	B-262	2E	2168	1May75	G-BABV	CAAC 1st fleet, r/r B-2203 May85
B-3511	551	Jun85	PH-EMB	CAAC 2nd fleet, to China General Jul90	B-263	2E	2185	13Sep77	G-BBWD	CAAC Military, to Chinese Air Force 50056 Dec81	
B-3512	831	Jun86	VR-BJP	CAAC 2nd fleet, to China General Jul90	B-264	2E	2169	24Nov75	G-BAJF	CAAC Military, to Chinese Air Force 50153 Jan76, DBR 14Sep83 Guilin, China	

[AF89 pp.9-10; Ballantine & Tang; SEA90 p.10; TAHS5 pp.191-199]

Douglas C-47 Dakota

f/n	c/n	name	date	fate
101	?	?		
102	?	?		
103	?	?		
104	?	?		
105	?	?		
106	?	?		
107	?	?		
108	?	?		
109	?	China Youth	May51	
110	?	National Day	Aug51	Preserved as XT-115

[Gradidge p.175; MM 15Dec2003, MM 18Apr2005]

Note: A photo of '109' shows a plane with a left-hand small passenger door, so possibly a DC-3 model. [MM]

Hawker Siddeley HS121 Trident 1E/2E/3B

reg.	model	c/n	date	p/i	transfer/fate
232	1E	2130	Jul70	AP-ATK	CAAC Govt, to Chinese Air Force as 50056 Jul74, B-232, 50051
256	1E	2131	Jul70	AP-ATL	CAAC Military, w/o 13Aug71 shot down over Mongolia
236	1E	2132	Jul70	AP-ATM	CAAC Military, to Chinese Air Force as 50050 Jul74
238	1E	2133	29Jun70	AP-AUG	Chinese Air Force as 50152 Aug70
240, B-240	2E	2157	19Nov72	G-AZFT	CAAC 1st fleet, r/r B-2201May85
242, B-242	2E	2158	16Mar73	G-AZFU	CAAC 1st fleet, r/r B-2202 May85
244, B-244	2E	2159	23Jul73	G-AZFV	CAAC Guangzhou, r/r B-2218 May85
246, B-246	2E	2160	06Sep73	G-AZFW	CAAC Guangzhou, r/r B-2219 May85
248, B-248	2E	2161	05Nov73	G-AZFX	CAAC 1st fleet, r/r B-2223 May85
250, B-250	2E	2162	16Jan74	G-AZFY	CAAC Shanghai, r/r B-2212 May85
B-252	2E	2163	20Aug74	G-BABP	CAAC Guangzhou, r/r B-2214 May85
B-254	2E	2164	29Sep74	G-BABR	CAAC 1st fleet, r/r B-2209 May85
B-256	2E	2165	5Dec74	G-BBVS	CAAC Govt., r/r B-261 Jun80 (q.v.)
B-258	2E	2166	10Feb75	G-BABT	CAAC Guangzhou, r/r B-2215 May85
B-260	2E	2167	19Mar75	G-BABU	CAAC Shanghai, w/o 27Feb83 Fuzhou, China
B-261	2E	2165	r/r Jun80	B-256	CAAC Shanghai, r/r B-2208 May85
B-262	2E	2168	1May75	G-BABV	CAAC 1st fleet, r/r B-2203 May85
B-263	2E	2185	13Sep77	G-BBWD	CAAC Military, to Chinese Air Force 50056 Dec81
B-264	2E	2169	24Nov75	G-BAJF	CAAC Military, to Chinese Air Force 50153 Jan76, DBR 14Sep83 Guilin, China
B-265	2E	2186	21Dec77	G-BBWE	CAAC Military, to Chinese Air Force as 50054 Dec81
B-266	2E	2170	3Jan76	G-BAJG	CAAC Guangzhou, w/o 26Apr82 flew into Mt Yangsu, Guilin
B-267	2E	2187	8Mar78	G-BBWF	CAAC Military, to Chinese Air Force as 50057 Dec81
B-268	3B	2327	22Aug75	G-BAJL	CAAC Military, to Chinese Air Force as 50059 1981
B-269	2E	2188	5Apr78	G-BBVG	CAAC Military, to Chinese Air Force as 50055 Dec81
B-270	3B	2328	26Sep75	G-BAJM	CAAC Military, to Chinese Air Force as 50058 1981
B-271	2E	2189	28Jun78	G-BBWH	CAAC Military, to Chinese Air Force as 50053 Dec81
B-272	2E	2171	17Feb76	G-BAJH	CAAC Govt., to Chinese Air Force as 50052 Apr85
B-274	2E	2172	30Mar76	G-BAJI	CAAC Guangzhou, w/o 14Mar79 near Guangzhou after being stolen
B-276	2E	2173	6May76	G-BAJJ	CAAC 1st fleet, r/r B-2213 May85
B-278	2E	2174	19Jun76	G-BAJK	CAAC Military, to Chinese Air Force as 50158 Aug76
B-280	2E	2175	11Aug76	G-BBVS	CAAC 1st fleet, r/r B-2204 May85
B-282	2E	2176	11Oct76	G-BBVT	CAAC Shenyang, r/r B-2205 May85
B-284	2E	2177	6Dec76	G-BBVU	CAAC 1st fleet, r/r B-2216 May85
B-286	2E	2178	31Dec76	G-BBVV	CAAC Shanghai, r/r B-2210 May85
B-288	2E	2179	17Mar77	G-BBVW	CAAC Guangzhou, r/r B-2217 May85
B-290	2E	2180	14Apr77	G-BBVX	CAAC Shanghai, r/r B-2211 May85
B-292	2E	2181	24May77	G-BBVG	CAAC 1st fleet, r/r B-2206 May85
B-294	2E	2182	29Jul77	G-BBVZ	CAAC 1st fleet, r/r B-2207 May85
B-296	2E	2183	7Sep77	G-BBWA	CAAC Shenyang, r/r B-2220 May85
B-298	2E	2184	14Oct77	G-BBWB	CAAC Shenyang, r/r B-2221 May85
B-2201	2E	2157	r/r May85	B-240	CAAC 1st fleet, to Air China Jan88
B-2202	2E	2158	r/r Jan86	B-242	CAAC 1st fleet, to Air China Jan88
B-2203	2E	2168	r/r Jan86	B-262	CAAC 1st fleet, to CAAC Tianjin, WFU Jun91, BU

B-2204	2E	2175	r/r Jan88	B-280	CAAC 1st fleet, Air China Jan88, NCAA Tianjin Mar91, WFU Nov91, used as ground trainer by CAAC College	604	Ilyushin	14	4 34 06 04	1954	CAAC Chengdu, BU Chengdu 1988
						605	Avia	14T	111 813102	Feb59	CAAC Chengdu, fate unknown
B-2205	2E	2176	r/r Jan86	B-282	CAAC Shenyang, WFU Nov91, BU 1992 Shenyang	606	Ilyushin	14P	5 34 07 03	1955	CAAC Chengdu, fate unknown
B-2206	2E	2181	r/r May85	B-292	CAAC 1st fleet, to Air China Jan88, WFU Nov91, stored	607	Avia	14T	112 813103	Nov58	CAAC 1st fleet, l/n derelict LZD May99
						608	Ilyushin	14P	4 34 06 05	1954	CAAC Govt., fate unknown
B-2207	2E	2182	r/r Jan87	B-294	CAAC 1st fleet, Air China Jan88, WFU 1990, BU 1992	609	Avia	14T	113 813104	Nov58	CAAC Chengdu, fate unknown
B-2208	2E	2165	r/r Sep85	B-261	CAAC Shanghai, DBR 22Mar90 Guilin	610	Ilyushin	14	5 34 07 04	1955	CAAC Shanghai, fate unknown
B-2209	2E	2164	r/r Jan86	B-254	CAAC Shenyang, WFU Nov91, BU Shenyang	611	Ilyushin	14G	1480 019 41	1958	CAAC Guangzhou, SCAA Guangzhou 1990,
						612	Ilyushin	14P	1460 006 12	1955	l/n stored at Guangzhou Aviation School Mar04 CAAC Guangzhou, fate unknown
B-2210	2E	2178	r/r Jan86	B-286	CAAC Shanghai, WFU, Nanjing	613	Ilyushin	14G	1480 019 42	1958	CAAC, fate unknown
					Aeronautical Institute Jun90, BU	614	Ilyushin	14	6 34 13 05	1956	CAAC Xian, BU .96
B-2211	2E	2180	r/r Jan86	B-290	CAAC Shanghai, WFU Nov91, BU Feb93 Shanghai	615	Ilyushin	14G	1480 019 49	1958	CAAC, fate unknown
B-2212	2E	2162	r/r Jul86	B-250	CAAC Shanghai, WFU, BU late 1991 Shanghai	616	Ilyushin	14	?	?	CAAC, crashed Guiyang 14Nov70
						617	Ilyushin	14	1480 019 50	1958	CAAC, fate unknown
B-2213	2E	2173	r/r Jan86	B-276	CAAC Shanghai, WFU Nov91, BU Mar97	618	Ilyushin	14	?	?	CAAC, crashed Namchang 1969
B-2214	2E	2163	r/r Mar86	B-252	CAAC Guangzhou, WFU, BU 1991-92 Fuzhou	619	Avia	14MF	135 912101	May59	CAAC 2nd fleet, r/r B-619 to China General Jul79
B-2215	2E	2166	r/r Jul85	B-258	CAAC Guangzhou, WFU Oct89, BU mid 1990 Hefei	620	Ilyushin	14	1460 007 19	1956	CAAC Eastern, fate unknown
						621	Avia	14MF	137 912102	May59	CAAC 2nd fleet, to China General Jul89
B-2216	2E	2177	r/r Jul85	B-284	CAAC Guangzhou, WFU Nov91, GIA SCAA	622	Ilyushin	14	6 34 15 03	1956	CAAC Guangzhou, SCAA Guangzhou 1984,
					Guangzhou Technical School						l/n Guangzhou technical school Mar04
B-2217	2E	2179	r/r Jul85	B-288	CAAC Guangzhou, WFU Nov91, GIA SCAA	623	Avia	14MF	139 912103	Jun59	CAAC 2nd fleet, r/r B-623 to China General Jul89
					Guangzhou Technical School	624	Ilyushin	14	6 34 15 02	1956	CAAC Xian, BU Lanzhou 1989
B-2218	2E	2159	r/r Jul85	B-244	CAAC Guangzhou, DBR 31Aug88 Hong Kong	625	Avia	14MF	141 912104	Jun59	CAAC 2nd fleet, to China General Jul89
B-2219	2E	2160	r/r Jan86	B-246	CAAC Guangzhou, WFU, GIA SCAA	626	Ilyushin	14	1460 007 20	1956	CAAC, fate unknown
					Guangzhou Technical School	628	Ilyushin	14P	1460 008 38	1956	CAAC Guangzhou, fate unknown
B-2220	2E	2183	r/r Jan87	B-296	CAAC Shenyang, WFU, BU Dalian	630	Ilyushin	14	1460 008 04	1956	CAAC Xian, BU Urumqi, fate unknown
B-2221	2E	2184	r/r Sep87	B-298	CAAC Shenyang, WFU Nov91, BU 1991-92 Shenyang	632	Ilyushin	14	?	1956	CAAC Xian, crashed 70km from Xian 5Apr58
B-2223	2E	2161	r/r Jan86	B-248	CAAC Shenyang, WFU, BU 1991-92 Shenyang	634	Ilyushin	14	1460 009 32	1956	CAAC Chengdu, fate unknown
						636	Ilyushin	14	1460 009 21	1956	CAAC Xian, fate unknown
[ABN7/86 p.8; AF89 p.10; AF92 p.11; ATDB; Ballantine & Tang, DAK 11Oct2011; Towey pp.496-498; WAFD5 p.306, WAFH79 pp.5-6]						638	Ilyushin	14	1460 010 31	1956	CAAC Urumqi, fate unknown
						640	Ilyushin	14	?	1956	CAAC, crashed PEK 5Dec68
Ilyushin IL-12						642	Ilyushin	14	?	1956	CAAC Govt., fate unknown
<i>reg. model c/n date operator/fate</i>						644	Ilyushin	14	?	1956	CAAC, crashed Guiyang 14Jan73
502 12 ? 1948 CAAC IASC, BU Tianjin 1987						646	Ilyushin	14	?	1956	CAAC Govt., fate unknown
503 12 ? 1948 CAAC Xian, WFU Jan86, to Tianjin technical school; l/n Mar04						648	Ilyushin	14	1460 009 19	1956	CAAC 1st fleet, fate unknown
504 12 ? 1948 CAAC IASC, BU Tianjin Mar86						650	Ilyushin	14M	1460 010 49	1956	CAAC Urumqi, fate unknown
505 12D ? 1948 CAAC Xian, WFU Jan86, BU Chengdu						652	Ilyushin	14M	1460 011 02	1956	CAAC Shanghai, l/n Shanghai Aviation Enthusiast Centre Mar03
[AF89 p.11; Ballantine & Tang; ST4 p.265]						654	Ilyushin	14M	1460 011 18	1956	CAAC, fate unknown
Ilyushin IL-14 & Avia 14						656	Ilyushin	14M	1470 013 22	1957	CAAC Urumqi, fate unknown
<i>reg. make model c/n date operator/fate</i>											
600 Ilyushin 14P ? ? CAAC Govt., fate unknown											
602 Ilyushin 14P 4340602 1954 CAAC Xian, l/n Chengdu Guanghan College Apr00											
603 Ilyushin 14FK 1470 012 29 1956 CAAC 2nd fleet, r/r B-603 to China General Aviation Jul89											



Left: One of three Ilyushin Il-18s to be seen at the Datang Shan Museum, near Beijing. B-226 appears to be the only one wearing its correct identity, though not visible in this view.

(Ian D Johnson collection)

Below: Ilyushin Il-14P '672' of CAAC was operating to Rangoon in 1962. (Peter Keating via JM Collection)

658	Ilyushin	14M	1470 013 24	1957	CAAC Urumqi, fate unknown
660	Ilyushin	14M	1470 013 21	1957	CAAC Guangzhou, BU Wuhan 1988
662	DFW	14P	14 803 046	1959	CAAC Shanghai, BU Shanghai
664	DFW	14P	14 803 047	1959	CAAC Shanghai, BU Shanghai
666	DFW	14P	14 803 050	1958	CAAC 1st fleet, l/n Beijing Aeronautical Institute Mar03
668	DFW	14P	14 803 051	1958	CAAC 2nd fleet, BU Taiyuan 1992
670	DFW	14P	14 803 049	x	NTU, delivered to North Vietnam
672	DFW	14P	14 803 048	1959	CAAC Chengdu, fate unknown
674	DFW	14P	14 803 052	1958	CAAC Guangzhou, l/n WFU Shanghai-Lunghua 24Apr00
676	DFW	14P	14 803 053	1958	CAAC 1st fleet, l/n Chengdu Guanhan College Mar03
678	Ilyushin	14P	1470 015 13	Aug57	CAAC Govt., CAAC 2nd fleet .68, to China General Jul89, preserved
B-4213	Ilyushin	14	?	?	CAAC Military Southwest, BU Chengdu 1989
B-4214	Ilyushin	14	?	?	CAAC Military Southwest, BU Chengdu 1989
B-4215	Ilyushin	14	?	?	CAAC Military Southwest, BU Chengdu 1989
B-4216	Ilyushin	14	1470 012 21	Jun86	CAAC Geographic Institute, fate unknown

[Ballantine & Tang; Stroud p.667; ST4 pp.266-277; WAFH79 p.6]

Ilyushin IL-18

reg.	model	c/n	date	operator/fate
200	18B	189 0015 04	1959	CAAC Govt., fate unknown
202, B-202	18B	189 0014 01	21Nov59	CAAC Xian, w/o at Guangzhou 24Dec82
204, B-204	18B	189 0016 02	1959	CAAC Xian, w/o Shenyang Feb77
206, B-206	18B	189 0016 01	1959	CAAC Chengdu, WFU TSN Apr84
208, B-208	18D	185 0087 01	1965	CAAC Xian, BU Xian early 1989
210, B-210	18V	184 0076 02	1964	CAAC Chengdu, NCAA Jan88, l/n Tianjin technical school Mar04
212, B-212	18V	184 0077 02	1964	CAAC Xian, WFU at Xian
214, B-214	18D	185 0085 05	1965	CAAC Chengdu, WFU Chengdu
216, B-216	18D	185 0087 04	1965	CAAC Chengdu, in a park in Chengdu



218, B-218	18V	184 0076 01	1964	CAAC Xian, China Northern, WFU 29Jun90, to Langzhou 1998
220, B-220	18D	187 0096 05	D05May67	CAAC Xian, WFU Xian
222, B-222	18D	187 0099 01	1967	CAAC Chengdu, crashed Chongqing 18Jan88
B-224(1)	18V	184 0078 05	Jul74	CAAC Govt., (ex 50854) fate unknown
B-224(2)	18D	187009703	?	preserved Datang Shan Museum, Changping as "208" May99
B-226	18D	187 0099 02	Dec86	China United AI (ex 50856) preserved Datang Shan Museum, Changping
B-228	18D	185 0087 02	Dec86	China United AI (ex 50855), preserved China Agricultural Museum, Beijing l/n Mar96
B-230(1)	18V	181 0036 02	R28Mar85	CAAC Xian, leased from TAROM, ret YR-IMA 30Mar87
B-230(2)	18V	184 0076 05		China United AI, (ex 50851) preserved Datang Shan Museum, Changping l/n Feb04 as '232'
B-232	18V	183 0062 05	Sep85	CAAC Xian, leased from TAROM, ret YR-IME 27Mar86
B-234	18V	184 0071 05	28Mar85	CAAC Xian, leased from TAROM, ret YR-IMF 21Mar86
B-240	18D	185 0086 04 184007604?	Dec86	China United (c/n TBC), to 50850

Notes: 202 to 222 were reportedly re-registered with B- prefix Jul74. [AF89 p.10; Ballantine & Tang; ST4 pp.277-290, 709-710; TA2000 pp.229-238; WAFH79 p.6]

Ilyushin IL-62

reg.	c/n	date	operator	fate
2020, B-2020	2 12 03	Apr72	CAAC 1st fleet	WFU May87 PEK BU
2022, B-2022	1 10 05	Dec71	CAAC 1st fleet	WFU May87 PEK BU



Above: B-2020 was the first of five Il-62s operated by CAAC.

Right: Two Lockheed L-100 freighters were used by CAAC in the late 1980s. B-3002 is seen here. (Both: Ian D Johnson collection)



2024, B-2024	1 11 01	Dec71	CAAC 1st fleet	WFU May87 PEK displayed at Datang Shan Museum
2026, B-2026	2 12 01	Feb72	CAAC 1st fleet	WFU May87 PEK BU
2028, B-2028	2 12 02	Apr72	CAAC 1st fleet	WFU May87 PEK BU

[AF91 p.11; Ballantine & Tang; ST4 p.709; Towey p.501, WAFH79 p.5]

Learjet 35A & 36A

reg.	model	c/n	date	operator
HY984	36A	36A-053	1985	CAAC Military
HY985	36A	36A-034	1978	CAAC Military
HY986	35A	35A-601	1985	CAAC Military
HY987	35A	35A-602	1985	CAAC Military
HY988	35A	35A-603	1985	CAAC Military

[Ballantine & Tang]

Lisunov Li-2

f/n	model	c/n	date	operator/ fate
301	2T	184 336 01	1949	CAAC Shanghai, CAAC IASC 1982, NCAA Tianjin 1986 GIA
302	2	184 338 06	1949	CAAC Xian, BU Xian 1984
303	2	184 336 02	1949	CAAC Xian, CAAC IASC 1982, BU Lanzhou 1984
304	2	184 338 04	1949	CAAC Xian, fate unknown
305	2	184 402 06	1952	CAAC Shanghai, CAAC IASC 1982, NCAA Tianjin 1986 GIA
306	2	184 338 03	1949	CAAC Xian, fate unknown
307	2	184 396 02	1951	CAAC Shenyang, canx 1986, BU Shenyang 1982
308	2	184 338 08	1949	CAAC Guangzhou, fate unknown
309	2	184 336 06	1949	CAAC Xian, canx 1982, BU Chengdu 1982
310	2	184 397 04	1942	CAAC Chengdu, canx 1982, fate unknown
311(1)2T		184 337 07	1949	CAAC 1st fleet, CAAC 2nd fleet 1982, BU Taiyuan 1987
311(2)2		184 397 03		Preserved Changping Museum (fake reg?)
312	2T	184 335 10	1949	CAAC Shenyang, CAAC IASC 1982, canx 1986, fate unknown
313	2	184 336 08	1949	CAAC Shenyang, canx 1982, fate unknown
314	2	184 363 05	1950	CAAC Shenyang, canx 1982, fate unknown
315	2T	184 331 01	1949	CAAC 1st fleet, CAAC IASC 1982, canx 1987, fate unknown
316	2	184 363 04	1950	CAAC Shenyang, CAAC IASC 1982, canx 1986, BU Shenyang 1988
317	2	?	?	CAAC Govt., fate unknown
318	2	184 338 09	1949	CAAC Xian, canx 1982, fate unknown
319	2	?	?	CAAC Govt., fate unknown
320	2	184 339 04	1949	CAAC Chengdu, canx 1982, BU Chengdu 1982
321	2	?	?	CAAC Govt., fate unknown
322	2	184 396 08	1952	CAAC Chengdu, BU Chengdu (date?)

323	2T	184 396 03	1951	CAAC 1st fleet, CAAC IASC 1982, canx Aug88, BU at Taiyuan 1990
324	2	?	?	CAAC Govt., BU at Taiyuan 1984
325	2	184 405 08	1952	CAAC 1st fleet, CAAC IASC 1982, canx 1987, BU at Taiyuan 1988
326	2	?	?	CAAC Govt., fate unknown
327	2	184 405 09	1952	CAAC 1st fleet, CAAC IASC 1982, canx 1987, BU at Taiyuan (date?)
328	2	?	?	CAAC Govt., fate unknown
329	2	184 402 05	1952	CAAC Chengdu, BU Chengdu (date?)

[Ballantine & Tang; Gordon & Komissarov p.111; Gradidge p.175; ST4 p.259-261, 483; PM 02Mar2011; SEA79 p.20; WAFH79 p.6]

Lockheed L-100-30

reg.	c/n	date	pi	operator/fate
B-3002	5025	Nov87	N4276M	CAAC IASC, to China Eastern Cargo Jul90, Air China Cargo Dec92
B-3004	5027	Nov87	N4278M	CAAC IASC, to China Eastern Cargo Jul90, Air China Cargo Dec92

[ATDB; Ballantine & Tang; Olausson p.109; SEA90 p.9]

MBB BO-105C

reg.	c/n	date	pi	operator/fate
B-761	S-255	Dec76	D-HDHO	CAAC 2nd fleet, to B-7001 May85
B-762	S-256	Dec76	D-HDHP	CAAC 2nd fleet, to B-7002 May85
B-763	S-281	Dec76	D-HDIO	CAAC IASC, to B-7003 May85
B-764	S-282	Dec76	D-HDIP	CAAC IASC, to B-7004 May85
B-7001	S-255	May85	B-761	CAAC 2nd fleet, to China General Aviation Jul89
B-7002	S-256	May85	B-762	CAAC 2nd fleet, to China General Aviation Jul89
B-7003	S-281	May85	B-763	? or w/o
B-7004	S-282	May85	B-764	?

[AF93 p.10; Ballantine & Tang; BUCH92 p.3; BUCH95 p.2; SEA79 p.21; SEA90 p.6]

McDonnell Douglas MD82 (DC-9-82)

reg.	c/n	date	p/i	operator
B-2101	49140	12Dec83	N1004S	CAAC Shanghai, to China Eastern 1May88
B-2102	49141	12Dec83	N10046	CAAC Shanghai, to China Eastern 1May88
B-2103	49355	7Oct85	N1005S	CAAC Shanghai, to China Eastern 1May88
B-2104	49425	28Nov85	N1005T	CAAC Shenyang, to China Northern 1May88
B-2105	49428	26Dec85	N1005U	CAAC Shenyang, to China Northern 1May88

B-2106 1/49415 31Jul87 CAAC Shanghai, to China
Northern 1May88
B-2107 2/49501 17Dec87 CAAC Shenyang, to China
Eastern 1May88
B-2108 3/49502 12Apr88 CAAC Shenyang, to China
Northern 1May88

Non-CAAC MD82s not included.
[AF87 p.8; AF92 p.11; Ballantine & Tang; MSB]

Mil Mi-4 & Z-5

reg.	model	c/n	date	operator	fate
701	Z-5	?	?	CAAC IASC	unknown
702	Z-5	?	?	CAAC IASC	unknown
703	Z-5	?	?	CAAC IASC	unknown
704	Z-5	?	?	CAAC IASC	unknown
705	Z-5	?	?	CAAC IASC	unknown
706	Z-5	?	?	CAAC IASC	unknown
707	Z-5	?	?	CAAC IASC	unknown
708	Z-5	?	?	CAAC IASC	unknown
709	Z-5	?	?	CAAC IASC	unknown
710	Z-5	?	?	CAAC IASC	unknown
711	Z-5	?	?	CAAC IASC	unknown
712	Z-5	?	?	CAAC IASC	unknown
713	Z-5	?	?	CAAC IASC	To NCAA Tianjin, ground trainer, in Tianjin technical school, l/n Jun01
714	Z-5	?	?	CAAC IASC	unknown
715	Z-5	?	?	CAAC IASC	unknown

[Ballantine & Tang; ST4 pp.458, 710]

Mil Mi-8

reg.	model	c/n	date	operator	transfer/fate
684	8	?	?	CAAC	unknown
752	8	20201?	?		
754	8	20202?	?		
756	8	20203	1972	CAAC Military	preserved Changping museum
758	8	20204?	?		
760	8	20205?	?		
762	8	20206	?		preserved Changping museum
764	8	20207?	?		
766	8	20208?	?		
768	8	20209?	?		
770	8	20210	?		preserved Changping museum
772	8P	20211	1972	CAAC 2nd fleet	r/r B-7801 Jul89
774	8P	20212	1972	CAAC 2nd fleet	r/r B-7802 Jul89
776	8	20213	1972	CAAC 2nd fleet	r/r B-7803 Jul89
778	8	20214	1972	CAAC 2nd fleet	r/r B-7804 Jul89
780	8	20215	1972	CAAC IASC	r/r B-7805 Sep90
782	8	20216	1972	CAAC IASC	r/r B-7806 Sep90
784	8	20217	1973	CAAC 2nd fleet	r/r B-7807 Jul89
786	8	20218	1973	CAAC 2nd fleet	r/r B-7808 Jul89
788	8	20219	1973	CAAC 2nd fleet	r/r B-7809 Jul89
790	8P	20220	1973	CAAC 2nd fleet	r/r B-7810 Jul89
820	8	?	?	CAAC Military	
822	8	?	?	CAAC Military	
824	8	?	?	CAAC Military	
842	8	20246	1984	CAAC IASC	r/r B-7811 Sep90
844	8	20247	1984	CAAC IASC	r/r B-7812 Sep90
846	8	20248	1984	CAAC IASC	r/r B-7813 Sep90
848	8	20249	1984	CAAC IASC	r/r B-7814 Sep90
852	8	?	?	CAAC Govt.	
858	8	?	?	CAAC Govt.	
860	8	?	?	CAAC Govt.	
862	8	?	?	CAAC Govt.	
864	8	?	?	CAAC Govt.	
B-7801	8P	20211	1972	CAAC 2nd fleet	to China General Aviation Jul89
B-7802	8P	20212	1972	CAAC 2nd fleet	to China General Aviation Jul89, w/o
B-7803	8	20213	1972	CAAC 2nd fleet	to China General Aviation Jul89
B-7804	8	20214	1972	CAAC 2nd fleet	to China General Aviation Jul89

B-7805	8	20215	1972	CAAC IASC	to China Northern Airlines Sep90
B-7806	8	20216	1972	CAAC IASC	to China Northern Airlines Sep90
B-7807	8	20217	1973	CAAC 2nd fleet	to China General Aviation Jul89
B-7808	8	20218	1973	CAAC 2nd fleet	to China General Aviation Jul89
B-7809	8	20219	1973	CAAC 2nd fleet	to China General Aviation Jul89
B-7810	8P	20220	1973	CAAC 2nd fleet	to China General Aviation Jul89
B-7811	8	20246	1984	CAAC IASC	to China Northern Airlines Sep90
B-7812	8	20247	1984	CAAC IASC	to China Northern Airlines Sep90
B-7813	8	20248	1984	CAAC IASC	to China Northern Airlines Sep90
B-7814	8	20249	1984	CAAC IASC	to China Northern Airlines Sep90
B-7815	8	20278	1985	CAAC IASC	to China Northern Airlines Sep90
B-7816	8	20279	1985	CAAC IASC	to China Northern Airlines Sep90
B-7818	8	20280	1985	CAAC IASC	to China Northern Airlines Sep90
B-7817	8	20281	1985	CAAC IASC	to China Northern Airlines Sep90
B-7819	8	20282	1985	CAAC 2nd fleet	to China General Aviation Jul89
B-7820	8	20283	1985	CAAC 2nd fleet	to China General Aviation Jul89
B-7821	8	20284	1985	CAAC 2nd fleet	to China General Aviation Jul89
B-7822	8	20285	1985	CAAC 2nd fleet	to China General Aviation Jul89

[Ballantine & Tang; BUCH92 p.3; BUCH95 p.3; SEA90 p.11; ST4 pp.511, 710]

Piper PA-42-720 Cheyenne IIIA

reg	c/n	date	operator	fate
B-3621	42-5501051	1990	CAAC Flying College	
B-3622	42-5501052	1990	CAAC Flying College	
B-3623	42-5501054	1990	CAAC Flying College	
B-3624	42-5501056	1990	CAAC Flying College	w/o over Sichuan Apr95
B-3625	42-5501059	1992	CAAC Flying College	
B-3626	42-5501060	1994	CAAC Flying College	

[Ballantine & Tang]

Short SD.360-100

reg.	c/n	date	p/i	operator / transfer
B-3601	SH.3667	1Jun85	G-BLRU	CAAC Shanghai, to China Eastern Jul90
B-3602	SH.3669	21Jun85	G-BLUU	CAAC Shanghai, to China Eastern Jul90
B-3603	SH.3670	12Jun85	G-BLWJ	CAAC Shanghai, to China Eastern Mar90
B-3604	SH.3671	15Jun85	G-BLWK	CAAC Shanghai, to China Eastern Mar90
B-3605	SH.3672	5Jul85	G-BLWN	CAAC Guangzhou, to China Southern Jul90
B-3606	SH3673	19Jul85	G-BLYF	CAAC Guangzhou, DBR 22Oct85 Enshi, China
B-3607	SH.3674	31Jul85	G-BLYG	CAAC Guangzhou, to China Southern Jul90
B-3608	SH.3675	15Aug85	G-BLYH	CAAC Guangzhou, to China Southern Jul90

[AF89 p.11; AF91 p.11; Ballantine & Tang; SEA90 p.10; TA2000 p.333]

Sikorsky S-76A

reg.	c/n	date	p/i	operator	fate
B-745	760173	Dec84	N4023K	CAAC IASC	r/r B-7301
B-746	760285	1984		CAAC IASC	r/r B-7302
B-747	760289	1984		CAAC IASC	r/r B-7303
B-748	760293	1984		CAAC IASC	r/r B-7304

Right: Short SD.360 G-BLWN still in delivery marks after arrival at the HAECO facility at Hong Kong where it was to become B-3605 before entering service with CAAC which acquired eight examples. (Ian D Johnson collection)



B-7301	760173	May85	B-745	CAAC Industrial, to China Southern Helicopters Apr91 w/o 4Dec97
B-7302	760285	May85	B-746	CAAC Industrial, to China Southern Helicopters Apr91 w/o 9Apr96
B-7303	760289	May85	B-747	CAAC Industrial, to China Southern Helicopters Apr91
B-7304	760293	May85	B-748	CAAC Industrial, to China Southern Helicopters Apr91

[AF89 p.11; AF91 p.11; Ballantine & Tang; BUCH92 p.3; MSB]

SOCATA TB-20 Trinidad

reg.	c/n	date	p/i	operator / fate
B-8901	823	Sep88	F-ODVJ	CAAC Flight Institute
B-8902	824	Sep88	F-ODVK	CAAC Flight Institute
B-8903	825	Sep88	F-ODVL	CAAC Flight Institute
B-8904	826	Sep88	F-ODVM	CAAC Flight Institute
B-8905	827	Sep88	F-ODVN	CAAC Flight Institute
B-8906	828	Sep88	F-ODVO	CAAC Flight Institute
B-8907	829	Sep88	F-ODVP	CAAC Flight Institute
B-8908	830	Sep88	F-ODVQ	CAAC Flight Institute
B-8909	831	Sep88	F-ODVR	CAAC Flight Institute
B-8910	832	Sep88	F-ODVS	CAAC Flight Institute
B-8911	833	Apr89	F-ODXA	CAAC Flight Institute
B-8912	834	Apr89	F-ODXB	CAAC Flight Institute
B-8913	835	Apr89	F-ODXC	CAAC Flight Institute
B-8914	836	Apr89	F-ODXD	CAAC Flight Institute w/o
B-8915	837	Apr89	F-ODXE	CAAC Flight Institute
B-8916	838	Apr89	F-ODXF	CAAC Flight Institute
B-8917	839	Apr89	F-ODXG	CAAC Flight Institute
B-8918	840	Apr89	F-ODXH	CAAC Flight Institute
B-8919	841	Apr89	F-ODXI	CAAC Flight Institute
B-8920	842	Apr89	F-ODXJ	CAAC Flight Institute
B-8921	843	Apr89	F-ODXK	CAAC Flight Institute
B-8922	844	Apr89	F-ODXL	CAAC Flight Institute
B-8923	845	Apr89	F-ODXM	CAAC Flight Institute
B-8924	846	Apr89	F-ODXN	CAAC Flight Institute
B-8925	847	May89	F-ODXO	CAAC Flight Institute
B-8926	848	May89	F-ODXP	CAAC Flight Institute
B-8927	849	May89	F-ODXQ	CAAC Flight Institute
B-8928	888	May89	F-ODXR	CAAC Flight Institute

[Ballantine & Tang; SEA90 pp.11-12]

Tupolev TU-154M

reg.	c/n	date	transfer	fate
B-2601	716	1985	CAAC Xian, to	China Northwest Jul88 to UN-85835
B-2602	717	1985	CAAC Xian, to	China Northwest Jul88 to UN-85836
B-2603	718	1985	CAAC Urumqi, to	China Xinjiang AI Jul88 to 4K-AZ17
B-2604	724	1986	CAAC Xian, to	China Northwest Jul88 to UN-85837
B-2605	725	1986	CAAC Xian, to	China Northwest Jul88 to UR-FVV



Above: A line-up of the first eighteen SOCATA TB-20 Trinidads of the CAAC Flight Institute in numerical order with B-8901 at the far end and B8918 in the foreground. (EADS Socata via JM Collection)



Left: Two of CAAC's Viscounts, B-404 and B-402, can be seen under maintenance in the crowded HAECO hangar at Kai Tak.

Below: Viscount 843 B-404 takes a shower outside the HAECO base. (Both: Ian D Johnson collection)

B-2606	728	1986	CAAC Urumqi, to China Xinjiang AI Jul88 to UN-85853
B-2607	729	1986	CAAC Urumqi, to China Xinjiang AI Jul88 to UN-85854
B-2608	734	1986	CAAC Xian, to China Northwest Jul88 to RA-85734
B-2609	735	1986	CAAC Xian, to China Northwest Jul88 to RA-85845
B-2610	740	1986	CAAC Xian, to China Northwest Jul88 w/o 06Jun94 Xian
B-2611	726	1986	CAAC Urumqi, to China Xinjiang AI Jul88 to UN-85852
B-2612	730	1992	CAAC Govt., to China United Airlines as r/r B-4050 1994
B-2614	741	1986	CAAC Govt., to China United Airlines as r/r B-4051 1994
B-4138	712	1991	CAAC Govt., to China United 1994

Additional Chinese Tu-154Ms were not used by CAAC.
 B-2613 was not used.
 [AF89 p.11; AF91 p.11; Ballantine & Tang; ST4 pp.585-596;Towey pp.618-622]



414, B-414 V.734 83 Apr70 J751 CAAC Govt., to Chinese Air Force as B-5114, BU Beijing by 1990

Note: 402 to 414 were reportedly re-registered with B- prefix Jul74. [Ballantine & Tang; Kittle pp.99, 368-371; WAFH79 p.6]

Vickers V.843 Viscount

reg.	model	c/n	date	p/i	operator/fate
402	V.843	451	16Jul63	G-ASDP	CAAC 1st fleet, r/r B-402 Jul74
B-402		451	Jul74	402	CAAC Guangzhou, sold as RP-C792 29May83
404, B-404		452	23Aug63	G-ASDR	CAAC 1st fleet, sold as RP-C794 29May83
406, B-406		453	19Sep63	G-ASDS	CAAC 1st fleet, to Chinese Air Force as 50258 Apr83
408		454	26Dec63	G-ASDT	CAAC 1st fleet, r/r B-408 Jul74
B-408		454	Jul74	408	CAAC Guangzhou, sold as RP-C793 29May83
410		455	19Feb64	G-ASDU	CAAC 1st fleet, r/r B-410 Jul74
B-410		455	Jul74	410	CAAC Shanghai, sold as RP-C795 29May83
412, B-412		456	16Apr64	G-ASDV	CAAC 1st fleet, to Chinese Air Force as 50259 Apr83

Yunshuji Y-11

reg.	c/n	date	operator/fate
B-3860	11 04 05	?	CAAC IASC, to China Flying Dragon Aviation Oct89
B-3861	11 04 06	?	CAAC IASC, to China Flying Dragon Aviation Oct89
B-3862	11 04 07	?	CAAC IASC, to China Flying Dragon Aviation Oct89
B-3863	11 04 08	?	CAAC IASC, to China Flying Dragon Aviation Oct89
B-3864	11 04 09	?	CAAC IASC, to China Flying Dragon Aviation Nov89
B-3865	11 04 10	Jan90	CAAC IASC, to Jiangnan Aviation May90
354, B-3868	11 01 09	1978	CAAC IASC, to Jiangnan Aviation May90
B-3869	11 05 01	1990	CAAC IASC, to Xinjiang General Aviation May92
B-3870	11 05 02	1990	CAAC IASC, to Xinjiang General Aviation May92
B-3871	11 00 03	1976	CAAC IASC, Pingfang, fate unknown
B-3872	11 00 04	1976	CAAC IASC, Pingfang, fate unknown
B-3873	11 00 05	1976	CAAC IASC, Pingfang, fate unknown
351	11 01 01	1977	CAAC IASC, WFU 1986; preserved Datang Shan museum



Above: An unmarked Yunshuji Y-11 in a rural environment. The type was built at the Harbin factory as a 6 - 8 seat utility aircraft, powered by two 285 hp 9-cylinder Jia Housai radials.

Right: The Y-12 was a more sophisticated development, a 17-seat feeder liner with two Pratt & Whitney PT-6A turboprops. This demonstrator was running up the engines, with chocks in place, outside HAECO at Hong Kong. (Both: Ian D Johnson collection)



352, B-3874	11 01 02	1977	CAAC IASC, to China Flying Dragon Aviation 1985	B-3892	11 03 08	1984	CAAC IASC, to Xinjiang General Aviation May92
B-3875	11 01 05	1977	CAAC IASC, to China Flying Dragon Aviation 1985	B-3893	11 03 09	1984	CAAC IASC, to Xinjiang General Aviation May92
B-3876	11 01 06	1977	CAAC IASC, to China Flying Dragon Aviation 1985	B-3894	11 03 10	1984	CAAC IASC, to Xinjiang General Aviation May92
B-3877	11 01 07	1978	CAAC IASC, to China Flying Dragon Aviation 1985	B-3895	11 04 01	1988	CAAC IASC, to Shuangyang Aviation Sep91
353	11 01 08	1978	CAAC IASC, to NCAA Tianjin ground trainer 1986, BU Nov97	B-3896	11 04 02	1988	CAAC IASC, to Shuangyang Aviation Sep91
B-3878	11 01 10	1978	CAAC IASC, to China Flying Dragon Aviation 1985	B-3897	11 04 03	1988	CAAC IASC, to Shuangyang Aviation Sep91
B-3879	11 02 01	1980	CAAC IASC, to China Flying Dragon Aviation 1985	B-3898	11 04 04	1988	CAAC IASC, to Shuangyang Aviation Sep91
B-3880	11 02 02	1980	CAAC IASC, to China Flying Dragon Aviation 1985	[Ballantine & Tang; ST4 pp.642-643]			
B-3881	11 02 03	1980	CAAC IASC, to China Flying Dragon Aviation 1985	Yunshuji Y-12-II			
B-3882	11 02 04	Apr80	CAAC IASC, to China Flying Dragon Aviation Jan81	<i>reg.</i>	<i>c/n</i>	<i>d/d</i>	<i>operator/fate</i>
B-3883	11 02 05	1980	CAAC IASC, to China Flying Dragon Aviation 1985	B-3809	?	1987	CAAC IASC, to Air Guizhou Sep91
B-3884	11 02 10	1981	CAAC IASC, to China Flying Dragon Aviation 1985	B-3810	12009	1987	CAAC 2nd fleet, to China General Aviation Jul89, Xinjiang General Aviation Aug95
B-3885	11 03 01	1984	CAAC IASC, to Xinjiang General Aviation May92	B-3815	120023	1987	CAAC 2nd fleet, to China General Aviation Jul89, Xinjiang General Aviation Aug95
B-3886	11 03 02	1984	CAAC IASC, to Xinjiang General Aviation May92	B-3816	120028	1987	CAAC 2nd fleet, to China General Aviation Jul89, Xinjiang General Aviation Aug95
B-3887	11 03 03	1984	CAAC IASC, to Xinjiang General Aviation May92	B-3817	120029	1987	CAAC 2nd fleet, to China General Aviation Jul89, Xinjiang General Aviation Aug95
B-3888	11 03 04	1984	CAAC IASC, to Xinjiang General Aviation May92	B-3818	120030	1987	CAAC 2nd fleet, to China General Aviation Jul89, Xinjiang General Aviation Aug95
B-3889	11 03 05	1984	CAAC IASC, to Xinjiang General Aviation May92	B-3821	120044	?	CAAC IASC
B-3890	11 03 06	1984	CAAC IASC, to Xinjiang General Aviation May92	[Ballantine & Tang; ST4 p.643] Only CAAC Y-12s shown			
B-3891	11 03 07	1984	CAAC IASC, to Xinjiang General Aviation May92				

CAAC Major accidents

date	type	reg.	circumstances	fatalities
5Apr58	Il-14	632	Crashed 70km from Xian	0
5Dec68	Il-14	640	Beijing	0
1969	Il-14	618	Crashed Namchang	0
14Nov70	Il-14	616	Crashed Guiyang	0
13Aug71	Trident 1E	256	Shot down over Mongolia (Chinese Air Force)	9
14Jan73	Il-14	644	Guiyang	0
May72	Li-2	?	Overshot the runway at Dalian Airport	6
23Mar73	Il-62	B-2002?	Crashed, China	?
21Jan76	An-24	B-492	Crashed on approach to Changsha, China	40
26Aug76	Il-14	?	Crashed during landing in Chengdu	12
Feb77	Il-18	B-204	Shenyang Airport	0
14Mar79	Trident 2E	B-274	Crashed at Beijing, China, after being stolen by unqualified pilot	12 + 32
20Mar80	An-24	B-484	Changsha	0
26Apr82	Trident 2E	B-266	Crashed into Mt Yangsu while on approach to Guilin	112
24Dec82	Il-18B	B-202	Burst into flames while on approach to Guangzhou, crashed on landing	25
27Feb83	Trident 2E	B-260	Overran on landing at Fuzhou Airport	0
5May83	Trident 2E	B-296	Hijacked en route Shenyang to Shanghai, landed at Chunchon, ROK	0
14Sep83	Trident 2E	B-264	Collided with a fighter on takeoff from Guilin	11
18Jan85	An-24	B-434	Crashed on approach to Jinan, Shandong (or overshoot)	38
22Oct85	Short 360	B-3606	Overran and hit wall at Enshi Airport	0
15Dec86	An-24	B-3413	Crashed on approach to Lanzhou during storm	6
16Jun87	737-2T4	B-2514	Fuzhou Airport	0
18Jan88	Il-18	B-222	Engine caught fire & separated, Chongqing	108
31Aug88	Trident 2E	B-2218	Hit approach lights at Hong Kong-Kai Tak	7
15Aug89	An-24	B-3417	Overran, Shanghai	34
5Nov92	Mi-17	?	Crashed into building at Yuangyang, China	(33)
23Mar95	PA-42	B-3426	Jinan	7
02Sep02	Cessna 650	B-7023	Xichang	3

[ACRO; ASN; Bordoni; DAK 11Oct2011; WDAC; Wikipedia]

Chronology

1949

2 November 1949: The Civil Aviation Administration of China was founded under the Chinese Air Force.

9 November 1949: eight C-47s, three C-46s and one Convair 240 were flown from Hong Kong to Tientsin by defecting Communists.

1950

27 March 1950: SKOAGA came into being.

1 July 1950: The international air services of China's Beijing-China [!], Beijing-Irkutsk and Beijing-Alma Ata were formally inaugurated.

1 August 1950: The domestic air services of China's Tjanjin-Beijing-Hankou-Guangzhou and Tjanjin- Beijing-Handou- Chongqing were formally inaugurated.

1951

May 1951: A C-46 aircraft of CAAC sprayed DDT emulsion over Guangzhou to wipe out mosquitoes and houseflies – the first general aviation operation carried out by CAAC.

5 December 1951: The first local air services of Chongqing-Xichang of China was inaugurated.

1952

April-June 1952: CAAC carried out aerial forest patrol for the first time with Aero 45 aircraft in Mudanjiang forest area and Da Hinggan Mountains and Xiao Hinggan Mountains forest areas in Heilongjiang Province.

17 July 1952: Formation of China People's Aviation Company announced.

1953

May-June 1953: CAAC carried out the dusting of benzene hexa-chloride for the first time with Bo-2 [An-2?] aircraft at Weishan Lake area in Jiangsu Province to eliminate locusts. In June the same year, aerial photography of forest was carried out for the first time in Mudanjiang Dahai forest area in Heilongjiang Province.

1954

July 1954: CAAC carried out an aerial magnetic survey with two Aero 45 aircraft for the first time in Chengdu area.

1955

26 May 1955: The friendship delegation led by Indonesian Prime Minister Ali flew by CAAC special flight CV-240 aircraft No. 401 (also known as "Beijing") from Guangzhou to Beijing. This was the first special domestic flight mission performed by civil aviation of China to carry a foreign head of government.

1956

11 April 1956: Route from Kunming via Mandalay to Rangoon opened with an Il-14.

29 May 1956: Route from Guangzhou to Hanoi via Nanning opened.

17 November 1956: CAAC dispatched Il-14 aircraft Nos. 632 and 626 to perform the special flight mission for sending Premier Zhou Enlai to visit Vietnam, Cambodia and Myanmar and for his return to Beijing on 8 February the next year. This was the first special flight mission performed by CAAC to fly a State leader to visit foreign countries.

1958

18 July 1958: CAAC signed an interline traffic agreement with Scandinavian Airlines. This was the first interline traffic agreement signed by CAAC with a foreign airline not serving China.

1959

3 April 1959: Route from Beijing to Pyongyang via Shenyang opened.

1960

10 August-8 September 1960: Guo Moruo, Vice Chairman of the Standing Committee of the National People's Congress (NPC), led a NPC delegation to take a special flight in CAAC Il-18 aircraft No. 204 on a visit to Indonesia. This was the first transoceanic special flight operated by CAAC abroad.

1962

15 August 1962: Pursuant to a decision of the Central Committee of the CPC and the State Council, CAAC became a department directly under the State Council.

1965

3-10 June 1965: Premier Zhou Enlai led the Government Delegation of China to fly on a visit to Tanzania by a special flight of CAAC Il-18 aircraft No. 208. This was the first time for a CAAC aircraft flew to Africa to perform a special flight mission.

17-28 July 1965: Secretary General Deng Xiaoping led a delegation to fly to Romania by a CAAC special flight Il-18 aircraft No. 212 to attend the Fourth Congress of the Communist Party of Romania. This was the first time for a CAAC aircraft flew to Europe to perform a special flight mission.

1971

13 May 1971: First Il-62 made its first revenue passenger flight on a non-stop Beijing-Guangzhou routing.

14 August 1971: CAAC ordered six Trident 2Es.

19 November 1971: The 16th meeting of the 74th session of the Council of the International Civil Aviation Organisation (ICAO) adopted a resolution recognizing the representative of the People's Republic of China as the sole legitimate representative of China, thereby expelling the representative of the Kuomintang (ROC) regime.

1972

11 September 1972: Order for ten Boeing 707s confirmed.

1973

15 March 1973: Trident began domestic services.

18 April 1973: Route from Beijing to Tirana, Albania, via Teheran and Bucharest inaugurated.

1974

30 January 1974: Il-62s opened a direct service to Moscow.

15 February 1974: The Chinese Government decided to recognize the Convention on International Civil Aviation (1944) (i.e. the Chicago Convention) and related amendments, and decided to participate in the activities of the International Civil Aviation Organization this very day.

29 September 1974: Service from Beijing to Tokyo opened with Boeing 707s.

17 October 1974: Service from Beijing to Paris via Karachi opened with Boeing 707s.

December 1974: The Chinese Government appointed He Fengyuan the first permanent representative of China to ICAO Council, and set up a representative office in Montreal.

1976

23 January 1976: Service to Phnom Penh began.

1978

31 March 1978: CAAC inaugurated Beijing-Karachi-Addis Ababa international service. This was the first CAAC air service leading to Africa.

12 October 1978: CAAC commenced service between Guangzhou and Hong Kong using Tridents

16 December 1978: CAAC signed a contract for three Boeing 747SPs.

1979

3 May 1979: Il-62s began flying to Frankfurt.

4 September 1979: Route to Manila opened.

1 November 1979: Route to Nagasaki, Japan, opened.

1980

1 April 1980: Boeing 747SP introduced on route to Paris.

3 May 1980: Beijing Aviation Catering Corporation, jointly operated by CAAC Beijing Regional Administration and China Aviation Catering Corporation (Hong Kong), formally started business. This was the first Chinese-foreign joint venture approved by China.

October 1980: CAAC made its first flight to USA

15 November 1980: Frankfurt service extended to London

1981

7 January 1981: Boeing 747SP service began from Beijing and Shanghai to San Francisco and New York

9 March 1981: CAAC joined the Société Internationale de Télécommunications Aéronautiques (SITA) and formally started using its first Garbriel [?] Automatic Reservation System. From this time on, computerized automatic reservation has been available for all international flights of CAAC.

14 August 1981: The Ministry of Education approved to change Civil Aviation Machinery Professional Training School into Civil Aviation University of China.

3 November 1981: direct service between Kunming and Hong Kong started with Tridents

1982

February 1982: CAAC Magazine, an in-flight magazine, started publication.

12 April 1982: trans-Pacific service to Los Angeles started

1984

7 September 1984: CAAC inaugurated Beijing-Guangzhou-Sydney international air service. This was the first international air service operated by CAAC to Oceania.

28 September 1984: Shijiazhuang, the provincial capital of Hebei, was formally opened to air traffic.

1985

January 1985: CAAC ordered eight Shorts 360

12 February 1985: CAAC Administration of Xizang (Tibet) Autonomous Region was officially founded.

April 1985: CAAC ordered three Airbus A310-200s through CASC.

12 April 1985: Agreement signed for the purchase of 26 McDonnell Douglas MD-80s.

23 May 1985: CAAC ordered one 747-200 Combi, two 767s and five 737-200s from Boeing

30 December 1985: The Shanghai Airlines organized by the Shanghai Municipality was formally founded. It was the first State-run local air transport enterprise able to make its own management decisions in China.

1986

29 April 1986: The ceremony of the inaugural flight of Chinese-made Yun-7 aircraft was held at Luogang Airport in Hefei, Anhui Province. It opened a new page in the history of civil air operations by Chinese-made transport aircraft.

1987

As approved by the Propaganda Department of the CPC Central Committee and the State Press and Publication Administration of the PRC, the CAAC Journal was put on sale in China and abroad.

31 July 1987: The first MD-82 aircraft co-produced by China and the United States was delivered to CAAC Shenyang Regional Administration, and was put into service for scheduled operation from 1 August.

15 October 1987: CAAC Southwest Regional Administration, China Southwest Airlines and Chengdu Shuangliu Airport were formally founded. This began the reform of CAAC management system.

1990

1 April 1990: Beginning from this date, all Chinese air carriers and CAAC regional administrations used their own titles to operate international, regional and domestic air services, and used the two-letter airline codes and three-letter numerical codes assigned to them by the International Air Transport Association (IATA) for transportation documents.

1991

27 July 1991: 17 enterprises owned by the whole people directly under CAAC, including Air China, Beijing Capital International Airport and China Eastern Airlines, signed the documents of contract and economic responsibility with Jiang Zhuping, Director General of CAAC, to implement overall contract and economic responsibility system.

1993

6, 10 October and 10 December 1993: China Eastern Air Group, China Southern Air Group and Air China Group were formally founded in Shanghai, Guangzhou and Beijing respectively.

1995

15-23 April 1995: The Symposium on Civil Air Transport across the Straits was convened in Taipei. People of civil aviation circles across the Straits met for the first time in Taipei and exchanged views on the six problems of common interest to the people on both sides of the Straits relating to direct air services.

1996

1 March 1996: The Civil Aviation Law of the People's Republic of China was implemented.

1 March 1996: The interline traffic agreements signed by Air China, China Eastern Airlines and China Southern Airlines respectively with China Airlines of Taiwan came into force, and the mutual acceptance of each other's air transport documents started. A passenger can travel on one ticket through to the end from inland China to Taiwan via Hong Kong.

18 March 1996: The Standards of Public Air Transport Service Quality were published by the State Bureau of Quality and Technical Supervision and implemented from September. This was the first set of national standards for service quality of transport industry of China.

1997

4 February 1997: The stocks of China Eastern Airlines Co. Ltd. were listed at the New York Stock Exchange in the United States and on 5 February at the Hong Kong Joint Stock Exchange, raising a fund of US\$282 million. This was the first case of listing the stocks of a civil aviation enterprise of China in the market abroad. The stocks of China Southern Airlines Co. Ltd. were listed in New York and Hong Kong on 30 July and 31 July respectively, raising a fund of US\$720 million.

29 June-2 July 1997: CAAC satisfactorily preformed the special flight mission for sending the Chinese Government Delegation to attend the handing over and receiving ceremony of Hong Kong political power, namely, the founding ceremony of the government of the Hong Kong Special Administrative Region. This was the largest special flight mission in the history of civil aviation of China.

20 July 1997: China Southern Airlines performed Guangzhou- Los Angeles scheduled flight with Boeing 777 aircraft, becoming the first airline in the world performing transpacific flight with B777 aircraft.

2-3 September 1997: The nationwide civil aviation meeting for exchanging the experience of creating quality service models was convened in Beijing. The meeting cited the first group of 32 flights, 16 booking offices and 5 airports for being up to standard and awarded medals to them for the first time.

12 December 1997: The aircraft registered in Hong Kong Special Administrative Region used the nationality mark "B" of the civil aircraft of China for the first time and the original mark VR was no longer used.

1998

26 February: China Eastern Airlines and American Airlines signed a code-sharing agreement. Henceforth, the air carriers of China began to practice code-sharing with foreign air carriers.

1 August 1998: Shanghai Hongqiao International Airport Co. Ltd. passed the ISO9002 quality certification, becoming the first airport in China winning ISO9002 international quality system certification.

10 September 1998: In Performing Shanghai-Beijing scheduled flight, airliner No. 2173 of China Eastern Airlines made a successful emergency landing at Shanghai Hongqiao International Airport after a breakdown in its landing gear. Of the 137 passengers aboard, 9 suffered minor injuries and the rest were all safe and sound.

Note: dates for the delivery of aircraft and accidents are included in other tables.

[CAAC (edited), Davies pp383-405]

Abbreviations

BU	Broken Up
CAAC	Civil Aviation Administration of China
canx	cancelled
CASC	China Aviation Supply Corporation
CATC	Central Air Transport Corporation
CATIC	China National Machinery Import and Export Corporation



Left: An additional photo of B-0002, an aircraft that does not appear in the CAAC listing. The Shanghai Y-10 was a one off, an indigenous design that obviously owed its concept, and its engines, to the Boeing 707. It is said that it did fly service routes for a short while in the 1980s before the costly experiment was ended, only three Y-10s having been built, two of which were static airframes. (Ian D Johnson collection)

c/n	construction number
CNAC	China National Aviation Corporation
CPAC	China People's Aviation Company
DBR	Damaged Beyond Repair
d/d	delivery date
DFW	Dresdener Flugzeug Werke
f/n	fleet number
GIA	Ground Instruction Airframe
IASC	Industrial Aviation Services Company
l/n	last noted
MATCO	Macao Air Transport Company
NCAA	North China Aviation Administration
NLR	No Longer Registered
NPC	National Peoples Congress
NTU	Not Taken Up
p/i	previous identity
PIA	Pakistan International Airlines
PLAAF	Peoples Liberation Army Air Force
PRC	People's Republic of China
reg.	registration
RFC	Reconstruction Finance Corporation
ROC	Republic of China
r/r	re-registered
SCAA	South China Aviation Administration
TBC	To Be Confirmed
USCAR	United States Civil Aircraft Register
USSR	Union of Soviet Socialist Republics
WFU	Withdrawn From Use
w/o	written off

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To be continued . . .

F-1922

The French Civil Aircraft Register from 1922

Part 31

By Bernard Martin, Dave Sparrow and Robert Espérou

Right: Dewoitine 272 F-AJTE seen at Vincennes where it took part in the first World Cup aerobatic competition in 1934. It was flown by Marcel Doret, on the left, seen here shaking hands with Gerhard Fieseler, centre, who won the contest [see elsewhere in this issue!], together with an unidentified French Air Force pilot. The aircraft was destroyed in 1936 but the registration lives on - it was re-issued on 23.4.37 to a similar Dewoitine 530 built by Sté Lioré from parts of c/n 06 F-ANAX and can currently be found in store at the Musée de l'Air, painted in the original red and white colours of F-AJTE. (via JM Collection)



As in recent issues we are continuing with the New Registrations in alphabetical order as they no longer correspond to CoFR Number order.

F-Update 1930 (contined)

New Registrations

2414	F-AJTE	Dewoitine 272	1
Marcel Doret, Chatillon sur Bagneux. (13.6.30)			
2595	F-AJTF	Breguet 284T	5
Cie Air Union, Paris. (16.10.30)			
2674	F-AJTG	Breguet 284T	6
Cie Air Union, Paris. (20.1.31)			
2846	F-AJTH	Bernard S.72	1
Société des Avions Bernard, Paris. (19.6.31)			
Unkn	F-AJTI	Lorraine Hanriot 42	01
Société Générale d'Aviation. Destroyed 29.6.30.			
2534	F-AJTJ	Lorraine-Hanriot 431	3
M.Outhenin Chalandre, Neuilly (based Bourges). (30.8.30)			
2535	F-AJTK	Lorraine-Hanriot 431	4
M.Outhenin Chalandre, Neuilly (based Bourges). (30.8.30)			
2531	F-AJTL	Hanriot 14	1200
M.Lieffroy, Cerilly; (based Montluçon). (28.8.30)			
2518	F-AJTM	Hanriot 14	1006
Ministère de l'Air; loan to Aéro Club de l'Allier, Moulins. (20.8.30)			
2422	F-AJTN	Blériot-Spad 56/6	20/4443
Société Air Publicite, St Cloud, Paris (based Hanworth). (28.6.30)			
2517	F-AJTO	Hanriot 14	325
Ministère de l'Air, loan to Aéro Club de Vichy, Vichy. (20.8.30)			
3356	F-AJTP	Morane 234	2
Michel Détrouyat, Boulogne-s/Seine. (11.4.33) [Originally built as Morane 130 c/n 1/3312].			
2514	F-AJTQ	Caudron 59/2	1/6428
R.Caudron, Issy. (19.8.30)			
2539	F-AJTR	Potez 36/14	1912
Raoul Duval Edgard, Le Havre. (8.9.30)			



Above: F-AJTF was a 580hp Hispano-Suiza 12Lbrx powered Breguet 284T operated by Air Union as an 8-seater. (via JM Collection)

Below: Bernard S.72 single-seat sportplane F-AJTH at Le Bourget running up the 230hp Gnome-Rhône Titan with its five individually-cowled cylinders but with no spinner fitted. (via JM Collection)



2625 **F-AJTS** Farman 190 51/7211
M le Capit. Wauthier, Paris; named "General Laperrine". (15.11.30)

Unkn **F-AJTT** Farman 230 2
M. de Viscaya, Paris. [Built 10.30. Converted to F.230bis and destroyed 12.31.]

2626 **F-AJTU** Farman 192 13/7178
Armand Esders, Paris (based Toussus-le-Noble). (17.11.30)

2536 **F-AJTV** Potez 36/13 1913
M.Aslan Finaly, Paris. (But BV 10/30 quotes Stanavo, Paris/Le Bourget). (3.9.30)



Left: F-AJTJ was a Lorraine-Hanriot 431 biplane trainer with a 240hp Lorraine 7Mb engine built in 1930 when the Hanriot company had become part of the Lorraine-Dietrich group. Some 50 examples were built for the French military and about a dozen more saw civil use. (via JM Collection)

Below, left: The Morane-Saulnier MS.234 F-AJTP of Michel Détroyat seen here at the US National Air Races in 1936 carrying advertising for the 1937 Paris Exhibition. Détroyat won the Thompson race, the only non-US pilot to do so. Earlier he was placed second in the 1934 World Cup and had often competed with Doret and Fieseler in aerobatic events. (via JM Collection)

Below: Michel Détroyat in the cockpit of F-AJTP - note the low steeply-raked windscreen and narrow side window. (via JM Collection)



2540	F-AJTX	Potez 36/14	1914.	2895	F-AJUH	Morane 231	1
		Leon Molon, Le Havre. (8.9.30)				Société des Aéroplanes Morane Saulnier, Puteaux. (23.7.31)	
2546	F-AJTY	Potez 36/14	1915	2896	F-AJUI	Morane 231	2
		Jules Meny, Paris. (13.9.30)				Société des Aéroplanes Morane Saulnier, Puteaux. (24.7.31)	
2537	F-AJTZ	Potez 36/14	1917	2568	F-AJUU	Morane Moth 60M	32
		Aéro Club du Havre, Le Havre. (3.9.30)				Andre Jacques, Paris (based Velizy). (3.10.30)	
2619	F-AJUA	Potez 36/14	1918	2897	F-AJUK	Morane 231	3
		Abel Pinchon, Niort. (4.11.30)				Société des Aéroplanes Morane Saulnier, Puteaux. (24.7.31)	
2459	F-AJUB	Fokker F.VIIa	5226	2458	F-AJUL	Peyret-Mauboussin II	02
		ex PH-AFF. Société de Transports Aériens Rapides, Paris/Le Bourget. (17.7.30)				P.Mauboussin, Paris. (17.7.30)	
2460	F-AJUC	Fokker F.VIIa	5227	2516	F-AJUM	Hanriot 14	194
		ex PH-AFG. Société de Transports Aériens Rapides, Paris/Le Bourget. (17.7.30)				Ministère de l'Air ; on loan to Aéro Club de Bourgogne, Chalon sur Saone. (20.8.30)	
2461	F-AJUD	Fokker F.VIIa	5228	2563	F-AJUN	Hanriot 14/23	1007
		ex PH-AFH. Société de Transports Aériens Rapides, Paris/Le Bourget. (17.7.30)				Ministère de l'Air, on loan to Union des Pilotes Civils, Paris. (3.10.30)	
2501	F-AJUE	Morane Moth 60M	33	2553	F-AJUO	Potez 36/14	1919
		Cie Générale Aéropostale, Paris. (11.8.30)				N.Cendre, Rethel. (29.9.30)	
2529	F-AJUF	Morane Moth 60M	34	2555	F-AJUP	Potez 36/14	1920
		Cie Générale Aéropostale, Paris. (26.8.30)				Michel Dore, Abbeville. (29.9.30)	
2748	F-AJUG	Morane 234	1	2554	F-AJUQ	Potez 36/14	1921
		Paul Michel, Paris. (8.4.31)				Albert Putinier, Lyon. (29.9.30)	
				2607	F-AJUR	Potez 36/14	1954
						Aéro Club du Maroc, Casablanca. (23.10.30)	
				2632	F-AJUS	Potez 36/14	1584
						Etabl. Henri Potez, Paris (based Meaulte). (29.11.30)	
				2888	F-AJUT	LeO 181	6
						Etabl. Lioré & Olivier, Paris (based Argenteuil). (21.7.31)	
				Unkn	F-AJUJ	Nothing known.	



Above: F-AJTY was one of a number of Potez 36 two-seat cabin monoplanes registered in September 1930. The power unit was a 95hp Renault 4 Pb. (via JM Collection)

To be continued . .

The Fieseler F 5

HEAD-ON VIEW No.41



Above: Gerhard Fieseler arrived in his F2 Tiger D-2200 at Le Bourget on 4.10.33 prior to an aerobatic meeting to be greeted by his great rival Michel Détroyat. (via JM Collection)

The Fieseler Flugzeugbau company was formed at Kassel on 1st April 1930 by Gerhard Fieseler in the premises of the former Raab-Katzenstein factory. Fieseler had been a First World War pilot and in the 1930s became European Aerobatic Champion in 1932 and then World Champion in 1934 flying his F2 Tiger D-2200 in the contest at Vincennes.

Following the aerobatic Tiger biplane, the first Fieseler light monoplane design was the F4, an open-cockpit tandem two-seater powered by a 40 hp Salmson AG 9, which made its debut at the German Airport exhibition in 1932.

The fuselage of the F4 was of fabric-covered steel tube and the single-spar cantilever wooden wing, also fabric-covered, was wire-braced to the fuselage and undercarriage. As an alternative power unit to the Salmson radial, a 4-cylinder horizontally-opposed 40 hp Argus As.16 could be fitted.

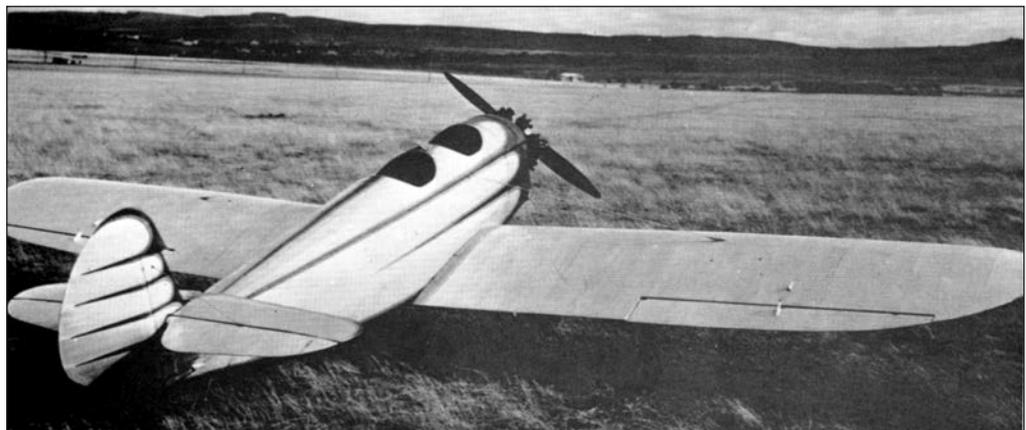
Development of the F4 concept at Kassel-Bettenhausen resulted, in 1933, in the F5. With increased power and the addition of trailing edge flaps the design became a highly-practical training and touring aeroplane.

The F5 retained the braced steel tube fuselage and fabric cover of its predecessor. The wing however was new, a two-spar cantilever unit with a swept leading edge and tapered chord and thickness. Bracing wires were no longer required and the wing surface was ply-covered back to the rear spar, behind which fabric-covered full-width slotted flaps and ailerons were fitted. The wings could be folded to reduce storage space.

The simple cantilever undercarriage main legs were attached to the main spar at the centre section and comprised oleo and rubber compression units fitted with low-pressure tyres. At first only the legs were faired but appearance was soon greatly improved when neat streamlined wheel fairings were introduced. A sprung tail skid was standard fitment.

The horizontal tail unit of wood and plywood was strut-braced beneath and wire-braced to the fin. It was adjustable for trim in flight. The fin was of fabric-covered steel tube and all the control surfaces were of wood with fabric covering.

Right: The first Fieseler monoplane was the F4, a tandem two-seater powered by a 40 hp Salmson radial. Many of its features were also to be found on its successor the F5, although the latter had a completely new wing and a more powerful engine. (via JM Collection)





Left: Labelled "Fieseler 5" D-2464 appears to have been the prototype and is seen here in early unpainted state. The undercarriage legs are faired but not the wheels. (via JM Collection)



Left: In head-on view the prototype, now with rally marking "S2", shows the long undercarriage legs giving ample prop clearance benefitting a training aeroplane. (via JM Collection)

Power was provided by a 60-65 hp Hirth HM.60 inverted air-cooled in-line giving a top speed of 190 km/hr (118 mph) in the standard model. If the uprated HM.60R was fitted giving 72-78 hp the aircraft was designated F5R and maximum speed increased to 210 km/hr (130 mph). The tandem open cockpits were fitted with dual controls and had a large luggage locker behind the rear seat. Behind that the fuselage top decking could be removed to allow the stowage of long items such as a spare propeller or skis.

Dimensions and performance:

	F5	F5r (if different)
Length	6.6 m (21 ft 8 in)	
Span	10 m (32 ft 10 in)	
Wing area	13.6 sq m (146.5 sq ft)	
Height	2.3 m (6 ft 6.5 in)	
Empty weight	350 kg (771 lbs)	395 kg (870 lbs)
Max AUW	610 kg (1,344 lbs)	660 kg (1,455 lbs)
Max speed	190 km/hr (118 mph)	210 km/hr (130 mph)
Cruising speed	160 km/hr (99 mph)	175 km/hr (109 mph)
Landing speed	65 km/hr (40.4 mph)	
Range	600 km (370 mls)	
Climb to 1,000 m (3,280 ft)	6.5 mins	5.5 mins
Ceiling	4,000 m (13,120 ft)	5,100 m (16,730 ft)

The F5, later known as the Fi5, became a popular ab-initio trainer and touring aeroplane in competition with the somewhat more sedate contemporary Klemm L25 which had a much larger wing. The Klemm was

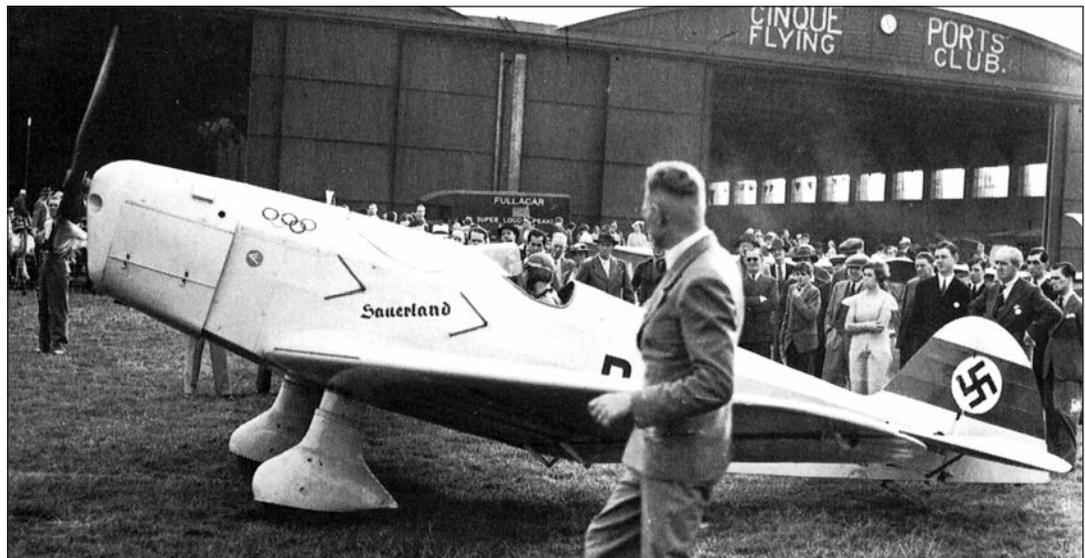


Above: Taxying in at Lympe for the 1935 International Meeting is Ilse Fastenrath in her F5R D-ERIV "Sauerland". (Aeroplane via JM)

Below: The prototype D-2464 was flown as "S2" by Kurt Bley of Magdeburg in the 1933 Deutschlandflug, his co-pilot enjoying a quick cigarette before departure from Tempelhof. The wheels were still not faired but the obligatory swastika had been painted on the fin and rudder. Visible on the original print at the bottom of the cowling is the c/n, "Wk Nr 203". (via JM Collection)



Right: A good view of D-ERIV "Sauerland" at the Lympe International Meeting on August 25th 1935 when the 18-year old pilot Ilse Fastenrath performed a crowd-pleasing aerobatic routine. The F5R wore the Fieseler logo and Olympic rings, for Berlin 1936, and the front cockpit was covered over. (Aeroplane via JM Collection)



Below: The tapered wing of the F5 shows up well in this view of D-ENAZ. (via JM Collection)



an earlier design however and was produced in much larger numbers in the late 1920s. Unlike the Klemm, the F5 was well suited for faster competition flying and touring, with the Luftsport-Verband for example, and also for aerobatics.

Already, after entering production in 1933, nine examples took part in that year's Deutschlandflug rally. One photograph shows that in the 1934 rally some six F5s were being operated by the Fliegergruppe Danzig alone, wearing G1 codes.

Visitors to Britain included Otto Mendl's F5R A-144 from Austria at Brooklands in June 1935 and the F5R "Sauerland" of aerobatic pilot Ilse Fastenrath. This remarkable pilot performed a highly-praised aerobatic display at the age of 18 at the 1935 Lympe International Meeting on 25.8.35.

Below: Seen at Berlin-Tempelhof before the start of the 1934 Deutschlandflug is this group of Fieseler F5s representing the Fliegergruppe Danzig. Identifiable are D-3093, D-3102, D-3104, D-3091 and probably D-3094 and D-EQOP. All are wearing a large Fieseler logo on the cowling, code "G1" and a further identification number below the rear cockpit. (via JM Collection)

It is not known precisely how many F5s were built but it seems that only one flying example survived World War Two. This was c/n 232 which originated as D-3085 in 1934, becoming D-EUJA later. Post-war it became HB-ELF in Switzerland in 4.46. There it was fitted with an enclosed cabin, close-fitting cowling, pointed spinner, and was finished in an attractive paint scheme. This final survivor was written off in France on 27.7.68.





Left: A pleasing air-to-air view of D-EPYS, c/n unknown. (via JM Collection)

Below: D-EUJA was c/n 232 and survived the war to become HB-ELF in 1946. The sole airworthy example post-war, it was written off in an accident in July 1968. (via JM Collection)



FIESELER F5 KNOWN EXAMPLES

xx	F4 prototype	one only? no regn known
D-2464	203	7.33 prototype? Later coded S2
D-2538	204	7.33
D-2539	205	8.33 to D-EBAP
D-2540	206	8.33 cld 6.34 as destroyed
D-2541	207	8.33 to D-EFVO
D-2542	208	8.33 cld 3.34 as destroyed
D-2630	209	8.33
D-2631	210	10.33
D-2632	211	9.33
D-2633	212	.33 cld 11.33 as destroyed
D-2634	213	10.33
D-2635	214	11.33 to D-ELYL
D-2636	215	11.33
D-2637	216	11.33
D-2638	217	12.33 cld 3.34 as destroyed
D-2639	218	12.33 cld .34 as destroyed
D-2919	219	12.33
D-2920	220	.33 to D-EMIT
D-2921	221	12.33 cld 2.34 as destroyed
D-2922	222	12.33 to D-EQOP
D-2923	223	12.33
D-2927	227	2.34
D-2928	228	
D-3084	231	2.34
D-3085	232	2.34 to D-EUJA, to HB-ELF 4.46, F5R w/o France 27.7.68
D-3096	240	3.34 Fi 5R
D-3097	241	3.34 Fi 5R
D-3100	243	3.34 Fi 5R
D-3101	244	3.34 Fi 5R

c/ns unidentified:

D-3087	
D-3091	Danzig 1934
D-3093	Danzig 1934
D-3094	possibly Danzig



Above: Few examples of the F5 appear to have been registered outside Germany but A-144 was an Austrian visitor to the UK in 1935, later becoming OE-DJX. (via JM Collection)

D-3102	possibly Danzig
D-3104	Danzig 1934
D-xxOP	Danzig 1934, probably D-EQOP
D-ENAZ	Fi 5R
D-EPYS	
D-EQUQ	Lympne visitor 8.35?
D-ERIV	"Sauerland", Ilse Fastenrath, aerobatics @ Lympne Intl meeting 8.35
	? noted on scale model
D-EZEF	
A-144	Fi 5R Otto Mendl, @ Brooklands 6.35; later OE-DJX

Another Deutschlandflug competitor coded 'L4' – see photograph

Many of the earlier examples may also be F5R or Fi 5R models

Additions or corrections to this provisional list would be gratefully received.

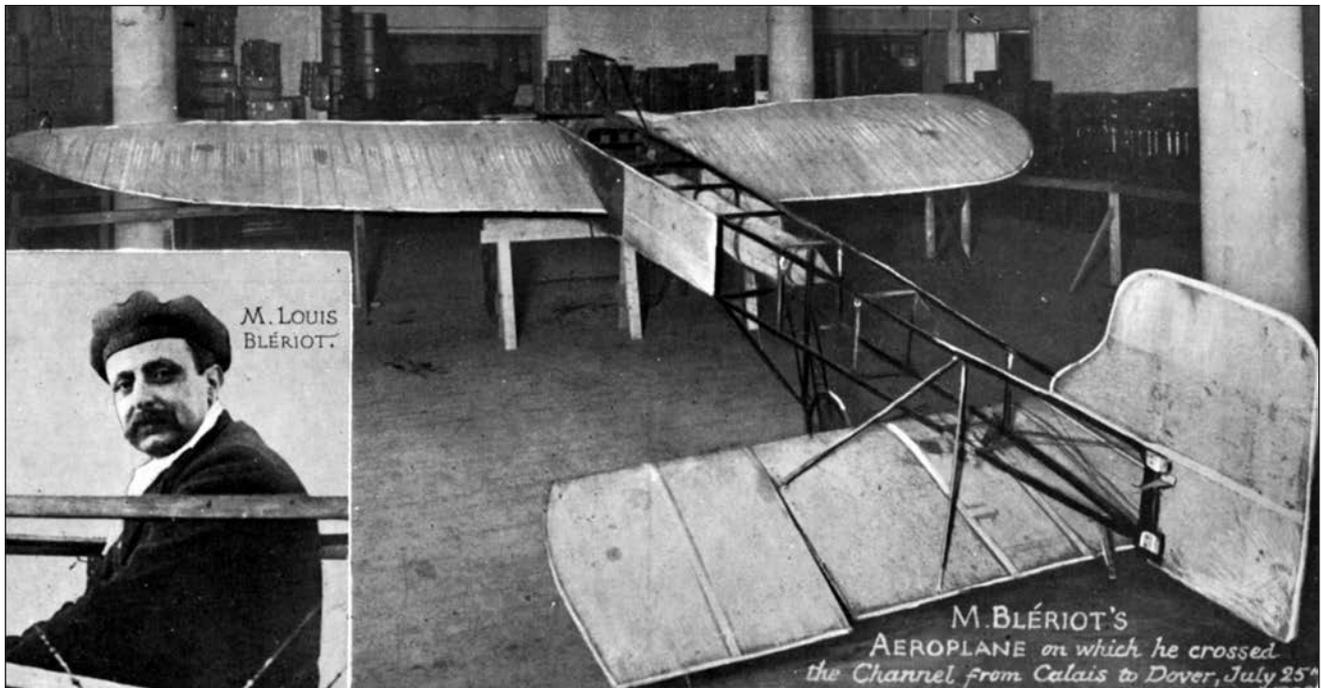


Left: The post-war survivor c/n 232 was registered HB-ELF to M.Dätwyler in April 1946 and was subsequently modified with a fully-enclosed cockpit, close-fitting cowlings and pointed spinner. It is seen here at Basle in May 1962 when it was being operated by Fieselergruppe Basel. Following an accident in France on 27.7.68 its registration was cancelled 27.11.68 (via JM Collection)

Ernest Maund: Pretender Pioneer

Fantasy made fact

Philip Jarrett exposes a modern myth



In British aviation's early days a great many 'one-off' aeroplanes were built by or for amateurs with lofty ambitions. A large number of these failed to fly or flew poorly and vanished into the back-alleys of history, but some passed to new owners who were as optimistic of success as the original owners had been, but were just as ignorant of the essential qualities required to achieve powered flight.

One classic example of the 'hand-me-down' aeroplane has become entangled in some extraordinary claims in recent times. Owing to claimants' ignorance of early aviation's development, and their over-eagerness to establish this machine, and its new owner, in the forefront of British pioneer aviation, it has been given undue prominence and attained greater elevation than it ever attained in attempts to fly it.

The aircraft in question originated in 1909, when avid 24-year-old motorcyclist Malcolm Campbell (later Captain Sir Malcolm Campbell, holder of world land and water speed records) went to the old Egyptian Hall in London's Piccadilly and saw an early cinematograph film of Wilbur Wright flying his biplane. In his autobiography, *My Thirty Years of Speed* (Hutchinson, London, 1935) he recalled:

'The picture impressed me strongly, and I came to the conclusion that flying was the thing of the future. Its definitely adventurous side made a great appeal to me and, although I knew nothing at all about aviation, I decided that I would build an aeroplane and get into the air.'

'It was this decision which brought me to what I regard as the greatest disappointment of my life and, directly as a result of this, I entered the world of motor-racing.'

Campbell's story

Sir Malcolm's own account of what ensued now follows, interspersed with some additions and comments to clarify matters.

'... I began the wholehearted study of aviation. I secured what information I could from photographs of existing machines, then began building models and learning all that I could about the theory of flight. What I discovered only strengthened my feeling that aviation was the thing of the future.'

Above: Gordon Selfridge wasted no time in getting Louis Blériot's No XI monoplane on display in his new department store in Oxford Street, London, following the French builder/aviator's epoch-making cross-Channel flight in the early morning of Sunday 25 July 1909. It was on show, repaired, in Selfridge's at 9 a.m. the next morning, and over the next four days 120,000 people viewed it. They included the young Malcolm Campbell, who spent a whole day examining the already historic aeroplane, which was destined to be built under licence and copied around the world. This souvenir postcard was printed for Selfridge's by Raphael Tuck & Sons Ltd.

'At that time, Louis Blériot and Hubert Latham were awaiting favourable weather for an attempt to fly the Channel. [This was in the latter half of July 1909.] Latham tried first [on 19 July], but his Antoinette fell into the sea, bearing out the opinion of those who believed that the Channel would never be crossed. I felt certain that Blériot would do it, because Latham had got nearly halfway across during very indifferent weather, and I arranged insurance at Lloyd's [where Campbell was successfully employed] against the "risk". On July 25th, 1909, he [Blériot] crossed the Channel and landed at Dover, and my insurance plan brought in seven hundred and fifty pounds, which I afterwards employed to meet the cost of experimental work when I began to construct a 'plane for myself.'

'Up to this time, I had never actually seen an aeroplane, but my opportunity came when Blériot's machine was put on exhibition in an Oxford Street store [Selfridge's]. I spent an entire day there, making notes and studying the frail monoplane, then went away to absorb what I had discovered, and to build more models.'

'Shortly afterwards, I heard that an aviation meeting—the first of its kind—was to be held at Reims, and I decided to go there; it was due to open one Sunday, about a month after Blériot had flown the Channel. [La Grande Semaine d'Aviation de la Champagne was held at Reims, France, from Sunday August 22 to Sunday August 29, 1909.] I found a companion and we left Dover on the Saturday night in a French packet-boat. The weather was foggy, and we narrowly escaped a collision in mid-Channel, while the boat ran aground a mile from Calais harbour.'



Left: A view of the Blériot hangars at Reims, taken during the first Grande Semaine d'Aviation de la Champagne meeting attended by Campbell in August 1909. On the left and right are two Blériot XIs and in the centre is the new Blériot XII.

(via JM Collection)

The captain made frantic efforts to get the vessel afloat again, but the tide was receding and, when dawn came, it appeared as though my hopes of being at the opening of the meeting were doomed. I was leaning over the rail, looking gloomily down at the water, when I heard a shout from below; a man had waded out from the shore, coming over the sandbank on which the ship was stranded. The shallowness of the water showed that the steamer could not possibly be refloated for many hours, and I was wondering whether I should wade ashore when I saw a number of small boats coming out. They were willing to take people off, and we chanced jumping down into one of them, accompanied by other passengers who were as anxious as ourselves to get ashore.

'My companion and I arrived at Reims in time for the opening ceremony, both determined to obtain as close a view as possible of the machines. We discovered that an ex-president of the French Republic - Emile Loubet - was making a tour of inspection, and we slipped in amongst the dignitaries who were with him [Campbell could speak French]. No one questioned us, and we enjoyed a perfect view of everything that was to be seen, so that I returned to England with my knowledge of early aeronautical practice considerably enhanced.

'At that time, various prizes were being offered as an incentive to pioneer airmen. In flying the Channel, Blériot had won £1,000, and a similar sum was put up [by the Daily Mail newspaper] for a circular mile flight on an all-British machine. This prize formed an objective, and it was in an attempt to win it that I now began work.

'I had a friend who was as enthusiastic as myself, and we engaged a carpenter, then rented a barn on the edge of a strawberry field near Orpington [Kent]; I had moved from Sundridge Park and was living in Bromley. We began work, learning a good deal as we went along, and my interest was even greater than it had been when I had run my first motor-cycles. I thought of nothing but 'planes and flying. The moment that I could leave the City, I hurried home, ate hastily and made at once for the barn, working there until two or three o'clock in the morning.

'Gradually, the machine began to take shape, and I often remained all night, returning home sleepless, with just enough time to wash and catch a train for the City. That continued for months on end and, looking back on those days, I often wonder how I managed to stand the strain and why my health did not fail.

'Our only visitors during those nights in the barn were occasional policemen who came to warm themselves by our brazier, and to comment on the slow construction of the 'plane. I encouraged their visits, because I knew that we should need their help when we actually began to fly. In those days, would-be aviators roused as much hostility and ridicule amongst the public as the first motorists had done ten years earlier, and friendly police would be useful to keep the crowd in hand.

'The machine very soon absorbed the money I had made at Lloyd's over Blériot's flight, and I sold my car to secure further finance. Everything was very costly, although we worked as economically as possible, even making our own propellers. I have one of them still; it is made up from laminated wood, now much worn-looking and with its edges badly chipped, but it forms a souvenir which I should not care to lose.

'We fitted the machine with a twin-cylinder J.A.P. [J.A. Prestwich Co] engine from a motor-cycle. The undercarriage had two bicycle wheels, and a third took the place of a tail-skid. The wings were fitted with ailerons, and the 'plane actually demonstrated one or two other ideas which we worked out for ourselves and which eventually found a place in later aeronautical practice.

'News of what we were doing soon spread in the locality. People used to gather near the barn on the chance of seeing something, long before we were ready to attempt our first flight. Their interest was derisive, and this attitude became intensified as time went on. I began to see that, when we did push the 'plane out, we should need the police to maintain order.

'The strawberry field was dangerous as a potential flying ground. It sloped badly, the earth was full of furrows and a deep ditch lay right across the centre. When the machine was nearly complete we selected a stretch for the take-off and boarded over the ditch, filling in the furrows, and making the ground as smooth as possible. We decided upon a Sunday morning for our first effort, and I sent a message to the police to let them know our intentions, but the message went astray, because no constables appeared.

'We made everything ready, and only when we were pushing the 'plane clear of the barn did I discover that a big crowd had gathered. The people were gathered right across the field, blocking the line of the take-off. When we asked them to move, we found that a public footpath traversed the field, and they reminded us that they had as much right to be there as ourselves, and refused to go.

'The crowd was very obstinate, and would not make way even after I had explained that it would be dangerous to remain in the path of the machine. The only thing to do was to start up the engine and hope that they would run when they saw the 'plane coming towards them.

'It was my intention to try and take the 'plane off the ground without preliminary tests of any sort, although I had never flown before. I knew that when one pulled the control stick back, the machine would ascend, and that when one pushed the stick forward, the nose dipped. I knew, also, that it was necessary to gather flying speed before trying to take the 'plane into the air, and that lateral control was maintained by ailerons. But that was about the sum total of my knowledge.

'The whole venture was, I suppose, very foolhardy, yet other experimenters were in exactly the same situation. The only thing a man could do, if he wanted to fly, was to build a machine and learn how to control it when he was off the ground, if he had the luck to make the 'plane rise. In any case, my enthusiasm was such that I would have given everything I had - as so many others actually did - for one real flight in the machine which I had designed and helped to build.

'After various delays, I climbed aboard, the engine was started and, when the right moment had come, I waved to friends holding the wings. The 'plane was released and it began to run forward across the field, heading for the crowd, wobbling from side to side as it gathered speed. I was very thrilled at actually being under way, while I struggled to keep the machine as straight as possible, and I judged that I was travelling fast enough to get off the ground when I found myself almost up to the staring crowd.

'I pulled back the control stick at once. The 'plane lifted a few feet into the air, hesitated, then flopped back with a crash, pitching half on to its nose before it came to an even keel, with the propeller damaged and the engine dead. A wing was broken, a wheel was smashed from the undercarriage and my first effort to fly was a failure.

'There was nothing for it but to get the machine back to the barn, rebuild it and try again, but the damaged 'plane was too difficult for us to move alone, since it had to be lifted and balanced on the remaining landing wheel. I asked some of the crowd to help, but they were laughing and jeering and did not respond. They simply did not understand the

months of work which we had put into the machine, nor could they appreciate the hopes we had entertained only a few minutes before, otherwise the attitude of the spectators would have been very different.

'The only way to shift the 'plane seemed to be to start up the engine again, support the broken side of the undercarriage, and hope that the propeller would assist in dragging the craft across the rough ground. We warned the crowd that the damaged propeller was liable to snap off, and might harm some of them, but they still refused either to assist or go. In the end, we restarted the engine and, at once, the propeller came clean away with its shaft, whizzing high into the air and disappearing over a hedge.

'The evident danger startled the crowd, and most of them retreated. A few men, however, now relented and came to help us so that, somehow, we managed to get the 'plane back to the barn. We then discovered that, during our absence, thieves had rifled the clothes we had left hanging on the walls.

'That was a blow, following what had already occurred, because I needed all the money that I could get for material to reconstruct the machine. We recommenced work the same day, trying to forget our disappointment, and I was buoyed up by the fact that I had actually managed to make the craft rise from the ground. It would be an exaggeration to say that the 'plane had flown, but it had certainly gone into the air under its own impetus and power.

'We tried again and, in time, we achieved one or two quite respectable hops, then came the news that J.T.C. Moore-Brabazon had won the prize for which we had built our machine. He had accomplished a circular mile flight in an all-British machine, using a Short 'plane [at Leysdown on the Isle of Sheppey, Kent, on 30 October 1909] and he was the first "Englishman" to fly; actually, he was an Irishman. [The prize was to be awarded to a Briton, not an Englishman.]

'This came as a check to our efforts in the strawberry field, but there were other prizes for which we could try. The Daily Mail offered £10,000 for a flight from London to Manchester, and the Baron de Forest put up £4,000 for the longest flight from England to the Continent. It seemed possible that we could make an effort to win one of these, since our 'plane would need only a larger engine and a more efficient propeller. Henry Farman had shown that long flights could be achieved because, during the Reims meeting, he had covered a hundred and eighteen miles without alighting, remaining in the air for over three hours.

'We bought a bigger engine, and our efforts continued during 1910, while I secured propellers from the Continent, paying twenty-five pounds each for them. Again and again we took the machine out, but it never really flew. During the longer hops, I could feel the 'plane remaining in the air for a few moments under its own flying power, but these were not true flights.

'Paulhan flew from London to Manchester in April, 1910, but we worked on, because the Baron de Forest prize still remained. The summer passed and winter came again, then, on December 18th, 1910, T.O.M. Sopwith flew a Howard Wright biplane from Eastchurch in Kent to Thirlemont, on the Franco-Belgian frontier, a distance of a hundred and seventy-seven miles, winning the de Forest prize.

'He accomplished that just at the time when we had come to the end of our resources. I had spent over eight hundred pounds, and had no more money available, but, although the prizes for which we had hoped to try had been won, still others were put up. Ten thousand pounds was now offered for a flight around Britain and this lured us on; it was not, however, the money which we wanted so much as the opportunity that it would provide for more adequate experiment and equipment.

'Since we could not continue without additional funds, I tried to raise them, but was unsuccessful. We decided to sell the machine, hoping that it might bring enough to enable us to make a fresh start, and I did discover a man who offered to buy, but at the last moment the deal fell through.

'While I was still endeavouring to find a purchaser, I was approached by Friswell's, a well-known firm of motor-car dealers. They suggested putting the 'plane up for auction with cars which they had for sale. They argued that it would be the first time in history that an aeroplane had been auctioned, and that this was certain to attract a great deal of attention.

'I agreed, and their forecast proved correct. The saleroom was crowded, largely by people who had never had such a close view of an

aeroplane. The bidding started at fifty pounds and rose in the most gratifying way until it reached two hundred and seventy pounds, then came a pause, and I decided to help matters on.

' "And ten!" I called.

'The man who had been making the price deliberated, but topped my figure with another ten pounds.

' "And ten!" I said once more.

'This brought the price up to three hundred pounds, and it also brought another long pause.

'The auctioneer tried to conjure a further bid. There was no response. The hammer fell and, to my dismay, I found that I had bought my own machine. I at once went over to the man against whom I had been bidding and offered to sell the 'plane to him, but his enthusiasm had cooled.

' "You bought it," he said, "and you can keep it."

'His actual words were a little stronger than that, and his manner was altogether unfriendly, while he seemed relieved to know that he had not finally committed himself to the purchase. I realised that I had acted foolishly, and consulted the auctioneer. He indicated that I owed him twenty-two pounds and ten shillings, by way of commission, and I suggested putting the machine up for sale again the following week.

'I judged it better, this time, to stay away from the auction, and I did not go near Friswell's until after the sale. I learned then that the 'plane had found a purchaser, and that the price was exactly twenty-two pounds ten shillings. As this sum balanced the commission that I had incurred at the first auction, I was virtually giving the machine away. It was a very unhappy moment for me, but the 'plane was sold and, since I had no finance for further experiments, my attempts to fly had come to an end.

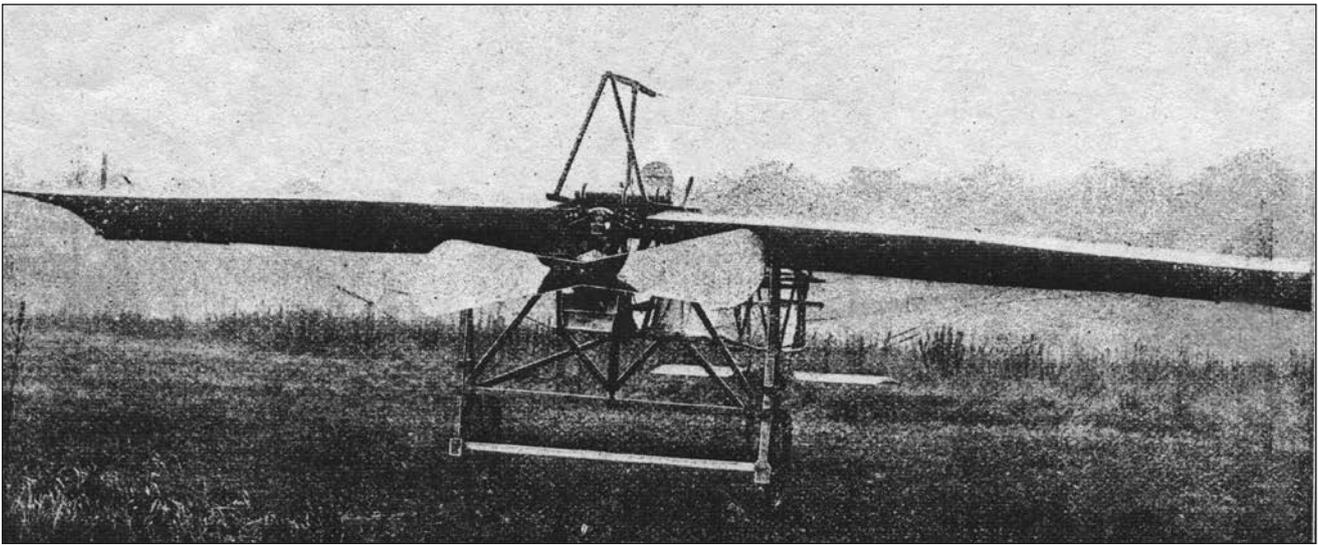
'I was depressed for a long time afterwards and, appreciating that I needed something which would help me to forget my interest in aviation, I turned to cars and to motor racing. I can see, now, that it was those two bids in that auction room which changed the whole course of my life. If I had not made them, I should probably have gone on trying to fly. I might have been one of the pioneers of aviation or, what is more than likely, I might have crashed finally near the strawberry field at Orpington.'

The foregoing account, by Campbell himself, differs in some respects and is more sober than the one in J. Wentworth Day's slightly earlier biography, *Speed: The Authentic Life of Sir Malcolm Campbell* (Hutchinson, London, 1932). One wonders why the same publisher published the subject's own account so soon after Day's book; perhaps Campbell was unhappy with Day's over-dramatised version. Whatever the case, Campbell provides a very honest and graphic impression of the trials and tribulations of enthusiastic aviation pioneers in the dawn of flight. Much later accounts by local historians have further confused the story.

It seems that Friswell's might have been misleading Campbell if they did indeed tell him that his aeroplane would be the first to be auctioned, as, according to a report on page 236 of the December 1909 issue of the magazine *Aerocraft* (Vol III No 9): *'The first aeroplane to be sold by public auction in this country was disposed of at Messrs. Friswell's sale rooms on November 4th. It comprised a chassis on general Bleriot lines and skeleton wings on theoretically impossible lines, the whole designed by Captain Lovelace. The machine was bought by Mr R.S. Grigg, of The Car Mart, for £52.'* This had actually begun life as a large triplane being built for George Friswell by the J.A.P. Avroplane Co, a short-lived partnership between A.V. Roe and Prestwich. After a disagreement with the builders, the owner had taken the uncompleted machine away to have it converted into a Blériot-type monoplane by Lovelace, who for a brief period was in Friswell's own 'Aero Department'. However, Campbell's aeroplane might have been the first not owned by Friswell's to be sold at auction by the company.

Contemporary reports

The earliest known published report concerning Campbell's aeroplane appeared in the magazine *Motor Cycling*. A front view of the monoplane, with a two-cylinder-vee J.A.P. installed, was published on page 149 of the 20 December 1909 issue, captioned: *'AN ALL-BRITISH MONOPLANE. Built at Orpington for Mr M. Campbell (Motor Cycling Club) and will be fitted with the eight-cylinder air-cooled engine, illustrated on the next page.'* Also on that page it was stated:



'At the recent dinner of the Motor Cycling Club, Mr A. Candler ventured to prophesy that aeroplanes would take part in the annual London to Edinburgh event, and suggested that only those who had gained a gold medal on a motor-bicycle should be eligible to compete. A member of the club, Mr Campbell, has, we believe, satisfied the first requirement, and is now busily engaged in perfecting the all-British monoplane depicted below, and we hope he may achieve success earlier than Mr Candler believes is yet possible. The two-cylinder engine shown will be replaced by an eight-cylinder very shortly.'

A picture of the 8-cylinder vee J.A.P. [35 h.p.] appeared on page 150.

Campbell's aircraft received scant attention in the aeronautical press of the time. On page 38 of its January/February 1910 issue (Vol IV no 1) *Aircraft* reported: 'A Blériot type monoplane has been built at Orpington, Kent, by Mr C.F. McGeorge to the order of Mr M. Campbell, of Bromley. The wings have a span of 39ft. A 50 h.p. J.A.P. engine is to be fitted.' Presumably Mr McGeorge was the carpenter engaged by Campbell and his friend. A minor setback occurred shortly thereafter, as recounted on page 153 of *The Aero* for March 1, 1910:

'Mr M. Campbell, whose monoplane Briton is reported to have made two short flights at the Orpington trial grounds, had the misfortune to have his garage damaged by fire at Bromley last week. He was able to get his Daimler chassis out of the way without damage, and an aeroplane engine, and parts in the vicinity also escaped any damage. Mr Campbell is fitting a new and more powerful engine into his monoplane which should render it capable of more sustained flights, though the limits of the ground do not permit of any long run.'

This is the first mention of the name Campbell had bestowed upon his aeroplane, which he had patriotically dubbed the *Briton*.

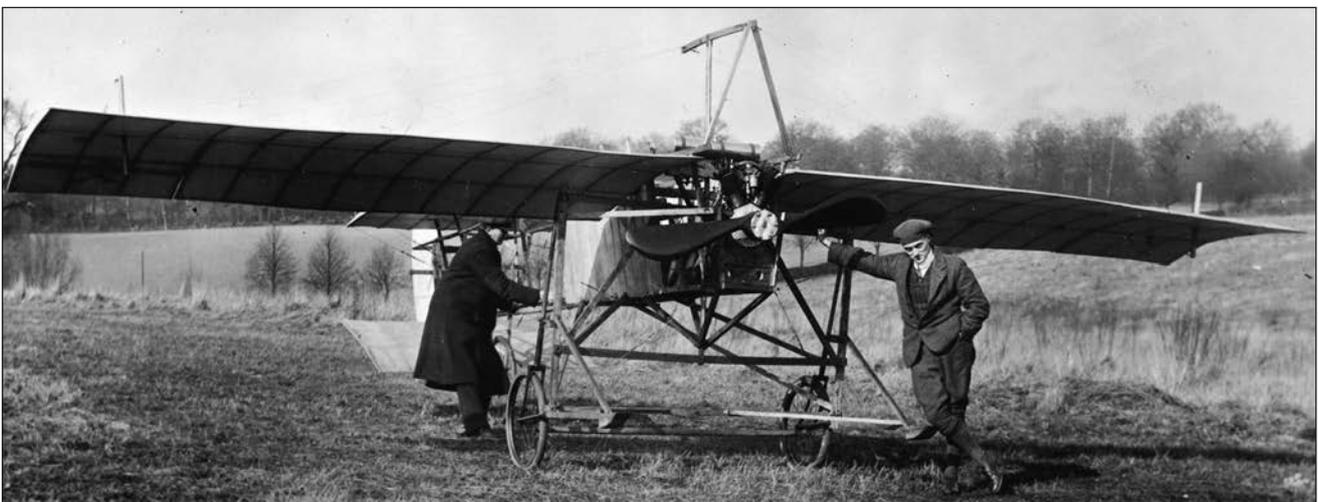
Above: Malcolm Campbell's crude attempt to copy the Blériot XI resulted in the monoplane seen here on page 149 of the 20 December 1909 issue of the magazine *Motor Cycling*. This is the earliest known published item about the aircraft.

In *Motor Cycling* for 14 March 1910, on page 462, there appeared a close-up shot of Campbell posing at the nose of his aeroplane, again with the two-cylinder engine, and it was reported:

'The photograph on this page shows Mr Campbell and his monoplane, on which he has made several short flights at Orpington, Kent, with a 10-12 h.p. two-cylinder engine, and 6ft Weiss propeller. Complete with pilot, the machine weighs under 400lb, and is able to lift at comparatively low speeds. Much useful experience has been gained during the practice trials at Orpington, the machine having been out in varying winds. He tells us that the next machine, the joint design of Mr G.S. Hill and himself, will be on somewhat different lines, and he is hopeful that it will be capable of sustained flights.'

Whether the bigger engine was actually installed is uncertain, but it would have increased the aircraft's overall weight substantially. The original 10 h.p. J.A.P. was evidently in situ when the machine was sold.

As there is no further record of the mooted second machine, it has to be assumed that Campbell's pecuniary difficulties precluded its construction. Campbell seems to have forgotten all about it by the time he wrote his autobiography. Photographs of the Campbell *Briton* show that it was a rather angular monoplane displaying evident Blériot inspiration and derivation, as freely acknowledged by Campbell. However, it was of much cruder construction than the French original, having a really rickety-looking wide-track undercarriage of principally wooden construction. Likewise, the pylons carrying the wing bracing wires were



Above: A rather over-nonchalant Malcolm Campbell, his cap optimistically reversed in true pioneer-aviator fashion, leans on the undercarriage supports of his newly-completed monoplane at Orpington, Kent, in late 1909. The somewhat primitive structure, with its rickety wide-track, bicycle-wheeled reversed-tricycle undercarriage and wooden pylons to carry the wing bracing wires, looks distinctly fragile.

also of wood, the upper one looking distinctly inadequate. The wings had a very thin aerofoil section, widely-spaced ribs and sharp leading edges; not ideal for a low powered aeroplane.

A change of ownership

Exactly what happened to the Campbell *Briton* after its sale by auction is not clear, but it very soon ended up in Shropshire, in the possession of a Mr Ernest Maund. Whether Maund bought it at the auction or acquired it subsequently is unknown, but a photograph of Maund in the aeroplane leaves no doubt that it is Campbell's old machine, as the general structure and the very distinctive undercarriage struts are unique and unmistakable.

Ernest Maund was a relation of A. Maund, proprietor of A. Maund and Co, with its 'Central Cycle & Motor Depot' in Market Street, Craven Arms, Shropshire. A surviving receipt or bill slip dated 31 December 1910 describes the company as 'Agents for all the Best Makes of Cars, Motor Cycles and Cycles', and also adds 'Aeroplanes Supplied and Repaired'. As well as repairing vehicles and charging accumulators, cars and motorcycles were hired out, and the business also stocked 'mailcarts, bassinettes, phonographs, records and all accessories'.

At the time it was not at all unusual for companies involved in the manufacture, sale or repair of road transport vehicles to profess expertise in aviation, as early aeroplanes shared many components in common with cars, motorcycles and bicycles. Indeed, Campbell's aeroplane had a motorcycle engine and bicycle wheels, though experience would soon show that engines designed for earthbound vehicles were usually too heavy and had power-to-weight ratios that were too low for aircraft, and that bicycle wheels were too insubstantial to take the loads imposed during take-offs and landings.

Another extant item of ephemera is a one-shilling admission ticket to the 'Craven Arms Aero Club', entitling the holder to 'admission to the ground on the day of flight, which will be advertised in local papers'. This suggests that Maund optimistically hoped to reap some financial reward from his recent acquisition. In a letter to aviation historian Michael H. Goodall, dated 24 August 1987 (now in the author's possession), Mr C.W. Summerfield, then the proprietor of Summerfield & Co, selling coal and coke and also trading as a builders' merchant, wrote:

'... as I was born in 1900 I remember Mr Maund in business as a Cycle Dealer and Repairer in Market Street in Craven Arms and he built the monoplane to which you refer in about 1910 in the building at the back of these premises. I think I remember his business failed soon after this and he moved to Shifnal in Shropshire w[h]ere he started business again as a Cycle Repairer and I know he was there for many years.'

Of course, although Mr Summerfield says that Maund 'built' the aeroplane, he probably simply assembled it after it had been delivered by road.

The myth is born

The foregoing is all quite sensible and logical. However, in 1990 things started to go awry. That year a book appeared, *Walsall Aviation: A Short History of Aviation in the Walsall Area*, by Edwin Shipley and W.T. Jeffries (privately published). On page 5 the authors reproduced an undated article from the *Walsall Observer*, published at the time the film *Those Magnificent Men in Their Flying Machines* was released in the locale (1965). In their accompanying text the authors stated:

'The first recorded aviation event in the Walsall area is almost unknown, neither the Historical Section [sic; Group] of the Royal Aeronautical Society nor the RAF Museum had ever heard about it when I made enquiries at both. The pioneer was a man named Ernest Maund who had a factory in Wisemore, Walsall and built an aircraft there to his own design. The aircraft was then transported out to a field near Stokesay, Craven Arms, Shropshire where he attempted to fly it. It is reported that he did manage to leave the ground but details are not available and as this was in 1904 he must have been one of the first Englishmen to fly and it is surprising that he did not get more publicity. However it seems fairly certain that the event did take place as his son, now 75, is still alive, living in Torquay and has given some details to the Walsall Observer. His grandson is also

still living in the Walsall area and has backed up the family claim though, of course, he did not see the event himself. Maund's firm developed from bicycles to the motor industry. He ran a large garage still on the Wisemore site, operated coaches and taxis from the first world war onwards. The Observer printed a rather poor reproduction of a photograph of the aircraft with Maund in the cockpit and two ladies, very much in the dress of the time, in front.' [The ladies are identified as his wife, on the right, and a cousin, and a male cousin is said to be in the fuselage with Ernest. See photo below..]

The newspaper article reported that Ernest's eldest son, Mr Frederick Ernest Maund, remembered the aeroplane 'built at Craven Arms, Shropshire' (which disagrees with the authors' account), and sometimes still visited the field at Stokesay where his father 'tried to take off in his machine'. 'This week's picture', the newspaper added, 'shows the aeroplane that the Walsall mechanic proudly displayed at Craven Arms in 1904.'

The report stated that '... childhood memories have been brought back to a number of Walsall garage proprietors, all of them the sons of the late Mr E. Maund, Shropshire's first motor-cyclist and inventor of what was probably the first flying machine in Britain'. The report continues:

'Mr H.S. Maund, of Day Street Garage, Walsall, said that he still remembers his father speaking of the flying machine he built in an attempt to win the £1,000 prize offered to the first man to fly a mile.

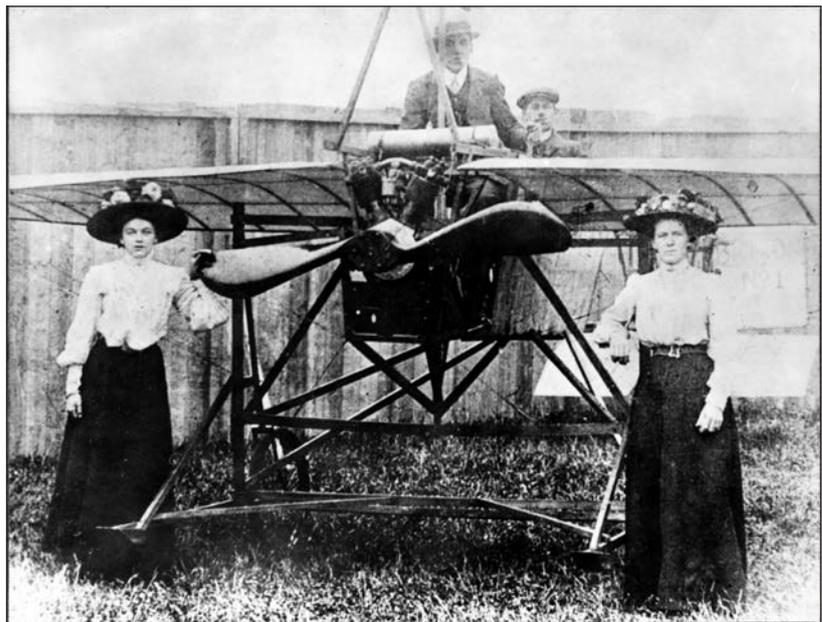
'Built of wood, with a highly polished propeller and an old twin motor-cycle engine developing about 10 h.p., the machine was completed in three months during 1904.

'Mr Maund Snr. put it on display to the public at Craven Arms, Shropshire, where he kept a bicycle shop, advertising himself as "Briton No 1."

'He was almost certainly "Briton No 1" in the construction field, but never succeeded in flying the required distance. After a good take-off, the machine rose to about housetop height, Mr Maund recalls, then fell to the ground.'

The alleged claim to be 'Briton No 1' was not made by Maund himself, but was based upon a poster visible in the background, which simply has that wording. It might well have been included with the aeroplane when it was auctioned. Nevertheless, the newspaper asserts that this poster 'proclaims Mr Maund to be "Briton No 1" in the field of aircraft construction'. This is quite an amazing leap of assumption, and a thorough check of the relevant literature would have shown that it was the name Campbell gave his aeroplane, not a title Maund bestowed upon himself.

One particularly significant inaccuracy in this irresponsible account, which unquestioningly accepts distant and unreliable family memories



Above: *The Campbell Briton after passing into the hands of Ernest Maund, who is in the pilot's seat in this picture. Even though this is a close-up view, the unique and distinct features of Campbell's aeroplane are unmistakable. The other gentleman and the two ladies have been differently identified by various people over recent years. Just visible on the right is the poster proclaiming "Briton No.1".*

as fact, is the reference to the '£1,000 prize offered to the first man to fly a mile'. The *Daily Mail* newspaper did not offer its £1,000 prize for the first one-mile circular flight by a Briton in an all-British aeroplane until April 1909. Moreover, the notion that the aircraft was built by Maund as early as 1904 is patently ridiculous to anyone with some knowledge of early aeroplane development, as its Blériot-based features are too strong to be ignored.

One has to wonder whether the totally erroneous early dating of the machine by Ernest or his son, and the claim that Ernest Maund built it, were simply due to faulty memory on someone's part, or whether, late in his life, Ernest sought to gain some unmerited belated kudos.

Further claims

Then, in 1998, another book appeared. *Wings Across the Border*, by Derrick Pratt and Mike Grant (Bridge Books, Wrexham), was subtitled 'A History of Aviation in North East Wales and the Northern Marches'. On page 20 of Volume 1 the authors devote a fair bit of space to Maund and attempt to elevate this jobbing mechanic to the status of a significant aviation pioneer. Evidently leaning heavily on the contents of *Walsall Aviation* (though that book is conspicuously absent from the bibliography of Vol 1), they describe him as a '... legitimate Shropshire claimant to be "Briton No 1" in the aviation world.' They reiterate the erroneous statement that, following the Wright brothers' first powered, sustained and controlled flights in December 1903, several British aviation pioneers were seeking to claim the *Daily Mail* £1,000 prize for a one-mile flight, even though, as previously mentioned, this prize was not announced until 1909. They say that Maund's contribution to aviation has been 'inexplicably overlooked', that he was a 'mechanical genius', and that he was 'probably the builder of the first flying-machine in Britain'. The rest of their text merely repeats the content of the earlier book, and they conclude that 'Ernest Maund must therefore be numbered among the earliest Englishmen, if not actually the first, to fly. The lack of contemporary publicity and his subsequent lapse into relative obscurity is [sic] all the more difficult to explain.'

The story was then taken up by the *Shropshire Star* newspaper, the provincial press always being keen to spread the word about hitherto unsung local heroes. In its issue dated 19 December 2003, under the headline 'Genius was a real high-flyer', the *Star* carried a story based on an interview with Mike Grant, who confidently (and wrongly) asserts: "Without a doubt, he was the first British national to fly", and then suddenly comes up with a date: July 14, 1904, though the source or veracity of this very specific piece of information is not revealed. 'He proceeded to do all his experiments with flying,' says Grant, 'until on July 14, 1904, on one run he achieved a height of 40ft and a length of 400ft, before fuel starvation brought him to the ground. The problems with vibration with the machine were never overcome. He made many more attempts before giving up due to lack of a light engine and lack of power.' It is extremely hard to believe that the machine carried only enough fuel for a 400ft flight. That, like the rest of the story, sounds like utter nonsense; pure embroidery and embellishment. It is far more likely that, after haring across a field with the inadequate 10 h.p. motor straining its utmost, Maund pulled back hard on the stick and the aircraft jumped off the ground at an acute angle and simply stalled and fell back to earth.

The reader is then introduced to Dave Evans of Longmeadow End, who 'has a keen interest in the area's history'. He 'has no direct information on that first flight', but he has the picture of Maund 'with twin sisters either side of his monoplane' (so the identities of the relations have changed), 'taken, he says, at the back of Market Street in Craven Arms in 1908'. Things are now becoming even more confused.

The *Shropshire Star* gave Maund another puff of publicity in its issue of 27 March, 2004, reproducing a better image of the same picture but captioning it 'Ernest Maund at the controls of his aeroplane in 1907', and proclaiming him '... the first person to fly an aircraft in the county'. This time the picture was provided by Maund's granddaughter, Vikki Wilding, and her print had the date 1907 written on the back, though who wrote it, and when they did so in the more than 90 years that had elapsed since it was taken, is unknown. We are now told that 'the man behind him might be one of his relatives, but this is uncertain'. On the left, according to Mrs Wilding, 'is one of Ernie's daughters, believed to be Gertie Maund, and on the right is his wife Alice'. Mrs Wilding also recalled that her parents were given complimentary tickets to a showing of the *Magnificent Men* film in Walsall, and that they received a standing ovation when it was announced that the son of the first man to fly an aeroplane in the Midlands was in the audience.

The claims disputed

In April 2004 Bill Grigg, editor of the Shuttleworth Veteran Aeroplane Society's magazine *Prop-Swing*, wrote to Toby Neal, who had been responsible for the last item in the *Star*, seeking clarification of the dates and claims made on Maund's behalf. Grigg was unaware of the Campbell connection, but had sufficient knowledge of early aviation to know that the monoplane displayed distinct 1909 Blériot influence, and could not have originated as early as was being claimed. In his reply to Bill Grigg, dated 29 April 2004, Toby Neal could only say that he had not personally come across any contemporary reports in the newspaper's archives. He wrote:

'For example, aviation historian Mike Grant gives the date very precisely as July 14, 1904, and his book gives a detailed account of the alleged flight. I don't know his source for this. I have found nothing about it in the Wellington Journal or Shrewsbury Chronicle. Unfortunately I don't have access to the Ludlow Advertiser, which would have been the newspaper most likely to have reported Mr Maund's exploits, as he came from nearby Craven Arms.'

'I live in hope of coming across something. My own feeling is like yours, that 1904 would be an extremely early date for a British flight. I don't dismiss the possibility however that he flew in 1907 or 1908 - the former is the date on the back of the photo of Ernie Maund and his plane which is in the family's possession. He did after all bill himself as "Britain's No 1" aviator.' [As we have seen, this was not the case.]

Later in the same letter, Mr Neal continues:

'... I don't think we should assume Ernie Maund's alleged early flights are "mythical". There is too much anecdotal evidence from disparate sources. In fact I would go so far as to suggest that the hard evidence that does exist [actually there is none] does certainly point to him being an early aviator, and what is at issue is not whether he flew, but when he flew. [There is actually no proof that he flew at all; only belated hearsay.] We know he built a plane [He did not; he assembled a secondhand one that was based on a 1909 French design] ... and we know that in 1910 he or a relative had a business in Craven Arms which "supplied and repaired" aircraft [it merely professed to be capable of doing so; there is no evidence that such business was carried out]. I can't imagine they supplied aircraft which didn't fly, so I think we can take it as read that by this time he had built at least one working flying machine'

Fired up and ready to go

MEET Shropshire's magnificent man and his flying machine - Ernest Maund, the first person to fly an aircraft in the county.

We published a poor quality newspaper cutting of this picture a while ago and told the story of Mr Maund, who made his historic flight near Craven Arms. That prompted his granddaughter Vikki Wilding, of Selattyn, to get in touch.

She has the framed, original copy of the same photo, which was taken, according to the date on the back of the print, in 1907.

which advertised "aeroplanes supplied and repaired".

Mrs Wilding's mother Gwen is the last surviving daughter-in-law of Ernie, having been married to the late Stanley Maund.

Tickets

In all, Ernie had 19 children. He hailed from Walsall, and had a garage in Day Street, Walsall, which has only been demolished in the past few months.

"When they brought out the film *Those Magnificent Men In Their Flying Machines*, the manager of the Gaumont cinema, I think it was called, in Walsall, rang my parents and they were offered complimentary tickets to see it. Mother was given a bouquet of flowers. As the film was starting they stopped and made an announcement that they had the son of the first man to fly a plane - they actually said in the Midlands - in the audience.

"They had a standing ovation."

BRANCH IN STATION ROAD.

CENTRAL CYCLE & MOTOR DEPOT.

MARKET STREET.

Craven Arms, Dec 31st 1910

112

Dr. 10

A. Maund & Co.,

Agents for all the Best Makes of

Cars, Motor Cycles and Cycles.

Aeroplanes Supplied and Repaired.

All kinds of Repairs Executed. Accumulators Charged.

MOTOR CARS and MOTOR CYCLES FOR HIRE.

Mallocks, Bassinettes, Phonographs, Records and all Accessories

In Stock.

Above: One of the stories from the Shropshire Star, in this case the edition for Saturday 27 March 2004. The delivery note or receipt at the foot of the story is dated 31 December 1910. (Reproduced by kind permission of the editor, Shropshire Star)

It would be wrong to make any such assumption. Many local garage mechanics all over the UK would undertake such repairs at that time, and, if they did sell aeroplanes, they usually acted as agents for dedicated aircraft manufacturers.

Toby Neal then says: '... I don't agree with the premise that lack of hard evidence that it happened should be taken as hard evidence that it didn't.' The argument that one should assume that some something might well have happened because we cannot prove it did not, is both devious and fallacious. It has been used by others proclaiming the pre-eminence of the pioneers they champion. In truth, the onus is on those promoting Maund's case to provide conclusive evidence. Bearing in mind all the evidence to the contrary, they will have their work cut out, especially as they are probably searching up to six or seven years earlier than the actual events.

Nevertheless, Bill Griggs's protestations were aired in the *Star* shortly afterwards, in an article in the 5 May 2004 issue headlined: 'Aviation first - or a flight of fancy?'. However, Toby Neal saved the last paragraph for himself, and for a partial plea on behalf of his county: 'Now what would clinch the argument in Shropshire's favour would be if somebody had a dated contemporary account — perhaps a newspaper report, diary entry or a letter — describing Maund's flight.' It would have been far more preferable for the plea to be free from provincial bias, and to be made on behalf of the truth.

In the 10 October 2006 issue of the *Shropshire Star* Toby Neal again took up the case, this time under the headline: 'Deserving of a place in history: Pioneer Ernest made his mark with a flying machine'. 'It is extraordinary,' he wrote, 'how a great Shropshire pioneer, Ernest Maund, has eluded a place in the history books.' So now Maund is elevated to the undeserved status of a 'great pioneer', even though nothing has been proved.

Neal continues: 'There is evidence from his family and through anecdote which points strongly to him having made an aircraft flight near Craven Arms in a machine he built himself some time in 1907.' It is said that his achievements 'appear to have been overlooked or ignored - so far no contemporary account of his exploits has turned up in local newspapers'. 'And, as he [allegedly] crashed after a short hop into the air,' adds Neal, 'his flight probably wouldn't have counted anyway, as it could hardly be counted as a successful, sustained, controlled flight.' Surely, if that was the case, the 'great pioneer' accolade would be totally unjustified?

Neal then announces that Gay Baldwin, Maund's great-grandson, 'has come up with more information, new photos and artefacts which shine some extra light on exactly what went on in those south Shropshire flying fields almost 100 years ago'. He reproduces the undated one-shilling admission ticket mentioned earlier. Guess what? Someone has written the date 1907 on the back of this as well, and yet again there is no way of knowing when this was done, or by whom. 'The family thinks Maund must have given flying exhibitions,' says Neal. All the ticket offers is 'admission to the ground on the day of the flight'; nothing more. It does not prove that any flight, or attempted flight, actually took place.

Incidentally, a shilling in 1910 was the equivalent of £2.85 in today's money, so Mr Maund was doing his best either to milk the locals or deter them from nosing in on his anticipated trials. (Remember the troubles Campbell experienced with the local populace.) It is doubtful whether many could afford or would be prepared to gamble a shilling on a speculation, although they might have paid out on the day if it really looked as though something exciting might happen. At that time a copy of the weekly magazine *Flight*, launched in January 1909, cost a penny.

However, Mr Neal says: 'With such publicity, there would surely have been a big crowd,' and adds that 'an air display in 1907 would have been a sensation'. Quite so, especially as there was not a single aeroplane flying in Britain at that time. So where are the reports of the event? Perhaps something did happen, but it would have happened in very late 1910 or, more probably, 1911, after Maund had acquired and assembled his secondhand aeroplane. That is the period in which local researchers should be searching.

Gay's grandfather, who died in 1983, left a page of reminiscences about his father, Ernest. He writes, in part: 'He built his aeroplane and completed it in January 1907. [January 1911 would fit well with known evidence.] It had a 6/8 [?] air cooled engine. He took it to a field in Stokesay, it went to about house top height and crashed. Engine was underpowered, could not lift the weight.' Again, this is secondary, not primary, evidence, based on distant memories and therefore unreliable.

Then, in 2006, further doubt was raised. Grahame Neale of Droitwich saw one of the *Star's* items about Maund, and a picture 'rang a bell'. Neale referred to a book entitled *The Racing Campbells* (1960), wherein he found a shot of Campbell with his *Briton*, and realised that the aircraft was identical with Maund's. He wrote to the *Star*, and Toby Neal's resulting story in the *Star's* November 21, 2006, issue was headlined 'Mystery over county air pioneer deepens'. Although Neale's revelations were described, there was an obstinate refusal to concede defeat, and the article concluded:

'Although Mr Neale believes the 1910 picture disproves Maund's claims [Ernest Maund himself had never made any claims, of course, though some have tried to make it appear that he had done so], there is an alternative explanation, as by 1910 the Maunds were advertising themselves as "suppliers and repairers of aeroplanes".'

'Could it be that the "Campbell Flyer" was actually built in Craven Arms?'

This clumsy and somewhat predictable attempt to reverse the story reveals a distinct reluctance to face up to the truth. The period evidence proving that Campbell was directly involved in its construction, and his own later account of how it came into being, show that this last-ditch effort to rescue the 'Maund myth' is a futile attempt to clutch at a straw. Moreover, why on earth would Campbell employ a virtually unknown garage in Shropshire to build him an aeroplane when there were plenty of competent builders in his own county, Kent?

An innocent victim

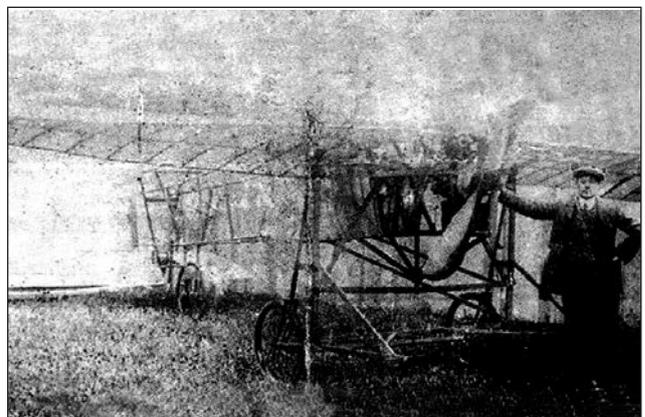
Ernest Maund has become the victim of inadequate research by provincial and parochial 'historians' who have failed to see their subject in the context of aviation's general development. This highlights the danger of becoming preoccupied with finding merit in minutiae, and trying to make 'evidence' fit a preconceived conviction. Moreover, local researchers seem to have been happy to accept, without question, the vague, unreliable, unsubstantiated and belated testimonies of people who, in most cases, had not even witnessed the events concerned. Descendants are understandably delighted to see an ancestor being elevated to the heights of fame. However, this can become painful for them if they are misled into believing what they want to believe, and it then turns out to be demonstrably wrong, as in this case.

Disastrously, Ernest Maund has now been included amid a gamut of illustrious and truly deserving names in a list of British pioneer flyers on the web site of the Early Birds of Aviation Inc., an American institution. His inclusion in this list is utterly unjustified, as would be that of Campbell and a host of other amateur aspiring airmen who made no contribution whatsoever to the cause of aviation. It must be removed, or the validity of the whole listing will be thrown into question.

Acknowledgements

I would like to thank Mike Goodall, Kenneth Goodwin, Bill Grigg, N.W. (Dick) Lewis, Toby Neal and Julian Temple for their help during the preparation of this article, and Keith Harrison, editor of the *Shropshire Star*, for permission to reproduce stories as they appeared in his newspaper.

Philip Jarrett, 2012



Above: Extracted from the *Shropshire Star* article, of Tuesday 10th October 2006, (see next page) was another view of the machine which was provocatively captioned: '... Ernest Maund with his aeroplane in 1907. Was he Britain's first flyer?'. (Reproduced by kind permission of the editor, *Shropshire Star*)

FEATURES

Deserving of a place in history

Pioneer Ernest made his mark with a flying machine

It is extraordinary how a great Shropshire pioneer, Ernest Maund, has eluded a place in the history books.

There is evidence from his family and through anecdote which points strongly to him having made an aircraft flight near Craven Arms in a machine he built himself some time in 1907.

This would have been a year earlier than the officially recognised first aircraft flight in Britain, which was by Samuel Cody in October 1908.

Two things seem to have conspired against Maund. Like the Wright brothers themselves, he started out as a cycle



TOBY NEAL
looks at a county man's role in early aviation

manufacturer, but also like them his achievements appear to have been either overlooked or ignored – so far no contemporary account of his exploits

has turned up in local newspapers.

And, as he crashed after a short hop into the air, his flight probably wouldn't have counted anyway, as it could hardly be counted as a successful, sustained, controlled flight.

Now Gay Baldwin, Maund's great-grandson, has come up with more information, new photos and artifacts which shine some extra light on exactly what went on in those south Shropshire flying fields almost 100 years ago.

One is a ticket, with the date 1907 on the back. "Craven Arms Aero Club," it reads. "This ticket entitles the holder to admission to the ground on the day of flight, which will be advertised in local paper. Price 1/-. Transferable if required."

The family thinks Maund must have given flying exhibitions.

With such publicity, there would surely have been a big crowd. Four years later the spectacle of an aircraft merely landing near Madeley had drawn thousands of spectators, so an air display in 1907 would have been a sensation.

Reminiscences

Gay, who is a journalist on the Isle of Wight, said his (Gay's) grandfather, Fred Maund, who died in 1983, left a page of reminiscences about his father Ernest, which he still has.

Fred's memories read: "Record of my father Samuel Ernest Maund. At Craven Arms he had two cycle shops, one at Market Street and one at Station Road. He built his aeroplane and completed it in January 1907. It had a 6/8 air cooled engine. He took it to a field at Stokesay, it went to about house top height and crashed. Engine was underpowered, could not lift the weight."

Fred goes on to paint a full picture of Ernest's inventive ways: "He had the first motor cycle in Shropshire, reg number AW1, then had one with a wicker chair in front for my mother to sit in. Another one



A faded family photo showing Ernest Maund with his aeroplane in 1907. Was he Britain's first flyer?

with the rubber belt taken off a cogged wheel put on the main shaft and a drive to the front of the bike, where a propeller was mounted and was pulled by same.

"He also invented the first dipping lamp at his garage at Wismore, Walsall, and gave a display in Hyde Park, London, to the Transport Ministry. After this, Lucas had a prototype for some time, then returned same. Not too long afterwards Lucas brought out a dipping reflector! Ernest did have a patent but didn't sell many because Lucas quickly brought out their version."

Gay comments: "Ernest sounds a fascinating character, and I'm only sorry I didn't appreciate this in time to ask my grandfather more before he died."

Fred, who was Ernest's

"Ernest sounds a fascinating character, and I'm only sorry I didn't appreciate this in time to ask my grandfather more before he died."

eldest son, also had a letter from a Heber Roberts of Heartsease, Newton, Craven Arms, dating from November 15, 1979. In it Mr Roberts gave some information about a photograph, which carries the date 1907, showing Ernest and members of his family with his aircraft.

Farmer

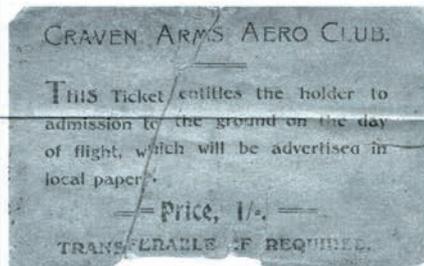
"I am a local retired farmer born 1907 and own the area of land (32 acres) between the A49 and the River Onny from Stokesay Hotel down to the river bridge to Ludlow. It may interest you to know that it was probably on my land that the photograph was taken," he said. In between supporting her

husband's ambitions, Ernest's wife Alice was able to find time for as many as 19 children. She died in 1956 at the age of 75.

"She apparently babysat for me when I was a baby and living in Walsall," recalls Gay.

"Ernest continued fathering children until the late 1920s. Family history tells that he lost much of his money in a court case. Until then the family must have been quite well off as my grandfather remembers having a governess.

"He had a garage, E Maund and Sons Ltd, Motor Engineers, at Day Street Garage, Walsall, which my grandfather Fred, and his brother Harry, ran in partnership after Ernest's death."



This ticket for "Craven Arms Aero Club" has the date 1907 on the back and Maund's family think he must have given flying exhibitions



Ernest Maund, Shropshire's forgotten aviation pioneer, in later life



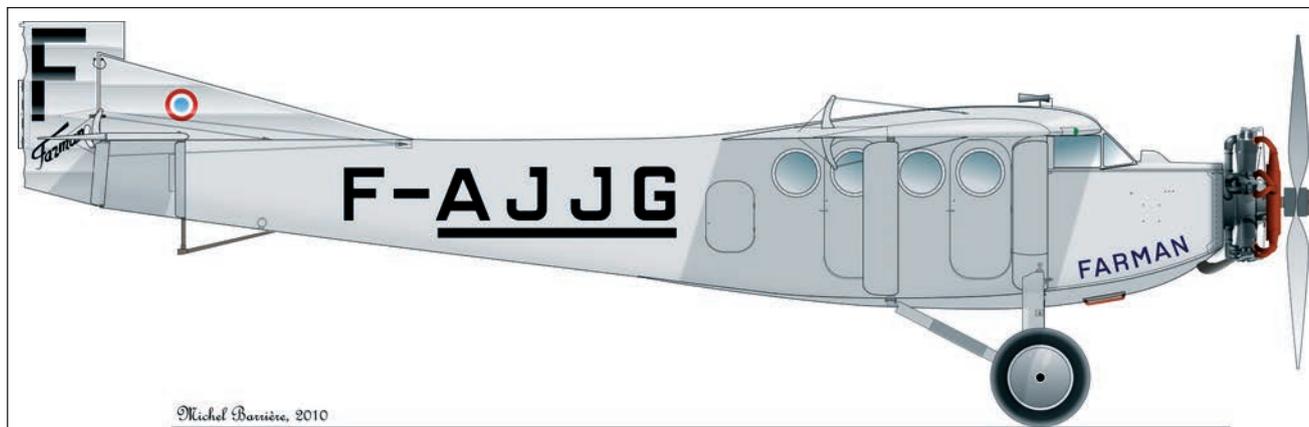
This is thought to be one of Maund's cycle shops in Craven Arms. Ernest is thought to be the man barely visible on the extreme left with his eight-year-old son Fred by him. The photograph was made into a postcard, which was franked in Church Street on February 22, 1909, and written by Ernest's wife Alice

This more recent Shropshire Star article, from the issue for Tuesday 10 October 2006, and reproduced here in full, includes the view of the machine, captioned: 'Ernest Maund with his aeroplane in 1907. Was he Britain's first flyer?', the admission ticket to the Craven Arms Aero Club and photographs of Maund himself and of his cycle workshop. (Reproduced by kind permission of the editor, Shropshire Star)

The FARMAN 190 and its derivatives

Michel Barrière

PART SIX



Individual F.190 histories (continued):

F.190 no.34 c/n 7158 F-AJJG

CdN / CdI no.2303 issued 16.10.29.

Registered F-AJJG to André Bailly. painted silver, this was a replacement for F.190 no.11 in which Bailly had completed the journey from Paris to Saigon and back. It was fitted with the GR 5 Ba engine no.5106 from the latter. It represented a significant point in the development of the long-range F.190 model as it was fitted with a reinforced wing with integral tanks of 770 litres, for the first time having fuel tanks in the leading edge.

From 28th October to 5th November 1929 the crew of Bailly, Reginensi and Marsot carried out the Paris – Tananarive journey in eight days, that consisted of 13,000 km via Oran (28.10), Reggan (29.10), Niamey (30.10), Maine-Soroa (31.10), Bangui (1.11), Pépéaga (2.11), Broken Hill (3.11), Quelimane (4.11), to Tananarive (5.11) thus breaking the record which Marcel Goulette had set in his F.192 no.3.

It later set off on the return route which was carried out between the 12th and 20th November, departing Tananarive to Quelimane (12.11), Elizabethville (13.11), Coquilhatville (14.11), Fort-Archambault (15.11), Zinder (16.11), Gao (17.11), Adrar (18.11), Carthage (19.11) and Le Bourget (20.11).

In April 1930 it took part in the repatriation of the Goulette, Marchesseau and Bourgeois expedition whose F.192 no.3 had been destroyed in the Sahara while returning from Madagascar. In July of the same year it won the Clermont-Ferrand rally with 1,287 km, beating the F.190 F-AJMV of Marcel Avignon.

Above: F.190 n°34 F-AJJG as flown by Bailly, Reginensi and Marsot on the record-breaking Paris to Tananarive journey commencing on 28th October 1929 - see next page. (Artwork: Michel Barrière)

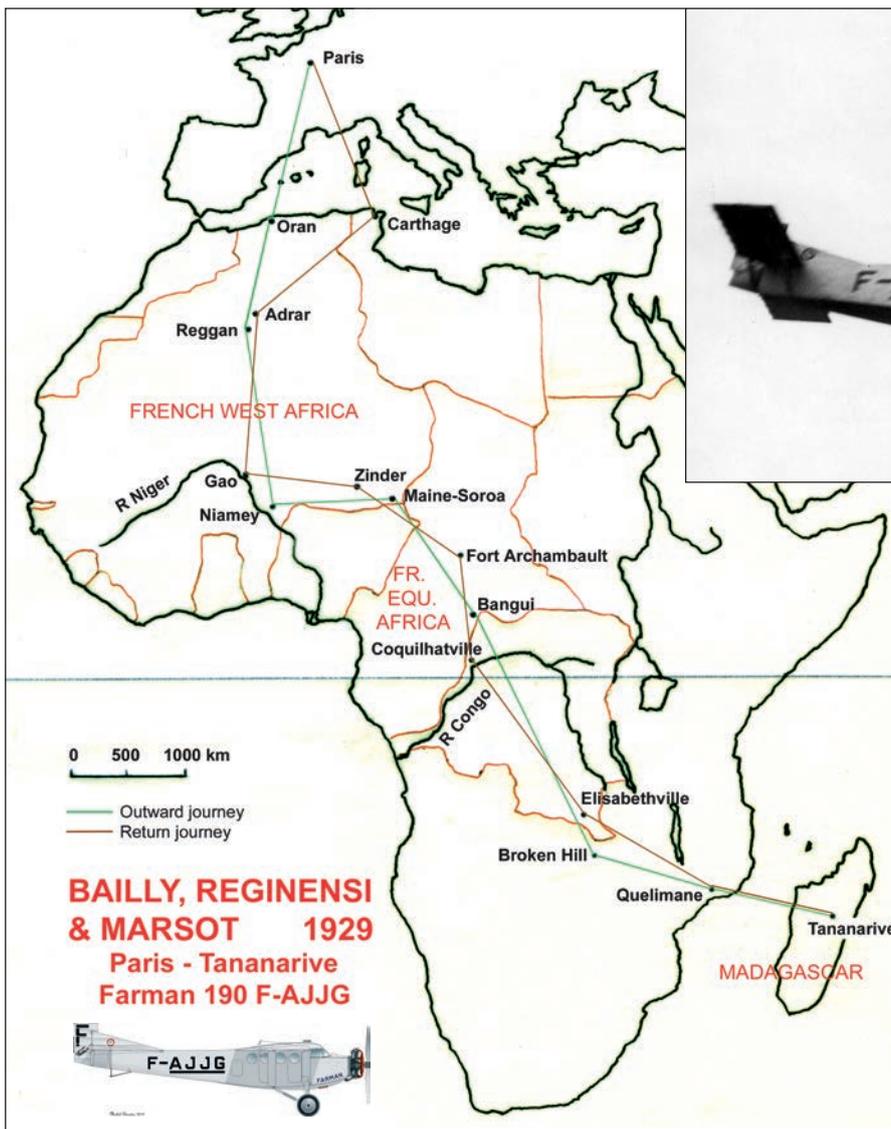
Below: F-AJJG as used by the Aéro-Club du Rhône et du Sud-Est from 1932-37, named "Ville de Lyon". (Artwork: Michel Barrière)

During 1932 the Aéro-Club du Rhône et du Sud-Est (ACRSE) decided to obtain an aircraft "which may be of significance in the region" (Emmanuel Large, "100 ans d'aéronautique lyonnaise", Editions La Taillanderie, 1998). F-AJJG, bought for 75,000 francs, was unveiled with great ceremony at Bron on 24th June 1932 and christened "Ville de Lyon", although it was not registered to the Aéro-Club du Rhône until July 1932. The 'godmother' of the aircraft which wore the colours and pennant of the club and the coat of arms of the town, was Madame Herriot, wife of the Mayor of Lyon. Registered on 16th July 1932 to the ACRSE, F-AJJG certainly took part in the major flying meetings which followed, such as the International Aviation Days at Lyon from 15th to 18th June 1933.

It seems that the establishment of the Sections d'Aviation Populaire (SAP) inevitably affected F-AJJG because of the options which it imposed on the Aéro-Club. The creation of the SAP de Lyon was decided upon during the administrative council of 25th January 1937 and on 16th April 1937 the air minister gave his approval to ACRSE for the formation of a SAP (Emmanuel Large, "100 ans d'aéronautique lyonnaise"). On 1st April 1937 the F.190 no.34 had been registered to Jacques Leroy, Paris; then on 23rd September 1937 it passed on to Max Normand, Drancy, whose company organised pleasure flights and aerial sight-seeing from Le Bourget. It was then renamed "Yoyo II" and painted in a unique colour scheme, probably in red and white.

It was still active in 1939 with 733 flying hours and was probably impressed.





Above: F-AJJG seen on its return to Paris from Madagascar on 20th November 1929. (Rol / Musée de l'Air / via Harm J Hazewinkel)

The record-breaking 'raid' by Bailly, Reginensi and Marsot in Farman 190 F-AJJG from Paris to Tananarive in Madagascar took nine days in 1929. This was only a matter of nine days after Marcel Goulette and René Marchesseau had made the first flight to Tananarive in eleven days en route to Réunion in F.192 F-AJJB. The record stood for precisely two years until Moench and Burtin arrived at Tananarive on November 5th 1931 having taken only seven days in their F.190 no.52 F-ALAP. Their record was short-lived however as on November 27th 1931 Goulette and Salel reduced the time to four days and ten hours in F.199 F-AJRY.

F.190 no.35? c/n ? F-AJJB

Acquired by Marcel Goulette and fitted with a Salmson 9 Ab, the fuselage of F.190 no.35 was used to manufacture F.192 no.3 F-AJJB. Its c/n could be 7159.

F.190 no.36? c/n ? F-AJJK

The fuselage of F.190 no.36, fitted with a Lorraine engine, became F.197 no.1. Its c/n could be 7160.

F.190 no.37 c/n ?

We now come to the problematic part of the 1930 production list. The use of the fuselage of F.190 no.37, which may correspond to c/n 7161, is officially unknown and does not match any F.190 with a Gnome-Rhône engine in the French register. It could belong to an export F.192 or to F.197 no.2.

F.190 no.38 c/n 7166 F-AJLL

CdN / CdI no.2342 issued 28.1.30.

Registered F-AJLL to Air Union Lignes d'Orient. The Farman was retained by Maurice Nognès to survey the Damascus – Saigon route and became the most famous of Air Union's aircraft. Fitted with a reinforced wing, it had both the large wing tanks and leading edge tanks giving a total capacity of 720 litres of fuel.

Leaving Paris on 12th February 1930, Nognès, accompanied by his mechanic Marsot, studied the Paris – Saigon route. The aim of the

journey was to reconnoitre the sectors, organise the stop-over services and study the equipment needed in order to establish the future service. They left by way of Naples (13.2), Athens (20.2), Cyprus, Aleppo, Damascus and Baghdad (28.2). At Baghdad they were joined by Mr Allègre, administrative representative of the Compagnie Air-Union Lignes d'Orient, which was responsible to the Air Ministry for the mission, who had followed them out on the 22nd February scheduled service from Marseilles via Syria to Baghdad.

The journey continued via Bassora, Bouchir, Djask (3.3), Karachi (4.3), Jodhpur, Benares, Gaya, Allahabad (5.3), Calcutta (6.3), Akyab (8.3), Rangoon and Bangkok (9.3). They arrived at Saigon on 10th March. Suffering from typhoid fever, Nognès required treatment there, which prevented an immediate return by air. Allègre was therefore obliged to return by ship to deliver his urgent account to the Minister. Once recovered, Nognès continued to Hanoi where he arrived on 20th March.

In March 1932 the aircraft was registered to Air Orient. Early in 1933 it seems to have been modified, at the same time as Air Orient F.190s no.56 and 57 were registered; the fuselage was always painted orange but the cabin was now lit by rectangular windows. The aircraft was fitted with wireless equipment and with a GR 5 Bc engine. Nognès tested the Farman on 7th February 1933.

On 10th February he left Toussus-le-Noble for a journey to Africa, accompanied by engineer and radio operator Le Stradic. Initially they flew via Bordeaux, Perpignan (10.2), Alicante (11.2) and Colomb-Bechar (12.2). There they were joined by passengers Ernest Roume, President of the administrative council of Air Orient in North Africa, and Mme.Allègre the wife of the administrative representative of Air Orient.



Despite his age – he was then 75 – Roume, a former governor of French West Africa, was going to inspect the irrigation works of the Niger River loop and the functions of the Office du Niger of which he was also president. Noguès then continued by way of Reggan, Bidon 5, Gao, Timbuctu, Mopti, Ségan (19.2), Kayes (21.2), and then Dakar (22.2) where he unloaded his two passengers who returned to France by sea. He then continued his flight to Port Etienne (23.2), Cap Juby (24.2), Agadir (25.2), Marrakech (26.2), Casablanca (27.2) and then Tangier. On 1st March he set off again for Seville, then Madrid (2.2), Perpignan and Bordeaux (4.3). After a stop-over at Poitiers he returned to Toussus-le-Noble on 6th March after a journey of 15,000 km free of incident.

During the rest of the year F-AJLL was based at Le Bourget and served as the personal aircraft of Nognès. Registered to Air France and named "L'Agile" it stayed with the company after the death of Nognès (on 15.1.34 in the crash of the Dewoitine D.332) and was one of four F.190s still in service with them at the beginning of 1939. Its CdN was renewed on 28.4.38 and returned later to Indochina where it passed an inspection on 11.8.38 at Saigon. On 31.8.39 it was registered to the Aéro-Club d'Annam at Hué. It disappeared during the war.

Note: For the airframes that follow we move into an area of imprecision, complicated by the simultaneous production activity in 1930 of several types: civil, military and colonial, for home or export, models F.190, 192, 195, 197 and 290 – of which the great variety destabilised the numerical record system used by Farman.

Study of the production list requires us to consider whether the aircraft of various versions in production at the end of 1929 and start of 1930 were in fact always integrated into the list of the F.190 series numbers or whether they resulted from the conversion of aircraft from storage. This assertion cannot be supported after no.40, the production list containing about fifteen unidentified aircraft.

For the entries that follow we have retained, when the series number is unknown, a numerical order corresponding as far as possible to the known order of production, delivery or receipt.

Above: F.190 no.38 F-AJLL wearing the titles of Compagnie Air Union Lignes d'Orient as used by Maurice Noguès to explore the Paris to Hanoi route in 1930. (Artwork: Michel Barrière)

F.190 (no.39), c/n ? F-AJLU

The airframe of F.190 (no.39) was that used in the production of F.192 no.4, c/n unknown (possibly 7171?). This F.192 no.4 of Lena Bernstein appeared on the Toussus airfield in February 1930. Over weight with fuel, the aircraft did not conform to the CdN specification which explains why it was not certificated until June 1930, after Bernstein's female endurance record of 35hrs 45mins on 2.5.30.

F.190 (no.40), c/n 7172 F-AJNH

The airframe of F.190 (no.40) was that used in the production of F.198 no.1. The c/n of that aircraft is confirmed. The presence of the aircraft at Toussus at the end of May 1930 is reported in the magazine "Les Ailes" of 5.6.30. The CdN was not obtained until October 1930 after the test which allowed the type to qualify.

F.190 (no.41), c/n 7178 F-AJTU

The airframe of F.190 (no.41) was that used in the production of F.192 no.13. The confirmed c/n shows a precocious rate of production but the serial number appears to be strangely late.

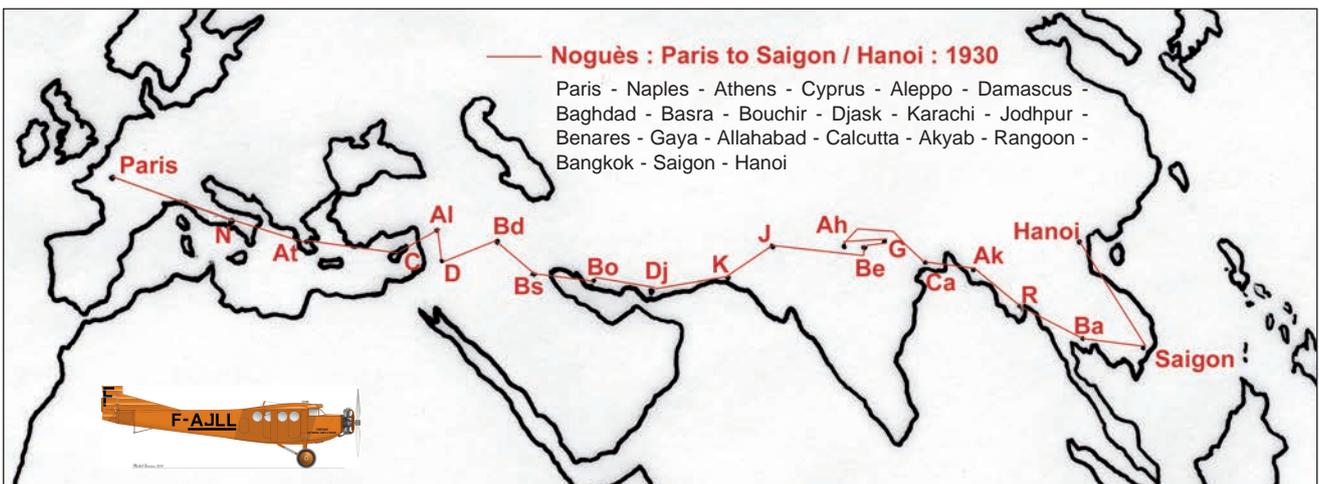
F.190 (no.42), c/n ? F-AJRX

The airframe of F.190 (no.42) was that used in the production of F.192 no.7, delivered on 3.7.30.

F.190 no.43, c/n ? F-AJMV

CdN / Cdl no.2382 issued 7.5.30.

The magazine "Les Ailes" of 24.4.30 mentioned that the F.190 intended for the Aéro-Club de l'Herault was ready for delivery. The aircraft was registered to Marcel Avignon, vice-president of the Club, which





Above: A rather grainy picture of F.190 n°43 F-AJMV of Marcel Avignon taken during its participation in the 1931 Tour de France. (via JM Collection)

Below: F-AJMV again, being manoeuvred with a trolley under the rear end, date unknown. There appears to be a bird-like symbol below the rear cabin door. (via JM Collection)



had benefitted from the government's purchase subsidies. Its c/n is unknown.

In May 1930 Marcel Avignon took part in a trip around North Africa with Philippe d'Albénas, president of the Aéro-Club, Alex Cousin, journalist Robert Audemas and Jean Cottier to attend the Congress of the Fédération Nationale Aéronautique at Oran. The itinerary was as follows: Paris to Montpellier on 4.5, through Alicante and Tangier (4.5), Oran (5.5), Algiers (6.5.), Djéfa, Laghouat and Oran (7.5), Colomb-Bechar (8.5), Beni-Abbès, Kanatsa, Colomb-Bechar (9.5), Fez, Meknes (10.5), Casablanca (11.5), Seville (12.5), Madrid (13.5) Barcelona and Montpellier (14.5). In all they covered 8,005 kms in 47hrs 5mins flying time.

On the 9th and 10th June 1930 Avignon, accompanied by Alec Covo, Million, Cottier and Fabre, took part in the meeting at Vincennes, winning the Paris – Bordeaux – Paris rally (1,000 kms in 5hrs 41mins) and the Prix du Président de la République. In July the crew of Avignon and Cottier were placed second in the Clermont-Ferrand rally.

In 1931 Avignon took part in the Tour de France, taking his wife and Mme.Lallouette. On the way back a bout of typhoid fever prevented him from taking part in the Bucharest rally. In July, hardly recovered, Avignon flew to Amsterdam and then won the Coupe Easterwood, named after Colonel Easterwood the President of the American Legion, a rally for reserve officers covering 1,200 kms between Amsterdam and Paris in eight hours.

On 3rd February 1932 Avignon, Cottier and Lebeau left Montpellier in F-AJMV and passed through Perpignan, Oran, Reggan, Gao, Niamey, Fort-Lamy, Fort-Archambault, Bangui, Coquilhatville and Brazzaville to arrive at Pointe-Noire on 20th February. They set off again in a torrential rainstorm for Libreville, then via Abidjan, Conakry, Dakar (27.2), to Thiès. After a stopover of three days they set off for Kayes, Bamako and Timbuctou, reaching Gao on 6th March and Tabankort on 7th. During their crossing of the Sahara, via Bidon 5, sandstorms forced two stops and two nights the middle of the desert, continuing via Casablanca (10.3), Perpignan (13.3) and Lyons. They returned to Le Bourget on 14th March having covered nearly 25,000 kms.

Between 15th and 18th September 1932 Avignon took part in a meeting for touring aircraft at Marignane. There he won the second prize of 500F and a bonus of 45F added as a distance award and also received the bronze medal of the city of Marseilles.

On 17th January 1933 Avignon positioned from Montpellier to Toussus to prepare for a new journey to Africa. On 22nd January he took off for

the first stage to Los Alcazares accompanied by Marsot, Henri Galibert and Marc Leenhardt. On 23rd they were at Oran, on 24th at Adrar and on 25th at Gao, reaching Fort-Lamy on 27th. On 7th February they arrived at Djibouti after having staged through Abechar and Khartoum. The return flight from Djibouti was made via Massaoua, the Nile Valley and Cairo, then Tripoli, Tunis and Algiers. On 16th they again passed through Seville heading for Perpignan, overflew Alicante and then diverted out to sea to avoid bad weather which raged over Spain. The stop at Perpignan was extended as Leenhardt and Galibert were ill and Marsot suffered an attack of malaria. After a final stop at Dijon, Marcel Avignon and Marsot returned to Le Bourget in snow on 22nd February. Not until 16th March did Avignon return to Montpellier. In July he took part in the Aéro-Club de l'Herault festival on the airfield at Larzac.

On 14th and 15th April 1934 Avignon took part, with F-AJMV, in air displays and international competitions organised by the Aéro-Club of Catalonia at El Prat de Llobregat. However, on becoming a pilot with Air Afrique, Avignon had no further use for the Farman. In 1936 F.190 no.43 was sold to the Spanish Republicans, leaving Montpellier-Candillargues on 26th August for Catalonia. It disappeared during the Civil War.

F.190 nos.44 to 49, c/ns ?

Unlike the situation at the beginning of 1930, the problem now is whether we should assume that the other F.192s and the F.197 no.3 built during 1930 should or should not be included in this list. The military orders and the export sales, including the six Venezuelan F.195s, about which the registers are frequently uninformative, make it difficult to identify c/ns and series numbers of aircraft produced in 1930. The batch of five airframes nos.44 to 48 manufactured in the second quarter of 1930 probably belong to this category of clients.

Unfortunately, with reference to the 'true' military F.190s with GR 5 Ba engines, the only confirmed example is colonial F.190 no.53 which was undoubtedly completed much later, probably in the first quarter of 1931. Jean Liron stated: "The F.190 ... also became the subject of orders from the Air Ministry. In 1931 they acquired two F.190s at a price of 200,000F each and four others of the colonial version for a total of 644,155F. The fourth example of the latter version, no.53, was tested at Villacoublay."

However, in the absence of technical documentation or photographic proof, the rather vague description makes precise identification of the exact versions concerned more difficult.

The same applies to the F.290s obtained by the S.T.A. (Service Technique de l'Aéronautique) with GR K 5 engines, the version which succeeded the GR 5 Ba, built in 1930. These indeed arrived at Villacoublay at the end of the year and the five examples were confirmed as present by January 1931. Furthermore, in 1931 there appeared F.192 and F.197 colonial models which cannot be considered as entirely excluded from this group.

On the other hand, the Venezuelan F.195s, military and export versions of the F.192, seem to be less likely to fit this group if we take into account the criteria applied at that time.

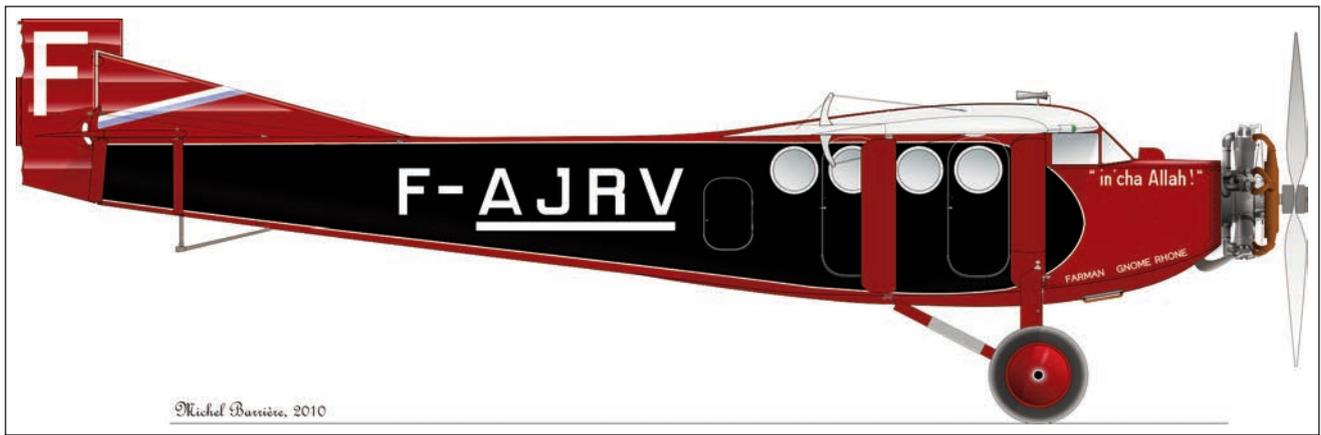
F.190 no.50, c/n 7202, F-AJRV

Charles de Verneilh acquired this aircraft, his first, in May 1930, financed by a banker.

CdN no.V-1725 (Veritas) issued in July 1930

After Lallouette had carried out test flights, F.190 no.50 was registered to Charles de Verneilh-Puirazeau as F-AJRV. The aircraft was equipped for long-distance flights with "several supplementary fuel tanks" ("Les Ailes" 17.7.30) of 1,280 litres capacity. Its loaded weight of 2,350kgs – greater than the type specifications – implies that the aircraft was the subject of a special authorisation. Painted red and black, it was named "In Cha Allah". The pilot's position was well-lit by a row of ceiling windows.

Prior to departure, Verneilh (who possessed Aerial Navigation Certificate no.100 and had been a pilot with Aéropostale) passed his radio operator's tests at Toussus. Then, between 20th and 26th July



Michel Barrière, 2010

Above: F.190 n°50 F-AJRV "In'cha Allah" of Charles de Verneilh which was flown to Ethiopia for the coronation of the Negus, the Emperor Haile Selassie which took place on November 2nd 1930.

(Artwork: Michel Barrière)

Right: Unfortunately, on arrival at Addis Ababa the Farman was landed at too high a speed and overshot the end of the runway with the consequences seen here. F-AJRV was declared a write-off as a result.

(via JM Collection)



1930, accompanied by Capt Max Dévé as navigator and Drouin as mechanic, he carried out a 'Mediterranean tour' – or more precisely a circuit from France to Italy, Tunisia, Spain and back to France – of 9,500 kms in six and a half days. Leaving Le Bourget at dawn on the 20th they reached Rome-Centocelli at 1250. Stopping at Brindisi on 21st to repair a rev counter, they did not set off again until the 23rd for Tunis-El Aouina. On 25th they reached Alicante, then flew over Barcelona and Montpellier on the return stage to Le Bourget arriving at 1805 on 26th July.

In August 1930 F-AJRV was modified with the addition of leading-edge tanks and extra equipment; the bulge which appeared on the engine cowling probably protecting a second compass. The appearance of the Gnome-Rhône brand name shown to advantage on the cowling implied that the long-distance flight which was to follow had been supported, or even instigated, by the engine manufacturer, probably annoyed by the support given by the State to Salmson for equipping the F.192 given to the Negus on his coronation.

Cdl no.2549 issued on 18.9.30

Re-registered following modification. Verneilh and Dronne spent the weekend of 18-19th October at Biarritz with Mr & Mme Guy de la Vasselais, achieving a cruising speed of 180 km/hr on the return journey.

Later that month Verneilh flew from Paris to Addis Ababa to attend the coronation of the Negus. He was accompanied by Colonel Weiss, Sgt Trafford and mechanic Dronne. According to Maréchal Franchet d'Esperey, official representative of the French Government at the coronation, this journey was the result of internal conflicts at the Air Ministry, as well as competition between the two engine manufacturers. Leaving Paris on the 27th October, they were at Marseilles on 28th for the official departure, then crossed the Mediterranean in a storm to Gabès. The next day they reached Benghazi, then Cairo on 30th, all the time in bad weather. They were at Wadi Halfa on 31st and reached Djibouti on November 1st. The rapidity of F-AJRV's journey was tarnished by its arrival at Addis Ababa on the 2nd when de Verneilh,

fearing a lack of lift at altitude and high temperatures, maintained a fast landing speed and ran off the end of the runway, destroying the aircraft without serious injury to the occupants. The engine was undamaged however.

Leaving the whole wreck where it was, the crew returned by boat from Djibouti on the 10th, reaching Paris on 25th November. Lloyd's quickly repaid half of the declared value of the aircraft, retaining the ownership of the intact engine. Weiss had given them a verbal assurance that the engine would be brought back and Verneilh went back again by ship to look for it but in the end received very little money on his return. (Suzanne de Verneilh, "Deux Pilotes", 1953)

On 2nd December 1930, F.192 no.50 was cancelled as destroyed following a letter from the French Legation in Ethiopia. [Charles de Verneilh-Puirazeau was killed in the crash of Couzinet 33 F-ALMV on 30.10.33.]

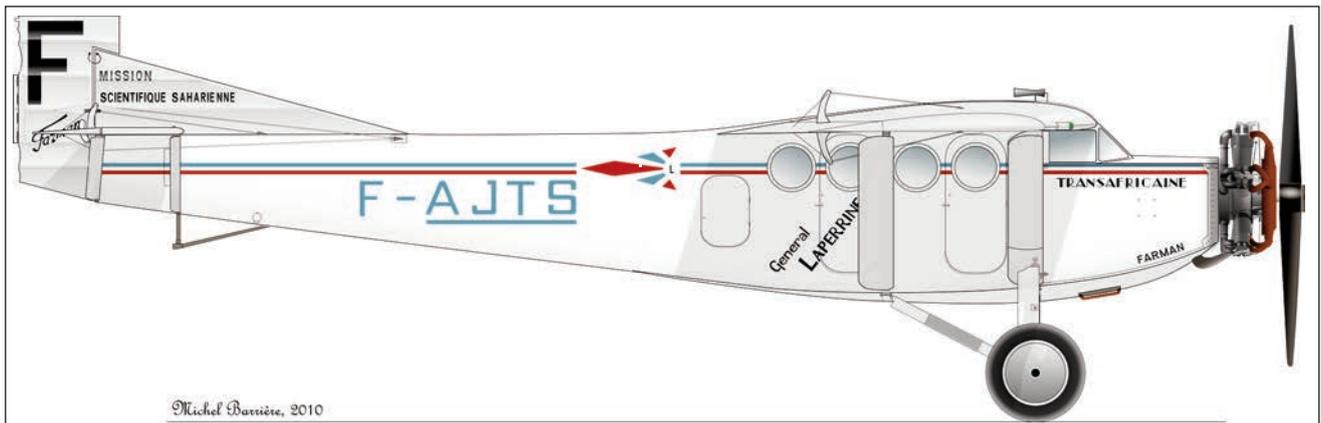
F.190 no.51, c/n 7211 F-AJTS

CdN no.1772, Cdl no.2625 issued 15.11.30.

Registered in the name of René Wauthier as F-AJTS, the aircraft was named "Général Laperrière" in early November by Mme Machereau in the presence of former minister Louis Marin.

From November 1930 to January 1931 F-AJTS took part in exploratory flights for the trans-Saharan Paris to Lake Tchad route which were co-ordinated by Paul-Louis Richard together with the Saharan scientific mission organised under the patronage of the International Anthropological Institute. During this mission the Farman was flown by Poulin, operations director of the C.T.A. (Compagnie Transafricaine d'Aviation). The crew also consisted of mechanic Pariset and Sgt Machonneau. As for Wauthier, he was in charge of the photography and documentation.

Leaving Paris on 28th November, the aircraft flew via Angoulême (28.11), Perpignan (30.11), Los Alcazares (4.12), Rabat (5.12), Algiers



Michel Barrière, 2010



Above and Left: F.190 no.51 was F-AJTS of René Wauthier who named it "Générale Laperrine" and took part in the trans-Sahara expedition to Lake Tchad from November 1930 to January 1931. On both sides it carries the names of Farman and the Transafricaïne company on the nose and on the fin the inscription "Mission scientifique saharienne". Later in 1931 it was partly converted to F.197 standard.
(Artwork: Michel Barrière; photo: via H J Hazewinkel)

(6-9.12), Aoulef (10.12), Reggan (11.12), Gao (12.12), Niamey (15.12), Zinder (16.12) and arrived at Fort Lamy on 17th December.

On 22nd December it set off again from Fort Lamy. The return flight was by way of Zinder, Niamey, Gao, Tabancourt, Reggan, Aoulef, In-Salah, El Goléa, Ben Djebbarra, Laghouat and Algiers where it arrived on 30th December for a long stop-over. The return to France took place in January by way of Tangier, Alicante, Perpignan, Toulouse and Tours; the aircraft finally landing at Le Bourget on 26th January 1931.

F.197 no.7, c/n 7211, F-AJTS

Change of type was officially registered on 23.9.31.

To best adapt it for African journeys, Wauthier fitted it with a Lorraine "Mizar" engine, thus F-AJTS became an F.197, no.7. However the conversion was not total as the wings were not modified; there were no leading-edge tanks, Wauthier having retained the 150 litre supplementary tank in the cabin. The aircraft was fitted with a Levasseur propeller and a sand filter.

In autumn 1931 Wauthier contemplated making a journey, together with Gustave Bonnet, from Paris to Peking, via Siberia, returning via the Indies. In October 1931 when, in his Farman he accompanied the Tour de France national technical competition for touring aircraft, he abandoned this project and then proposed a journey towards the Dutch East Indies.

Between 24th January and 19th February 1932 Wauthier carried out a journey from Paris to Timbuctou and back with two American writers, William Seabrook and Miss Marjorie Worthington, who paid a visit there to Father Yacouba.

In the third quarter of 1932 the F.197 no.7 was cancelled from the Register as destroyed in unknown circumstances. In January 1933 Wauthier took part in a long air and road crossing of Ténéré region of Niger with the SPCA 80 tri-motor.

F.190 no.52, c/n 7222 F-ALAP

CdN no.1772, Cdl no.2642 issued 6.12.30.

Registered F-ALAP in the name of Christian Moench and named "Alsa" after the famous brand of family yeast products. The aircraft had been acquired with the financial support of the family company of which Christian Moench's brother was managing director. It was subsequently used mainly to publicise the company's products, for which purpose it would have carried the 'house colours' of blue and pink. (We have not been able so far to find any confirmation or otherwise of this colour scheme, despite there being numerous documents and accounts concerning this aircraft. The publicity material and examination of many orthochromatic and panchromatic photos seem to support this hypothesis.)

In fact, the F.190 no.52 intended for Christian Moench was delivered at the end of October ("Les Ailes" 23.10.30). The possibility of a fast journey from Paris to Saigon was raised. To make up the crew, Moench at that time considered bringing together Warrant Officer Cuny and Marsot. By mid-December Cuny was withdrawn and was replaced in January by Johnny Burtin, a Farman company test pilot, for a Paris - Tokyo flight. Marsot, who had prepared the motor, became chief engineer of Air Orient at Saigon and did not take part in the flight.

To be continued



Above: F.190 no.52 F-ALAP, the Paris - Tokyo aircraft named "Alsa" (via JM Collection).

£6.50

SUMMER ISSUE
JUNE 2012

Air-Britain ARCHIVE

The AIR-BRITAIN Civil Aviation Historical Quarterly



China: 1947 Sino-British Agreement

Avro Cabin Cadet and Commodore

Farman F.191

F- and YU- Registers

BOAC at war 1940-1942

AIR-BRITAIN - Founded 1948



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COVER PHOTO



Illustrating the 1930s French register in this issue is Morane Saulnier MS.181 "F-AJXN" also wearing N304JX, on display in the EAA Museum at Oshkosh 7.04. The real F-AJXN was a MS.230 as noted in the register extract. (Dave Partington)

CLOSING DATE for contributions to next ARCHIVE: July 21st 2012

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China: The Sino-British Air
Transport Agreement 1947 2012/053
F-1922+ Register 2012/073

Airliners in Wapaint:

BOAC 1940-1942 2012/077
Head-on View: Avro
Cabin Cadet & Commodore 2012/081
The Farman F.191 2012/089



HEAD-ON VIEW - WHAT IS IT? Number 44

An unusual one-off with grand intentions but, as was often the case, these came to nought. This should be easy to identify due to its unique shape though details of the lady are not required. Full description of the aircraft next time. (via JM Collection)

In this issue . . .

From the old,

This issue, being something of a joint effort, sees this editor moving steadily towards retirement. The content is virtually self-explanatory, all being series items without a 'one-off' on this occasion. The Farman histories complete the F.190 model and move on to the two F.191s; Airliners in Wapaint begins to look at the wartime activities of BOAC; our two historical registers, of France and Yugoslavia, continue and this time the subject of Head-on View covers two related Avro cabin biplanes.

Chinese research in this issue concentrates on the political agreements which affected the post war development of commercial aviation there (the last major narrative before we return to the descriptions of the other operators of the period). Indeed there is much historical background here which should be essential reading for any student of the international airline industry as a whole.

My personal thanks go to all our contributors, past and present, and it only remains for me to

express the hope that the same level of support will be given to my successor.

Dave Partington

to the new:

I have been actively involved in researching and recording aviation history since 1963 and have been a member of Air-Britain since 1966. I am delighted to have the opportunity to take over the editing of Archive from the Autumn issue. Dave Partington, the founding editor, has established its reputation for detail and accuracy and I will of course seek to maintain that. Within its remit to record the history of civil aviation I aim to ensure that the magazine's scope remains as broad as possible. I am always keen to hear from new and established writers about possible new projects, and I shall be contributing some of my own: I have conducted extensive research in various registries over the years. I look forward to hearing from any reader about how they would like Archive to develop in the future.

Robert Swan

On the Wings of a Gull

Air-Britain's latest major publication is *On the Wings of a Gull* - a history of Percival Aircraft and its successors which is now available from the Sales Department. Founded by Edgar Percival, the company was one of the iconic aircraft manufacturers of the 1930s and will always be linked to the record breaking flights of Alex Henshaw, Amy Johnson and others. The book covers the well known Gulls and Q6 of the 1930s, production during the Second World War of the Proctor, and all the post-war aircraft including the Prentice, the Prince/Pembroke and of course the Provost, Jet Provost and Strikemaster series. There are production histories of over 3,300 Percival and Hunting aircraft, exhaustive coverage of the many Percival projects, details of the company's wartime subcontract activities, accurate three-view drawings and 32 pages of colour illustrations. This book, written by the late David Gearing and brought to publication by a team of Air-Britain specialists, is the first truly authoritative history of the company and its products and will be an essential addition to the bookshelves of both civil and military historians.

416 pages A4 hardback, Members' price £32.50 from Air-Britain Sales. ISBN 978 0 85130 448 9

On the Wings of a Gull



Percival and Hunting Aircraft

By David W. Gearing
with the Air-Britain
Percival Project Team

COMPLETE CIVIL REGISTERS: 15

X- UN- YU- YUGOSLAVIA

With thanks to the following for their contributions to this issue:

John Wegg, Vojislav Jereb and Ognjan Petrovic.

Right: Adria's MD-82 YU-ANG at Dusseldorf in ZAS Egypt colours during lease. (via Silvain Croes)



The post-war Yugoslavian Civil Aircraft Register (continued)

YU-ANA to ANZ series: 2-engined jet aircraft (continued)

YU-ANG McDonnell Douglas DC-9-82 49379/1205 13.6.85
F/f 14.5.85; Inex Adria Aviopromet, Ljubljana 8.1.85; CoR 1480; leased to Air Liberté 22.3.88; Adria Airways 20.6.88; ZAS, Egypt 5.1.89; Adria Airways 1.5.89; ZAS 1.11.89; Adria Airways 31.11.90; regn cld 26.12.91; became SL-ABC 26.12.91, S5-ABC 5.93, D-ALLS 29.4.94, N923TW 9.4.97, wfu & stored 4.03.

YU-ANH Boeing 737-3H9 23415/1171 10.12.85
F/f 22.11.85; d/d 10.12.85; JAT Belgrade 24.12.85; CoR 1484; regn cld 21.11.86; lsd to VASP as PP-SNY 25.11.86 to 21.4.87; regn renewed 30.4.87, new CoR 1484/2; to Bosphorus European Airways TC-CYO 1.5.92 to 7.97 (seized at Dublin 5.93 and stored); YU-ANH JAT 30.7.97; Air Afrique 1.7.98 to 4.00; JAT 2.4.00; JAT Airways 1.03; Aero Contractors of Nigeria 1.11.03; JAT Airways 10.11.04; wfu/stored at Belgrade .07.

YU-ANI Boeing 737-3H9 23416/1175 17.12.85
F/f 26.11.85; d/d 17.12.85; JAT Belgrade 24.12.85; CoR 1485; lsd Constellation International Airlines, Brussels 1.5.96; JAT 11.96; lsd Cameroon Airlines 15.10.96; Air Malta 5.4.97; JAT 13.2.98; Tunis Air 29.5.98; reg cld 21.09.99, to MAT Macedonian as Z3-AAA 31.10.99; JAT Airways YU-ANI 1.11.05; lsd Air Ivoire 11.5.09; JAT Airways 2.1.10; active.

YU-ANJ Boeing 737-3H9 23714/1305 17.11.86
F/f 31.10.86; JAT Belgrade 17.11.86; CoR 1503; lsd Australian Airlines 3.10.89; Ansett Airlines 15.11.89; JAT 20.10.90; regn cld 30.4.92; to Bosphorus European Airways as TC-MIO 5.6.92; JAT YU-ANJ 26.7.01; JAT Airways 1.03; leased to Aero Contractors of Nigeria 20.8.06; JAT Airways 15.8.07; active.

YU-ANK Boeing 737-3H9 23715/1310 26.11.86
F/f 12.11.86; JAT Belgrade 26.11.86; CoR 1504; lsd Constellation International Airlines, Brussels 1.3.96; JAT 27.6.96; JAT Airways 3.03; lsd to Cameroon Airlines 9.05; JAT Airways 27.10.05; active.

YU-ANL Boeing 737-3H9 23716/1321 19.12.86
F/f 8.12.86; JAT Belgrade 19.12.86; CoR 1505; to Tunisair as TS-IEC 1.3.92; JAT YU-ANL 4.5.96; Cameroon Airlines 31.1.97; MAT Macedonian 25.5.97; regn cld 14.9.98; leased to MAT as Z3-ARF 16.9.98; JAT Airways 19.8.05; (returned to Yugoslav register 16.8.05 after lease); Benin Gulf Air 1.08; JAT Airways 19.8.08; active.



Above: JAT Boeing 737 YU-ANI was another Dusseldorf visitor while leased to Air Malta in full colours in 1997. (via Silvain Croes)

Below: JAT Boeing 737 YU-ANL in regular service at Heathrow on 19.9.90. (H John Black)



YU-ANM BAC 111-525FT 266 28.4.86
F/f 13.11.80; ex YR-BCN (.80), YU-AKN (.85), YR-BCN; leased (2nd time) from TAROM Romania 28.4.86; Adria Airways 30.4.86; CoR 1506; Returned to TAROM 17.10.86; regn cld 21.10.86; To YR-BCN, EI-BSY 3.87, YR-BCN 11.89, 5N-ESF EAS Airlines and crashed 5.4.02 in Kano, Nigeria.

YU-ANN BAC 111-525FT 272 28.4.86
F/f 15.2.82; ex YR-BCO (.82), G-TARO (3.84 to 12.85); YR-BCO; leased from TAROM 28.4.86; Adria Airways 30.4.86; CoR 1507; regn cld 21.10.86; returned to TAROM 31.10.86 as YR-BCO; to EI-BSZ 4.87, YR-BCO TAROM 11.89. Written off, Istanbul 30.12.95.

YU-ANO McDonnell Douglas MD-82 49440/130 10.9.86
F/f 12.8.86; Adria Airways 10.9.86; CoR 1509; MDD Corp 1.2.89; Adria Airways 22.4.89; lsd Croatia Airlines 3.5.91; Adria Airways 1.10.91; regn cld 26.12.91; to Slovenia as SL-ABD 26.12.91, S5-ABD 31.3.92; D-ALLT 4.6.94, N944AM 28.2.97, N135NJ 22.8.01, N940TM 9.2.04 to 29.5.05, ZS-TRF 4.6.07, stored 2.11.



Left: Boeing 737-3H9 c/n 23715 YU-ANK of JAT Airways shown in the new colour scheme with three dots on the tail which was introduced in 2003 at the same time as the changed company name. (Artwork by O Petrovic)

YU-ANP	Boeing 737-2K3	23912/1401	30.6.87	Contractors 1.12.06; JAT Airways 18.3.08; Air Ivoire 08; JAT Airways 5.09; active.
	F/f 5.6.87; Aviogenex 19.6.87 "Zadar"; CoR 1525; Malaysia Airlines 27.12.89; Aviogenex 15.4.90; wfu 5.92-9.94; Air Zimbabwe 28.11.96; Air Ukraine International 28.3.97; Aviogenex 8.2.98; Chanchangi Airlines 1.2.99; Aviogenex 18.8.01; Air Express 1.11.02; Air Bosna 4.1.03; Aviogenex 20.1.03; Cameroon Airlines 20.1.03; President Airlines 29.3.03; Aviogenex 11.10.04; Sudan Airways 1.1.05; Aviogenex 8.05; lsd to JAT Airways 14.8.06; Sudan Airways 14.10.06; JAT Airways 2.7.07; Tahmid Air as UN-B3709 16.5.08; Aviogenex 20.7.08; YU-ANP; active (as sole Aviogenex airliner).			
YU-ANR	RomBAC 111-561RC	(268)/401	29.4.87	
	F/f 18.9.82; ex YR-BRA (.82); Adria Airways 1.5.87, leased from TAROM 29.4.87, returned 16.10.87; YR-BRA, AP-BFC Aero Asia, wfu 29.1.02. Note: the aircraft was leased by JAT for summer seasons .89. and .90 as YR-BRA (but with full JAT livery).			
YU-ANS	RomBAC 111-561RC	(270)/403	29.4.87	
	F/f 26.4.84; ex YR-BRC (8.84); Adria Airways 1.5.87; leased from TAROM 29.4.87; returned 1.11.87; YR-BRC, EX-103 Trast Aero..			
YU-ANT	RomBAC 111-561RC	(271)/404	29.4.87	
	F/f 2.4.85; ex YR-BRD (.86); Adria Airways 1.05.87; leased from TAROM 29.4.87, returned 01.11.88; YR-BRD, AP-BFD Aero Asia, wfu 2002.			
YU-ANU	Boeing 737-2K3	24139/1530	31.3.88	
	F/f 17.3.88; Aviogenex 31.3.88 "Tivat"; leased to Malaysia Airlines 1.11.88; Aviogenex 15.4.89; Malaysia 31.10.89; Aviogenex 26.3.90; Malaysia 1.11.90; Aviogenex 6.2.91; wfu 5.92-9.94; Transaero Airlines 2.10.96; Aviogenex 8.3.97; Chanchangi Airlines 20.4.97; destroyed 22.2.98 (fire on the ground), Kaduna aerodrome, Nigeria.			
YU-ANV	Boeing 737-3H9	24140/1524	21.3.88	
	F/f 7.3.88; JAT Belgrade 21.3.88; CoR 1539; Travel Service Airlines 19.6.01; JAT 2.11.01; JAT Airways 3.03; Aero Contractors of Nigeria 20.11.04; JAT Airways 1.10.05; Bellview Airlines 1.1.06; JAT Airways 9.06; Aero			
YU-ANW	Boeing 737-3H9	24141/1526	25.3.88	
	F/f 10.3.88; JAT 25.03.88; CoR 1540; leased to Tunisair as TS-IED 26.4.92; JAT YU-ANW 29.10.96; Air Afrique 2.99; Macedonian Airlines 15.11.02; JAT Airways 11.03; Cameroon Airlines 19.6.05; JAT Airways 6.9.05; active.			
YU-ANX	Boeing 737-281	20227/178	27.3.89	
	F/f 6.6.69; ex JA8402 (17.6.69), N1444Z (7.4.76), B-1872 (9.4.76), N503AV (17.8.87). Aviogenex YU-ANX 27.3.89 (leased from Aviation Sales Company - ASC); became: ASC N503AV 4.11.89 then COPA Airlines 1.7.90; stored 2.91, scrapped.			
YU-ANY	Boeing 737-281	20277/235	5.89	
	F/f 14.1.70; ex JA8405 (30.1.70), N1450Z (21.4.76), B-1874 (23.4.76), N505AV (26.9.88). Aviogenex YU-ANY 21.5.89 (leased from ASC); became: N505AV 4.11.89, OB-1511 9.9.92, P4-ARA 1.10.96, OB-1746 1.7.00, OB-1746-P 23.7.04, stored 4.05 at Lima.			
YU-ANZ	Boeing 737-2A9	20956/386	4.5.89	
	F/f 18.11.74; ex C-GTAQ (27.11.74), C6-BEK (1.4.82), C-GTAQ, N131AW (30.11.83), C-GVRD (13.12.88). Aviogenex lsd YU-ANZ 4.5.89; became:C-GVRD, HR-SHI 18.11.89, VT-EWA 4.92, OB-1544 29.8.93; OB-1544-P 15.5.02; dbr 13.12.03 (belly landing) at Lima			

To be continued . . .



Above: Boeing 737-281 YU-ANY was the first 737 to appear in the new JAT livery introduced in January 1994. The JAT title was soon increased in size - see YU-ANF in the previous issue. (JAT via O Petrovic)



Left: YU-ANP in the later Aviogenex livery and logo is today the company's only aircraft although many other examples have been leased (Aviogenex via O Petrovic)

The Development of Commercial Aviation in China

PART 15A

The Sino-British Air Transport Agreement of 1947

EDITED BY MARTIN S BEST,
CHINA HISTORY RESEARCH GROUP

Right: CNAC were operating the C-47 / DC-3 / Li-2 on internal routes in Nationalist China at the time of the 1947 discussions. The registration XT-115 would represent a C-47 of 1948 which defected to the PRC in 11.49 but is falsely applied to an Li-2 as seen at the Chinese Air Force Museum at Datang Shan. (Ian D Johnson collection)



Introduction

In the previous articles in this series, we have considered the airlines of mainland China without paying much attention to foreign airlines flying into China, with the notable exception of Pan American Airways, because of its association with China National Aviation Corporation (CNAC). In this article we consider the negotiation of a Sino-British Air Transport Agreement in 1947.

The British Government intended that this "Agreement should be in the standard Chicago form for Bilateral Agreements as amended from time to time to include the Bermuda principles, the most appropriate version in this case being SAM.3" [CO937/104/1 #60] We therefore need to explain what is meant by "the standard Chicago form" and "Bermuda principles" before discussing the negotiation and operation of this Agreement.

To set the background, we need to consider the International Civil Aviation Conference held in Chicago in 1944 and the bilateral Bermuda Conference in 1946. These two conferences are not discussed in much detail, as that would require two long, dedicated articles, but references are given to where more detail can be found. The Sino-American Air Transport Agreement, however, which preceded the Sino-British Agreement by a few months, is discussed in greater detail.

In Part 15B we will consider the operation of this agreement in the period between 1947 and 1949 up to the point where the Chinese Communist Government effectively took over control of air transport in mainland China.

Notes on sources

Information in this article has mostly been derived from three main groups of sources:

- (1) Files in the British National Archives (TNA) at Kew. (Some relevant files are listed below.)
- (2) Foreign Relations of the United States (FRUS), published for the United States Department of State by the U.S. Government Printing Office but now available as PDF files on a University of Wisconsin website at <http://digital.library.wisc.edu/1711.dl/>. (See List of references.)
- (3) Other sources, including books by R E G Davies and other websites, as listed in the List of References below.

Certain problems arise when using National Archives files. The first concerns inadequacies in compiling the online catalogue. The process for using identified files is to photograph all the pages of documents therein using a digital camera, which can lead to challenges in reading text in images, particularly where the original document is a carbon copy with print on both sides, and where the image is blurred. Some documents are in poor condition and text is missing or has not been deciphered in the original telegram. In comparison, there are no problems reading FRUS documents as PDF files.

Planning post-war international air transport

As World War 2 began to show signs of coming to an end, nations with an interest in civil aviation took steps to protect their interests when the flood of post-war services burst upon the intercontinental routes. Pan American's original trans-ocean routes had been negotiated with individual nations, each special case being the subject of some hard bargaining. But these circumstances would not necessarily apply on a world-wide scale.

The biggest possible challenge to American supremacy would have come from a united British Commonwealth policy, in which Canada, Australia, New Zealand, South Africa, and India jointly could control the world's air routes by manipulation of landing rights. Lord Beaverbrook, charged with preparing the way for post-war British civil aviation, called a conference of the British Dominions in London in October 1943. Hastily prepared, the conference broke up after two days in secret session and could only be judged a failure. Out of the ashes of this Dominions Conference, however, emerged for the first time the definition of what were subsequently to be known as the **Five Freedoms of the Air**.

These gave an international airline the right to:

1. Fly over a foreign territory.
2. Land for refuelling, repairs, or for non-commercial purposes.
3. Carry traffic from its home country destined for a foreign country.
4. Pick up traffic from a foreign country destined for the home country.
5. Pick up traffic from one foreign country and carry it to another foreign country.

[See also ICAO version below.]

There was another privilege, known as cabotage, which was the right of an airline to carry traffic from point to point wholly within one foreign country. This, however, was to be a rare situation in the post-war world and, in fact, less exploited than an additional Sixth Freedom, allowing an airline to achieve the coveted Fifth Freedom by an accident of geography. When its base was strategically situated en route between two traffic-generating points in different countries, a twenty-minute stop and change of flight number could combine the Third and Fourth Freedoms into one.

Conscious of its strength as the world's leading supplier of civil airliners and easily the world's biggest civil aviation power, the United States tended to adopt what was popularly known as the Open Skies policy. This was vigorously promoted by some politicians, notably Representative Clare Booth Luce. Mr L Welch Pogue, the chairman of the Civil Aeronautics Board (CAB), took a more moderate view.

Having digested innumerable reports and recommendations on the subject of air commerce, President Roosevelt held an important meeting at the White House on 11 November, 1943, in which he stated his views on U.S. civil aviation policy, which were partly influenced by discussions with Britain's Prime Minister, Winston Churchill. The main points were that:

1. None of the Axis Powers should participate in airline activity.
 2. Every country should control its own domestic air routes.
 3. Although Pan American was entitled to a senior place among United States overseas carriers, it was not entitled to a monopoly.
 4. Each U.S. carrier should have a designated sphere of operation.
 5. The government should not participate in airline ownership.
 6. Subsidies were justified where a route was needed for social or political reasons but could not pay its way commercially.
 7. There should be a free interchange of air and landing rights, except for routes wholly within the territory of another nation.
 8. There would have to be international discussion on the subject, preferably under the auspices of the United Nations.
- [See also FRUS, 1944, Vol. II, pp.360-362]

With this clear lead, diplomatic wheels began to turn and discussions were started between the United States and Britain, and many other nations joined in formal and informal talks. Pressure mounted to a point where the British were prepared to hold an international conference in London, and faced with this attempt to steal a psychological march, Adolf Berle, Roosevelt's assistant and air adviser in the Department of Commerce [sic], issued invitations to 54 nations to attend a civil aviation conference in Chicago. [Davies US pp.362-364]

On 28 September 1943, the Minister Counsellor of the Canadian Embassy in Washington (Lester B Pearson) gave the US State Department the following memorandum:

"1. On September 17th September the United Kingdom Government issued invitations to the other governments of the British Commonwealth to attend an informal and exploratory meeting in London on the subject of international air transport policy. The United Kingdom Government hopes that this meeting may be held early in October, and it is likely that a statement will be made shortly in the United Kingdom Parliament regarding it. Canada has accepted.

"2. Before the United Kingdom Government issued this invitation, the proposed Commonwealth conference was discussed between the United Kingdom Government and the Canadian Government. Both Governments agreed that it was desirable to discuss the matter with the United States Government in order to avoid any misunderstanding of the purpose and scope of the Commonwealth conference. Accordingly, Mr Churchill, when he was in Washington, discussed the matter with the President, who said that he saw no objection to such an exploratory Commonwealth conference being held.

"3. Mr Churchill also discussed with the President the possibility of some kind of international conference on air policy being held after the Commonwealth conference. The President said that a decision regarding an international conference should wait until the matter has been discussed at the forthcoming Anglo-Soviet-United States meeting [in Moscow, 18 October-1 November 1943].

"4. The Commonwealth meeting in London will be of a preliminary and exploratory nature. It is not expected that the Canadian representative will at this meeting support or reject any specific proposal on the organisation of international air transport after the war.

"5. Mr Churchill has informed the Canadian Government that he understands preliminary United States views on post-war international air transport to be as follows:

- (1) There should be private ownership.
- (2) Key points should be available for international use on reciprocal basis.
- (3) International traffic should be reserved to international companies.
- (4) Government support may be required on an international basis for certain non-paying routes."

The Empire air conversations in London were held on 10-13 October, 1943. (TNA files on this conference have not been reviewed.)

On 18 October 1943, Lord Beaverbrook (Lord Privy Seal) gave the US Ambassador in the UK the following (edited) message for Mr Harry Hopkins (Special Assistant to President Roosevelt):

"Conversations with Dominion representatives on civil aviation after the war have resulted in general agreement. We have not gone beyond exploratory and informative exchanges, and all decisions have been referred back to Dominion Governments. It is my hope that we may now enter into engagements with the United States Government at Washington and agree upon joint policy for international conference. After we get to know what USA and Great Britain will present, our Dominions will be asked to give approval. Do you think the time is now opportune and the situation favourable for swift agreement on broad lines relating only to international traffic and without going into any details of national operations? We would propose in such a conference to discuss operational agreements and also spheres of activity. I would be accompanied by [Lord] Leathers [Minister of War Transport], and [C D] Howe [Canadian Minister of Munitions and Supply] would join us to keep the Dominions in line with our decisions. The conference could be written down in public, if desired, to a confidential basis." [FRUS]

Although bilateral discussions started between the UK and US governments in 1943, the US government was keen to include Canada, China and the Soviet Union in these discussions during 1944. The other British self-governing Dominions (Australia, New Zealand and South Africa) didn't want Canada to be represented without them, which prompted the US government to say that, in which case, Brazil and Mexico should also be invited and there was a case for also including the French Committee of National Liberation, the Netherlands, and Belgium. This resulted in a list of 16 nations and the US government then anticipated demands from other states to be involved in these preliminary discussions before a full meeting of the United Nations could be called. The British government was anxious that bilateral disagreements between the UK and US should not be aired in the bigger forum and the solution to this 'chicken and egg' problem was for the US government to engage in bilateral discussions with the principal parties, namely Canada, the UK and the Soviet Union.

The Chicago Conference

The Chicago Conference began its first session on 1 November, 1944, and lasted until 7 December. It was attended by the top men from all the leading civil air powers. The United States delegation, led by A A Berle, Jr (Assistant Secretary of State), and the British party, led by Lord Swinton, became antagonists in a complicated exercise in transport economics, international law, and practical necessity. The USA found itself in a minority and was unable to press its Open Skies policy. The problem was that neither side had considered the arguments in sufficient depth. The US was inclined to regard Europe as a single political entity when it came to exchanging traffic rights, and, by demanding access to all countries indiscriminately, laid itself open to the British and other requests that European airlines should be granted wider access to US cities.

Ultimately, after much bickering, the Chicago Conference produced some limited agreement on the Freedoms of the Air, involving what was known as the Transit Agreement, covering the right to over-fly and to alight for non-commercial purposes at airports in foreign countries. The Conference also produced several documents, the most important being the International Convention on Civil Aviation, which provided for the establishment of an International Civil Aviation Organisation (ICAO). [Davies US pp.364-367]

The documents signed at Chicago on 7 December 1944 comprised the four conventions and twelve resolutions and recommendations known as the Final Act of the Conference. The four agreements included a general convention on international civil aviation (TIAS 1591); an

interim agreement (EAS 469); an international air services transit agreement (EAS 487); and an international air transport agreement (EAS 488).

US State Department papers on the Chicago Conference are included in FRUS paper "Preliminary and Exploratory Discussions regarding International Civil Aviation; Conference held at Chicago, November 1-December 7, 1944", Foreign relations of the United States diplomatic papers, 1944. General: economic and social matters (1944), Volume II, pp. 355-613. The US State Department sent a draft of relevant papers to the Foreign Office in 1964 asking for their agreement to publication, which was given in 1965. [BT 245/914 #339A]

British preparations for the Chicago Conference are in TNA file BT 245/914. This does not include the proceedings of the conference, which may be included in BT 11/2565, BT 217/87 and/or FO 954/2. (CO 937/32/16 was reported missing in February 2005.)

The Chicago Convention

As a result of a Conference held at Chicago from 1 November to 7 December 1944, in which the nations battled their way towards an agreed compromise between 'Open Skies' (advocated by the United States of America) and national sovereignty of airspace, the International Civil Aviation Organisation (ICAO) was born. A 'provisional' prefix, resulting in the temporary title of PICAO, was dropped in 1946 when the fifty-second contracting state signed the Convention, and by 1961 there were ninety-two member states, including virtually every country in the world except the USSR and the People's Republic of China.

The Convention on International Civil Aviation, also known as the Chicago Convention, established ICAO, a specialised agency of the United Nations charged with coordinating and regulating international air travel. The Convention establishes rules of airspace, aircraft registration and safety, and details the rights of the signatories in relation to air travel. The Convention also exempts air fuels from tax.

The document was signed on 7 December 1944 in Chicago, Illinois, by 52 signatory states. It received the requisite 26th ratification on 5 March 1947 and went into effect on 4 April 1947, the same date that ICAO came into being. In October 1947 ICAO became a specialised agency of the United Nations Economic and Social Council (ECOSOC). The Convention has since been revised eight times (in 1959, 1963, 1969, 1975, 1980, 1997, 2000 and 2006).

ICAO is responsible for the strict regulation of safety standards, airworthiness requirements, airfield standards, navigational control, meteorological services, international air maps and charts, and a host of other essential adjuncts to a smooth-working international transport system. [Davies OUP p.426]

The original version of the Convention (61 pages, including signatures) is available as a PDF file at:
http://legacy.icao.int/icaonet/arch/doc/7300/7300_orig.pdf

Main articles

Some important articles of the Convention (ICAO document 7300) are:

Article 1: Every state has complete and exclusive sovereignty over airspace above its territory.

Article 5: (Non-scheduled flights over State's Territory): The aircraft of states, other than scheduled international air services, have the right to make flights across state's territories and to make stops without obtaining prior permission. However, the state may require the aircraft to make a landing.

Article 6: (Scheduled air services): No scheduled international air service may be operated over or into the territory of a contracting State, except with the special permission or other authorisation of that State.

Article 10: (Landing at customs airports): The State can require that landing to be at a designated customs airport and similarly departure from the territory can be required to be from a designated customs airport.

Article 12: Each state shall keep its own rules of the air as uniform as possible with those established under the convention, the duty to ensure compliance with these rules rests with the contracting state.

Article 13: (Entry and Clearance Regulations): A state's laws and regulations regarding the admission and departure of passengers, crew or cargo from aircraft shall be complied with on arrival, upon departure and whilst within the territory of that state.

Article 16: The authorities of each state shall have the right to search the aircraft of other states on landing or departure, without unreasonable delay.

Article 24: Aircraft flying to, from or across, the territory of a state shall be admitted temporarily free of duty. Fuel, oil, spare parts, regular equipment and aircraft stores retained on board are also exempt customs duty, inspection fees or similar charges.

Article 29: Before an international flight, the pilot in command must ensure that the aircraft is airworthy, duly registered and that the relevant certificates are on board the aircraft. The required documents are: Certificate of Registration; Certificate of Airworthiness; Passenger names, place of boarding and destination; Crew licences; Journey Logbook; Radio Licence; Cargo manifest.

Article 30: The aircraft of a state flying in or over the territory of another state shall only carry radios licensed and used in accordance with the regulations of the state in which the aircraft is registered. The radios may only be used by members of the flight crew suitably licensed by the state in which the aircraft is registered.

Article 32: The pilot and crew of every aircraft engaged in international aviation must have certificates of competency and licensed issued or validated by the state in which the aircraft is registered.

Article 33: (Recognition of Certificates and Licences) Certificates of Airworthiness, certificates of competency and licensed issued or validated by the state in which the aircraft is registered, shall be recognised as valid by other states. The requirements for issue of those Certificates of Airworthiness, certificates of competency or licences must be equal to or above the minimum standards established by the Convention.

Article 40: No aircraft or personnel with endorsed licenses or certificate will engage in international navigation except with the permission of the state or states whose territory is entered. Any license holder who does not satisfy international standard relating to that license or certificate shall have attached to or endorsed on that license information regarding the particulars in which he does not satisfy those standards." [Wikipedia]

CAB decisions

A great deal of wrangling ensued on Capitol Hill when the documents signed by the United States delegates went up for ratification. Discussion revolved around the issue of whether the rights of foreign carriers should be decided by treaty or by executive agreement, i.e. by the President signing international contracts without consent of the Senate, in the interests of speed, safety, or secrecy. This appeared to conflict with the Civil Aeronautics Act of 1938, which stated that foreign carriers should obtain a permit from the CAB. Eventually, the articulate L Welch Pogue clarified the matter by distinguishing between the State Department, which gave permission to a foreign country to allow one of its operators to land in the United States, and the CAB, which prescribed standards of operation.

Finally, after weighing all the evidence, the CAB made its decision. On 14 June 1944, it announced that it would receive applications for international route certificates from interested promoters. On 7 February, members of the Committee announced that it favoured the principle of competition and the CAB settled down to the formidable task of allocating the world's air routes to the entire United States airline industry on a fair and equitable basis.

The CAB designated five specific areas, three Pacific and two Atlantic, with the division point at Calcutta. The subsequent hearings were called the North, Central, and South Pacific; and the North and South Atlantic Cases. By far the most important was the North Atlantic.

The CAB made its decision on 1 June, 1945, announcing that both American Export Airlines and Trans World Airlines (TWA) would be granted the right to join Pan American on the North Atlantic for a period of seven years.

On 1 August, 1946, the CAB awarded to TWA an extension of its route through southern Asia to Shanghai, where by connecting with Northwest Airlines' new route across the Pacific it could theoretically offer a round-the-world service to the travelling public. [Davies US pp.364-368]

Formation of the International Air Transport Association

When the CAB took its Atlantic decision on 1 June, 1945, this was made unilaterally in the sense that the Board had neither the authority over foreign landing rights nor of routes over foreign territory. True, the Chicago Conference had achieved some limited objective in this direction, but the whole framework of international civil air rights was as yet only loosely visualised. But the whole world recognised that the airline business was about to expand phenomenally and that international regulation was essential.

The first step was to form the International Air Transport Association (IATA), to be a voluntary organisation whose main purpose would be to prevent airlines from practising unethical methods in rates and scheduling. In general the principle was to protect the weak from the strong, who might be tempted to try bullying methods, for example by flooding a route with excessive capacity to dilute a competitor's traffic, or by setting uneconomic rates on certain routes which could be cross-subsidised only by the larger airlines. On the other hand, the authority vested in IATA to control rates on a world-wide scale laid it open to charges of cartel methods, and throughout its history the Association has had to watch carefully that its decisions could not be regarded as disreputable on this account.

Whatever the shortcomings, an organisation of this kind was obviously necessary, and at a three-day conference held in Havana in April 1945, 41 airlines of 25 nations signed the original articles of association. Many more airlines quickly joined and soon most nations were represented. Headquarters were established at Montreal, close to PICAQ, the provisional predecessor of ICAO, now getting under way.

Throughout the period immediately following the end of World War 2, there was undoubtedly a fear on the part of every nation that the United States would exert its powerful air transport strength to acquire world dominance. Only control or regulation of some kind could stop this happening. The world's civil air transport systems had broken down or suffered greatly during the hostilities. Most of Europe had been laid waste and re-establishment of an airline system was only one of many vast post-war reconstruction programmes.

When the war ended, the four-engined Douglas and Lockheed airliners were so in advance of possible European development that US airlines could call the competitive tune and the best the European airlines could do was to take their turn in placing orders for US types until such time as their own battered aircraft industries were able to make up lost ground. [Davies US pp.369-370]

The Bermuda Agreement

Britain, potentially the biggest rival to the United States, was representative of Europe's attitude as a whole. Its support of the general objectives of the new IATA on fares and rates epitomised the apprehension common to almost every non-U.S. airline nation of a possible rate war. Pan American threw down the gauntlet on what it interpreted as restriction by an international cartel by announcing, late in 1945, that it would reduce the transatlantic one-way fare from \$375 to \$275. This brought the issue into the open and there followed a period during which the British and the Americans indulged in some unsavoury bargaining on frequency and service. On 30 November, 1945, Pan American gave way on fares and had to accept a half-share of an agreed ten frequencies a week which Britain considered was a reasonable post-war starting point.

Dissatisfaction with this arrangement, however, led to the two sides coming together in an attempt to work out a more permanent solution of the principles of rate-setting and frequency allocation. The United States and Great Britain met at Bermuda and signed a document on 11 February, 1946, which, with refinements, has since become a model for bilateral air agreements throughout the world.

The clauses of the Bermuda Agreement were, mainly, that:

1. Routes were mutually allocated by common consent on the basis of a fair exchange.
2. IATA would set rates, (a concession by the U.S.A.).



3. Fifth Freedom rights were exchanged, again on the basis of a fair exchange, (a concession by Britain).
4. Frequencies should be unlimited but subject to control by the two governments, to prevent abuse, (a concession by Britain).

Although Britain appears to have made major concessions, it did win the battle against unlimited competition which the United States airlines would undoubtedly have ruthlessly applied, given half a chance.

Examples of the exchange of routes were the British right to offer service from New York to Australia via San Francisco, and the U.S. right to offer service from London to certain points in Europe, such as Frankfurt and Rome. The British could use Hawaii, the U.S. gained access to Singapore. Later review revealed some loopholes and shortcomings, but the basic principles established at Bermuda were sound. Indeed, France lost no time in following Britain's example, and signed a Bermuda-type agreement on 27 March, 1946. Others followed, although some countries, notably Australia and India, were in no hurry. The Bermuda document was confirmed as a valid and legal contract by Attorney General Tom Clark on 18 June, 1946. [Davies US pp.370-371]

American correspondence connected with the Bermuda Conference is given in FRUS document "United States Policy with Respect to International Civil Aviation Questions: the Bermuda Conference and Related Developments." British correspondence is given in TNA files FO 371/54493 to 54516 (1946) and also FO 371/54463 to 54467 with regard to the commercial use of leased air bases (a particularly thorny problem during the negotiations in Bermuda). See also BT 245/911: "Bermuda Conference, 1946". The Bermuda Agreement was published in the UK as Cmd. 6747 and is online at <http://www.aviation.go.th/air-trans/airlaw/us-uk.html>.

Freedoms of the air

The freedoms of the air are a set of commercial aviation rights granting a country's airlines the privilege to enter and land in another country's airspace. Formulated as a result of disagreements over the extent of aviation liberalisation in the Convention on International Civil Aviation of 1944 (the Chicago Convention) the United States had called for a standard set of separate air rights which may be negotiated between states but most other countries involved were concerned that the size of the U.S. airlines would dominate all world air travel if there were not strict rules.

The Convention was successful in drawing up a multilateral agreement in which the first two freedoms, known as the International Air Services Transit Agreement (IASTA), or "Two Freedoms Agreement" were open to all signatories. As of the summer of 2007, the treaty is accepted by 129 countries.

While it was agreed that the third to fifth freedoms shall be negotiated between states, the International Air Transport Agreement (or the "Five Freedoms Agreement") was also opened for signatures, encompassing the first five freedoms.

Several other freedoms have been added since, although most are not officially recognised under international bilateral treaties they have been agreed by a number of countries; for example, Aer Lingus had fifth freedom rights through Manchester to various European destinations prior to EU liberalisation and Pan American had rights through London for many years. The first five freedoms are explained below.

First freedom: the right or privilege, in respect of scheduled international air services, granted by one State to another State or States, to fly across its territory without landing.

Second freedom the right or privilege, in respect of scheduled international air services, granted by one State to another State or States, to land in its territory for non-traffic purposes.

Third freedom the right or privilege, in respect of scheduled international air services, granted by one State to another State, to put down, in the territory of the first State, traffic coming from the home State of the carrier.

Fourth freedom the right or privilege, in respect of scheduled international air services, granted by one State to another State, to take on, in the territory of the first State, traffic destined for the home State of the carrier.

Fifth freedom the right or privilege, in respect of scheduled international air services, granted by one State to another State, to put down and take on, in the territory of the first state, traffic coming from or destined to a third State.

[ICAO FAQ, Doc 9626, Part 4]

Air transport agreement between China and the USA

A bilateral air transport agreement between the Republic of China and the United States of America was signed on 20 December 1946. This was based on the Chicago standard form and incorporated the principles of the Bermuda Final Act. It included lengthy rate provisions.

This agreement was negotiated on behalf of the USA by Bolling Powell of the State Departments Office of Transport and Communications Policy between August and December 1946. Details of the negotiations are included in FRUS document "Negotiation of Civil Air Transport Agreement between the United States and China signed at Nanking, December 20, 1946", Foreign Relations, 1946, Volume X, pages 1228 to 1260 (see list of references below).

The agreement was signed for the two Governments by American Ambassador J. Leighton Stuart and Chinese Foreign Minister Wang Shih-chieh. Mr. Bolling R. Powell from the Department of State also assisted the Embassy at Nanking in the negotiation.

"AIR TRANSPORT AGREEMENT BETWEEN THE GOVERNMENT OF THE UNITED STATES OF AMERICA AND THE GOVERNMENT OF THE REPUBLIC OF CHINA

Having in mind the resolution of December 7, 1944, at the International Civil Aviation Conference in Chicago, Illinois, for the adoption of a standard form of agreement for provisional air routes and services, and the desirability of mutually stimulating and promoting the sound economic development of air transportation between the United States of America and the Republic of China, the two Governments parties to this agreement agree that the establishment and development of air transport services between their respective territories shall be governed by the following provisions.

Article 1. The contracting parties grant the rights specified in the Annex hereto necessary for establishing the international civil air routes and services therein described, whether such services be inaugurated immediately or at a later date at the option of the contracting party to whom the rights are granted.

Article 2 (a). Each of the air services so described shall be placed in operation as soon as the contracting party to whom the right has been granted by Article 1 to designate an airline or airlines for the route concerned and authorised an airline for such route, and the contracting party granting the right shall, subject to Article 7 hereof, be bound to give the appropriate operating permission to the airlines or airlines concerned; provided that the airline so designated may be required to qualify before the competent aeronautical authorities of the contracting party granting the rights under the laws and regulations normally applied by these authorities before being permitted to engage in the operations contemplated by this Agreement; and provided that in areas of hostilities or of military occupation, or in areas affected thereby, such inaugurating shall be subject to the approval of the competent military authorities.

(b). It is understood that the contracting parties should undertake to exercise the commercial rights granted under this agreement at the earliest practicable date except in the case if temporary inability to do so.

Article 3. Operating rights which may have been granted previously by either of the contracting parties to any State not a party to this agreement or to an airline shall continue in force according to their terms.

Article 4. In order to prevent discriminatory practices and to ensure equality of treatment, it is agreed that:

(a) Each of the contracting parties may impose or permit to be imposed just and reasonable charges for the use of airports and other facilities. Each of the contracting parties agrees, however, that these charges shall not be higher than those which would be paid for the use of such airports and facilities by the national aircraft engaged in similar international services.

(b) Fuel, lubricating oils and spare parts introduced into the territory of one contracting party by the other contracting party or its nationals and intended solely for use by aircraft of such other contracting party shall be accorded national and most-favored-nation treatment with respect to the imposition of customs duties, inspection fees or other national duties or charges by the contracting party whose territory is entered.

(c) The fuels, lubricating oils, spare parts, regular equipment and aircraft spares on board civil aircraft of the airlines of one contracting party authorized to operate the routes and services described in the Annex shall upon arriving in or leaving the territory of the other contracting party, be exempt from customs, inspection fees or similar duties or charges, even though such supplies be used or consumed by such aircraft on flights in that territory.

Article 5. Certificates of airworthiness, certificates of competency and licenses issued or rendered valid by one contracting party shall be recognised as valid by the other contracting party for the purpose of operating the routes and services described in the Annex. Each contracting party reserves the right, however, to refuse to recognise, for the purpose of flight above its own territory, certificates of competence and licenses granted to its own nationals by another State.

Article 6 (a) The laws and regulations of one contracting party relating to the admission to or departure from its territory of aircraft engaged in international air navigation, or to the operation and navigation of such aircraft while within its territory, shall be applied to the aircraft of the other contracting party without distinction as to nationality, and shall be complied with by such aircraft upon entering or departing from or while within the territory of the contracting party.

(b) The laws and regulations of one contracting party as to the admission to or departure from its territory of passengers, crew, or cargo of aircraft, such as regulations relating to entry, clearance, immigration, passports, customs, and quarantine shall be complied with by or on behalf of such passengers, crew, or cargo of the aircraft of the other contracting party upon entrance into or departure from or while within the territory of that contracting party.

Article 7. Substantial ownership and effective control of airlines of each contracting party authorised under the Agreement shall be vested in nationals of that contracting party. Each contracting party reserves the right to withhold or revoke the certificate or permit of any airline of the other contracting party in case of failure of such airline to comply with the laws of the State over which it operates, as described in Article 6 hereof, or otherwise to fulfil the conditions under which the rights are granted in accordance with this Agreement and its Annex.

Article 8. This Agreement and all contracts connected therewith shall be registered with the Provisional International Civil Aviation Organization, or its successor.

Article 9. Except as otherwise provided in this Agreement or in its Annex, any dispute between the contracting parties relating to the interpretation or application of this Agreement be referred, for an advisory report, to the Interim Council of the Provisional International Civil Aviation Organization (in accordance with the provisions of Article III, Section 6(8) of the Interim Agreement on International Civil Aviation signed at Chicago on December 7, 1944) or its successor.

Article 10. For the purposes of this Agreement and its Annex, unless the context otherwise requires:

(a) The term "aeronautical authorities" shall mean, in the case of the Republic of China, the Minister of Communications for the time being, and any person or body authorized to perform any functions presently exercised by the said Minister or similar functions, and, in the case of the United States of America, the Civil Aeronautics Board and any person or body authorized to perform the functions presently exercised by the Board or similar functions.

(b) The term "designated airline" shall mean the air transport enterpris-

es which the aeronautical authorities of one of the contracting parties have notified in writing to the aeronautical authorities of the other contracting party as the airlines designated by it in accordance with paragraph (a) of Article 2 of this Agreement for the routes specified in such notification.

(c) The term "territory" shall have the meaning assigned to it by Article 2 of the Convention on International Civil Aviation signed at Chicago on December 7, 1944.

(d) The definitions contained in paragraph (a), (b) and (d) of Article 96 of the Convention on International Civil Aviation signed at Chicago on December 7, 1944 shall apply.

Article 11. In the event either of the contracting parties consider it desirable to modify the routes or conditions set forth in the attached Annex, it may request consultation between the competent aeronautical authorities of both contracting parties, such consultation to begin within a period of 60 days from the date of the request. When these authorities mutually agree on new or revised conditions affecting the Annex, their recommendations on the matter will come into affect after they have been confirmed by an exchange of diplomatic notes.

Article 12. This Agreement shall continue in force for a period of four years or until it may be superseded in order to conform with a general multilateral air transport convention which may enter into force in relation to both contracting parties. Upon the expiration of this Agreement its renewal for additional periods of time to be agreed upon may be effected by an exchange of diplomatic notes. It is understood and agreed, however, that this Agreement may be terminated by either contracting party upon giving one year's notice to the other contracting party. Such notice may be given at any time after a period of two months to allow for consultation between the contracting parties.

Article 13. This Agreement, including the provisions of the Annex hereto, will come into force on the day it is signed.

Done in duplicate, in the English and Chinese languages, both equally authentic, at Nanking, this 20th day of December, one thousand nine hundred and forty six, corresponding to the 20th day of the twelfth month of the thirty-fifth year of the Republic of China.

For the Government of the United States of America:
J. LEIGHTON STUART

For the Government of the Republic of China:
WANG SHIH-CHIEH

ANNEX

A. Airlines of the United States authorised under the present Agreement are accorded rights of transit and non-traffic stop in Chinese territory, as well as the right to pick up and discharge international traffic in passengers, cargo and mail at Shanghai, Tientsin, and Canton, as well as at such additional points as may be agreed upon from time to time, on the following routes, via intermediate points in both directions.

1. The United States over a Pacific route to Tientsin and Shanghai and thence to the Philippine Islands and beyond, as well as beyond Shanghai via Route No. 3 described below.
2. The United States over a Pacific route to Shanghai and Canton and beyond.
3. The United States over an Atlantic route via intermediate pints in Europe, Africa, and the Near East, India, Burma and Indo-China to Canton and Shanghai and beyond.

On each of the above routes the airline authorized to operate such routes may operate non-stop flights between any of the points on such route omitting stops at one or more of the other points on such route.

B. Airlines of China authorized under the present Agreement are accorded rights of transit and non-traffic stop in the territory of the United States, as well as the right to pick up and discharge international traffic in passengers, cargo and mail at San Francisco, New York, and Honolulu, as well as at such additional points as may be agreed upon from time to time, on the following routes, via intermediate points in both directions:

1. China over a Pacific route via Tokyo, Kurile Islands, the Aleutian Islands and Alaska to San Francisco and beyond.
2. China over a Pacific route via the intermediate points of Manila, Guam, Wake, and Honolulu to San Francisco and beyond.
3. China over an Atlantic route via intermediate points in Indo-China, Burma, India, the Near East, Africa and Europe to New York and beyond.

On each of the above routes the airline authorized to operate such route may operated non-stop flights between any of the points on such route omitting stops at one or more of the other points on such route.

C. In the operation of the air services authorized under this Agreement, both contracting parties agree to the following principles and objectives:

1. Fair and equal opportunity for the airlines of each contracting party to operate air services on international routes, and the creation of machinery to obviate unfair competition by unjustifiable increases of frequencies or capacity;
2. The elimination of formulae for the predetermination of frequencies or capacity or of any arbitrary division of air traffic between countries and their national airlines;
3. The adjustment of fifth freedom traffic with regard to:
 - (a) Traffic requirements between the country of origin and the countries of destination;
 - (b) The requirements of through airline operation;
 - (c) The traffic requirements of the area through which the airline passes after taking account of local and regional services.

D. 1. Rates to be charged by the air carriers of either contracting party between points in the territory of the United States and points in the territory of China referred to in this Annex shall be subject to the approval of the contracting parties within their respective constitutional powers and obligations. In the event of disagreement the matter in dispute shall be handled as provided below.

2. The Civil Aeronautics Board of the United States having announced its intention to approve the rate conference machinery of the International Air Transport Association (hereinafter called "IATA"), as submitted, for a period of one year beginning in February 1946, any rate agreements concluded through this machinery during this period and involving United States air carriers will be subject to approval by the Board.

3. Any new rate proposed by the air carrier or carriers of either contracting party shall be filed with the aeronautical authorities of both contracting parties at least thirty days before the proposed date of introduction, provided that this period of thirty days may be reduced in particular cases if so agreed by the aeronautical authorities of both contracting parties.

4. The contracting parties hereby agree that where:

- (a) during the period of the Board's approval of the IATA rate conference machinery, either any specific rate agreement is not approved within a reasonable time by either contracting party or a conference of IATA is unable to agree on a rate, or
- (b) at any time no IATA machinery is applicable, or
- (c) either contracting party at any time withdraws or fails to renew its approval of that part of the IATA rate conference machinery relevant to this provision,

the procedure described in paragraphs 5, 6, and 7 hereof shall apply.

5. In the event that power is conferred by law upon the aeronautical authorities of the United States to fix fair and economic rates for the transport of persons and property by air on international services and to suspend proposed rates in a manner comparable to that in which the Civil Aeronautics Board at present is empowered to act with respect to such rates for the transport of persons and property by air within the United States, each of the contracting parties shall thereafter exercise its authority in such manner as to prevent any rate or rates proposed by one of the carriers for services from the territory of one contracting party to a point or points in the territory of the other contracting party from becoming effective, if in the judgment of the aeronautical authorities of the contracting party whose air carrier or carriers is or are proposing such rate, that rate is unfair or unacceptable. If one of the contracting

parties on receipt of the notification referred to in paragraph 3 above is dissatisfied with the new rate proposed by the air carrier or carriers of the other contracting party, it shall so notify the other contracting party prior to the expiry of the first fifteen of the thirty days referred to, and the contracting parties shall endeavour to reach agreement on the appropriate rate. In the event that such agreement is reached each contracting party will exercise its statutory powers to give effect to such agreement. If agreement has not been reached at the end of the thirty day period referred to in paragraph 3 above, the proposed rate may, unless the aeronautical authorities of the country of the air carrier concerned see fit to suspend its operation, go into effect provisionally pending this settlement of any dispute in accordance with the procedure outlined in paragraph 7 below.

6. Prior to the time when such power may be conferred by law upon the aeronautical authorities of the United States, if one of the contracting parties is dissatisfied with any new rate proposed by the air carrier or carriers of either contracting party for services from the territory of one contracting party to a point or points in the territory of the other contracting party, it shall so notify the other prior to the expiry of it shall so notify the other prior to the expiry of the first fifteen of the thirty day period referred to in paragraph 3 above, and the contracting parties shall endeavour to reach agreement or the appropriate rate. In the event that such agreement is reached each contracting party will use its best efforts to cause such agreed rate to be put into effect by its air carrier or carriers. It is recognised that if no such agreement can be reached prior to the expiry of such thirty days, the contracting party raising the objection to the rate may take such steps as it may consider necessary to prevent the inauguration or continuation of the service in question at the rate complained of.

7. When in any case under paragraph 5 and 6 above the aeronautical authorities of the two contracting parties cannot agree within a reasonable time upon the appropriate rate after consultation initiated by the complaint of one contracting party concerning the proposed rate or an existing rate of the air carrier or carriers of the other contracting party, upon the request of either, both contracting parties shall submit the question to the Provisional International Civil Aviation Organisation or to its successor for an advisory report, and each party will use its best efforts under the powers available to it to put into effect the opinion expressed in such report.

8. The rates to be agreed in accordance with the above paragraphs shall be fixed at reasonable levels, due regard being paid to all relevant factors, such as cost of operation, reasonable profit and the rates charged by other air carriers.

9. The Executive Branch of the Government of the United States agrees to use its best efforts to secure legislation empowering the aeronautical authorities of the United States to fix fair and economic rates for the transport of persons and property by air on international services and to suspend proposed rates in a manner comparable to that in which the Civil Aeronautics Board at present is empowered to act with respect to such rates for the transport of persons and property by air within the United States."

Copies of the Air Transport Agreement between China and the USA are included in TNA file FO 371/65494, dossiers W343 (carbon copy) and W405 (with press release). A copy of the US Agreement with the Philippines is included in TNA file FO 371/54587, dossier W11408.

After the bilateral Sino-British Air Transport Agreement had been signed in 1947, the Chinese asked the Americans to renegotiate their agreement. We will discuss this subject in Part 15B.

Debrief in Washington

The following is the edited text of a telegram from the British Embassy in Washington (No.7191) dated 18th December, 1946:

"Assistant Civil Air Attaché has had long conversation with Bolling Powell, State Department, who has just returned, having negotiated bilateral agreements at Nanking and Manila." [Text for Manila not included here.]

"In Nanking negotiations were opened with Liu Chieh, Vice Minister for Foreign Affairs, who passed Powell on to General David Ta-Wui, Minister of Communications, and negotiations were carried on with three of his advisers, Dr Li Ching-lu, Director of Navigation and Civil Aviation Department, Mr Yuan Chao-wu, Assistant Director and Mr

Andrew S F Lin Adviser to Minister of Communications. The latter two spoke English but Powell described all three as "dignified flunkies who had no authority and knew nothing of aviation". Any decisions had to be referred to T V Soong and finally to the Generalissimo for approval.

"General Chon Chiah-je commanding Chinese Air Force, was described as a fly in the ointment. All "improved" air ports are under air force control and Chon is attempting to use this to gain full control of civil aviation. He recommended that the Government enter into no (repeat no) aviation agreements with foreign Governments, in the hopes of using air fields as bargaining points with foreign Governments himself. He was over-ruled by the Generalissimo.

"Regarding routes Manchuria is definitely out. The three air lines, C.A.T.C., C.N.A.C. and Sino-Soviet, are evidently all considered part of Ministry of Communications. C.A.T.C. will fly North Pacific route, and C.N.A.C. will fly Central Pacific and European routes.

"Powell suggests that the Chinese will try and obtain large loan from us for improving aviation, and will ask to include whole Empire in the agreement. He thinks that loan plus help on Indian-European route can be used by us as bargaining points for an agreement as we want it.

"Anyway Cave and Peterson accompanied Powell to dispose of surplus property in China. Powell insists that temporary acting rank of Minister is essential in Nanking. He was greatly handicapped by his rank, and all United States negotiators are now receiving this rank for negotiations.

"Text of United States-Chinese agreement will be released in next few days and will be sent by air bag." [BT 245/656]

State Department papers on the negotiation of the civil air transport agreement between the United States and China, signed at Nanking on 20 December 1946, are included in FRUS, 1946. The Far East: China, Volume X, pp.1228-1260 (<http://digital.library.wisc.edu/1711.dl/FRUS.FRUS1946v10>)

Negotiation of the Sino-British Air Transport Agreement

Preparations

In preparation for the negotiations, a meeting was held in London to consider the terms to be included in the draft Bilateral Agreement with China. The meeting was attended by representatives of the Ministry of Civil Aviation, BOAC and the Colonial Office. [The date of the meeting is not given in the minutes but was probably in mid December 1946.]

"Record of a Meeting for the purpose of considering terms to be included in draft Bilateral Agreement with China.

Present: Mr Ratcliffe Cousins P.1 (Chairman)
Mr Irwin P.2
Mr Maxwell B.O.A.C.
Miss Ruston } Colonial Office
Mr Farmer }

The Agreement should be in the standard Chicago form for Bilateral Agreements as amended from time to time to include the Bermuda principles, the most appropriate version in this case being SAM.3. [SAM.3 is a generic template with no routes specified.]

Rights Required by British Airlines:

A. U.K. AIRLINES

(1) Trunk Route. The trunk route would run from the U.K. via intermediate points to Europe, Africa and Asia to Hong Kong and thence to Shanghai and Tokyo. On the assumption that no suitable airfield will be available in Hong Kong for a number of years Canton would be required but can be omitted when Hong Kong is available. This would be for landplanes. Flying Boat services would not need to use Canton.

The service would require both terminal and transit rights at Canton and Shanghai, and all Five Freedoms at both.

(2) The South China Seas Circular Route does not touch anywhere in Chinese territory, and would require only the First Freedom in Chinese territory between Hanoi and Hong Kong.

(3) BOAC are hoping to be allowed to operate a number of local routes based on the U.K., and fanning out from Hong Kong in different directions across Chinese territory, and hope to get not only all Five Freedoms on these routes but cabotage also, and contracts to carry the mails. They, however, realise that these concessions may not be obtainable at once, or indeed at all, and have stated that they are prepared to operate the following routes irrespective of the grant of cabotage or mail contracts. The routes, arranged in order of priority, are:-

- (i) Hong Kong – Canton – Macao.
- (ii) Hong Kong – Swatow – Amoy – Foochow – Shanghai/Nanking – Tsing Tao – Peking.
- (iii) Hong Kong – Hankow – with an intermediate non-traffic stop.

BOAC wish to regard all these routes as originating in the United Kingdom, and to have all Five Freedoms even if cabotage is not permitted. They do not wish to regard the services as originating in Hong Kong, because they might wish to carry passengers from intermediate points between the United Kingdom and Hong Kong, e.g. from Cairo for Amoy or Peking, or vice versa, and they apprehend that their rights to do so might be limited if the services were regarded as based upon Hong Kong. There would be a change of gauge at Hong Kong and also a fanning out of services, but since this change takes place in U.K. territory it can be argued that the Chinese can have no cause to object to it.

Mr Maxwell for BOAC admitted that the programme sketched above, even without cabotage, might be difficult to obtain from the Chinese, and for that reason the routes had been arranged in order of priority so that if the whole could not be obtained, at least the most necessary can be arranged. He was anxious to know the terms of the U.S.A. Agreement with China as he felt that we should not be likely to obtain anything better for ourselves.

The schedule furnished by BOAC at 29B included a number of routes based on Malaya. It was pointed out that there might be considerable difficulties in getting the Chinese to agree to such a vastly extended series of services, and that it was really not necessary, since there would be considerable hardship if traffic from Singapore had to be re-booked (it would inevitably have to be transhipped) at Hong Kong for points in China, particularly since it now seemed unlikely that BOAC would be interested in any local service based on Malaya. Mr Maxwell agreed, subject to confirmation from his superiors that the routes mentioned under headings 4 and 5 of the schedule should be omitted from consideration. ["29B" is probably a document number in TNA/MCA file BT 245/567, "Suggested routes in connection with bilateral agreement negotiations with China," 11.12.46.]

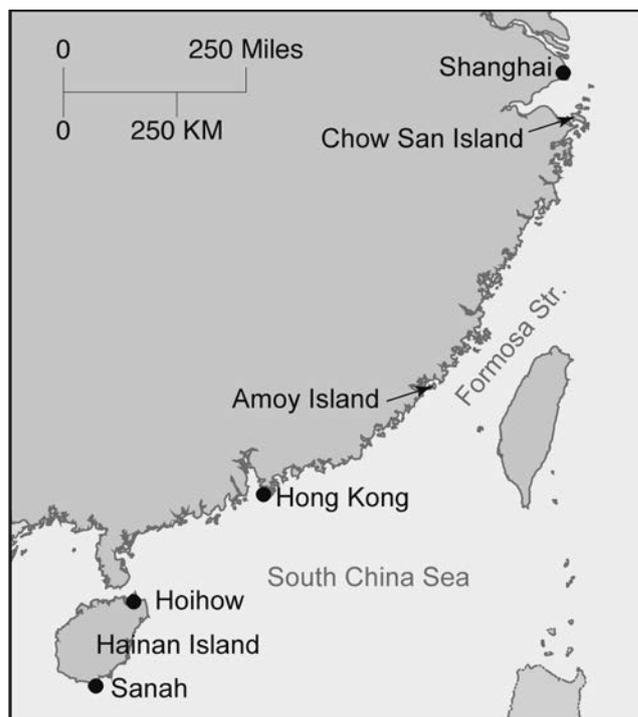
B. COLONIAL REQUIREMENTS

The Chairman pointed out that the ideas of the Hong Kong Government on the operation of air services appeared to be based on the conception of Hong Kong as a free airport open to all, and so far not only had they permitted a very large number of operators from China and the Philippines to operate services to Hong Kong, but they were apparently prepared to regard Cathay Pacific Airlines, a company formed by an American operator in Hong Kong, without apparently any local subscription of capital, as a representative Hong Kong company for the purpose of exchange of reciprocal rights with other countries. It is pointed out that although, on a reciprocal basis, it would clearly be necessary to permit outside operators to come into Hong Kong, there was a danger that if a number of locally registered but foreign controlled companies were set up in Hong Kong, there might be serious prejudice to the formation of a genuine local airline, such as BOAC have in contemplation. The Colonial Office representative stated that they had insufficient information as to the ideas and intentions of the Hong Kong Government in regard to local services, but the Secretary in charge of Aviation with the Hong Kong Government was in the country and would be available for discussions with this Ministry during the first week in January. The Chairman said that he hoped the Colonial Office and the representative of the Hong Kong Government would formulate their views and if it was considered that a meeting could usefully be arranged this would be done.

It was noted that China has not signed the Transit Agreement, and that consequently it would be necessary to secure the incorporation of its provisions in any Bilateral Agreement.

Typhoon Dispersal

BOAC were particularly anxious that specific permission for the use of the emergency sea-plane anchorage mentioned in their letter of the



Above: Proposed emergency water bases for use in typhoon alerts by BOAC flying boats. (Mapping: Sue Bushell)

21st November (43A) should be obtained. They agreed furthermore that an attempt should be made to incorporate in the Agreement a provision to the effect that in the event of a typhoon warning aircraft whether in the air or on the ground should be allowed to take refuge without traffic rights at any convenient airfield.

P.1, 23/12/46."

["43A" is a document number in TNA/MCA file BT 245/656, letter from BOAC to MCA dated 21Nov46] [BT 245/656 #57A; CO 937/104/1 #60]

Brief for negotiation of bilateral agreement with China

The following is the text of a brief prepared for the British Mission:

"1. BACKGROUND

The only previous agreement with China with regard to civil aviation is an Exchange of Letters dated 24th January 1939 (see MD 6122 of 1939) by which we have reciprocal rights with a Chinese airline for services from Akyab or Rangoon to Kunming and Hong Kong, and thence on to Shanghai. This Exchange of Letters was negotiated whilst the "China incident" was going on and there was provision that the matter should be reconsidered as soon as peace was restored. For the present, however, it appears that this agreement is still in force. Unless, therefore, the Chinese Government chooses to contend that the route specified in this Exchange of Letters is not the same as the route which B.O.A.C. now wish to fly from Rangoon via Bangkok and Hanoi to Hong Kong and thence to Shanghai, we appeared to be covered in respect of the trunk route during the interim period until a new agreement is negotiated.

"China has signed the Chicago Final Act, the Interim Agreement, the Convention, and the Transport Agreement, but not the Transit Agreement. We on the other hand have signed the Transit Agreement but not the Transport Agreement. It is therefore necessary in negotiating a bilateral to include any provisions we need from the Transit Agreement.

"2. FORM OF AGREEMENT

It has been agreed that this should be in the form of SAM.3.

The following comments are necessary:-

A. Change of Gauge. Provision is made for this in the Annex, and if no objection is raised it would be desirable to include it. As far as can be seen, however, there will not be any need to change gauge in Chinese territory, and if the clause meets objection, it may be dropped.

B. Typhoon Dispersal. It is necessary to incorporate in the agreement a clause to the effect that in the event of the warning of an approach-

ing typhoon being received it shall be permissible for any aircraft of the designated airline whether on the ground or in the air at the time, to take refuge without traffic rights at any convenient airfield outside the anticipated path of the typhoon.

"In particular B.O.A.C. are anxious to secure such emergency landing rights at the following water bases:-

- (1) Hainan Island to the south of Hong Kong. Hoihow [Haihou?] in the north, Sanah [Sanna?] Bay in the south.
- (2) Amoy Island. The alighting area in the south west believed to be called Kulang Nau.
- (3) Chow Shan Island. The alighting area in the south believed to be called Ting Hai.

Similar privileges will also be required at Macao, but this will presumably have to be negotiated with the Portuguese Government.

"C. Nationality of Crews

In the U.K. – Brazil Agreement there is an addition to Article VI of the Agreement reserving the right to withhold or revoke the exercise of rights specified in the Annex to the Agreement if not satisfied that the crews operating the aircraft of the other party are nationals of such party. This provision does not occur in SAM.3 and it was decided not to insert it.

"3. RIGHTS REQUIRED BY THE U.K.

(A) U.K. – Tokyo Trunk Route. This route will run from the U.K. via the interim points in Europe, Africa and Asia to Hong Kong and thence to Shanghai and Tokyo. In the event that no suitable airfield is available in Hong Kong for a number of years, rights at Canton will also be required, but can be omitted when Hong Kong is available. At present the route will be operated by flying boats which will not need to use Canton, but it is intended that the route shall eventually be operated by land plane, and the changeover may take place before a suitable airfield at Hong Kong is available.

The service would require both terminal and transit rights at Canton and Shanghai, and all five freedoms at both.

(B) THE SOUTH CHINA SEAS CIRCULAR ROUTE

This runs Hong Kong – Manila – Sarawak – Singapore – Penang – Bangkok – Ubon [later changed to Udorn] – Hanoi – Fort Bayard – Hong Kong. Except in transit between Fort Bayard and Hong Kong it does not cross Chinese territory, and would require only the first freedom.

(C) LOCAL SERVICES

The first four freedoms are required for the following routes based on Hong Kong, arranged in order of priority:-



Above: The three 'local' services which BOAC proposed to operate originating in the UK via Hong Kong to various destinations within China. (Mapping: Sue Bushell)

- (i) Hong Kong – Canton
 - (ii) Hong Kong – Swatow – Amoy – Foochow – Shanghai – Nanking – Tsing Tao – Peking.
 - (iii) Hong Kong – Hankow with an interim non-traffic stop.
- If negotiations are likely to be protracted it is desirable to obtain provisional authority for the operation of routes (A), (B), and (C) (i).

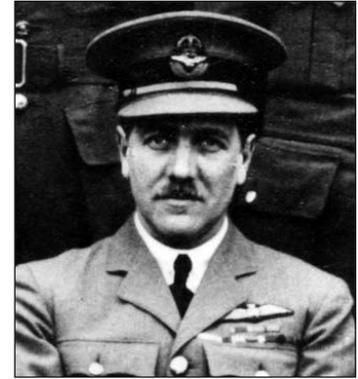


Above: BOAC's South China Seas Circular Route required protection under the agreement. (Mapping: Sue Bushell)

"4. A number of air services from different parts of China have provisionally been granted permission to operate via Canton into Hong Kong, the permission being liable to cancellation at two months' notice. It is possible that the Chinese may wish to contend, since all these services operate through Canton, that the British claim to reciprocity will be met if rights to operate from Hong Kong to Canton are granted. It will be necessary to argue strongly that this is not genuine reciprocity, and that if Chinese airlines from distant parts of China are permitted to operate into Hong Kong we should be accorded facilities of equivalent value to a number of points in the Chinese hinterland. Should extreme difficulty be met on this point, which seems likely to be the main point of dispute in the agreement, it may be possible to obtain extended rights by bargaining with the known desire of C.N.A.C. to operate from Canton through Hong Kong to Singapore and Penang. The Singapore Government have stated that they would not object to such service provided it was not permitted to exercise cabotage rights between Singapore and Penang. Since Hong Kong, Sarawak, Singapore and Penang are all in British Colonial territories, a Chinese airline could not be permitted to carry traffic between any of them without infringing the principles of cabotage.



Major participants in the Sino-British Agreement negotiations were: (Left) Dr Wang Shih-chieh the Chinese Minister for Foreign Affairs; (Right) Sir Ralph Skrine Stevenson the British Ambassador in Nanking; and (Far Right) Sir John Baldwin, Head of the Ministry of Civil Aviation Mission.



"5. RECIPROCAL RIGHTS TO BE GRANTED TO THE CHINESE
In respect of the trunk route we should be prepared to grant China the right to operate a service to the United Kingdom following the same route as the U.K. trunk line to China. No reciprocity would appear to be needed in respect of the South China Seas circular service.

"As regards local routes, provided China is reasonable in agreeing to the operation of the local routes which we desire we should be prepared, subject of course always to the principles of a fair division of traffic, and the limitation of frequencies to the requirements of the traffic between terminal points, to exchange rights in Hong Kong for similar rights granted to us in Chinese territory. It is not yet definitely known what routes China desire to operate into Hong Kong.

"If the Chinese insist that our services should go no further than Canton, it will be necessary for us to stipulate in the same way that only Chinese services originating in Canton will be permitted to enter Hong Kong, and must be limited in numbers and capacity to the equivalent British services from Hong Kong to Canton.

"6. The views of the Hong Kong Government have not yet been formulated, and they may desire rights for routes additional to those given in 3(c) above." [BT245/656 #69A]

Negotiations

The British Mission, which was led by Air Marshal Sir John Baldwin and included Mr Charles North of the Ministry of Civil Aviation; Mr A J R Moss, Director of Air Services in Hong Kong; and Commander B W Galpin, BOAC Regional Director for India and the Far East, was hosted by Sir Ralph Stevenson, the British Ambassador in Nanking.

The Mission left the UK on 25 January, arriving on Hong Kong on 31 January and reached Nanking from Shanghai on 6 February 1947.

During the course of the negotiations in Nanking, the Foreign Office sent many messages on behalf of the MCA to the British Embassy in Nanking for the attention of Sir John Baldwin and he and other members of the Mission sent many messages back to the Foreign Office for the MCA and/or BOAC with progress reports.

The Mission left Nanking for Hong Kong on 9 May 1947 by means of RAF Dakota KK155.

Mission report

"Sino-British Air Transport Negotiations
February 6th – May 8th, 1947.

LIST OF RELEVANT PAPERS

1. Report on the work of the United Kingdom Ministry of Civil Aviation to Nanking, by Mr C P F North.
2. List of persons who took part in the negotiations.
3. Text of the Agreement together with Annex and Route Schedules.
4. Text of Exchanges of Notes signed simultaneously with the Agreement.
5. Record of the proceedings of 23 formal meetings between the United Kingdom Mission and the Chinese Delegation. (Note. Copies of the record are held by the Ministry of Civil Aviation in London and by H.B.M. Embassy and the Chinese Government in Nanking.)

[These records are not in CO or FO files at TNA and only a few are in MCA file BT 245/657.]
Ministry of Civil Aviation
London June 1947"

"Sino-British Air Transport Negotiations REPORT ON THE WORK OF THE UNITED KINGDOM MINISTRY OF CIVIL AVIATION TO NANKING February 6th – May 8th, 1947.

Sir Ralph Skrine Stevenson, the British Ambassador to Nanking and Dr. Wang Shih-chieh the Chinese Minister for Foreign Affairs recently signed a bilateral Agreement in accordance with a text negotiated in Nanking by a Ministry of Civil Aviation Mission led by Sir John Baldwin. The following summarises briefly the course of the negotiations and indicates problems which arose and may come up again in the process of putting the agreement into practice.

2. Opening of Negotiations

The United Kingdom Mission first met the Chinese Government Delegation on Saturday 6th February a fortnight after leaving England. The Chinese were led by the Head of the Foreign Relations Branch of the Ministry of Communications who held equivalent rank to Assistant Secretary. The Delegation comprised an expert on international treaties from the Chinese Ministry of Foreign Affairs, a former officer of the Chinese Air Force recently appointed to take charge of the Civil Aeronautics Administration and other members of the Staff of that body. The Leader had taken part in the Sino-American negotiations and the treaty expert was familiar with the Chicago Interim Agreement but in general officials of the Chinese Government did not show any consciousness that it had subscribed to a world policy or accepted responsibility as a signatory to the Chicago Convention. The general attitude of these officials to opening China to British airlines followed traditional Chinese foreign policy which has opposed any activity by foreigners inside China since the first diplomatic mission to China in the beginning of the 18th century and has in the past prevented foreigners from owning land or travelling freely and still debar foreign ships from entering rivers or trading elsewhere than at certain ports.

3. Exchange of Drafts

At the first meeting the Chinese tabled a draft agreement in their own language which subsequently proved to cover commercial rights for their airlines to fly generally into British Colonial territory and to the United Kingdom. It permitted Chinese airlines to fly local services terminating in Hong Kong from any point in China. The United Kingdom Mission responded with a draft based on the standard form (SAM3) seeking British routes from London and from Hong Kong to four principal Chinese cities. The British suggested that this be adopted as the working document but the Chinese insisted that all discussion must be postponed until an English text of their draft had been prepared. They offered translation within five days but in response to protest undertook to provide an unofficial English text within two days. They informed the United Kingdom Mission that their policy was to permit foreign airlines to call at only four points, namely, Kunming, Canton, Shanghai and Tientsin which they had designated with I.C.A.O.

4. Main Text of the Agreement

The next four sessions considered the articles in the British and Chinese draft Agreements and found no serious difficulty in working out a reasonable text. The Chinese were suspicious of the intent of any alteration which the British text showed in comparison with Chicago and sought to read curious interpretations into any such changes.

5. Chinese draft Annex

Meanwhile the Chinese had been asked to reconsider and set out more clearly what rights China required and the routes which her airlines wished to fly. They responded with a draft which would have prevented

British airlines from carrying traffic between Hong Kong and China and permitted both British and Chinese airlines to carry traffic between Hong Kong and other Colonial territory. This proposal would only have represented a correct application of the principle of reserving cabotage if Hong Kong had been under Chinese sovereignty and since it appeared to be a political gambit the United Kingdom Mission refused to discuss it. The new Chinese Annex also contained provision to predetermine frequency and the type of aircraft to be used. In support of it the Chinese claimed that certain United Kingdom agreements with other countries contained provision for such predetermination that they also required them in order to protect their airlines from competition. The British explained the working of the principles in the British draft Annex and the protection thereby provided against cut-throat competition, but the Chinese Delegation gave the appearance of being unable to comprehend these points and much confusion arose owing to interruptions in both languages that it was agreed to set up a Routes Committee comprising two members from each side.

6. Determination of Routes

On the Routes Committee the Chinese attempted to maintain that the principle of reciprocity would be fulfilled if British airlines operated trunk services between the United Kingdom and China and left all local and regional services from China to such points as Hong Kong and Singapore for sole operation by Chinese airlines. The British firmly stonewalled this and other comparable proposals and in the end the Chinese agreed to exchange rights for trunk and local routes roughly on the lines of those in the schedules to the Agreement which has now been concluded. At that stage, however, the Chinese would only exchange rights for one local service, namely, between Hong Kong and Canton and refused to agree to services between Hong Kong and any other point in China.

7. The main Committee approved these proposals except that the United Kingdom Mission protested against the exclusion of any direct services between Hong Kong and Shanghai. They pointed out that these were the two most important commercial centres in the Far East and housed seven million people between them. Under the Chinese proposals persons travelling between these two cities would be compelled either to go round by Canton and change services at that point with resultant delay and inconvenience, or to seek seats offered on a Fifth Freedom basis by operators who were neither Chinese nor British owned.

8. Annex to the Agreement

The Main Committee then reverted to the terms for an Annex and the Chinese were told that the United Kingdom would not consider any form of predetermination and after some evasion agreed to the British draft annex as a working document. They continued to show suspicion and to be quick in suggesting tortuous misinterpretation of the British document. They clearly regarded every change for which they could establish some justification, however flimsy, as a triumph demonstrating the prestige due to China in the drafting of treaties and the United Kingdom Mission had to exercise patience and firmness in order to get Chinese agreement to a reasonable text.

9. The Shanghai – Hong Kong route

While the text of the Agreement and its Annex together with the Routes Schedules were being considered in London the Mission secured Chinese agreement to an Exchange of Notes arrangement to permit British airlines to import special equipment which they might require in order to operate into China but which would be prohibited under existing Chinese regulations. The Mission then renewed pressure to get the direct route between Hong Kong and Shanghai included in the Routes Schedules. At first the Chinese refused on the ground that existing Chinese services offered adequate capacity for the traffic offering. The Mission showed that to be incorrect and pointed out that it was irrelevant unless the route was included in the Schedules. The Chinese then pleaded that they had no money with which to subsidise their government owned airline which earned a large part of its revenue from this traffic and expected to continue to do so even if it was routed by way of Canton. Any competition would decrease earnings and drive the China National Aviation Corporation into bankruptcy. The Mission explained that United Kingdom policy did not seek to bankrupt other national airlines and that British resources were insufficient to permit large aircraft or frequent services to be operated on this route by British airlines for some time to come. Eventually the Chinese agreed to include the route provided the British undertook to limit the extent of their competition in order to give Chinese airlines a chance to re-organise and improve their operations. After much bargaining the limit for British participation was

determined as two services each week which was later compounded to 50 seats weekly for local traffic during an interim development period.

10. It proved very difficult to reach agreement on the procedure for recording this participation, the Chinese wanted an Exchange of Diplomatic Notes whereas the Mission insisted that it should be left to correspondence between the operators after these had been designated, and pointed out that the agreed minutes of the negotiations recorded the United Kingdom Government's concurrence and would be binding upon it. Neither side would give way on this matter although many solutions to the deadlock were put forward, but in the end the Chinese accepted an agreed statement recorded in the minutes of the final meeting between the Delegations.

11. Establishment of Flying Boat Bases

The remaining point outstanding concerned Chinese agreement to B.O.A.C. establishing and operating flying boat water bases suitably spread along her coast line to provide refuge from typhoons and in emergency. Initially the Chinese opposed the use of flying boats on the grounds that China could not afford to provide bases and would not allow them to be established within her territory by a foreign power. After a great deal of discussion the Chinese Delegation agreed in principle to this being done but the selection of the sites for these bases resulted in an impasse. The Chinese Ministry of National Defence would not approve certain of the sites proposed by B.O.A.C. and the Chinese Delegation could not move that department to suggest alternatives. Chinese Air Force and Naval Officers came to meetings but had no knowledge whatever of the subject to be discussed and would not accept responsibility for making any suggestions. The Chinese Delegation proposed that the Mission should themselves approach the Ministry of National Defence direct, but as this seemed entirely inappropriate the British Ambassador asked the Ministry of Foreign Affairs to intervene and this course was successful. The Mission learnt unofficially that the Ministry of National Defence had been alarmed lest permission for the British to position motor boats at alighting areas might enable them to establish motor torpedo boat bases and result in a similar request from Russia. Upon enlightenment the Ministry of National Defence sent a Rear Admiral to a meeting who brought a series of 1912 British charts and undertook to get his Department's approval for the necessary number of sites selected from a list of suitable points. After the Mission had left Nanking the Embassy reported that the Chinese Delegation had given official approval to these sites.

12. Documents agreed

There still remained certain amendments to the Agreement, its Annex and the Routes Schedules which arose from Ministry of Civil Aviation instructions, but the Chinese Delegation accepted these changes without difficulty because the Mission made it very clear that these were firm requirements upon which they were not prepared to make concessions and that the Mission did not intend that its departure should be much longer postponed. In the result the Chinese Delegation and the Mission had reached agreement that the following draft documents were suitable for submission to their Governments as the basis of an Agreement:-

- (a) An Agreement incorporating an Annex and a Schedule of routes granted to each party by the other;
- (b) Three Exchanges of Notes covering:-
 - (i) the importation of special equipment into China;
 - (ii) the case of non-traffic stops and the establishment of flying boat bases in China;
 - (iii) the transit of Chinese territory on the British route between Hong Kong and Macao.

13. Chinese Views on the Agreement

The Chinese Ministry of Foreign Affairs are likely to welcome an Agreement on these terms and in particular to regard the inclusion of two Chinese routes to London, on west-about across Asia and Europe and the other east-about across America, as indicating modern China's status in the post-war world. The Chinese Ministry of Communications will share this view tempered, however, by realization that Chinese airlines are unlikely to get the resources or acquire the technique to operate such trunk routes. The Chinese airlines have six Douglas Skymasters (C-54) and a considerable number of twin-engined American aircraft of which very few are serviceable. Their maintenance organisation is inept and hampered by shortage of spares in America and difficulty in securing American dollars to purchase such spares as become available. The airlines are, therefore, cannibalising and consuming their existing resources and see no opportunity of replenishing them. In the result the Chinese airlines and the Civil Aeronautics

LIST OF PERSONS WHO TOOK PART IN THE NEGOTIATIONS

UNITED KINGDOM

Sir Ralph Skrine Stevenson	H.B.M. Ambassador at Nanking
Air Marshal Sir John Baldwin *	Head of the Ministry of Civil Aviation Mission
Mr Geoffrey Wallinger *	Minister at H.B.M. Embassy
Mr L H Lamb	Head of Chinese Secretariat, H.B.M. Embassy
Mr Derek Bryan *	First Secretary, Chinese Secretariat, H.B.M. Embassy
Air Commodore ... Hasketh	Air Attaché, H.B.M. Embassy
Mr C P F North *	Ministry of Civil Aviation, Planning Division
Mr A J R Moss *	Director of Air Services, Hong Kong Government
Commander H E Galpin *	B.O.A.C. Regional Representative for India and the Far East
Wing Commander H P Simmons	Assistant Air Attaché, H.B.M. Embassy

CHINA

Dr Wang Shih-chieh	Minister of Foreign Affairs of the Republic of China
Dr George Yeh	Under Secretary, Ministry of Foreign Affairs
General Yeu Ta Weh	Minister of Communications
Dr Li	Director of Communications and Aviation
Dr Andrew S F Lin *	Director of Foreign Relations Department, Ministry of Communications
Mr Tao Yueh *	Civil Aeronautics Administration
Colonel Tai An-Kuo *	Director of Civil Aeronautics Administration
Dr Wu Yuan-chao *	Civil Aeronautics Administration
Mr L K Shaw *	Civil Aeronautics Administration
Mr C C Tso *	Civil Aeronautics Administration
Mr K C Chow *	Civil Aeronautics Administration
Mr T M Pan *	Civil Aeronautics Administration
Mr C K Lin *	Civil National Aviation Corporation

* Asterisk indicates those who participated in formal meetings between the United Kingdom Mission and the Chinese Delegation." [Honours not included for UK members.]

Administration appreciate that their international air services now operating from Shanghai to Calcutta and to Hong Kong are an achievement which they will find difficult to maintain. If any extension were to become possible their first choice would be Singapore and the right to fly there is the only practicable gain to China in this agreement. In order to get it China has had to open the valuable route between Hong Kong and Shanghai to competition from both trunk and local British services. The Chinese claim to believe that in equity the traffic on that route should be regarded as cabotage and reserved for their airlines alone and they point to the lack of any agreement relating to the present Chinese services to Hong Kong as evidence that they do not require British permission to fly there. There is little justification for this view but it is true that the establishment of a British service on that route would show the existing Chinese services to be expensive, irregular and unsafe and that passengers would only travel Chinese when they could not accept the delay entailed however many weeks it might be, in order to get a British booking.

14. The Ministry of Communications did not welcome the proposal to use flying boats because it will mean that the British will take little interest in the improvement of aeronautical ground services in China. These services are in no better state than the Chinese flying equipment and organisation, and the Chinese Civil Aeronautics Administration has scant funds and no foreign currency with which to purchase new equipment and hire foreign experts. China's only hope of getting these,

therefore, lies in the desire of foreign airlines to have proper equipment installed, and trained staff available, to safeguard their own services flying into China. If B.O.A.C. establishes flying boat bases these will be of no use to Chinese airlines, but if the British services use landplanes the British as well as the Americans may eventually be manoeuvred into supplying ground installations and trained staff in order to provide aeronautical ground services, and into sending materials and equipment to rebuild and maintain the runways at least at Shanghai. The airfields at Shanghai and Kunming are the only two which the Chinese seriously hope to keep serviceable for large aircraft.

15. The Chinese Ministry of National Defence will have less interest in the terms of the agreement but its views are likely to be dominated by the Chief of Air Staff, General Chow, who is reputed to have an outstanding antipathy for the British and to remember that during the war they embarrassed him by disclosing and curtailing smuggling operations which he had organised over "the Hump" and had brought him great personal profit.

16. In the implementation of the Agreement the Ministries of Foreign Affairs and of Communications, and particularly within the latter, the Civil Aeronautics Administration will be helpful because they desire to avoid being dominated by American interests and therefore wish to be able to turn readily to British sources for technical advice. The Ministry of National Defence may prove difficult but although China's Central



The Chinese airlines at the time operated six Douglas C-54s and a considerable number of twin-engined American aircraft mainly C-46s and C-47s of which they admitted very few were serviceable. Seen here at Calcutta -Dum Dum in 1946/7 are (Left) a C-54B which appears to be XT-T03 and (Right) C-46 XT-T47 wearing fleet no.147 which confirms a previously unknown tie-up. (Both: Ron Parsons)

Government has certain characteristics of a military dictatorship the alliance between the Ministry of Communications and the comparatively powerful Ministry of Foreign Affairs should be able to overcome obstruction from the military powers. Moreover little is required from the Ministry of National Defence now that they have approved the flying boat bases needed by B.O.A.C. The terms of that approval permit B.O.A.C. to position and use equipment and it only remains for them to make detailed arrangements with the local authorities who are likely to be amenable to the customary commercial practices of China. B.O.A.C. have made arrangements to rely on the expert assistance of the Shell Company's organisation for this work. The flying boat base at Shanghai comes under the jurisdiction of the Ministry of Communications who know what B.O.A.C. require in the way of clearing the river and other matters and have agreed in principle to arrange it.

17. Background to the Negotiations

The Chinese Central Government at Nanking rests insecurely on an un-ratified constitution and its stability depends largely upon the support of a cabal of political financiers and the loyalty of provincial governors. The Central Government, however, is the only body claiming to represent China abroad and modern China regards herself, Russia and the United States as the great powers of the post-war world. For continued support the Government must be successful in holding modern China's conception of its national status but in contrast to that picture China's internal economy is unorganised, its currency on the point of collapse and its foreign trade stagnant. Against this background the Chinese Government's policy in these negotiations was to demand every claim to which China might be held to be entitled and to resist every concession for which the Mission might ask.

18. The Chinese negotiators on the other hand examined every concession made to China from a severely practical viewpoint even though this might be at variance with the general policy outlined above. Thus they sought commercial rights throughout Colonial territory but explained that such rights were of no practical value along the trunk route to the United Kingdom because China's omission to sign the Chicago Transit Agreement would make it difficult for her to secure permission to cross intervening States and anyway there was little prospect of her airlines being capable of operating long distance trunk routes. The Chinese seemed to expect similar contradictions between practice and policy from the British and never hesitated to put forward proposals which they realised would be inconsistent with orthodox policy. When they did so it did not avail to explain this or show that such proposals might have wide and unwelcome repercussions, and experience showed that the best course was a firm and flat rejection repeated as often as the proposal was put forward. The best way to convince the Chinese mind proved to be to show that there was established precedent for any proposition and the least effective way was to argue that it was or was not a reasonable and logical development for the application of agreed principles to the relevant circumstances. It is possible that time might have been saved if the Mission had been firmer in refusing to participate in discussions as to whether plausible proposals, which the Chinese proved adept at putting forward, were admissible under the general policy. Such proposals had regard to the letter rather than the spirit of such policy and wherever their rejection by the British Mission lacked unanimity the Chinese were quick to press the matter and demand that the proposal be recommended to London as justified by special circumstances. They only gave up trying to use this gambit towards the end of the negotiations when the Mission's impending departure justified accepting the risk of breakdown in presenting a firm front in a final effort to force a conclusion.

19. Although the Chinese Delegation were quick and ready to propose ...[?, looks like "bareay": parlay?] they would not set their suggestions on paper and with the exception of their original draft Agreement, all the drafts for the Agreement, the Annex and the Exchange of Notes as well as the minutes of meetings had to be prepared by the mission. This left the Chinese free to imply that each draft was unacceptable to them and must be amended in favour of their viewpoint, and when they wished, to refuse a draft without reason and ask for another on the same subject. During the course of the negotiations, the Mission prepared and submitted over 100 draft documents to the Chinese Delegation.

20. Conclusion

The behaviour of the Chinese throughout the negotiations repeatedly posed the problem of deciding whether the Chinese Delegation themselves, or some advisor in the background, fully understood the theory and application of international air transport doctrine or had only a bemused appreciation of the outlines. Certain questions and sugges-

tions which they raised pointed to the former while at other times their naivety and apparent lack of understanding lent conviction to the latter. This problem, however, has been common to negotiations with the Chinese Government on many different subjects and those with 20 years experience of such negotiations declare that they do not know which answer is correct."

(Signed) C NORTH
Planning Division,
Ministry of Civil Aviation,
London, June, 1947."

CIV.11367 [BT 245/657 #100; CO 937/104/2 #210; FO 371/65497 W5984]

"CIV.11367 [CO 937/104/2]

The Sino-British Air Transport Agreement, 1947

AIR TRANSPORT AGREEMENT BETWEEN THE GOVERNMENT OF THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND AND THE GOVERNMENT OF THE REPUBLIC OF CHINA. SIGNED AT NANKING, ON 23 JULY 1947

The Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Republic of China, Desiring to conclude an Agreement for the purpose of establishing air services as soon as possible between their respective territories, have agreed as follows:-

ARTICLE 1

Each Contracting Party grants to the other the rights specified in the Annex to this Agreement for the purpose of the establishment of the air services therein described (hereinafter referred to as "agreed services").

ARTICLE 2

(1) The agreed services may be inaugurated immediately or at a later date at the option of the Contracting Party to whom the rights are granted, but not before (a) the Contracting Party to whom the rights are granted has designated an airline or airlines for the specified route or routes; and (b) the Contracting Party granting the rights has given the appropriate operating permission to the airline or airlines concerned (which, subject to the provisions of paragraph (2) of this Article and of Article 7, it shall do as soon as possible); provided that in areas of hostilities or of military occupation, or in areas affected thereby, such inauguration shall be subject to the approval of the competent military authorities.

(2) Every designated airline, before being permitted to engage in the operations contemplated by this Agreement, may be required to qualify before the aeronautical authorities of the Contracting Party granting the rights under the laws and regulations normally applied by these authorities to the operation of commercial airlines.

ARTICLE 3

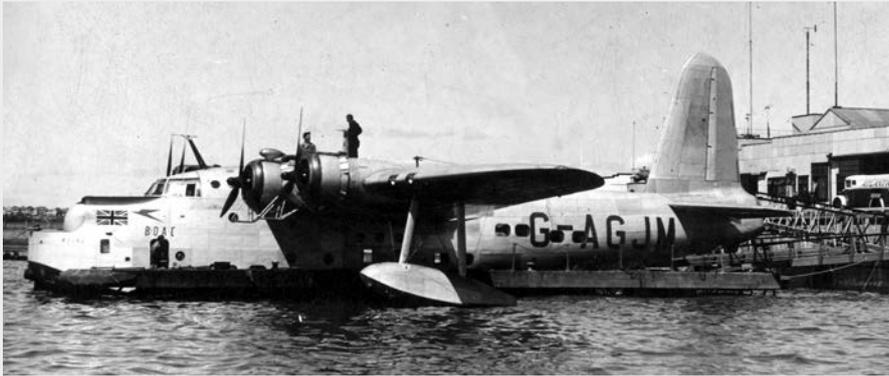
In the operation of the agreed services by the designated airlines of either Contracting Party, the interests if the designated airlines of the other Contracting Party shall be taken into consideration so as not to affect unduly the services which the latter provides on the same routes.

ARTICLE 4

(1) The charges which either of the Contracting Parties may impose, or permit to be imposed, on the designated airline or airlines of the other Contracting Party for the use of airports and other facilities shall be just and reasonable and shall not be higher than would be paid for the use of such airports and facilities by its national aircraft engaged in similar international services.

(2) Fuel, lubricating oil and spare parts introduced into or taken on board aircraft in the territory of one Contracting Party by, or on behalf of, the other Contracting Party or its designated airlines and intended solely for use of the aircraft of the other Contracting Party, shall be accorded, with respect to customs duties, inspection fees or other charges imposed by the former Contracting Party, treatment not less favourable than that granted to national airlines engaged in international air transport or the airline of the most favoured nation.

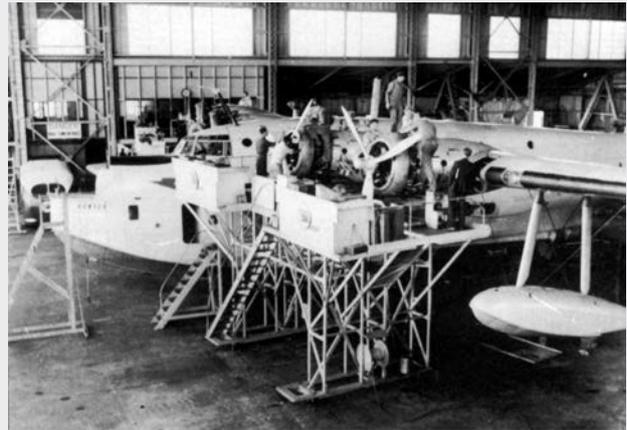
(3) Aircraft of the one Contracting Party operated on the agreed services and supplies of fuel, lubricating oils, spare parts and regular equipment and aircraft stores retained on board such aircraft shall be



Left: BOAC's Sunderland III "Hythe" G-AGJM was the first British civil flying boat to visit China and Japan when, in early 1946, it flew a survey route from Poole to Hong Kong, Shanghai and Tokyo. It is seen here on 6.3.46 at Mechanics Bay, Auckland after carrying delegates to an Empire Conference. (via JM Collection)



Above: Sunderlands of 88 Squadron, Hong Kong, extended the "Dragon" route by carrying mail onward to UK forces in Japan. GR.5 SZ570 is parked at Kai Tak in 1947. (via JM Collection)



Below: One of the Sunderlands which inaugurated the "Dragon" route in August 1946 was G-AGLA "Hunter", here undergoing maintenance at Hythe. (via JM Collection)



Above: Sandringham 5s G-AHYY and G-AHZA to G-AHZG replaced the 'Hythe' class Sunderlands in 1947 and operated the Hong Kong - Iwakuni - Tokyo route for BOAC. G-AHUU "Portsmouth" illustrated following conversion ex ML838. (BOAC via JM Collection)

exempt in the territory of the other Contracting Party from customs duties, inspection fees or similar duties or charges, even though such supplies be used by such aircraft on flights in that territory.

ARTICLE 5

Certificates of airworthiness, certificates of competency and licenses issued or rendered valid by one Contracting Party and still in force shall be recognised as valid by the other Contracting Party reserves the right, however, to refuse to recognise, for the purpose of flight above its

own territory, certificates of competency and licenses granted to its own nationals by the other Contracting Party or any other State.

ARTICLE 6

(1) The laws and regulations of one Contracting Party relating to the entry into or departure from its territory of aircraft engaged in international air navigation, or to the operation and navigation of such aircraft while within its territory, shall apply to the aircraft of the other Contracting Party without distinction as to nationality, and shall be com-

SCHEDULE I: ROUTES GRANTED TO AIRLINES OF THE REPUBLIC OF CHINA

(In both directions; omitting stops for non-traffic purposes)

Route Numbers	Points of Departure (Any one or more of the following if desired)	Intermediate Points (Any one or more of the following if desired)	Destinations in United Kingdom (Any one or more of the following if desired)	Points beyond (Any one or more of the following if desired)
1.	Kunming Canton Shanghai Tientsin	(a) Tokyo Kurile Islands Alaska Points in U.S.A. Points in Canada Newfoundland Rineanna (b) Hong Kong Manila Guam Wake Honolulu Points in U.S.A. Points in Canada Newfoundland Rineanna	Prestwick London	
2.	Kunming Canton Shanghai Tientsin	Hong Kong Points in French Indo-China Points in Siam Points in Burma Points in India Bahrein Points in Iraq Lydda Points in N. Africa Points in France	London Prestwick	Rineanna Newfoundland Points in Canada Points in U.S.A.
3.	Kunming Canton Shanghai Tientsin	Hong Kong Points in French Indo-China Points in Siam Points in Burma		Calcutta
4.	Kunming Canton Shanghai Tientsin	Hong Kong Points in French Indo-China Points in Siam	Penang Singapore Kuching	Points in Netherlands East Indies
5.	Kunming Canton Shanghai Tientsin	Hong Kong Manila	Jesselton Labuan	Points in Netherlands East Indies Points in Australia
6.	Canton		Hong Kong	
7.	Shanghai	Foochow Amoy Swatow	Hong Kong	

[Notes: Newfoundland became the tenth Canadian province on 31 March 1949. Jesselton is now known as Kota Kinabalu.]

piled with by aircraft such aircraft upon entering or departing from or while within the territory of that Contracting Party.

(2) The laws and regulations of one Contracting Party relating to the entry into or departure from its territory of passengers, crew or cargo of aircraft (such as regulations relating to entry, clearance, immigration, passports, customs and quarantine) shall be applicable to the passengers, crew or cargo of the aircraft of the designated airline or airlines of the other Contracting Party while in the territory of the first Contracting Party.

ARTICLE 7

Each Contracting Party reserves the right to withhold or revoke the exercise of the rights specified in the Annex to this Agreement by an airline designated by the other Contracting Party in any case in which it is not satisfied that substantial ownership and effective control of such airline are vested in nationals of either Contracting Party, or in case of failure by that airline to comply with the laws and regulations referred to in Article 6 hereof or otherwise to fulfil the conditions under which the rights are granted in accordance with this Agreement and its Annex.

ARTICLE 8

This Agreement shall be registered with the Provisional International Civil Aviation Organisation set up by the Interim Agreement on International Civil Aviation signed at Chicago on 7th December, 1944, or its successor.

ARTICLE 9

(1) It is the intention of both Contracting Parties that there should be regular and frequent consultation between their respective aeronautical authorities and that there should thereby be close collaboration in the observance of the principles and the implementation of the provisions outlined in this Agreement and its Annex.

(2) If either of the Contracting Parties considers it desirable to modify the terms of the Annex to this Agreement, it may request consultation between the aeronautical authorities of the two Contracting Parties, such consultation to begin within a period of sixty days from date of the request. When these authorities agree to modifications to the Annex, these modifications shall come into effect when they have been confirmed by an Exchange of Notes through the diplomatic channel.

SCHEDULE II: ROUTES GRANTED TO AIRLINES OF THE UNITED KINGDOM

(In both directions; omitting stops for non-traffic purposes)

Route Numbers	Points of Departure (Any one or more of the following if desired)	Intermediate Points (Any one or more of the following if desired)	Destinations in Chinese territory (Any one or more of the following if desired)	Points beyond (Any one or more of the following if desired)
1.	London	Points in Europe Points in North Africa Points in Asia Minor Points in India Points in Burma Points in Siam Points in French Indo-China Hong Kong	Kunming Canton Shanghai	Tokyo and beyond
2.	London	Points in Europe Points in North Africa Points in Asia Minor Points in India Points in Burma Points in Siam Points in French Indo-China Hong Kong	Kunming Canton Shanghai Tientsin	-
3.	Hong Kong	Manila Points in Borneo Points in Sarawak Singapore Penang Points in Siam Points in French Indo-China	(No commercial rights in Chinese territory are involved on Route No. 3)	Hong Kong
4.	Singapore Penang	Kuching Points in Borneo Manila Hong Kong	Canton Shanghai Tientsin	-
5.	Singapore	Kuching Borneo Manila Hong Kong	Canton Shanghai Tientsin	-
6.	Hong Kong	-	Canton	-
7.	Hong Kong	-	Shanghai	-

ARTICLE 10

Except as otherwise provided in this Agreement or its Annex, any dispute between the Contracting Parties relating to the interpretation or application of this Agreement or its Annex which cannot be settled through consultation shall be referred for an advisory report, to the Interim Council of the Provisional Civil Aviation Organisation (in accordance with the provisions of Article III, section 6 (8), of the Interim Agreement on International Civil Aviation signed at Chicago on 7th December, 1944) or its successor, unless the Contracting Parties agree to refer the dispute for decision to an Arbitral Tribunal appointed by agreement between the Contracting Parties, or to some other person or body. The Contracting Parties undertake to comply with the award from such arbitration.

ARTICLE 11

If a general Multilateral Air Convention which is accepted by both Contracting Parties comes into force, this Agreement shall be amended so as to conform with the provisions of such Convention.

ARTICLE 12

For the purpose of this Agreement and its Annex, unless the context otherwise requires –

(a) The term "aeronautical authorities" shall mean, in the case of the United Kingdom, the Minister of Civil Aviation for the time being, and any person or body authorised to perform any functions presently exercised by the said Minister or similar functions, and, in the case of the Republic of China, the Minister of Communications for the time being, and any person or body authorised to perform the functions presently exercised by the said Minister or similar functions.

(b) The term "designated airlines" shall mean the air transport enterprises which the aeronautical authorities of one of the Contracting

Parties have notified in writing to the aeronautical authorities of the other Contracting Party as the airlines designated by it in accordance with Article 2 of this Agreement for the routes specified in such notification.

(c) The term "territory" shall have the meaning assigned to it by Article 2 of the Convention on International Civil Aviation signed at Chicago on 7th December, 1944.

(d) The definitions contained in paragraphs (a), (b) and (d) of Article 96 of the Convention on International Civil Aviation signed at Chicago on 7th December, 1944, shall apply.

(e) The term "successor" shall mean the organisation which, on the coming into force of the Convention referred to in (d) above, will take the place of the Provisional Civil Aviation Organisation.

(f) The term "capacity" shall mean the total over any given period of the available passenger seats and freight and mail space of the aircraft operated over the routes.

ARTICLE 13

(1) This Agreement shall continue in force for a period of four years unless it is previously terminated in accordance with the procedure set out below, or renewed by an Exchange of Notes through diplomatic channel.

(2) Either Contracting Party may at any time give notice to the other if it desires to terminate this Agreement; if such notice is given, this Agreement shall terminate twelve months after the date of receipt of such notice by the other Contracting Party, unless the notice to terminate is withdrawn by agreement before the expiry of this period.

(3) Such notice of termination shall be simultaneously communicated to the Provisional International Civil Aviation Organisation, or its successor. In the absence of acknowledgement of receipt by the other Contracting Party, such notice of termination shall be deemed to have been received fourteen days after the receipt of the notice by the Provisional International Civil Aviation Organisation or its successor.

ARTICLE 14

This Agreement shall enter into force on the date of signature.

IN WITNESS WHEREOF the undersigned, duly authorised by their respective Governments, have signed the present Agreement and have affixed their seals.

DONE in duplicate in the English and Chinese languages, both equally authentic, at Nanking, this twenty-third day of July, one thousand nine hundred and forty-seven, corresponding to the twenty-third day of the seventh months of the thirty-sixth year of the Republic of China.

For the Government of the United Kingdom of Great Britain and Northern Ireland:

[L.S.] Ralph Skrine STEVENSON

For the Government of the Republic of China:

[L.S.] WANG Shih-Chieh

ANNEX

I

The Government of the United Kingdom grants to the Government of the Republic of China the right to operate air services by one or more airlines designated by the latter to or through points in United Kingdom territory on the routes specified in Schedule I attached, provided that only such route service patterns shall be adopted as provide a reasonably direct route between the point of departure and the destination.

II

The Government of the Republic of China grants to the Government of the United Kingdom the right to operate air services by one or more airlines designated by the latter to or through points in Chinese territory on the routes specified in Schedule II attached, provided that only such route service patterns shall be adopted as provide a reasonably direct route between the point of departure and the destination.

III

The airlines designated by each of the Contracting Parties shall, for the purposes of operating the agreed services and under the conditions prescribed in the Agreement and its Annex, be accorded in the territory of the other Contracting Party –

- (a) Rights of transit and of stops for non-traffic purposes (including the use of ancillary facilities) at airfields and water bases designated for international air services agreed between the Contracting Parties from time to time;
- (b) The right to take refuge in emergency at any convenient airfield or water base;
- (c) At the points specified in the Schedules to this Annex rights of commercial entry and departure for international traffic in passengers, freight and mail, including the right to embark and disembark international traffic destined for and coming from third countries.

IV

It is agreed between the Contracting Parties that the foregoing rights shall be subject to the observance of the following principles:-

- (a) The capacity provided shall be maintained in close relationship with the traffic offering.
- (b) There shall be a fair and equal opportunity for the airlines of the two Contracting Parties to operate on the routes specified in the Schedules.
- (c) The services provided under the Agreement and its Annex by a designated airline shall retain as their primary objective the provision of capacity adequate to the traffic demands between the country by which such airline has been designated and the country of ultimate destination of the traffic.
- (d) The right to embark or disembark international traffic destined for or comprising from third countries at a point or points on the routes specified in Schedules I and II to this Annex shall be applied in accordance with the general principles of orderly development to which both Governments subscribe and shall be subject to the principle that capacity should be related-
 - (i) to traffic requirements between the country of origin and the Countries of destination;
 - (ii) to the requirements of through airline operation; and
 - (iii) to the traffic requirements of the area through which the airline

passes after taking account of local and regional services.

(e) The aeronautical authorities of the Contracting Parties will consult together, at the request of either of them, to determine whether the principles set forth above are being complied with by the airlines designated by the Contracting Parties.

(f) Where the onward carriage of traffic by an aircraft of different size from that employed on the earlier stage of the same route (hereinafter referred to as "change of gauge") is justified by reason of economy of operation and where such change of gauge is to be made by the airlines of one Contracting Party either in its own territory or at any point of destination in the territory of the other Contracting Party, the smaller aircraft shall only operate in connection with the larger aircraft which has started from a point of departure in the territory of the first Contracting Party. The smaller aircraft shall not normally leave the change of gauge point until the larger aircraft has arrived and shall be operated for the primary purpose of carrying onwards to their ultimate destinations passengers who have travelled to the territory of the United Kingdom or of the Republic of China in the larger aircraft. The capacity of the smaller aircraft shall be determined with primary reference to the traffic travelling in the larger aircraft normally requiring to be carried onward. Vacancies in the smaller aircraft may be filled with passengers from the territory of the United Kingdom or of the Republic of China respectively without prejudice to the local traffic, exclusive of cabotage. Similarly in the reverse direction the principles set out in this sub-paragraph shall apply and the larger aircraft shall not normally leave the change of gauge point until the smaller aircraft has arrived.

(g) Tariffs to be charged for the carriage of passengers and freight by the airlines referred to in this Annex shall be agreed in the first instance between them in consultation with other airlines operating on the same routes or any section thereof. Any tariffs so agreed shall be subject to the approval of the Contracting Parties. In the event of disagreement between the airlines, the Contracting Parties themselves shall endeavour to reach agreement. If the Contracting Parties should fail to agree, the matter in dispute shall be referred to arbitration as provided for in Article 10 of this Agreement.

(h) The tariffs to be agreed in accordance with (g) above shall be fixed at reasonable levels, due regard being paid to all relevant factors, including economical operation, reasonable profit, difference of characteristics of service (including standards of speed and accommodation) and the tariffs charged by any other carrier on the route.

Exchanges of Notes

No.1

His Majesty's Ambassador to the Chinese Minister for Foreign Affairs
Nanking, 23rd July, 1947

Sir,

During the negotiations for the Air Transport Agreement signed today between the Government of the Republic of China and His Majesty's Government in the United Kingdom, the British Delegation drew the attention of the Chinese Delegation to the effect on Article 4, paragraph 2, of that Agreement, of the Revised Temporary Foreign Trade Regulations at present in force in the Republic of China.

The British Delegation pointed out that these Regulations may impede, and in some cases prohibit, the importation into China of items of equipment which are essential for the operation of the British air services contemplated under the Agreement. This is particularly the case having regard to the present intention of the British designated airlines concerned to employ flying boats for some at least of these services.

It is, therefore, desired that the British airlines shall receive, in regard to the Revised Temporary Foreign Trade Regulations, (a) treatment not less favourable than that granted to the Chinese designated airlines or to the airlines of the most favoured nation; and (b) in so far as such treatment does not permit the importation of the necessary equipment, a special dispensation from the application of the Revised Temporary Foreign Trade Regulations, in order that the British airlines, or their agents on their behalf, may import into China from time to time all that equipment which is, in their opinion, necessary for the safe and efficient operation of the air services for which they will be responsible either at regular or emergency landing grounds or water bases. A typical list of such equipment forms an Appendix to this Note but should not be considered as being comprehensive since the equipment required will vary with the development of the services.

The British airlines for their part will give an undertaking that any item of equipment which is imported into China under the above-mentioned special dispensation and is no longer required for the operation of the

British air services, shall be re-exported by them or shall be subjected to the normal procedure of any import regulations in force at the time of disposal of such item.

I have the honour to request Your Excellency's good offices in securing the grant to the British designated airlines of the facilities specified in the above paragraphs; and to suggest that this Note and Your Excellency's reply thereto constitute an Exchange of Notes which will enter into force concurrently with the Air Agreement signed today.
I avail, &c. (Signed) Ralph Skrine STEVENSON

APPENDIX: LIST OF AIRLINE EQUIPMENT, &c.

- (a) BOATS. – Motor and other launches, complete with equipment and beaching trolleys.
(b) MOORINGS. – Aircraft buoys, launch buoys, flare path buoys, dinghies and floats, chains and connecting pieces, wires, anchors and sinkers, pontoons and flying boat docks complete with equipment. Lifting and laying equipment for above.
(c) ELECTRICAL. – Electrical generators and batteries, searchlights, floodlights, warning and working lights. Electrical cables as necessary for above. Radio sets and equipment for the control of aircraft and launches on or near the alighting areas and for the provision of navigational aid in regard to the alighting areas. Electrical tools and ancillary equipment for above.
(d) MOTOR VEHICLES. – Passenger coaches, crew cars, lorries, cars, vans and motor bicycles.
(e) SPARES AND MAINTENANCE. – Spare units and parts, maintenance equipment, test equipment, general spares and materials required for (a), (b), (c) and (d) above.
(f) PYROTECHNICS. – Very lights and flares, Very pistols and other ancillary apparatus.
(g) FUEL. – Fuel and lubricating oil for (c) and (d) above.
(h) SPECIALISED STATIONERY. – Printed forms, tickets, advertising matter, posters, &c.
(i) STAFF EQUIPMENT. – Uniforms and material for uniforms, office equipment.

No.2

The Chinese Minister for Foreign Affairs to His Majesty's Ambassador Nanking, 23rd July, 1947
Sir,

I have the honour to acknowledge receipt of Your Excellency's Note of today's date reading as follows:-

[As in Note No. 1]

In reply I have the honour to state that the Government of the Republic of China is agreeable in principle to the grant of the facilities proposed in Your Excellency's Note. In order to receive these facilities, however, the British designated airlines will be required to submit for prior approval to the Civil Aeronautics Administration of the Ministry of Communications particulars of such equipment as they desire to import, so as to enable the Administration to certify such equipment as falling within the scope of this Exchange of Notes.

I avail, &c. (Signed) WANG Shih-Chieh

No.3

His Majesty's Ambassador to the Chinese Minister for Foreign Affairs Nanking, 23rd July, 1947
Sir,

I have the honour to seek Your Excellency's good offices for the grant of permission, required under paragraph III of the Annex to the Sino-British Air Agreement signed today, to use airfields at the following points for non-traffic purposes:-

Haikow (Hoihow)
Amoy
Tsingtao.

In abnormal circumstances use of the airfields at Swatow and Foochow will also be required for non-traffic purposes so that, when flight plans are being prepared, account be taken of the availability of these airfields in the event of the airfield at Amoy being closed or an aircraft bound for Hong Kong or Shanghai finding itself unable to land at the airfield to which it is proceeding.

During the course of the recent negotiations it was explained that at least one of the British airlines to be designated under the Agreement would use flying boats, and I take this opportunity to inform Your Excellency that the rights of commercial entry for these flying boats under the Agreement will be exercised at Shanghai. Permission is, however, required, under paragraph III of the Annex, for such aircraft to



Above: Emergency landing grounds requested for non-traffic purposes in the event of Hong Kong or Shanghai being unavailable. (Map: SB)

use water bases at the following points for non-traffic purposes:-

Kwang Chow Wan
Swatow
Quemoy
Wenchow

Normally these points will be used only in the event of emergency, in particular when typhoon conditions make such landings necessary in the interests of safety, and for that purpose the positioning and use of certain specialised equipment will be required there. In abnormal circumstances, similar to those described in the second paragraph of this Note, emergency use of a water base at Gaalong Bay will be required, but no specialised equipment is necessary at that point.

I should be grateful to have Your Excellency's assurance that permission to exercise the above rights in accordance with the terms and conditions of the Agreement, at the points specified herein, will be forthcoming on application to the appropriate authorities.

I avail, &c. (Signed) Ralph Skrine STEVENSON

No.4

The Chinese Minister for Foreign Affairs to His Majesty's Ambassador Nanking, 23rd July, 1947
Sir,

I have the honour to acknowledge the receipt of Your Excellency's Note of today's date reading as follows:-
[As in Note No. 3]

I have the honour to inform you in reply that the Government of the Republic of China is agreeable in principle to such use of the airfields named in the first paragraph of the above Note, in accordance with the provisions contained in the Sino-British Air Agreement. At the present moment, however, it is necessary to withhold the use of Tsingtao under the provision of the final clause of the first paragraph of Article 2 of the Agreement. If His Britannic Majesty's Government will, however, raise

the question of the use of Tsingtao again at a later date, the possibility of granting such approval will be sympathetically considered.

The Government of the Republic of China notes that the British designated airlines will use flying boats on certain routes and exercise rights of commercial entry with such aircraft in accordance with the terms of the Agreement at Shanghai, and that use of the points specified in paragraph 3 of the above Note will be required in emergency. It is agreeable to such use in accordance with the provisions contained in the Sino-British Air Agreement and to the positioning and operation there of the necessary specialised equipment by the British designated airline provided that such equipment is operated under the supervision of the Civil Aeronautics Administration, which shall at all times remain the controlling authority in regard to the use of these alighting areas by flying boat aircraft.

If the Government of the Republic of China should wish to withdraw permission for the use by the British designated airlines of any of the water bases specified in paragraph 3 of Your Excellency's Note it will give to the Government of the United Kingdom three months' notice of its intention to withdraw such permission and will make arrangements for the designation of some other place in substitution of the water base in respect of which permission is so withdrawn.

In the event of such withdrawal being necessary for reasons of national security, the requirement of three months' notice, as referred to in the preceding paragraph, shall not apply.
I avail, &c. (Signed) WANG Shih-Chieh

No.5

His Majesty's Ambassador to the Chinese Minister for Foreign Affairs
Nanking, 23rd July, 1947
Sir,

I have the honour to refer to the Air Transport Agreement between the Government of the Republic of China and His Majesty's Government in the United Kingdom signed at Nanking today and to say that it is the understanding of His Majesty's Government in the United Kingdom that the Government of the Republic of China agrees to grant to airlines of the United Kingdom operating on scheduled international services between Hong Kong and Macao, the right to fly across and in the event of emergency to land for non-traffic purposes in Chinese territory (including territorial waters) between those two points.

I have the honour to request that Your Excellency will be so good as to confirm this is also the understanding of the Government of the Republic of China.
I avail, &c. (Signed) Ralph Skrine STEVENSON

No.6

The Chinese Minister for Foreign Affairs to His Majesty's Ambassador
Nanking, 23rd July, 1947
Sir,

I have the honour to acknowledge receipt of Your Excellency's Note of today's date reading as follows:-
[As in Note No. 5]

I have the honour to confirm that the understanding of His Majesty's Government in the United Kingdom recorded in Your Excellency's Note as quoted above is also the understanding of the Government of the Republic of China.

I avail, &c. (Signed) WANG Shih-Chieh

Copies of the Air Transport Agreement between China and the UK are included in TNA files BT 245/657 #82A; CO 937/104/2 #170; and FO 371/65497 dossier W5838. The complete document was published by HMSO as Cmd 7211.

Chronology

13 October 1919	Paris Convention
7 December 1944	Chicago Convention
11 February 1946	Bermuda Agreement
17 December 1946	Provisional China - France Agreement
20 December 1946	China - USA Agreement
23 July 1947	China - UK Air Transport Agreement
23 July 1947	China - Siam Air Transport Agreement (initialled)
6 December 1947	China - Netherlands Agreement

Abbreviations

BOAC	British Overseas Airways Corporation
CAB	Civil Aeronautics Board
CATC	Central Air Transport Corporation
CNAC	China National Aviation Corporation
CO	Colonial Office
ECOSOC	Economic and Social Council (UN)
EU	European Union
FAQ	Frequently Asked Questions
FO	Foreign Office
FRUS	Foreign Relations of the United States
HBM	His Britannic Majesty's
IASTA	International Air Services Transit Agreement
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
MALIAT	Multilateral Agreement on the Liberalisation of International Air Transportation
MCA	Ministry of Civil Aviation
PDF	Portable Document Format
PICAO	Provisional International Civil Aviation Organisation
TNA	The National Archives
TWA	Trans World Airlines
USSR	Union of Soviet Socialist Republics

Acknowledgements

The author would like to thank the following for their help in the preparation of this article: Ian Johnson, John Davis, Maurice Wickstead, TNA staff, Tony Doyle.

TNA files

Titles given below are as given in the TNA's online catalogue except those in [square brackets], which are the titles written on the covers of the actual files.

Colonial Office (code CO)

TNA ref.	title in TNA catalogue	years
937/104/1	China [Communications. Aviation. Foreign. China]	1945-47
937/104/2	China: Anglo-Chinese Air Transport agreement	1947
937/104/3	China: local and foreign air routes	1947

Foreign Office (code FO)

TNA ref.	title in TNA catalogue	years
371/54583	Civil aviation in the Far East: negotiations with China.	1946
371/54584	Civil aviation in the Far East: negotiations with China.	1946
371/54585	Civil aviation in the Far East: negotiations with China.	1946
371/54586	Civil aviation in the Far East: negotiations with China.	1946
371/54587	Civil aviation in the Far East: negotiations with China.	1946
371/65494	Anglo-Chinese air negotiations	1947
371/65495	Anglo-Chinese air negotiations	1947
371/65496	Anglo-Chinese air negotiations	1947
371/65497	Anglo-Chinese air negotiations	1947

Ministry of Civil Aviation, Board of Trade (code BT)

TNA ref.	title in TNA catalogue	years
217/1813	Draft Multilateral Agreement on traffic rights: U.S. proposal for chapter Facilitation of International Air Services	1947-48
245/656	Negotiations [U.K./China Air Services Agreement]	1946-47
245/657	Negotiations [U.K./China Air Services Agreement]	1947
245/914	Discussions with US about post war civil air transport	1944-65



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Above: One of Skyways Avro Lancastrians shown landing at Kai Tak in 1947, operating the type of service described in the accompanying advertisement. (Ian D Johnson collection)



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Above: CNAC were advertising on 19.3.47 the resumption of services from Hong Kong on many of the routes to be subject to the Sino-British Agreement.

Right: BOAC was not the only British company with an interest in Hong Kong - UK services as this advert in the South China Morning Post of 3rd March 1947 shows. As Skyways Far East Ltd the airline was trying to muscle in on local and high speed services to London. (Ian D Johnson collection)

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© M S Best, April 2012

Martin Best's epic history of Civil Aviation in China has been published in *Archive*, commencing with the Spring 2007 issue.

Two sections may be found online in the files section of AB-IX on Yahoo Groups: Part 6C and Part 13B/C. - Ed.

F-1922

The French Civil Aircraft Register from 1922

Part 32

By Bernard Martin, Dave Sparrow and Robert Espérou

Right: Some 40 Latécoère 28s were supplied to Aéropostale which had succeeded Lignes Aériennes Latécoère in 1927. Seen outside the Toulouse-Montaudran factory wearing the manufacturer's titles, c/n 930 (note the number below the cockpit) became F-AJUX (via JM Collection)



As in recent issues we are continuing with the New Registrations in alphabetical order as they no longer correspond to CoFR Number order.

F-Update 1930 (contined)

New Registrations

2442	F-AJUV	Latécoère 28/0	929
Cie Générale Aéropostale, Paris (based Toulouse). (9.7.30)			
2443	F-AJUX	Latécoère 28/0	930
Cie Générale Aéropostale, Paris (based Toulouse). (9.7.30)			
2444	F-AJUY	Latécoère 28/0	931
Cie Générale Aéropostale, Paris (based Toulouse). (9.7.30)			
2445	F-AJUZ	Latécoère 28/0	932
Cie Générale Aéropostale, Paris (based Toulouse). (9.7.30)			
2457	F-AJVA	Blériot-Spad 56/6	19/4442
SA Air Publicite, St Cloud, Paris. (17.7.30)			
2446	F-AJVB	Latécoère 28/0	933
Cie Générale Aéropostale, Paris (based Toulouse). (9.7.30)			
2571	F-AJVC	Hanriot 14	5019
M.Plantagenet, Paris. (6.10.30)			
2556	F-AJVD	Potez 36/14	1955
Georges Turenne, Paris. (29.9.30)			
2562	F-AJVE	Potez 36/14	1956
Aéro Club du Maroc, Casablanca. (2.10.30)			
2656	F-AJVF	Potez 36/14	1957
Reserved 10.30 for Leveque, Maisons-Lafitte but regd to Jean de Ridder, Creil. (24.12.30)			
2608	F-AJVG	Potez 36/14	1958
Aéro Club du Maroc, Casablanca. (23.10.30)			
2477	F-AJVH	Latécoère 28/0	934
Cie Générale Aéropostale, Paris. (28.7.30)			
2478	F-AJVI	Latécoère 28/0	935
Cie Générale Aéropostale, Paris (based Toulouse). (28.7.30)			
2479	F-AJVJ	Latécoère 28/0	936
Cie Cie Générale Aéropostale, Paris (based Toulouse). (28.7.30)			

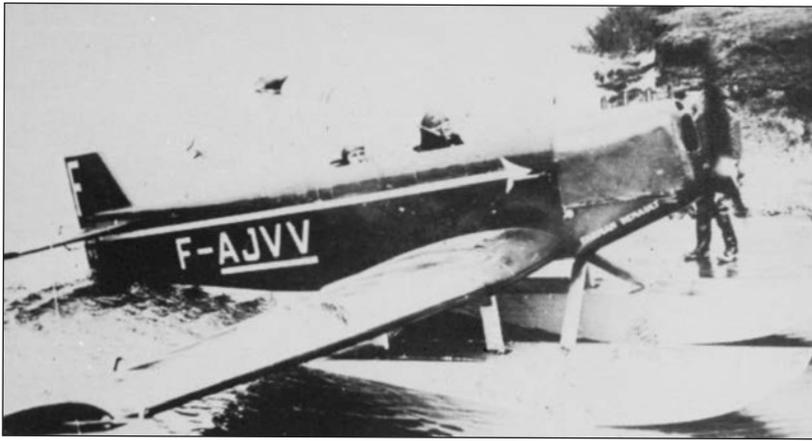


Above: F-AJVB was another Laté 28, seen here in full Aéropostale titles. Both of the examples above were fitted with the long exhaust to carry the fumes above the cockpit and cabin. (via JM Collection)

Below: Potez 36 F-AJVD was a 95hp Renault 4 Pb engined model, here forming with a Salmson 7 Ac radial powered example over Orly airport. (via JM Collection)



2484	F-AJVK	Latécoère 28/0	937
Cie Générale Aéropostale, Paris (based Toulouse). (31.7.30)			
2497	F-AJVL	Schreck FBA.17HT4	193
Cie Aérienne Française, Suresnes. (7.8.30)			
2498	F-AJVM	Schreck FBA.17HT4	194
Cie Aérienne Française, Suresnes (based Le Pecq). (7.8.30)			
2639	F-AJVN	Morane Moth 60M	35
M.Gabriel, Nimes. (2.12.30)			
Unkn	F-AJVO	Nothing known	
2845	F-AJVP	Morane Moth 60M	38
Pierre Gay Faub., Gambetta, Oran. (18.6.31)			



Left: F-AJVV was the second Farman 231, modified to 231 bis and fitted with floats for Marcel Lallouette and Jean de Permangle to attempt a long-distance record during which it crashed when landing on a rough sea near Villa Nueva on the Spanish coast, 30.5.31. Both occupants were killed, but see also entry for F-AJTB earlier. (via JM Collection)

Below: The Latécoère 28-8 was intended as a long-range record breaking aircraft. The fuselage of a 28-0 was fitted with a much larger wing and tail unit and was first flown in this form as F-AJXL in July 1930. On 30.8.30, during a calibration flight between Toulouse and Muret, the aircraft broke up in flight during a turn and Mermoz, who was the sole occupant, was fortunate to be able to parachute to safety. (via JM Collection)

2679	F-AJVQ	Farman 303	2/7213
Cie Air Orient, Paris. (22.1.31)			
<i>(Quoted by TU as c/n 2/7215)</i>			
2680	F-AJVR	Farman 303	3/7214
Cie Air Orient, Paris. (22.1.31)			
2681	F-AJVS	Farman 303	4/7215
Cie Air Orient, Paris. (22.1.31)			
<i>(Quoted by TU as c/n 4/7217)</i>			
2662	F-AJVT	Farman 303	5/7218
Cie Transafricaine d'Aviation, Paris (based Alger). (5.1.31)			
Unkn	F-AJVU	Farman 230	3
Société des Avions HM & D Farman, Billancourt.			
2665	F-AJVV	Farman 231	2/7216
André Boulanger, Choisy le Roi (based Toussus-le-Noble). (9.1.31)			
2584	F-AJVX	Hanriot 431	5
M.Outhenin Chalandre, Neuilly. (14.10.30)			
2585	F-AJVY	Hanriot 431	6
M.Outhenin Chalandre, Neuilly-sur-Seine (based Bourges). (14.10.30)			
2586	F-AJVZ	Hanriot 431	7
M.Outhenin Chalandre, Neuilly-sur-Seine (based Bourges). (14.10.30)			
2504	F-AJXA	Caudron 232/4	13/6493
Club Aérien du Tourisme Amateur, Montrouge (based Orly). (13.8.30).			
2521	F-AJXB	Caudron 232/2	14/6494
Aéro Club du Havre, Le Havre (23.8.30)			
2522	F-AJXC	Caudron 232/2	15/6495
Aéro Club de l'Eure, Evreux. (23.8.30)			



Unkn	F-AJXD	Caudron 232/4	16/6496
Aéro Club de Cochinchine, Saigon. (10.30)			
2601	F-AJXE	Caudron 232/4	17/6497
Lucien Grach, Alger. (18.10.30)			
2576	F-AJXF	Caudron 232/4	18/6498
Aéro Tourisme Abbevillois, Abbeville. (6.10.30)			
2543	F-AJXG	Caudron 232/4	19/6499
Louis Durafour, Alger. (9.9.90)			
Unkn	F-AJXH	Caudron 232/2	20/6503
Appert, Paris/Orly. (.8.30)			
2532	F-AJXI	Caudron 232/2	21/6504
Roger Corbin, Paris/Orly. (29.8.30)			
2550	F-AJXJ	Caudron 232/4	22/6505
Louis Marcellin, Vichy. (18.9.30)			
Unkn	F-AJXK	Latécoère 28/5	920

Another view of the Morane Saulnier MS.181 N304JX, quoted as c/n 206 by the FAA, which is not related to the original F-AJXN listed above. It appeared at the EAA Museum in the early 1980s but was last reported in France at Compiègne-Margny in 2009. (Jennifer Gradidge via JM Collection)





Unkn	F-AJXL	Latécoère 28/8	918	
	S.I.D.A.L.			
2587	F-AJXM	Hanriot 431	8	
	M.Outhenin Chalandre, Neuilly-sur-Seine (based Chalon-sur-Saone). (14.10.30)			
2572	F-AJXN	Morane 230	56	
	Cie Française d'Aviation, Boulogne sur Seine (6.10.30)			
2573	F-AJXO	Morane 230	57	
	Cie Française d'Aviation, Boulogne sur Seine (6.10.30)			
2574	F-AJXP	Morane 230	58	
	Cie Française d'Aviation, Boulogne sur Seine (6.10.30)			
2575	F-AJXQ	Morane 230	59	
	Cie Française d'Aviation, Boulogne sur Seine (6.10.30)			
2590	F-AJXR	Morane 230	60	
	Cie Française d'Aviation, Boulogne sur Seine (15.10.30)			
2591	F-AJXS	Morane 230	61	
	Cie Française d'Aviation, Boulogne sur Seine (15.10.30)			
2592	F-AJXT	Morane 230	62	
	Cie Française d'Aviation, Boulogne sur Seine (15.10.30)			
2593	F-AJXU	Morane 230	63	
	Cie Française d'Aviation, Boulogne sur Seine (15.10.30)			
2707	F-AJXV	Morane 230	64	
	Cie Française d'Aviation, Boulogne sur Seine (2.3.31)			
2564	F-AJXX	Morane 147	103	
	Cie Française d'Aviation, Boulogne sur Seine (based Orly). (3.10.30)			
2565	F-AJXY	Morane 147	104	
	Cie Française d'Aviation, Boulogne sur Seine (based Orly). (3.10.30)			
2566	F-AJXZ	Morane 147	105	
	Cie Française d'Aviation, Boulogne sur Seine (based Orly). (3.10.30)			
2567	F-AJYA	Morane 147	106	
	Cie Française d'Aviation, Boulogne sur Seine (based Orly). (3.10.30)			
2582	F-AJYB	Caudron 232/4	23/6506	
	M.Legendre, Longueville, (S.I) (based Orly). (13.10.30)			
Unkn	F-AJYC	Caudron 232/4	24/6507	
	Aéro Club du Rhone et du Sud-Est, Lyon-Bron. (10.30)			
2599	F-AJYD	Caudron 232/4	25/6508	
	Aéro Club du Rhone et du Sud Est, Lyon-Bron. (17.10.30)			
2610	F-AJYE	Caudron 232/4	26/6509	
	Aéro Club du Rhone et du Sud Est, Lyon-Bron. (24.10.30)			

Above: The Caudron 232 was contemporary with the Morane Moth in France and had, in principle, many similarities with the DH Moth series.. It was powered by a 95 hp Renault 4 Pb. Privately-owned example F-AJYK was photographed in 1932 on a visit to the UK. (Aeroplane via JM Collection)

2618	F-AJYF	Caudron 232/4	27/6510	
	Aéro Club de l'Est, Nancy. (31.10.30)			
2623	F-AJYG	Caudron 232/4	28/6511	
	Union des Pilotes Civils de France, Paris/Orly. (12.11.30)			
2628	F-AJYH	Caudron 232/4	29/6512	
	Club d'Aviation Leg. Flandres (Aéro Club des Flandres), Lille (21.11.30)			
2629	F-AJYI	Caudron 232/4	30/6513	
	Club de L'Avionnette, Paris/Orly. (21.11.30)			
2769	F-AJYJ	Caudron 232	31/6514	
	Club de L'Avionnette, Paris/Orly. (22.4.31)			
2589	F-AJYK	Caudron 232/4	32/6515	
	Jacques de Peyerim-Hoff, Paris/Orly. (15.10.30)			
2548	F-AJYL	Potez 36/13	1963	
	M.David, Marseille/Marignane. (16.9.30)			
2485	F-AJYM	Latécoère 28/0	938	
	Cie Générale Aéropostale, Paris (based Toulouse). 31.7.30)			
2602	F-AJYN	Potez 36/14	1959	
	Aéro Club du Berry, Bourges. (20.10.30)			
2578	F-AJYO	Potez 36/14	1960	
	Pierre Carvallo, Amposta, Province de Tarragone, Spain. (7.10.30)			
2597	F-AJYP	Potez 36/14	1961	
	Aéro Club du Tarn, Castres. (17.10.30)			
2657	F-AJYQ	Potez 36/14	1962	
	M.Fouques Duparc, Oran. (24.12.30)			
2613	F-AJYR	Potez 36/13	1964	
	M.Lotti, Paris. (28.10.30)			
Unkn	F-AJYS	Hanriot 14	467	
	Aéro Club de l'Ouest			
2524	F-AJYT	Caudron 154	2/6386	
	Rene Caudron, Issy. (26.8.30)			
2913	F-AJYU	Nieuport 391	21	
	Cie Aérienne Française, Suresnes. (6.8.31)			
2691	F-AJYV	Nieuport 391	22	
	Cie Aérienne Française, Suresnes. (2.2.31)			



Left: Air Union's CAMS 53/1 F-AJZX "Saintonge" under tow on the Etang de Berre, Marseilles. The company operated from the French port to a number of Eastern Mediterranean destinations with these flying boats. (via JM Collection)

2692	F-AJYX	Nieuport 391	23	2561	F-AJZT	Morane 222	2
		Cie Air Union, Paris (2.2.31)				Société des Aéroplanes Morane Saulnier, Puteaux (based Velizy). (29.9.30)	
3018	F-AJYY	Nieuport 391	24	2779	F-AJZU	Potez 36/13	1972
		Cie Aérienne Française, Suresnes. (23.11.31)				Société des Aéroplanes H.Potez, Paris. (28.4.31)	
2961	F-AJYZ	Nieuport 391/2	25	2972	F-AJZV	Potez 36/14	1586
		Cie Aérienne Française, Suresnes. (17.9.31)				Société des Aéroplanes H.Potez, Paris. (24.9.31)	
2515	F-AJZA	Hanriot 14	404	2605	F-AJZX	CAMS 53/1	26
		Ministere de l'Air, Etat Francais; (20.8.30) on loan l'Aéro Club de l'Est, Nancy. (Built 1923. C/n also quoted as 1001)				Cie Air Union, Paris; named "Saintonge". (22.10.30)	
2609	F-AJZB	DH.60M Moth	1542	2627	F-AJZY	CAMS 53/1	27
		Ex G-AAXG Edouard Bret, Cannes. (based Marignane) (23.10.30)				Cie Air Union, Paris; named "Guyenne". (20.11.30)	
2630	F-AJZC	Caudron 232/4	33/6516	2596	F-AJZZ	Potez 36/14	1966
		Aéro Club des Jeunes Ailes, Paris/Orly. (21.11.30)				M.Lefevre, Paris (16.10.30)	
2647	F-AJZD	Caudron 232	34/6517	At this point the Register diverges from the previously logical system. The F-AKxx series was reserved for prototypes, many of them military, for the French government between 1930 and 1938. Very few were listed in the official civil registers, while Ministry of Air records were lost during the War, so manufacturers' literature and photographs often became the sole source. As the marks were frequently of temporary usage it seems that reallocations were probably common. Known registrations are as follows, without CofR numbers:			
		Aéro Club de France, Paris. (15.12.30)		F-AKAH	CAMS 52		001
2648	F-AJZE	Caudron 232	35/6518			Built 1930; twin-engined flying boat.	
		M.Carrot Dulac, St Etienne. (15.12.30)		F-AKAK	Bernard HV-120		01
2660	F-AJZF	Caudron 232	36/6519			Built 1929; single-engined flying boat.	
		.Union des Pilotes Civils, Paris (5.1.31)		F-AKAL	Bernard HV-120		02
2594	F-AJZG	Caudron 232/4	37/6520			Built 1930; single-engined flying boat.	
		.M.de Mac Mahon, Paris/Orly (16.10.30)		F-AKAN	CAMS 60		-
2649	F-AJZH	Caudron 232	38/6521			Flying boat; not built?	
		Hubert Lambotte, Lyon. (15.12.30)		F-AKAO	Lioré et Olivier H.197S		1
2689	F-AJZI	Caudron 232	39/6522			Built 1928; single-engined amphibian ambulance version.	
		Aéro Club de Normandie, Rouen. (30.1.31)		F-AKAX	SPCA II Type 20		02
2837	F-AJZJ	Caudron 230	13/6523			Built 1930; twin-engined flying boat.	
		Club d'Avions Legers des Flandres, Lille. (11.6.31)		F-AKBA	Schreck FBA.271 HMT2		1
2654	F-AJZK	Caudron 232	41/6524			Flying boat.	
		Aéro Club de la Tour du Pin, La Tour du Pin. (22.12.30)		F-AKBL	CAMS 53		001
2652	F-AJZL	Caudron 232	42/6525			Built 1928; twin-engined flying boat. To F-AIVH ?	
		Thomas Francis, Annemasse (Haute Savoie). (16.12.30)		F-AKBP	Blériot Spad 91-4		01
2676	F-AJZM	Farman 203	1/7219			Built 1930.	
		Jacques Kellner, Paris (based Toussus-le-Noble) (20.1.31)		F-AKBV	Bernard 60T		01
2909	F-AJZN	Farman 231	3/7220			Trimotor. Marks also used by Bernard 61T.	
		Pierre Ranon de la Vergne, Paris. (4.8.31)		F-AKBX	Lioré et Olivier H.24		1
2728	F-AJZO	Farman 199	1/7221			Twin-engined flying boat 1929; later F-AKDX and c/n 01.	
		Ex F-AKHV. Aérotopographie, Courbevoie (20.3.31)		F-AKBZ	Lioré et Olivier H.24		-
2577	F-AJZP	Potez 25	2038			Twin-engined flyigboat.	
		Société des Aéroplanes H.Potez, Paris/Le Bourget. (7.10.30)		To be continued			
2826	F-AJZQ	Hanriot 14	001				
		Charles Perigue, Paris. (2.6.31)					
2569	F-AJZR	Potez 25A.2	2035				
		Cie Générale Aéropostale, Paris (3.10.30)					
2570	F-AJZS	Potez 25A.2	2036				
		Cie Générale Aéropostale, Paris (3.10.30)					

Airliners in Warpaint - Warbirds in Civvies: 7

BOAC - The Early War Years

Michael West

AFRICA AND THE "HORSESHOE ROUTE"

In the Summer of 1940. Italy's entry into World War II, the German invasion of France and the denial of access to Spanish airspace, severed Britain from its trunk air routes to the Empire in the Orient and Africa. The planned 'Horseshoe Route' was activated linking South Africa to East Africa, Sudan, Egypt, Arabia, British India, the East Indies and Australia using Empire Flying Boats (with 45 possible stops!). Accessing the 'Horseshoe Route' from Britain by air exposed the severe shortage of long range aircraft in BOAC's fleet. Even the British foothold on the Iberian Peninsula, Gibraltar and neutral Lisbon were beyond the useful reach of much of BOAC's fleet. The route via Malta to Cairo across the Mediterranean (effectively an Axis lake) was mainly avoided due to risk of interception (and later desperate aviation fuel shortages in besieged Malta). The alternative route, a long over-water flight to West Africa followed by a landplane flight across sub-Saharan Africa to Khartoum had to be developed.

British Airways had made an exploratory flight to Bathurst in West Africa with a Lockheed 14 in December 1938 .Lisbon was reached in just over 5 hours non-stop (1040 miles from Heston) and the grass airfield at Granja do Marques, Sintra near Lisbon was used. Airfield size and lack of D/F equipment at Granja do Marques were used as an excuse to postpone the planned mail service (however the BOAC/KLM DC-3 service from the UK used it without problems for two years until Lisbon-Portela's hard surface runway was ready in October 1942). The Lockheed routed via French Casablanca, Agadir, Port Etienne and Dakar to Bathurst returning via Spanish Villa Cisneros and Las Palmas.

On 6th August 1940 Captain Loraine flew a party of Free French officials to the Congo in G-AFCX *Clyde* routing Poole-Lisbon-Bathurst-Freetown-Lagos. After RAF requisitions and losses BOAC only had two long-range Empire flying-boats (G-AFCX *Clyde* and G-AFCZ *Clare*) which were being used on a final short series of mail/courier flights to New York during the Battle of Britain.

Overwater from Lisbon to Bathurst (now Banjul), in the British colony Gambia, was some 1900 miles (not much less than the North Atlantic sector Foynes - Botwood) and at the limits of the S.30 Empire's range. Some subsequent flights were permitted to refuel halfway in Las Palmas in the Spanish Canary Islands, for example the ferry flights to Africa of G-AEUF *Corinthian*, G-ADUX *Cassiopeia*, and G-AFBL *Coosee*, between the 23rd and 29th September. The BA Museum records that G-AFCZ *Clare* over-nighted there on the 5/7th January 1941 and G-AFCX *Clyde* on 31stJan/1stFeb 1941. Limited further use may have been made of Las Palmas by the Empire flying-boats but the politics and diplomacy with Franco and 'non-belligerent' Spain were complex and avoiding a Spanish or German attack on Gibraltar was a priority. Lack of guaranteed access to Las Palmas was perhaps a reason for BOAC's introduction of American flying-boats which had the range for Lisbon-Bathurst direct with a meaningful payload. There is a BOAC letter in the National Archives which suggests the practice of marking some of the camouflaged BOAC fleet with large Union Jacks followed a Las Palmas visit in 1940 by Captain James in an Empire flying-boat which was mistaken for a French aircraft.

'*Clyde*' was lost in a hurricane at Lisbon in February 1941 and a Consolidated 28 (civilian version of thePBY/Catalina) was introduced from March 1941, this being NC777 '*Guba II*' the former transport of explorer Richard Archbold which had a still-air range of some 4,200 miles and was re-registered G-AGBJ. BOAC received a second Catalina G-AGDA, ex-RAF



Above: Still wearing Imperial Airways titles in this photo published in January 1940, Short S.30 G-AFCX *Clyde* was one of two long-range versions available to BOAC but was destroyed in a hurricane in February 1941. (via JM Collection)

Below: The other long-range S.30 Empire flying boat initially used by BOAC was G-AFCZ *Clare* seen here in camouflage with name and registration but apparently without company titles. (via JM Collection)



Above: Consolidated 28-3 Catalina NC777 *Guba II* was the long-range mount of explorer Richard Archbold which as G-AGBJ served as a replacement for *Clyde* being put into service by BOAC in March 1941. (via JM Collection)

Below: Classic pre-war view of Perseus-engined S.30 G-AFCT *Champion* at Rod el Faraq, Cairo. After a spell on the West Africa route it returned to Cairo services via the Mediterranean in 1941. (Aeroplane via JM Collection)





Left: Purchased from Pan American for use by BOAC on the West African route, Boeing 314A G-AGCA Berwick was the second of three. (via JM Collection)

Below: The first Boeing 314A, G-AGBZ Bristol wearing the large Union Jack for ease of identification. (Aeroplane via JM Collection)

AH563 in July 1941, which confusingly was named 'Catalina'. Two more Short Empires. G-AFCT 'Champion' and G-AFKT 'Cathay' also joined the West African route in 1941.

An Air Ministry official, Harold Balfour, travelled on one of 'Clare's' New York trips in 1940 to negotiate the purchase of 3 Boeing 314A flying boats from Pan American for the difficult Britain - West Africa route, and these were introduced in mid-1941. Because these needed to visit a Baltimore facility for work on their engine valves every 120 flying hours a circular route was followed linking Poole - Lisbon - Bathurst - Lagos - Bathurst - Belem - Trinidad - Bermuda - Baltimore - Bermuda - Lisbon - Poole.

A summer route from Baltimore to Foynes was also operated. This was a *de facto* Transatlantic service, but limited to carrying Government personnel, freight and mail and providing no northbound link from Bathurst - Lisbon. The terminal for the West Africa flights was moved from Poole to Foynes in Eire with a shuttle service from there to Poole or Whitchurch. From October 12th 1941 to February 1942 the West African 'fleet' S.30s 'Clare', 'Cathay' and 'Champion' together with 'Guba' and 'Catalina' were switched serving Cairo via Lisbon, Gibraltar and Malta. In September 1942 'Clare' caught fire in mid-air out of Bathurst for Freetown and disappeared with all souls onboard.

Brian Chapman's 'Flying Empires' refers to the sector distances on the West Africa route (converted to statute miles) Poole-330-Foynes-1024-Lisbon-ca.1825(12hrs)-Bathurst-449-Freetown-1276-Lagos; then 608-Libreville-576-Leopoldville-473-Coquilhatville-652-Kisumu/Lake Victoria). Las Palmas is 817 miles from Lisbon and 1025 from Bathurst (nowBanjul).

BOAC had inherited from Imperial and Elders Colonial Airways a landplane route across Africa south of the Sahara linking ports in the Gold Coast (Ghana) via Nigeria to Khartoum, using at first DH86 and Ju-52 landplanes and later Lockheed twins. The administration of French Equatorial Africa was persuaded to abandon Vichy and back the Free French in the Autumn of 1940 (the *Clyde* mission). This made possible an alternative all flying-boat BOAC route up the Congo River to link up with the 'Horseshoe Route'

Several times in the expatriate operation around Cairo the regular schedules were abandoned and emergency flights were carried out, to Crete when it was invaded, to Malta under siege and supporting the crucial battles in the Western Desert in Libya and Tunisia.

There were just enough intermediate airfields on the trans-Africa route to permit the ferrying of shorter-range military types which had arrived



by ship for assembly at Takoradi in the Gold Coast (now Ghana), destined for the combat zones in Egypt and Libya. The requirement for the rapid return of the ferry pilots, BOAC's shortage of equipment and the rather primitive condition of the African airfields led to Churchill's request to Pan American's Juan Trippe to upgrade and operate 'an Airway across Africa' which Pan American Airways Africa Ltd and Pan American Airways Ferries Inc. put into operation in late 1941 with the cooperation of BOAC (although one suspects BOAC had reservations about the initiative).

The British Gold Coast colony (now Ghana), roughly halfway between Freetown (Sierra Leone) and Lagos (Nigeria), had harbours at Takoradi and Accra but these do not appear to have been used by the BOAC flying boats as it seems that the breakwaters were inadequate. An internet search 'BOAC flying boats Accra' brings up an interesting archive document from early 1943 from the U.S. State department about the use by BOAC of the Pan American installed refuelling facilities at Fisherman's Lake (flying-boats) and Robert's Field in Liberia (Ensigns), in which the extent of BOAC's commercial traffic is discussed and the carriage of Syrian traders instead of military cargoes is mentioned. <http://tinyurl.com/ctqo3qu>

The new hard-surface runway at Lisbon-Portela was operational by October 1942 permitting use by BOAC's new Liberator III transports which could reach West Africa with ease. With the elimination of the Axis forces from North Africa by 1943 and the removal of the Vichy

Below: Armstrong Whitworth Ensign G-ADSV Explorer refuelling at Takoradi while operating on the trans-Africa route. (via JM Collection)



Administration in Algeria and Morocco, the importance of the West African route lessened in favour of the Mediterranean route from Lisbon and Gibraltar

THE NORTH ATLANTIC: Flying Boats and the Return Ferry Service

The Empire flying-boats had made a series of experimental North Atlantic flights via Botwood, Newfoundland, starting with those of *Caledonia* and *Cambria* in 1937 which were fitted with 6 wing tanks. They carried only a token payload of mail and maybe a couple of passengers. A more southerly route over the North Atlantic via Lisbon, the Azores and Bermuda was also assessed for flying boats in Winter conditions.

The new Short G-class flying-boats destined for BOAC's oceanic flying were, however, impressed from the factory in 1940 by the RAF as armed patrol aircraft, as were two longer-range Short S.30 boats G-AFCU/V3137 *Cabot* and G-AFCV/V3138 *Caribou* (both destroyed by enemy action in Norway in 1940). The longest-range Empire boats still available to BOAC, G-AFCZ *Clare* and G-AFCX *Clyde* made the final series of courier flights in camouflage to the New La Guardia Marine Airport during the Battle of Britain, one suspects mainly for propaganda reasons. (*Clare* at La Guardia <http://tinyurl.com/5vsvbrz>) The Transatlantic crossings by BOAC's Boeing 314As for engine maintenance achieved a restricted service from 1941.

The Return Ferry Service operated by BOAC with early Liberator transport conversions is regarded as the first North Atlantic landplane service. Jack Bamford, who was Air France's manager in England pre-war, was working with S A Dismore running ATFERO the Atlantic Ferry Organization and in his autobiography '*Croissants at Croydon*' he claims the credit for selecting Prestwick as the UK landfall for the ferry flights. It was decided to fly the ferry pilots back to Canada to increase productivity and Bamford describes the flight of the first Liberator down to Heston for a very basic passenger conversion (by Airwork) with BOAC's Jimmy Youell as Captain. Given a Spitfire escort over England due to its unusual silhouette the Liberator was nearly brought down when one of the Spitfires turned into its path near Heston. After using Squires Gate for early flights in May 1941 while the Prestwick runway was laid the service settled in there with the famous Orangefield building as its terminus. The service was an all-weather all-seasons effort but hit a bad patch when Liberator AM261 flew into a mountain on Arran after take-off on 10th August 1941 and AM915 flew into a hill at Campbeltown after an Atlantic crossing. Bamford describes some disquiet from the ferry pilot passengers over the lack of instrument flying training amongst the BOAC crews who, it must be admitted, were sometimes less experienced and trained than their American and Canadian passengers. Whilst the civilian ATFERO organization was militarized in 1942 the Return Ferry Service was left as a BOAC operation even though many of the Liberators flew with their military serials.

On occasion the RFS Liberators were used on other routes. In early 1942 it was decided to fly directly to Cairo from the UK. The outward flight was successful but crossing the English Channel on the return flight on 15th February 1942 Captain Humphry Page and all his passengers and crew were lost when Polish-crewed Spitfires shot down Liberator G-AGDR ex AM918 after misidentification. Subsequent flights to Cairo routed via Gibraltar and the Mediterranean. An epic flight was also made to Moscow from Prestwick by BOAC's Captain Percy in October 1942 skirting the Arctic Circle ('*Merchant Airmen*', HMSO). Six similar courier flights followed before a southern route from Cairo was substituted to reach Russia

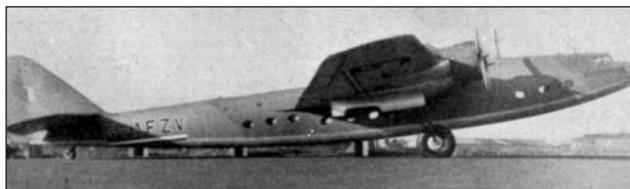
THE ROUTE TO SWEDEN

British Airways and ABA Sweden had just got services going from Stockholm to Perth when war broke out. Neighbouring Denmark and Norway were soon overrun and it was remarkable that neutral Sweden



Above: RAF Liberator AM259 was registered to BOAC as G-AGCD in April 1941 and subsequently operated on the Return Ferry Service. (via JM Collection)

Below: Ensign G-AFZV *Enterprise*, with Wright Cyclones, was taken over by the Vichy French after a forced landing in Mauretania - see Archive p.2010/161 for details. (via JM Collection)



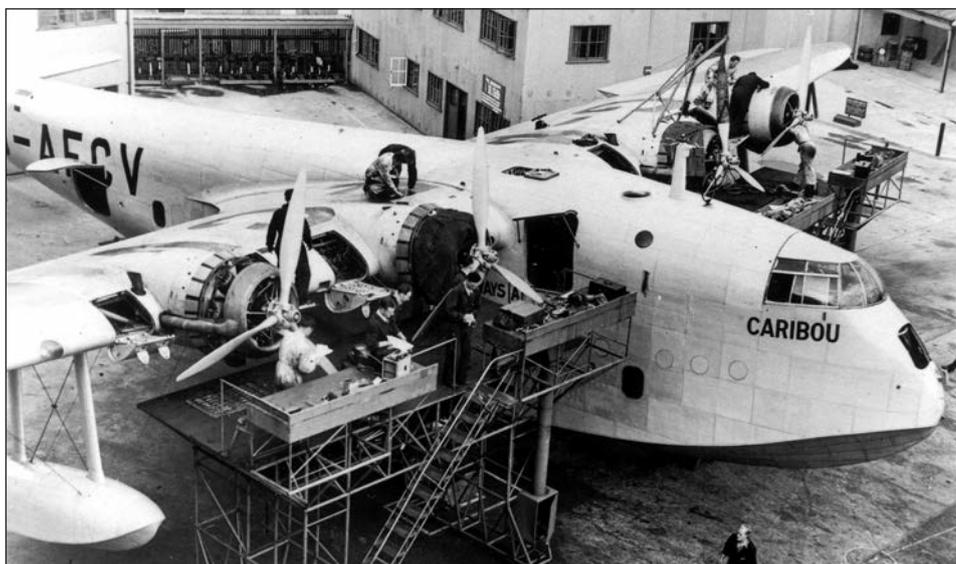
did not suffer the same fate. ABA kept up a sporadic service to Aberdeen-Dyce throughout the war at a high price as two of the DC-3s were shot down over the Skaggerak by Luftwaffe night-fighters. BOAC replaced the weekly Perth - Stavanger - Oslo - Stockholm Ju-52 or Lockheed 14 service when Norway fell in April 1940 with a Leuchars - Stockholm Lockheed 14 service flown 9 times between April and December 1940. In 1941 some 54 services were flown to Stockholm with Lockheed twins.

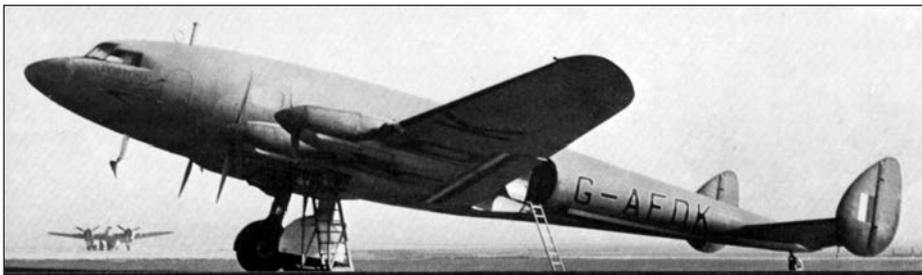
THE ENSIGN, ALBATROSS AND FLAMINGO

BOAC inherited a somewhat unfortunate position from Imperial Airways with respect to landplanes. Although Wright Cyclones had been ordered pre-war to re-engine the Ensigns this wasn't carried out until 1941 and 1942. They were ferried to West Africa via Lisbon and Bathurst with a 1,000 gallon fuselage tank installed. G-AFZV *Enterprise* was seized by the Vichy French after force-landing on a Mauretania beach on its ferry flight in February 1942. Contrary to myth it is not now believed to have flown for the Germans, though they may have taken its engines from France. Similarly, photos of G-ADSX *Ettrick* at Le Bourget show it too damaged by fire to fly again for the Germans, even though its pilot thought it flyable when abandoned in 1940.

Perhaps the kindest way to regard the graceful de Havilland Albatross is to consider it as a stepping stone on the way to the Mosquito which

Below: S.30 G-AFCV *Caribou* was credited with inaugurating the Transatlantic air mail service on 5.8.39. (via JM Collection)





Left: The DH.91 Albatross G-AFDK, Fortuna, seen in wartime BOAC colours in 1941 at Whitchurch from where it provided a link to flying boat services from Foynes. (via JM Collection)

Below: Awaiting delivery on the Lockheed ramp at Burbank in 1940, and surrounded by Hudsons, are two of the Lodestars diverted to BOAC, G-AGBX and G-AGBW. (via JM Collection)



Above: One of the seven BOAC DH.95 Flamingoes at Bramcote 11.40 prior to despatch to the Middle East, G-AFYF was one of five which survived the war. (Aeroplane via JM Collection)



BOAC did get the chance to operate as a high speed mailplane of sorts, which was the original purpose of the Albatross. It ended its days linking Whitchurch to Foynes for the long distance flying-boat connection.

The de Havilland Flamingo had the potential to grow into a very successful type had the war not intervened. It continued in production during the Battle of Britain and BOAC's fleet of seven was fitted with long-range tanks and ferried out to Cairo routing St Eval - Gibraltar - Malta - Cairo from where it operated alongside the slightly larger Lodestars and Lockheed 14s. However, there were a couple of crashes in which the elevator shroud was implicated and the type was withdrawn, the fleet dismantled and shipped back to England

BUYING AMERICAN

The National Archives have many interesting files from the British Air Commission in the USA (formerly the British Purchasing Commission) which oversaw the procurement of aircraft from the USA. By late 1940 the Commission was shopping for second-hand airliners for the RAF and BOAC. A limited number of DC-2s and various Lockheed twins were being sold off by US Airlines which were upgrading to the newer DC-3s. There was initially a lack of co-ordination in the purchase of DC-2s which resulted in the Indian and Australian governments securing batches of airliners in competition with the Commission. The Indian-acquired DC-2s eventually came into RAF service.

A large order with Lockheed for P&W Hornet powered Lodestars for Régie Air Afrique and Air France had only partially been fulfilled when France fell and the last nine of the batch were secured for BOAC under contract A1451 delivered between January and April 1941 as G-AGBO to G-AGBX. These arrived by sea at Capetown between March and August 1941 for assembly, camouflaging and air delivery to Egypt. BOAC wanted to avoid camouflaging their African and Horseshoe Route aircraft but the Middle Eastern Command insisted. As a result, red, white and blue bands were applied on wings and fuselage, reduced to just white and blue bands late in the war in the Far East to match the removal of red from the RAF and RAAF roundels. The

Commission files note that Lockheed's production of Lodestars had outstripped the supply of engines in 1941 causing delays.

In a letter dated 26th April 1941 it is recorded that, searching for a type suitable for bringing back ferry pilots across Africa, the Commission was offered a choice of the Boeing B-15, the Curtiss CW20 prototype or a DC-4 (curious, as the latter didn't fly until 1942 and the DC-4E prototype had been sold and shipped to the Japanese in late 1939). The Commission chose the CW20 for BOAC and it was ferried to Prestwick in November as G-AGDI fitted with extra tanks giving a 4,000 mile range. (The massive Boeing B-15 did later serve for 18 months with the USAAF on transport duties as the XC-105 in 1943 and 1944 in the Caribbean).

In 1941 the future supply of two DC-4s to Britain to connect with the Pan American Clippers at Lisbon was discussed (these would have had to be civil registered with BOAC). In the event, the Lisbon - UK link remained, most satisfactorily, the task of KLM's DC-3s under contract to BOAC. The procurement of VS 44 flying boats for Transatlantic services was also discussed but eventually three Boeing 314As were transferred from Pan American in May, June and July 1941. By the end of 1941 the Lockheed 49 (which became the Constellation) was being discussed by the British Air Commission in terms of ensuring that the Dutch were not supplied before the British, even though delivery was thought to be at least 2 years away.

The Lend-Lease Act of March 1941 and America's entry into the war after Pearl Harbor in December 1941 eventually ensured a plentiful supply of transport aircraft for BOAC especially the Dakota supplied via the RAF, but the few C-54s which equipped RAF units in 1944 and 1945 were returned to the US post-war instead of being offered to BOAC. (Post-war this left BOAC at a disadvantage compared with KLM whose President Albert Plesman personally obtained the loan of stop-gap C-54s for his airline from President Truman). BOAC had its eyes on the Constellation and for several years after the war used much ingenuity to obtain a fleet in the face of dollar expenditure restrictions.

To be continued . . .



Left: The sole example of the Curtiss Wright CW.20, prototype for the C-46 Commando series, originally NX19436 and 41-21041, was sold to BOAC as G-AGDI in 1941 and named St Louis. It was broken up after two years' service on long distance routes.. (via JM Collection)

The Avro 639 Cabin Cadet and 641 Commodore

HEAD-ON VIEW No.42



The highly-successful Avro 621 Tutor of 1929 and the derivative 626 remained in production until 1936 and 1939 respectively. In the meantime a slightly smaller version intended for civilian or club use, the Avro 631 Cadet, was developed as early as 1931. This biplane, together with the Avro 643 Mk.II Cadet, retained the deep stagger of the original while using the lower-powered Genet Major I engine. Sales were moderate, with Air Service Training being the main UK user of both variants with a total of 39, while 34 Mk.IIs went to the RAAF.

In 1933 a further modification was introduced in the form of a basic 631 with reduced stagger which allowed the wings to be folded for ease of storage. This model was known as the Avro 638 Club Cadet of which 17 examples were registered, one of which was not completed. Six of these were used by Airwork, the remainder mainly by flying clubs.

The next step was to design a three-seater version with an enclosed cabin based on the Club Cadet. This was the first stage in Avro's attempts to develop a cabin tourer in competition with the likes of de Havilland and it was known as the model 639 Cabin Cadet. Built at the

***Above:** Avro 638 Club Cadet, which formed the basis of the Cabin Cadet design, illustrated by Airwork's G-ACHO here fitted with a blind-flying hood for the rear cockpit. Unlike the Tutor, the wings of the Club Cadet were not staggered. (via JM Collection)*

company's Newton Heath works in 1933, the Cabin Cadet was roaded to Woodford for assembly and was first flown there on June 2nd 1933 by Avro test pilot Frederick Basil Tomkins in B-condition marks as K-14.

The sole example of the type had been allocated c/n 639 and registered G-ACGA to A.V.Roe & Co Ltd as early as April 12th 1933, seemingly placing it ahead of all the production Club Cadets, while indicating that development of the basic Cadet concept was continuing in various forms at this time.

To achieve the cabin layout, the fuselage top decking was raised to the level of the upper wing and the 28 gallon fuel tank was moved from the upper wing to the cabin floor. The original forward struts were retained to form part of the complex flat panelled windscreen design. Inside the



***Right::** Head-on View of Cabin Cadet G-ACGA with the 7-cylinder Genet Major and complex raised windscreen clearly visible. (via JM Collection)*



Above: The Cabin Cadet clearly shows its exhaust collector ring and long tailpipe extended below the cabin. Mainplane bracing wires are also apparent, accounting for the cut-out shape of the door. (Avro Heritage Centre)



Left: Airborne, G-ACGA in this early side view shows the exhaust system, unstaggered mainplanes and tailskid. The windscreen shape provided a better view ahead of the leading edge from inside the cockpit. (Avro Heritage Centre)



Left: The cabin of G-ACGA was fairly basic with a single pilot's seat, steel tube fuselage frame, folding wings and vertically-sliding passenger windows all visible here. (Avro Heritage Centre)

cabin the pilot was seated centrally in the front with two passengers side-by-side behind, photos indicating an entrance door on each side of the fuselage.

Following the type derivation the fuselage was of fabric-covered steel tube, as were the wings which were fitted with a pair of steel struts outboard, wire braced and with linked ailerons. Power was provided by a cowled 7-cylinder Armstrong Siddeley Genet Major I radial of 135 hp. Little has been published regarding the performance of the Cabin Cadet and it is believed that a second example was intended but completed as a Club Cadet instead (see listing below). The prototype never

achieved CofA status. It was not until November 1933 that G-ACGA was demonstrated for the benefit of photographers from Flight (2.11.35) and Aeroplane (8.11.33).

By this time a further development had already appeared, the three-seat open-cockpit Avro 640 Cadet. This model was intended for joyriding and parachuting, with two passengers side-by-side in the front cockpit and the pilot in a separate cockpit behind them. Only nine were built, four of which were fitted with the 140 hp in-line Cirrus Hermes IV engine.

Returning to the Cabin Cadet, G-ACGA was tested with a tailwheel replacing the original tailskid on 24.1.34 and in June of that year was flown with a geared Genet engine. Flights were made to Hamble during June, via Castle Bromwich, but on July 4th 1934 the aircraft, flown by Tomkins, made a forced landing at Crewe. It returned to Woodford on the same day but shortly afterwards, on 18.7.34, made its last recorded flight there. The registration G-ACGA was cancelled on 7.9.36 and the aircraft was scrapped at Woodford.

The Cabin Cadet may be considered to be a development aircraft for a scaled-up design, the Avro 641 Commodore which was a 4 or 5-seat cabin biplane, larger than existing British types. The Commodore actually reverted to some of the Tutor's features notably with heavily-staggered wings with N struts. Only one bracing wire was used however, and a diagonal faired steel strut was fitted between the mainplanes which were built with steel spars, aluminium ribs and fabric covering.

Right: This view of the starboard side of G-ACGA shows the outline of a door on this side too. (via JM Collection)



Ailerons were fitted on the lower wings only, while the upper wings each contained a 25 gallon fuel tank, sufficient for a 500 mile range.

The fuselage of welded steel tube, wooden stringers and fabric cover, contained a spacious cabin with two adjustable pilots' seats in front and three passenger seats behind – or two seats with extra luggage space. For the pilots, cross-over controls were fitted and instrumentation was duplicated. The engine fitted was a 215 – 240 hp Armstrong Siddeley Lynx IVC radial driving a Fairey-Reed metal propeller and provided with an electric self-starter. It was fully-cowled with a Townend-type ring and stub exhaust.

Streamlined semi-cantilever main legs with oleo shock absorbers, brakes and wheel spats provided an attractive wide-track undercarriage. The tailwheel was fitted below the strut-braced tailplane and the large rudder was mass-balanced. All in all the Commodore was a very advanced aircraft, outwardly similar to US designs which already existed, indeed Waco UIC G-ACGJ had been imported in 1933, but there was little demand in thirties Britain for such high levels of sophistication and only six examples were completed.



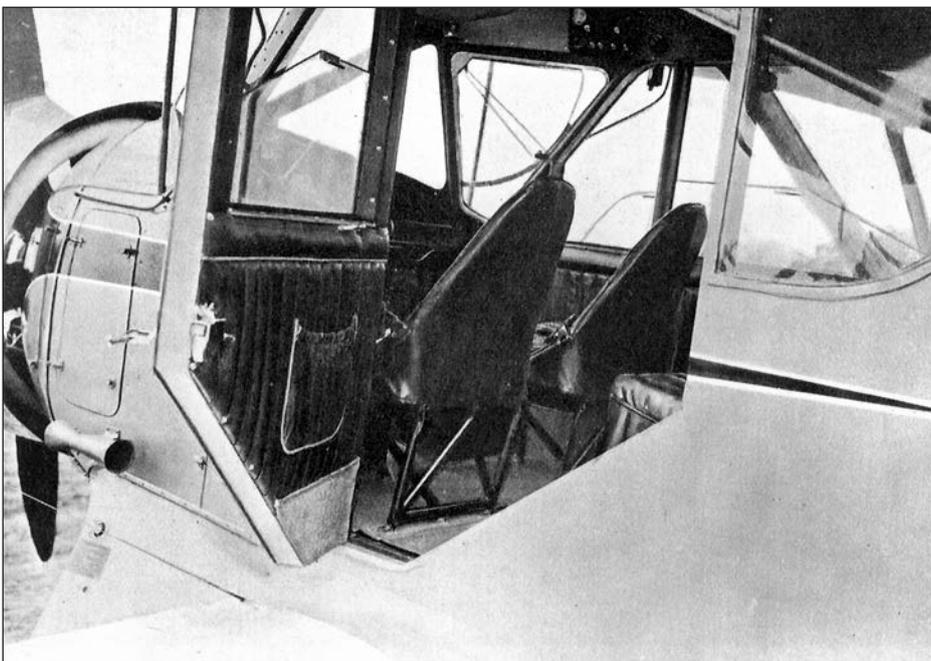
Above:The business end of the Cabin Cadet in close-up. The pilot is presumed to be Frederick Tomkins who flew G-ACGA on most occasions. (Avro Heritage Centre)

Below: The first Commodore G-ACNT in original all-silver paint scheme, photographed in May 1934. The wing stagger is emphasised by the N struts. (Aeroplane via JM Collection)





Above: On a demonstration flypast, the Commodore clearly shows the diagonal steel tube struts and the cutaway leading edge above the cockpit. (Aeroplane via JM Collection)



Left The cabin of G-ACNT reveals two adjustable front seats with a single control column which could be swung to either side, carpet and leather trim are evidence of the quality market sought for this aircraft. (via JM Collection)

Below: Genet-powered Avro 640 Cadet three-seater G-ACFX of Midland & Scottish Air Ferries Ltd with two passengers in the forward cockpit and the slightly raised pilot's position behind. (via JM Collection)

The prototype Commodore, c/n 691, was built to the order of Mr W Westhead and registered G-ACNT in February 1934, making its first flight on 16.4.34 with Frederick Tomkins at the controls. Although delivered to the owner on 24.5.34 it seems to have returned to Woodford for use as a company hack less than a year later. The second example, G-ACRX, went to the Earl of Amherst in July 1934 but within a year that too was sold, first to Airwork and then to Egypt. Airwork also ordered G-ACUA which then followed its predecessor to Egypt.

Two more Commodores, Major Durrant-Shaw's G-ACUG and Henlys' G-ACZB were eventually impressed, as DJ710 and HH979 respectively but did not survive post-war. The last example was the Maharajah of Vizianagram's VT-AFN which stayed in India for less than a year before returning to the manufacturer and reportedly being broken up pre-war. Only the prototype is believed to have survived, having been dismantled and stored at Woodford in 1939, until finally being scrapped in 1950.





So ended the story of the Avro cabin biplanes, one essentially experimental, the other ahead of its time and unable to find an appropriate market.

Above: Commodore c/n 691 G-ACNT after being resprayed in grey with red trim for use as the manufacturer's hack. (via JM Collection)

Individual histories

c/n 639 Avro 639 Cabin Cadet.

Built Newton Heath 1933. Regd **G-ACGA** to A V Roe & Co Ltd 12.4.33 (CoR no.4310). F/f 2.6.33 as K-14 by F B Tomkins at Woodford. Tested with tailwheel 24.1.34, with geared Genet 13.6.34. Last recorded flight 18.7.34 at Woodford. Regn cld 7.9.36, scrapped at Woodford.

c/n 686 Avro 639 Cabin Cadet.

Regd **G-ACMD** 22.11.33 to A V Roe & Co Ltd. Not flown with cabin; became model 638 Club Cadet and re-regd **G-ACNY** 2.34, to Airwork Ltd with CofA 24.3.34.

c/n 691 Avro 641 Commodore.

Built to Works Order 14679 at Failsworth for W Westhead to whom regd 2.34 as **G-ACNT** (CoR no.4860). F/f 16.4.34 by F B Tomkins at Woodford

Below: C/n 700 G-ACRX is seen here at Woodford prior to delivery to the Earl of Amherst in July 1934. (Avro Heritage Centre)



Dimensions and performance:

	638 Club Cadet	639 Cabin Cadet	641 Commodore
Engine	AS Genet Major I	AS Genet Major I	AS Lynx IVC
Horsepower	135 hp	135 hp	215 hp
Span	30ft 2in (9.2m)	30ft 2in	37ft 4in (11.37m)
Length	24ft 9in (7.54m)	24ft 9in	27ft 3in (8.30m)
Height	8ft 9in (2.66m)	8ft 9in	10ft 0in (3.04m)
Wing area	262 ft ² (24.34m ²)	262 ft ²	307 ft ² (28.52m ²)
Empty Weight	1,244 lb (564.2 kg)	-	2,237 lb (1,014.7 kg)
All-up Weight	2,000 lb (907.2 kg)	-	3,500 lb (1,587.6 kg)
Max speed	115 mph (185 kmh)	-	130 mph (209 kmh)
Cruising speed	100mph (160 kmh)	-	110 mph (176 kmh)
Range	325 mls (523 km)	-	500 mls (804 km)

(Figures for Club Cadet included in absence of performance data for Cabin Cadet)



(15 mins). Test flying 17.4 to 3.5.34; to A&AEE Martlesham Heath for CofA trials 4.5.34 to 11.5.34; CofA no.4298 issued 18.5.34. Del to owner and flown to Heston 24.5.34. Other tests followed in May and the silver aircraft was re-sprayed in grey with red trim, becoming a company hack and regd to A V Roe & Co Ltd 24.4.35 (CoR no.5830). Various test flights by Tomkins and H A Brown took place 1934-36. CofA expired 27.8.37. Recorded as dismantled at Woodford 20.9.39 and regn cld 28.9.39. Believed scrapped there, 1950.

c/n 700 Avro 641 Commodore.

Built to Works Order 15176 at Failsworth for Capt the Earl of Amherst to whom regd 4.5.34 as **G-ACRX** (CoR no.5024). Tested by Tomkins 1.7.34 and CofA no.4354 issued 3.7.34. Delivered to Heston in red with grey trim and later used for air taxi work by British Air Navigation Co. Regd to Airwork Ltd 8.5.35 (CoR no.5862). Sold 3.9.35 to V H Tait, Almaza, Egypt (CoR no.6271). UK CofA expired 21.8.36 and re-regd in Egypt .36 as **SU-AAS**. Took part in Circuit of the Oases race as No.41, 22-26.2.37, entered by Egyptian Government and flown by A Nagi. Transferred to Royal Egyptian Army Air Force, probably as **W213** (or **W203?**).

c/n 721 Avro 641 Commodore.

Built to Works Order 15485 at Failsworth for Airwork Ltd to whom regd 11.6.34 as **G-ACUA** (CoR no.5128). Tested by Tomkins 2.8.34 and CofA no.4461 issued 7.8.34. White with green registration. Regn cld 2.35 and sold to Egypt and regd **SU-AAU** .36, based Almaza. Transferred to Royal Egyptian Army Air Force, (possibly as **W203?**).

c/n 722 Avro 641 Commodore.

Built to Works Order 15320 at Failsworth for Major J E Durrant-Shaw to whom regd 14.6.34 as **G-ACUG** (CoR no.5143). Tested by Tomkins 27.9.34 and CofA no.4517 issued 28.9.34. Blue with silver trim; based at Heston and Welburn near Kirkbymoorside. CofA expired 23.4.40 but

Above: After sale in Egypt c/n 700 became SU-AAS and was entered in the 1937 Circuit of the Oases as No.41. (RAF via Avro Heritage Centre)

Below: Ordered by Airwork, G-ACUA c/n 721 was delivered in white with green registration but after six months it was cancelled and transferred to Egypt. (Avro Heritage Centre)



Above: This very grainy image shows a Commodore of the Royal Egyptian Army Air Force with the serial W203 on the rudder. This is assumed to be the former G-ACUA/SU-AAU. (via JM Collection)

Left: G-ACUA followed G-ACRX onto the Egyptian register in 1936, becoming SU-AAU before transferring to the Royal Egyptian Army Air Force where it was probably serialled W203 as shown above. On this photograph the serial is barely visible however. (Avro Heritage Centre)





Above: Major Durrant-Shaw purchased c/n 722 G-ACUG and based it at Welburn airfield near Kirkbymoorside in Yorkshire. The name of the field is written on the hangar roof and the bull-nose Morris on the right was an established part of the scenery. (J M Bruce/ G S Leslie collection via JM)



Right: The blue and white Commodore G-ACUG was one of two impressed during the war, however its service career was short-lived as it was written off in a stall at White Waltham on 10.8.41. (via JM Collection)

made airworthy and impressed 15.2.41 as **DJ710** for use by HQ Training Ferry Pilots' Pool of the ATA at White Waltham. Stalled and crashed on approach at White Waltham in 30 degree crosswind on 10.8.41, killing pilot. Struck off charge 18.8.41 as scrap.

c/n 729 Avro 641 Commodore.

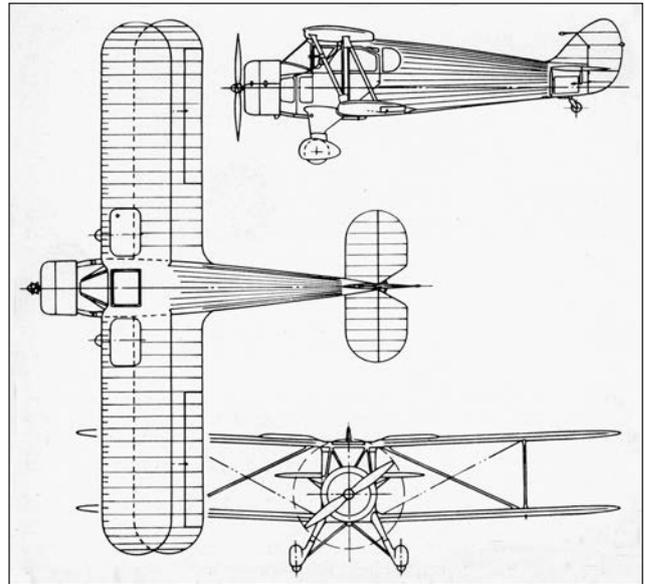
Built to Works Order 15858 at Failsforth for Henlys (1928) Ltd to whom regd 18.10.34 as **G-ACZB** (CoR no.5398). Tested by Tomkins 16.4.35 and CofA no.4441 issued 24.4.35 and delivered to Henlys at Heston for use as demonstrator. Regd to Sir W G Armstrong Whitworth Aircraft Ltd, Whitley 9.3.36 (CoR no.6809) for company communications. Inspected for impressments 21.8.39 but declared unairworthy; CofA expired 11.6.40 but overhauled by Herts & Essex Aero Club. Impressed 3.8.41 as **HH979** for operation at Cranfield and regn cld 27.8.41. To 6MU Brize Norton 28.3.42 and to No.51 OTU, Cranfield 9.6.42. Struck off charge as scrap 17.8.42.



Above: The fifth Commodore began its career as Henlys' demonstrator G-ACZB and became Armstrong Whitworth's company hack prior to impressments. It does not appear to have ever been fitted with spats, as shown here on a visit to Manston. (via JM Collection)



Above: This cabin view of the Commodore shows less interior detail than the earlier image but the central control column with cross-over wheel can be seen clearly. This particular example is believed to be the cabin of G-ACZB. (via JM Collection)



Above: Three-view drawing of the Avro 641 Commodore. (via JM Collection)

c/n 759 Avro 641 Commodore.

Built to Works Order 15580 at Failsforth for The Maharajah of Vizianagram, Waltiar to whom regd 17.8.34 as **VT-AFN** (CoR no.231). Tested by Tomkins 12.10.34 and CofA no.4542 issued 16.10.34. Delivered to Heston for acceptance by H L'E Tyndale-Biscoe (Instructor, Madras FC) and presumed shipped to India, based Madras. Returned to UK and test flights recorded at Woodford 14.10.35. To Hooton Park for storage and reported broken up at Woodford or Hooton by end of 1935, although one source suggests that it was used as a company hack. However CoR no.231/2 was issued to an unknown person 4.39, the Indian registration finally being cancelled on 6.5.42.

With special thanks to George Jenks, Avro Heritage Centre, for additional information.



Above: The Commodore featured on a Players Cigarette Card where it was described as "... designed for the private owner or for the use of the air-travelling businessman. It has a luxuriously furnished cabin with seating for four" and "is a very pleasant machine to fly". (via JM Collection)



Above: The sixth and last Commodore was c/n 759 VT-AFN which was found unsuitable for conditions in India and returned to the manufacturers within a year of delivery. It was soon broken up although there is still some mystery attached to its fate as it has been suggested that for a short time it was used as a company hack. (via JM Collection)

The FARMAN 190 and its derivatives

Michel Barrière

PART SEVEN



Individual F.190 histories:

F.190 no.52, c/n 7222 F-ALAP (Continued)

With 780 litres of fuel in the wings, 300 litres in the cabin, and 55 litres of oil, the Farman had a range of 2,800 kms (ie: 21 hours) but was heavily loaded. Bad weather prevented their intended departure from Le Bourget on 1st March and it was not until dawn on 2nd that the Farman took off. It passed through Athens (3.3) but a forced landing shortly before Aleppo damaged the metal propeller and, after a makeshift repair, resulted in a prolonged delay for permanent repair. Setting off again on the 8th from Aleppo they reached Bassora (Basra), Bandar Abbas, Bouchir (8.3), then Karachi (9.3), Allahabad (10.3), Rangoon (11.3), then Hanoi (12.3). They then crossed China, staging through Macao, Hong Kong (14.3) where bad weather stopped them, then Swatow and Shanghai (18.3). At Seoul (19.3) the Japanese authorities detained them for overflying the Moppo forbidden zone. It was not until 21st March 1931, after a demonstration of their good faith and an intervention by the French authorities, that the crew were able to complete the final stage and reach Tokyo.

On 26th March Moench and Burtin began the return journey but fog forced them to land at Osaka (26.3). They left the following day for Seoul (27.3), then Pekin (28.3). They continued on 30th with a passenger, Capt Fieschi the French military attaché in China, who they took to Nanking, before reaching Shanghai where weather delayed them for a day. They departed on 1st April for Hong Kong where weather again grounded them until 3rd before continuing to Moncai (4.4), Hanoi (5.4) and Saigon (6.4) where Marsot, who was now living there, serviced the engine. Leaving on 10th they flew to Rangoon, then Calcutta (11.4), Allahabad (12.4) and Karachi (13.4). On 14th they took off for Bandar Abbas and Lingeh, on 15th they reached Bassora, then Baghdad, next came Aleppo (16.4), Brindisi (17.4), Marseilles (18.4) and they returned to Le Bourget on April 19th.

In August the possibility was raised of a new project for Moench to fly to Madagascar. It was also rumoured that his co-pilot would be Santereau, a former Air Union and Aéropostal pilot. Early in September the press reported that that the compasses of the "Moench – Santereau" aircraft had been set. Nevertheless, at the beginning of October the crew of Moench and Burtin was re-formed. On 24th the aircraft's compasses were set at Villacoublay, on 28th they took off from Le Bourget to Istres which was the official starting point for their attempt to break the record held by Bailly and Reginensi.

The Farman took off on 30th October, loaded with 1.050 litres of fuel. It was planned to reach Tananarive in seven stages which were respec-

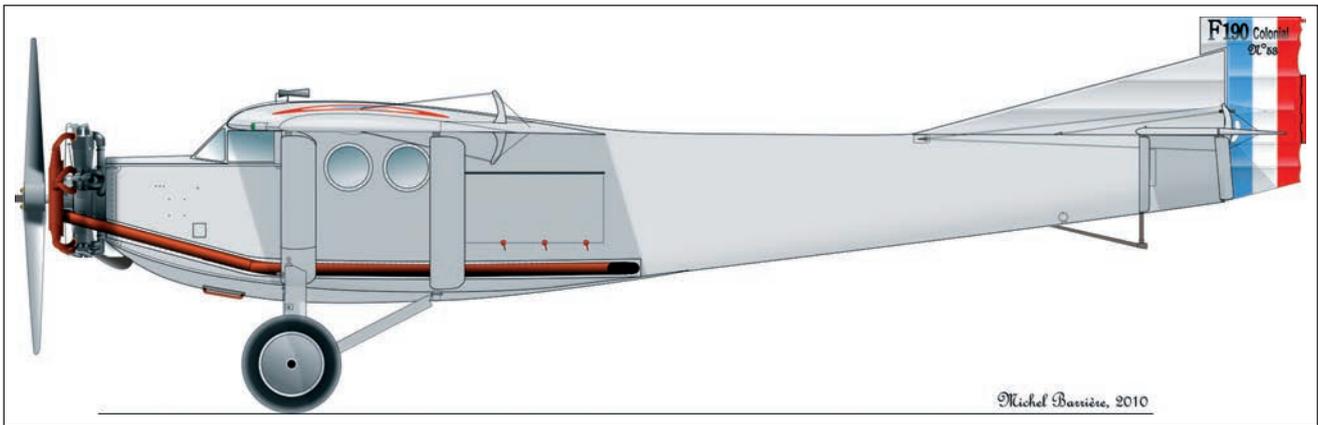
Above: F-ALAP in the colours of Lignes Aériennes Nord-Africaines (LANA) for whom it operated between 1934 and 1936. (Artwork: M. Barrière)

tively: Colomb-Bechar (30.10), Gao (31.10), Fort Lamy (1.11), Bandundu (2.11), Elisabethville (3.11), Quelimane (4.11) and Tananarive (5.11). In this way they broke Bailly's record by 48 hours. The return flight to Le Bourget, with three bags of mail to demonstrate the viability of a postal service between Tananarive and Paris, took ten days. Departure from Tananarive took place on 14th November to Quelimane (14.11), Elisabethville (15.11), Port Franqui (16.11), Coquilhatville (17.11), Bangui (18.11), Fort Lamy (19.11), Gao (20.11), Reggan (21.11) where engine maintenance added a day's delay, then Oran (23.11) and Istres, the finishing point, on 24th November. On 25th "Alsa" returned to Le Bourget. Several days later Goulette and Salel in their F.199 broke the new Paris – Tananarive record with 4 days and 10 hours by following a shorter route via East Africa.

Christian Moench did not keep the Farman. On 1st December 1931, F-ALAP was registered to Henri Germain, descendant of a family of passionate aviators, who first used it in the fleet of the Aéro-Club d'Alger. In July 1932 the aircraft was flown by Roidot to Toussus-le-Noble for a service. On this occasion the aircraft was modified, the cabin was rearranged as a 'tourisme colonial' version, portholes deleted, windows and doors enlarged according to the latest standards. In early October 1932 Burtin took the aircraft back to Algiers, arriving there on 10th. In November 1934 Henri Germain, with the support of the Algiers Chamber of Commerce and the local administration, created Lignes Aériennes Nord-Africaines (LANA). F-ALAP was transferred to the company, as was F.192 no.17 F-ALEB.

On 6th December 1934 the Algiers – Oran route was officially opened by these aircraft and the Algiers – Bone route followed in February 1938. The Farmans provided the service, joined later by a Fokker F.VIIa leased to Air France, then by DH.84 Dragons, which allowed the Algiers – Tunis route to open in December 1935. The operation was successful at first: 912 passengers were carried in 265 flights between 1.12.34 and 20.8.35 on the Oran – Algiers – Bone route. However, Paris increased opposition pressure to consolidate the monopolies of the national companies Air France and Air Afrique. In 1936 LANA, deprived of subsidies, was obliged to cease operations. The aircraft were sold by Henri Germain, one example being retained by Air Afrique.

On 4th May 1937 the Farman was registered to the Société Algérienne de Transports Tropicaux (SATT). It was inspected at Algiers on 8.4.38, at that time it had 700 flying hours which resulted in suspension of its CdN. Its final fate is unknown.



F.190 no.53, c/n ?

F.190 no.53 was identified from a photograph as an F.190 Colonial, acquired by the French state and fitted out as an ambulance version with a large door on the left side for stretcher access. According to Jean Liron (*"Les Avions Farman"*, Docavia) it was the last of an unidentified series of four F.190s built as part of previous orders in 1931. It appears that this order can be found along with other governmental orders in the c/n series 7240 to 7260.

The magazine *"Les Ailes"* of 30.7.31 mentions the introduction by Farman, during the "Journées d'Aviation Sanitaire Coloniale" at Orly, of its F.190 model specially built for the colonies. This F.190 was quickly convertible to an ambulance version or to a 4-5 passenger version.

F.190 no.54, c/n (7290)? (F-ALHY), (YR-AAM)?

It is known that in June 1931 an F.190 was acquired by Princess Irina Cantacuzino and entered in the Romanian register as YR-AAM. It can be supposed that this was no.54 which had been registered as F-ALHY (AIR.2102, c/n probably 7290) allocated to Farman but not identified elsewhere. We have no other specific information about this aircraft, which disappeared from the Romanian register before 1938.

F.190 no.55, c/n 7299, F-ALKQ

CdN no.2169, Cdl issued 29.5.31

Registered to Air Union but not taken over by Air France. Letters between Air France and the military Matériel Aérien in February 1934 proposed its cancellation from the register.

[In September 1933 an advertisement appeared in *l'Aero* stating that a "saloon Farman 190, Gnome-Rhône Titan 230hp engine, as new" was for sale for 80,000 francs. The vendor was Pierre Maillat, 17 rue Parmentier, Neuilly s/Seine. On the basis of these points it appears that this refers to F.190 no.55.]

Above: F.190 no. 53 was an example of the Colonial ambulance variant; note the jarge hatch for stretcher access. No registration is known for this aircraft. (Artwork: Michel Barrière)

F-ALKQ was registered in November 1934 to Rémy Clément. Nothing is known of its use other than a mention of a visit to Paray-le-Monial between 20th and 22nd April 1935, arriving from Nevers and departing to Moulins. In October 1936 Rémy Clément gave it to the Spanish Republicans whose cause he actively supported. F-ALKQ disappeared during the Civil War.

F.190 no.56, c/n 7296, F-ALIP

CdN no.2118, Cdl no.3284 issued 30.12.32

Registered to Air Orient, who took delivery on 31st January 1933. On 14th February 1933 it was registered, donated or leased, to the Société des Transports du Proche Orient (S.T.P.O.), and does not seem to have been taken over later by Air France. It disappeared from the register about 1938, perhaps following an accident.

F.190 no.57, c/n 7354, F-AMFF

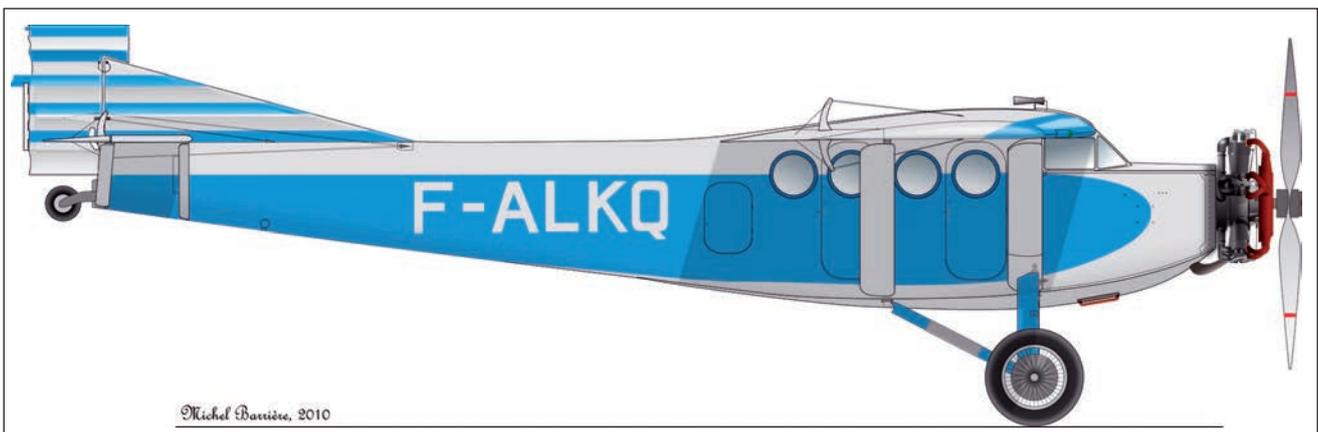
CdN no.3052, Cdl no.3285 issued 30.12.32

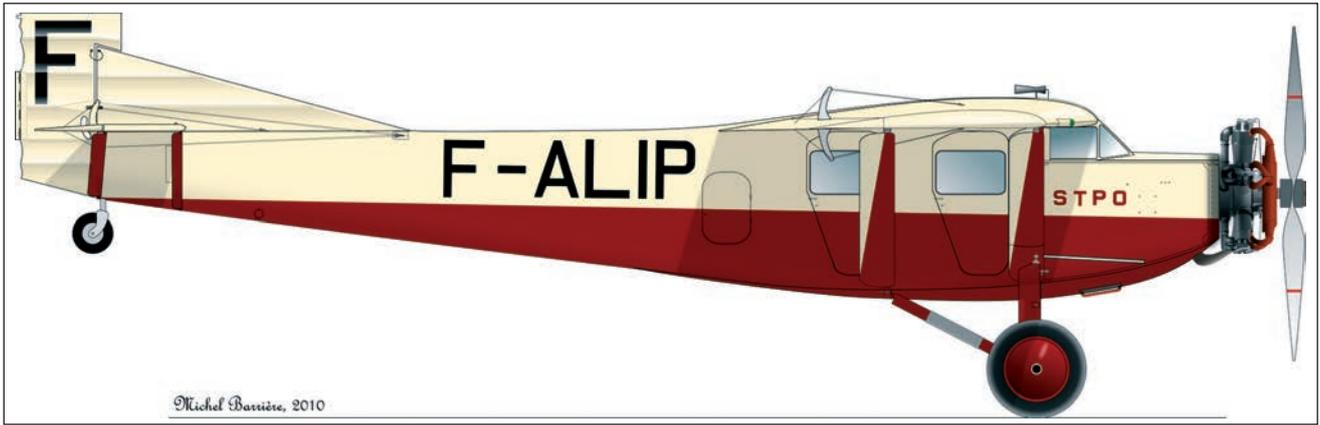
Registered to Air Orient. In 1933 it was transferred to Air France and named "L'Adroït". Still in service in 1939, it was requisitioned by the Germans in 1940.



Above: An undated photograph of F-ALKQ (via JM Collection)

Below: F-ALKQ as originally delivered. (Artwork: Michel Barrière)





Above: F-ALIP was F.190 No. 56. It was operated by the Société des Transports du Proche Orient (S.T.P.O.) and probably based at Damascus or Baghdad. (Artwork: Michel Barrière)

F.190 no.?, c/n ?, FL-AUM

In 1942 a Farman F.190 was recovered at Rayak, Lebanon. This could have been F.190 no.14 F-AJAI of Georges Goumin as the other F.190s used in the Middle East by S.T.P.O. were based at Damascus or Baghdad.

It was used by the Lignes Aériennes Militaires with registration FL-AUM. Transported by road to Damascus, it was made serviceable for use as a hack for journeys in the Levant. Several flights are known, such as a Damascus – Baghdad link on 16.6.42 flown by Lt.Speich, and a trip to Cairo on 18.7.42 carrying Cdt.Sladk and his crew to connect with a Lodestar. The last known flight took place on 25th July 1942 (“Le Trait d’Union”).

F.190 no.? c/n ?

On 27th January 1943 the “Artois” group was founded in French Equatorial Africa. The Artois squadron was based at Pointe-Noire under the command of Cdr.Kopp and was equipped with, amongst other types, an unidentified F.190, probably of military origin.

F.190 “Farm 18”, c/n ?

On 12th October 1933, the mechanic Gaston Ladarré at Bamako flew to the 1st Squadron AOF (French West Africa) in an F.190 marked “Farm 18”. A photograph taken in October or November 1933 shows an ambulance version fitted with a GR 5 BA engine. This engine was unusual in not being fitted with an exhaust collector, not even a large exhaust pipe.

This aircraft is a mystery: according to its series number it may be thought to be F.190 no.18 F-AJDD of the CAF, reported as destroyed in December 1931 which must therefore have been recovered and repaired (See illustration in *Archive* page 2011/144). On the other hand it could be F.192 no.18, possibly re-engined locally.



Above: Possible arrangement of fuel tanks (shown in yellow) for the F.191. (Michel Barrière)

Right: General arrangement views of the two American transatlantic contenders. The fuel tanks, shown in yellow, are near the centre of gravity, unlike the proposed arrangement for the F.191. (Le Document aéronautique, juin 1928 - Coll. M.Barrière)

Genesis of the F.191

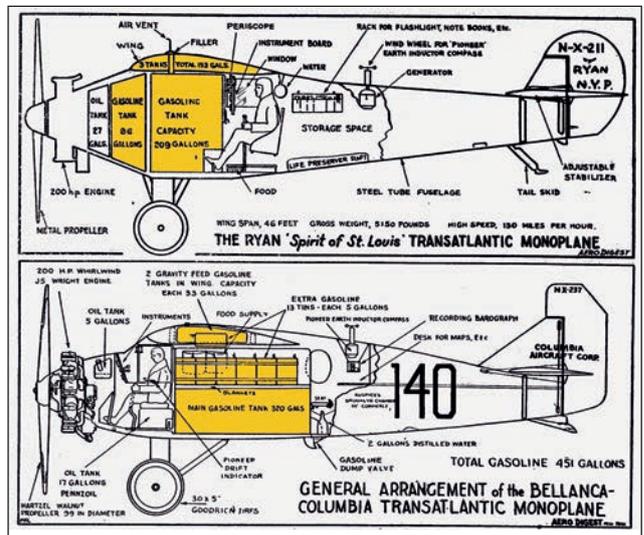
Inspired by the “*Spirit of Saint Louis*”, the F.191 acknowledged the principle of the absence of a visible pilot’s position, replacing it by streamlining. It appeared in several photographs taken during winter 1928-29 (“*Revue Gnome-Rhône*”) wearing the registration F-AIVQ which followed that of F.190 no.1 (F-AIVP), their c/ns being 7109 and 7110, and they must have been conceived at the same time. This was no doubt a Farman initiative. Two examples of the F.191 were built, both quickly exported, one to Romania and the other to Portugal.

The designation F.191 was confirmed but remained relatively confidential. To make matters worse, at the beginning of 1930 the press pointed out that “It has become customary to change aircraft type numbers according to the engine type. Thus the Farman F.190 is the designation reserved for the Titan engine. Salmson, Lorraine, Farman and Hispano are correctly numbers 191, 192, 193 and 194 respectively.” (“*L’Intransigeant*” 2nd February 1930) This numbering of F.191 instead of F.192 and of F.192 instead of F.197 was widely adopted in 1930 and it only ceased to be used in 1936.

Description of the F.191

The fuselage of the F.191 was similar to that of the F.190 but was extended by 0.60 metres in the section behind the cabin. It was identified principally by the streamlined fuel tank replacing the pilot’s position which was moved back to between the first two frames of the fuselage. On each side of the aircraft a square window was inserted, that on the right side being positioned in the entry door.

Jean Liron claimed that the pilot’s position was fitted with a periscope for forward vision, but neither Lucien Coupet the chief pilot of Farmans, nor Brito Paes mentioned the presence of such unusual equipment. Brito Paes criticised the raised position of the pilot who, for landing,





Above: F-AKFK was the Farman F.1000 'stratospheric' variant intended to break the world altitude record. (Coll. Michel Barrière)



Left: Coupet in the raised pilot's position for take-off and landing. He seems very exposed! (Les Ailes - Coll. M Barrière)

Below: A close-up of the raised pilot's position on F-AKFK. The pressurized hatch was closed for high altitude flight and the pilot climbed up into the seat to use extended controls for take-off and landing. (via JM Collection)

must stand up to see the runway and set the aircraft down. In an interview with *Diario de Lisboa* of 20th March 1929 he said "...landing with such an aeroplane is difficult, since the pilot in this position cannot see downwards clearly, having to move forward to see the runway and to land". Photographs which allow a glimpse of the cabin interior lead us to suppose that there was an open cockpit. It is worth remembering that, on the Farman F.1000 'stratospheric' aircraft derived from the F.190, Coupet had fitted a raised seat on the top of the fuselage for use on take-off and landing, a situation which recalled the criticism of Brito Paes. As a consequence of this situation the cruising speed of the Portuguese F.191 was only 120 km/hr instead of the 140 km/hr predicted, which the Romanian F.191, fitted with a standard cockpit, achieved as specified.



The wing of the F.191 was similar to that of the F.190, but its span increased to about 17.00 metres, the extension being due to the additional trapezoidal wing tips, the length of the ailerons being similarly increased. The lengthening of the fuselage was repeated in the increased chord of the wing behind the second spar; the depth of the wing to the adjoining flush fitting being 3.65 metres. The wing area of 40.2m² for the F.190 was therefore increased to about 55m² for the

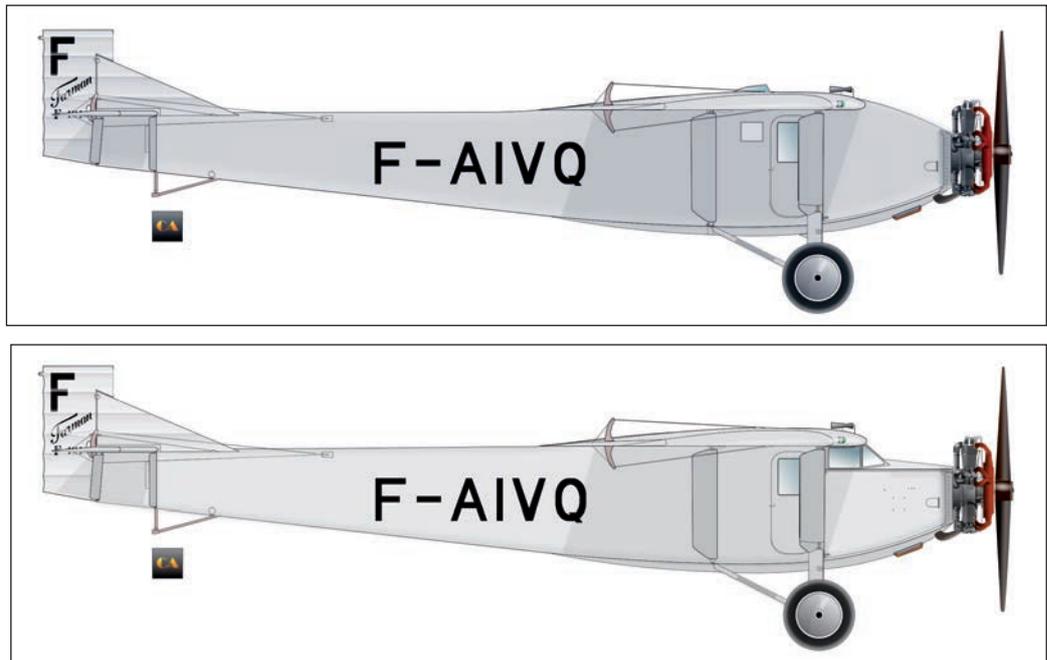
F.191. The position of the spars, the length and attachments of the struts, remained unchanged. As before, the construction of the wing was completely of wood.

The F.191 seemed to be fitted with the small fin and the balanced rudder of the F.190 of November 1928; in addition it had a balanced tailplane. It retained the wide-track undercarriage of the F.190, fitted

Right: Two contrasting views of F-AIVQ. On the top it is in its original state, at Toussus-le-Noble during the winter of 1928-29. Note the streamlined front section containing the additional fuel tank but with no forward vision and the additional side window

In the lower image it has been modified for its record-breaking non-stop flight from Paris to Bucharest in May 1929 and is now fitted with a standard cockpit.

(Artwork: Michel. Barrière)



with Farman oleopneumatic shock absorbers. The wheels appeared to be fitted with the same 750 x 150 tyres. The aircraft was fitted with a Gnome-Rhône Titan GR 5 Bc engine developing 240hp. The radiator was further forward than that of the F.190, with an oil tank just behind the engine, its filler cap being hidden behind a small flap on the left side.

The fuel tanks of the F.191 were located in the wings, behind the engine and in the cabin. On the wing, the taps visible on the external pipe-work indicated the presence of large flat tanks located between the two spars. Their capacity appeared to be typical of those of 275 litres each. It may be estimated that the capacity of the streamlined tank behind the engine was about 800 litres. The Portuguese F.191 which carried a total of 3,000 litres of fuel for an all-up weight of 4,500 kg, therefore must have had cabin tanks with a capacity of between 1,500 and 1,700 litres of fuel.

After the removal of the streamlined tank, the Romanian F.191's fuel capacity was reduced by 1,400 litres, from which a lower initial capacity can be assumed – about 2,200 to 2,500 litres – but nevertheless greater than the 1,700 litres of the Ryan NYP and the Bellanca, although therefore sufficient for a demonstrator. The designation F.191-1 of Brito Paes' aircraft therefore corresponded to an increased capacity version, consequently strengthened, but that is only a hypothesis.

F.191 no. ? c/n 7110, F-AIVQ, YR-MIH

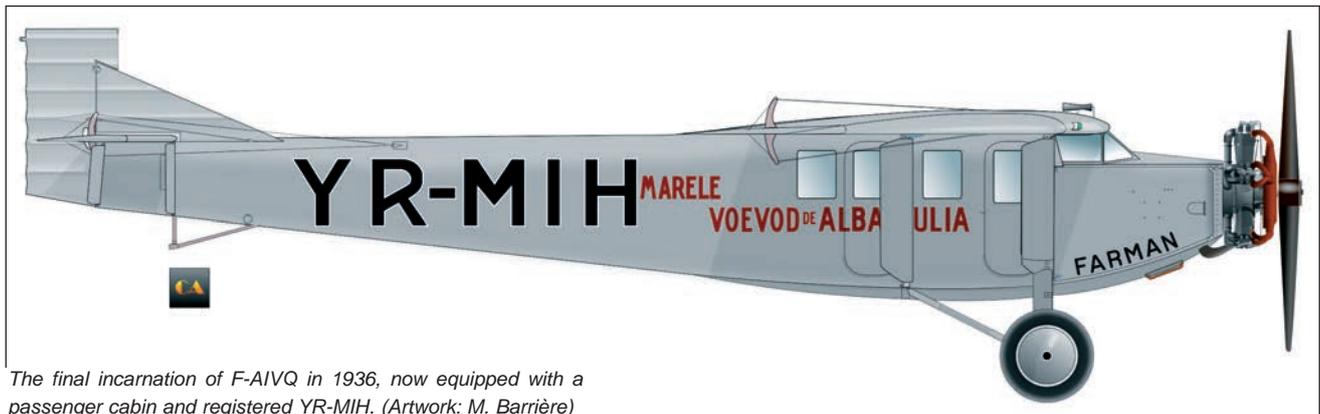
Accompanied by two officers, the Romanian ace Romeo Popesco arrived in France at the end of October 1928 to take delivery of LGL 32 C1 fighters fitted with new Jupiter Type VII engines; he did not leave until 28th November. Lucien Coupet made a short flight in the F.191

F-AIVQ on 6th November and Popesco was able to assist him. It was doubtless at his request that the aircraft reappeared in the following year with a standard cockpit. Dismantled and sent back to Billancourt at the beginning of 1929, the modified F.191 was returned to Toussus in April or May for assembly and delivery. Early in July it was at Villacoublay where Romeo Popesco took delivery and practised for an intended non-stop Paris – Bucharest flight for the Bibesco Cup. The aircraft was named "Mihail I" in tribute to the Romanian king. Registration in France could not be carried out in the name of a foreign citizen but it seems to have been done in the name of the Franco-Romanian company CIDNA.

At dawn on 16th August, mechanic Claude Damet and Lieutenant Jagoinza of the information section of the International Institute of Intellectual Cooperation, Popesco departed in the F.191 loaded with 1,400 litres of fuel. The aircraft carried 50 copies of the "Petit Parisien" and of "L'Excelsior" for distribution in Bucharest that evening. Leaving Le Bourget at 0450, Popesco landed at Bucharest-Baneasa at 2007, having set down between Linz and Vienna for an hour and a half with an engine problem.

The F.191, still registered in France, seems to have been little used during that autumn and winter. On five days Popesco carried out publicity flights for the Aero-Club of Romania, giving pleasure flights to nearly 3,000 schoolboys and girls.

On 7th May 1930 at 1622, accompanied by Georges Tzinta, Commissioner of the Aero-Club of Romania, and by Damet, he departed from Baneasa with 1,400 litres of fuel and 54 litres of oil and climbed easily to 1,200 metre altitude after a take-off run of only 400 metres. He landed on 8th May at 1322, having broken the Romanian endurance record with 21 hours.



The final incarnation of F-AIVQ in 1936, now equipped with a passenger cabin and registered YR-MIH. (Artwork: M. Barrière)



Left: Romeo Popesco and his Romanian students in front of F-AIVQ during their propaganda campaign in Spring 1929. (Coll. Dan Antoniu, via Franck Roumy)
Below: The F.191-1 (Coll. José Amado Neves, via José Vilhena)

Popesco took F-AIVQ for overhaul at Le Bourget on 7th June, it covered 15,000 km in 160 flying hours. He wanted to attack the Romanian record for distance in a straight line with a non-stop London – Bucharest flight. On 11th July, at 0447, he took off from Croydon and flew to Bucharest but the record reverted to Prince Ionel Ghika who, setting off from Oxford, had landed in Bulgaria.

On 1st April 1931 the F.191 received Romanian CofA no.12. However, on 9th December 1931 Romeo Popesco was killed during an attempt on the World Speed Record in the prototype IAR CV.II.

During the following years the F.191 led a quiet life. It was used for tourism and publicity flights by ARPA (Asociatia Romana pentru Propaganda Aviatiei). It had been fitted with a large well-lit cabin with large windows of a type unlike those generally used by Farman. On the fuselage it carried the inscription "MARELE VOEVOD DE ALBA JULIA" (Grand Prince of Alba-Julia), the inherited title that Prince Mihail regained on the return in 1931 of his father King Carol II. In 1936 the F.191 received the registration YR-MIH but shortly afterwards disappeared from the register. The marks YR-MIH were re-used in August 1938 by a Nardi FN.305.

F.191-1 No 5 (F.190), c/n 7114, F-AIYC, "Patria 3"

The F.191-1 had probably been ordered by the Portuguese long-distance pilot Brito Paes around September 1928. [Antonio Jacinto da Silva Brito Paes made the first Lisbon – Macao flight, beginning in the Bréguet 16 "Patria" and ending with the DH.9 "Patria II".]

Seven F.190s were already said to be on order in early October at the Berlin Salon. Without doubt F-AIVQ was one of those already sold. Brito Paes bought the airframe and engine on preferential terms, at a reduced price. Its registration F-AIYC identified the aircraft as built with the fuselage of F.190 no.5/7114.



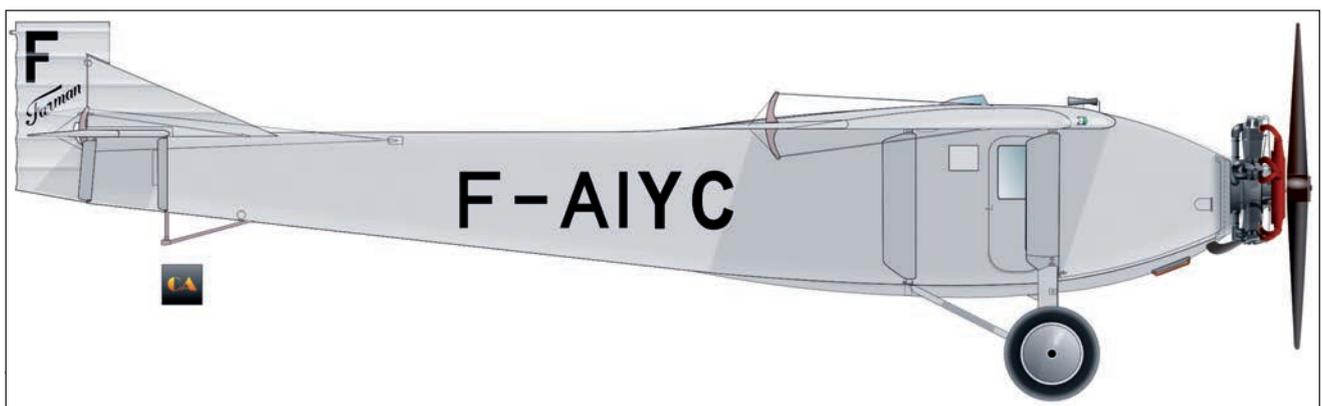
In mid-February 1929, Lt Tártaro, who was to ensure that the aircraft was airworthy, arrived at Toussus-le-Noble. He was joined there by Brito Paes. On 22nd February Lucien Coupet made a short demonstration flight in the aircraft, doubtless for their benefit, (Log book of Lucien Coupet).

Brito Paes was not satisfied with the first tests. For a month the two officers spent a lot of energy in adjusting the aircraft with a moderate amount of support from Farman, apparently with little motivation. Tártaro was finally authorised to fly the aircraft, accompanied by a Gnome-Rhône engineer. To their great disappointment the Farman was not tested at maximum weight, the Parisian airfields not being authorised for such trials.

On 8th March Lucien Coupet made a short flight in the F.191-1 and on the 14th the tuning of the engine was again resumed. On the same day the F.191-1 received its Certificates of Registration and Airworthiness (no.2051). The registration was in the name of Aéropostale, whose plans for the creation of Portuguese routes were entering a critical stage, and it became valid on March 28th.

On 15th March the F.191-1 left for Lisbon under French registration with a Portuguese crew and a Gnome-Rhône mechanic, Palvin. They

Below: The F.191-1 in its original livery for delivery to Portugal in March 1929. (Artwork: M. Barrière)



Left: The 191-1 in Portuguese markings. It is just possible to make out the opening in the cabin roof and the external seat. (Arquivo Histórico da FAP, via José Vilhena)



were forced to land en route at Rochefort due to fog. The flight continued the next day with 700 litres of fuel on board. At 1700 hrs, short of fuel, Tártaro successfully landed without damage in a field 16 km from Coria. The crew, who had estimated fuel consumption to be no more than 350 litres, were surprised to find that the feeder pipe was not at the bottom but in the middle of the fuel tank. They did not reach Lisbon-Amadora until the next day, after having been taken by car to Cáceres to obtain more fuel.

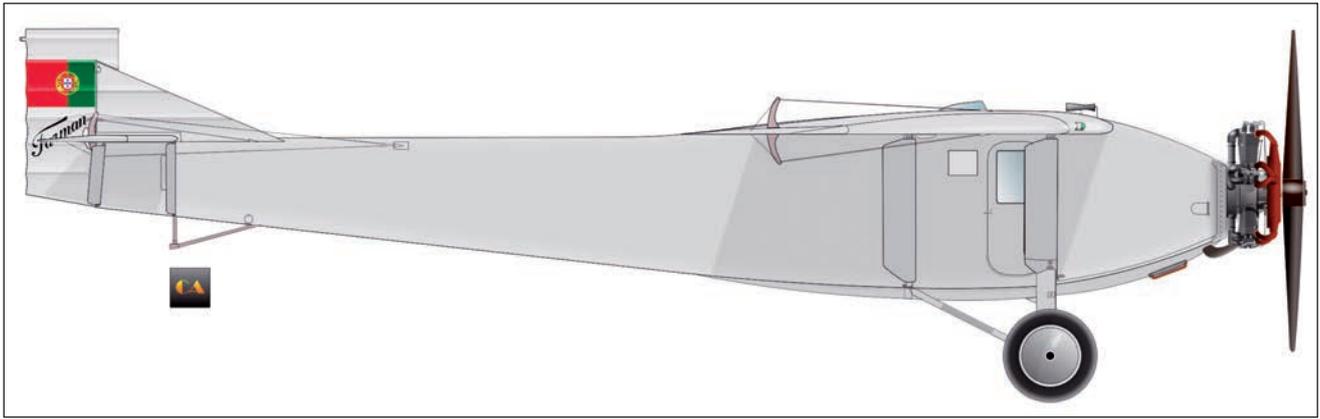
On arrival at Lisbon, Brito Paes discovered that on the 16th March the *Diário de Lisboa* had reported that Gnome-Rhône, “who had put forward proposals for the construction of engines, aerodromes and hangars, and for the operation of airlines, had offered a Farman monoplane for a flight from Lisbon to Mozambique with a possible stop-over at Luanda indicating its wish to see it break a long-distance record”.

After his arrival, Brito Paes corrected the information about the purchase conditions of the aircraft. He

Above: Brito Paes and the F.191-1. From this angle the very poor forward vision is readily apparent and through the cabin window it is just possible to see the raised seat and opening in the roof. (Coll. Revista Mais Alto via José Vilhena)

Below: The F.191-1 in a hangar, probably at Amadora. The French registration marks F-AIYC can still be made out under the freshly-painted Portuguese underwing insignia. (Arquivo Histórico da FAP, via José Vilhena)



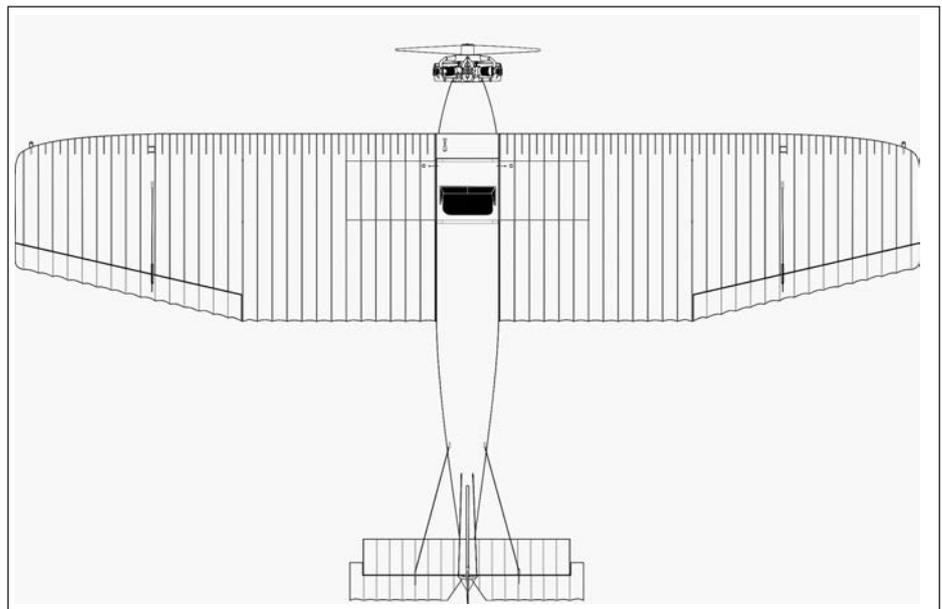


pointed out that the delivery flight had convinced him that the aircraft was not capable of a transatlantic crossing and he had to put forward important modifications. His proposal was to make a direct flight towards Mozambique. Departure would not take place before mid-April in order to benefit from the full moon when flying at night. He planned to depart from Vila Nova de Milfontes, whose 3,000 metre runway was the only one to allow him to take-off fully loaded.

On 23rd March the F.191-1, now named "*Patria 3*" was still at Amadora for engine modifications. On 4th April it was ready to be transferred to Vila Nova de Milfontes for trials. Tártaro took off from Amadora at 1130, with Brito Paes and Palvin, accompanied by two Vickers types (presumably Valparaiso I or IIs). Climbing with difficulty after take-off, Tártaro made an about turn. The cause of the incident, restricted supply due to the presence of fuel in the air intake pipe, was quickly identified and repaired. The aircraft then flew to Vila Nova de Milfontes with no further problem.

Then, on 17th April, Brito Paes pointed out the need to modify the aircraft further. The main modification consisted of re-converting the pilot's position in order to provide better visibility and to allow the observer to make his calculations. He no longer gave any information about their projects or their timetable. In any case there was no question of departure in the short term and Brito Paes seemed to quickly abandon the whole project with the F.191-1 which, being of no further use,

Right: Plan view of the F.191-1.
(Artwork: M. Barrière)



Above: The F.191-1 in its final, definitive Portuguese colour-scheme.
(Artwork: M. Barrière)

was transferred to the Portuguese Air Force. Involved in the revolutionary uprising of 26.8.31, Brito Paes was arrested, reinstated in 1932, but was killed on 22.2.34 during a training flight at Sintra.

Based at Tancos, the Farman F.191-1 was used during the following years for photographic missions before being broken up in 1935.

To be continued . . .

Below: It happens !! No sooner had the previous six or seven pages been finalised when we came across this additional photo of F.190 no.52 F-ALAP, complete with the sponsor's name "Alsa" and crew of Moench and Burtin prior to their flight to Tokyo. (via JM Collection)



£6.50

AUTUMN ISSUE
SEPTEMBER 2012

Air-Britain ARCHIVE

The AIR-BRITAIN Civil Aviation Historical Quarterly



China: 1947 Sino-British Agreement

Helmy Aerogypt

Farman F.192

F- Register

Fiat G.212

BOAC at war

AIR-BRITAIN - Founded 1948



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COVER PHOTO



Illustrating the article on the little-known Fiat G.212 is this image of the only surviving example in the Museo Storico dell'Aeronautica Militare, Vigna de Valle. (Ciro, courtesy of Wikimedia)

CLOSING DATE for contributions to next ARCHIVE: September 15th 2012

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HEAD-ON VIEW - WHAT IS IT? Number 45

This makes a change as most of our full-frontals are taken on the ground! This totally British design sounds foreign, a 3-seater cabin monoplane with retractable undercarriage that should be easy to identify. Full details next time. (via JM Collection)

Congratulations to Vic Smith who correctly identified the Helmy Aerogypt in the last issue, and even named the woman who was standing on it!

In this issue . . .

In this issue a number of well-established series continue, and are complemented by several one-off pieces.

The Fiat G.212 was a graceful post-war trimotor airliner recognisably descended from the great Italian designs of the 1930s, but manufactured in small numbers and little known. The sole survivor is pictured on the front cover

David Legg complements the article on BOAC At War with some more detailed information on BOAC's use of Catalinas during the war.

Michael West continues his research into less well-known corners of aviation history to tell the story of Henry Kissinger's first clandestine visit to China aboard a PIA Boeing 707.

Martin Best's marathon series on China concludes the discussion of the SBATA in this issue by looking at some of the problems encountered when it was implemented. The next instalment will move on to less diplomatic territory in the Korean War.

I would like to thank Dave Partington for his continuing help as I gradually take over Archive; his contributions will continue behind the scene for some time to come. Needless to say, I am grateful to all those who take the time to prepare articles for *Archive* so that their enthusiasms can be shared by a wider audience.

Robert Swan

AN APPEAL

Since taking over as editor of *Archive* I have received feedback from a number of readers and Air-Britain members, but not enough! The role of *Archive* is to document civil aviation history from the dawn of flight to yesterday, throughout the world. I am keen to widen the pool of authors and the range of topics covered so that all members of Air-Britain can find material to interest and inform them within its pages.

I therefore urge you to write to me with any suggestions or comments, and to consider whether there is an aspect of civil aviation which you have researched which could be shared with the readership. By all means e-mail me with ideas before embarking on the project if you prefer. I look forward to hearing from you.

Airliners in Warpaint - Warbirds in Civvies: 8

BOAC At War - Part III

Michael West



BOAC wartime management

After the death of Sir Eric Geddes in 1937 Imperial Airways' decline accelerated. The criticism in Parliament and the Cadman Report of 1938 forced General Manager Woods-Humpherys' resignation. Board member Sir John Reith was appointed (unwillingly) as Imperial's first full time Chairman. He brought in Leslie Runciman as his Chief Executive and with Clive Pearson and Major McCrindle (Chairman and Managing Director of British Airways Ltd) formed the board of the infant BOAC in November 1939. Reith's vision of a single publicly owned British Overseas Airways Corporation (his choice of name), free of private shareholding and run as a public service (as was the BBC he had famously founded) was not at all what the Cadman report had recommended but was implemented by Chamberlain's Conservative Government. When Lord Reith moved to the Ministry of Information in 1940 Pearson replaced him as Chairman of BOAC. Whilst he headed notepaper which flowed from the wartime headquarters in Bristol carried the full legal title British Overseas Airways Corporation, the signwork on wartime bases, vehicles, boats and aircraft often just used the title 'British Airways' (even the menu card on Churchill's famous Atlantic flight in Boeing 314 'Berwick' carried the heading 'British Airways'). The instruction to shorten the Corporation name in 1941 to

***Above:** A classic image of BOAC Dakota G-AGNC at Gothenburg-Torslanda in 1945. BOAC's services to Sweden during the war form a major focus of this article. (via MW Collection)*

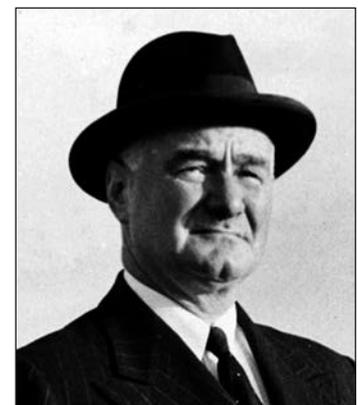
a simple 'British Airways' had come from Runciman, according to the authoritative (and extremely rare!) *History of BOAC* by W. Bray (1974).

Imperial's ousted but experienced former top men, Woods-Humpherys and Brackley, (who had organised the 'Horseshoe Route') later reappeared in senior positions in ATFERO and RAF Transport Command.

One stipulation of the Act of Parliament setting up BOAC was that 'no aircraft designed or manufactured outside His Majesty's Dominions should be used on the Corporation's services unless with the approval of the Secretary of State'. One of BOAC's immediate problems was its desperate shortage of aircraft, particularly long-range types, requiring the immediate abandonment of this 'Buy-British' policy. Whatever American airliners could be purchased in 1940 and 1941 were shipped or delivered by air, mainly to Africa, and the Return Ferry Service across the Atlantic was initiated with converted early Liberator models.

***Right:** Brigadier-General A. C. Critchley, Director-General of BOAC.*

(Greensted Archive)
***Left:** The BOAC title and logo as adopted in 1939 (MW Collection)*





Left: Lancaster 6 G-AGJI is a clear example of the camouflage scheme adopted by BOAC during the war. See discussion below. (via MW Collection)

Below: Sunderland (?) JM722 illustrates the use of RAF with large external 'O' series call-signs to operate the main BOAC trunk route to India. They were flown by BOAC crews in RAF uniforms. (via MW Collection),

Curiously it was after the tide had turned in the Allies' favour in North Africa, in 1943, that the organization (and very existence) of BOAC came under its most severe threat, that of being absorbed into the newly formed RAF Transport Command. After arguments about BOAC's 'anomalous situation' in relation to the Government, Air Ministry and the RAF, Pearson, Runciman and two other directors resigned, leaving only Gerard D'Erlanger who had joined the board when his ATA organization was attached to BOAC. After a short gap, in May 1943 Lord Knollys and Sir Harold Howitt were installed as BOAC's Chairman and Vice-Chairman with Brigadier-General A.C. Critchley as Director-General.



A compromise was reached where the main BOAC trunk route to India, now able once again to route via Gibraltar and North Africa to the Middle East, was flown with military marked types, with 'O' series call-signs marked externally, with the BOAC crews in RAF uniforms (this presumably prevented their use of Lisbon). The Sunderlands and Dakotas which BOAC began to receive from RAF supplies bore these military marks, the Speedbird symbol was sometimes the only mark distinguishing an aircraft as BOAC even though a civil registration had been allotted. This policy was relaxed towards the end of the war.

When the Lancastrian high speed airmail route to Australia began in June 1945 the Westbound aircraft (2Jun1945) wore a military OKZS code and the Eastbound (4Jun1945) arrived with civil marks G-AGLV, both with SEAC-compliant nationality stripes (no red band, see below).

It was RAF Transport Command's 110 squadron which restarted services from London to the cities of Western Europe as they were liberated after D-Day. Many of the BOAC wartime routes continued post-war with the same 'line-numbers'.

The British Air Commission in Washington were well aware of the Douglas Skymaster (DC-4/C-54) and its transoceanic capabilities and the possibility of BOAC receiving a few had been discussed even before the type's first flight in Feb1942, but when a batch materialised under Lend-Lease in 1944 they were issued only to RAF Transport Command and used on a high speed route to the Far East (Churchill had been given an early C-54 with a long range fuselage tank which was never removed as a personal transport by Roosevelt in 1944). All were returned to the U.S. in 1946. BOAC was issued with the cramped, noisy but plentiful Lancastrian whilst most of the more capacious, but also noisy, York production went to the RAF. Post-war the closest

Left: The official authorisation to remove camouflage from BOAC aircraft in 1945 (MW Collection)

CONFIDENTIAL

O.S.Nav. ✓
 C. P. No: D. Ops. A.D.
 A.D. 0.1
 470. R. T. O (A)
 Ops. A.D. 6

D. T. D. 13266

Civil Aircraft - Camouflage

It has been agreed that civil aircraft operating on the routes marked X in the attached Appendix and also the civil fleet of Dominion and D.H.86 aircraft operating wholly within this country, may operate without camouflage.

- Will O.S.Nav. please notify Ops.A.D.6 if any changes arise in types of aircraft flying on the various routes so that defences may be warned.
- Any aircraft operating on routes overseas not agreed in the attached appendix are to be camouflaged according to D.T.D. technical circular No.360.
- While it is now possible for O.S.Nav. to state his requirements for ~~camouflage~~ of aircraft direct to M.A.P., it would be appreciated if both Ops.A.D.6 and ourselves are kept informed of the types of camouflage being applied to civil aircraft.

no camouflaging


 Squadron Leader.

O.R.2(a)
 21.1.45.



Above: Camouflaged BOAC aircraft at Lisbon airport in 1943. (via MW Collection)



Left: Return Ferry Service pilots inside a BOAC Liberator. (via MW Collection)

Captain James' report on Las Palmas 10Sep1940-21Oct1940

On 6Sep1940 Captain James was instructed to assess Las Palmas (Canary Islands) as a refuelling point for S.23 Empire flying boats en route to Durban from the UK. He was flown from Heston to Lisbon on 10Sep1940 (this would have been on the BOAC/KLM DC-3 service) and flew up to Madrid the next day on a DC-2 (Iberia?). In Madrid he began to experience obstruction from the Spanish who claimed no knowledge of his onward booking to Las Palmas. On booking a new ticket he was informed that a Special Permit was necessary to enter Las Palmas which the British Embassy applied for. During a six day wait Captain James' hotel room was ransacked by the police and documents removed, he was interrogated and made to fill out a long statement. When the permit arrived the ticket was found to be cancelled so yet another one had to be purchased and a seat booked by direct intervention of the British Air Attache. Captain James arrived on 18Sep1940 via Seville, Larache, Ifny and Cap Juby. With the assistance of the British Trading Consul Mr Head and the Shell Representative Mr MacKellar he set about assessing the Spanish Air Force seaplane base at Gando and the large Las Palmas commercial harbour at Puerto de La Luz for use by Empire flyingboats. Both were reported by coded cable as suitable (with reservations on wind direction).

BOAC got to operating the DC-4 was the chartering of capacity in 1948/1949 from Skyways which had bought 4 from KLM. The Speedbird was painted on these DC-4s.

Camouflage and Markings

Whilst BOAC's existing fleet continued carrying civil registrations underlined with red white and blue bands enabling them to fly to neutral countries (Portugal, Sweden, Turkey), this was modified in the Far East to just a blue and white band to comply with the SEAC ban on red in aircraft markings

The Return Ferry Liberators continued to fly between the UK and Canada in camouflage, with roundels and military serial numbers.

After D-Day camouflage was considered less necessary and the instruction to remove it from BOAC aircraft was given in January 1945 (delayed a little on the Sweden route, and at KLM's request on their aircraft chartered to BOAC) and the red, white and blue stripes (just white and blue in the Far East) under the registration marks were removed from August 1945.

Return Ferry Service

The Return Ferry Service suffered 3 fatal accidents in August 1941 (not 2 as noted in part II), namely AM261 at Goat Fell, Arran, 10Aug1941, AM260 at Heathfield, Ayr, 14Aug1941, and AM915 at Achinoan Hill, Campbeltown, Arran, 31Aug1941.

On 15Feb1942 G-AGDR (AM918) was shot down by Spitfires south of Falmouth, Cornwall (misidentification, all on board perished) and AL591 crashed 10 miles short of Gander killing 19 occupants on 9Feb1943. The RFS had 5 other crashes up to February 1946.

The service had made 1000 crossings by 1944 and 2000 by February 1946. The Liberators were used by BOAC to carry freight post-war.

BOAC headquarters at Bristol was cabled on 19Sep1940 and Captain Harrington was despatched in 'Corinthian' G-AEUF for Lisbon. The permit for 3 flights at 2-day intervals arrived in Las Palmas from Madrid on 24Sep1940 and Harrington arrived over La Luz harbour at 1300GMT from Lisbon, having failed to make the required radio contact with Gando because the British had failed to give him the frequencies.

Below: Short S.26 G-AFCK at Lisbon in 1943. It crashed into the River Tagus near Lisbon on 9 Jan 1943. (via MW Collection)





Right: AW.27 Ensign G-ADSV at Almaza airport, Cairo (via MW Collection)

Below Left: Poster for BOAC flights to Lisbon (MW Collection)

Below Right: Lodestar G-AGCM at Port Sudan (via MW Collection)

OS VELHOS AMIGOS SÃO OS MELHORES



A Portugal — o mais antigo aliado da Grã Bretanha — a Grã Bretanha oferece os meios de transporte mais modernos. É natural que a Grã Bretanha continue a manter os serviços para Portugal e vice versa durante esta a maior guerra na historia, estreitando dest'arte os laços que sempre uniram estas duas nações. A viagem de Lisboa a Londres leva somente poucas horas. Transportam-se passageiros malas e frete.

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BRITISH OVERSEAS AIRWAYS



Fortunately he was not fired on and Captain James reports a crowd of some 2000 local people watched from the harbour as 'Corinthian' arrived. It departed successfully for Bathurst at 0800GMT on 25Sep1940 after refuelling by Shell.

Captain Davys in 'Cooee' VH-ABF (not marked G-AFBL as stated in part II) arrived at La Luz harbour at 1430 GMT on 28Sep1940 leaving at 0800 GMT the next day for Bathurst.

Captain Bailey in 'Cassiopeia' G-ADUX arrived at La Luz at 1530GMT having first landed at Gando in error because of incorrect instructions at Lisbon, leaving for Bathurst at 0800GMT two days later, 2Oct1940 with one passenger for Sierra Leone (Note...Brian Cassidy in *Flying Empires* has Bailey in 'Cooee' and Davys in 'Cassiopeia')

Captain James also surveyed the Gando airfield for BOAC landplane use, finding it suitable (though it is believed BOAC never used it in WWII). He suggested that BOAC aircraft should have a Union Jack painted on them to distinguish them from French aircraft.

Having determined that the Spanish would permit further flights via Las Palmas with prior approval required for each flight and Certificate of Departure from the Spanish Embassy at Lisbon and a Bill of Health, Captain James flew back for Lisbon on a Ju52 on 7Oct1940 after yet again finding his ticket cancelled and a fresh purchase needed. The Spanish did eventually refund the value of the cancelled tickets through their Lisbon Embassy.

(Perhaps of interest, the fare quoted by BOAC for Lisbon-UK in early 1942 was £35.15s.6d, equivalent to at least £2,000 today.)

Left: Short S.26 G-AFCL anchored at Durban. (via Mollard Collection)





Above Left: Lodestar G-AGIL in Turkey. This aircraft was reportedly the personal mount of BOAC's Director General, A. C. Critchley, and was de-camouflaged ahead of the official directive. (via MW Collection)
Above Right: Captain R. P. Mollard ferried G-AFCL to Durban for operation on the Horseshoe route in 1943. (via Mollard Collection)



Landplane operations in Africa

The Lockheed Lodestar and various other Lockheed Twins were the backbone of BOAC's African landplane fleet. The nine secured from the frustrated Air France/Air Afrique order in 1941 were joined by aircraft received under Lend-Lease and from the RAF and the fleet was eventually equipped with Wright Cyclone engines. (When Pan American was contracted to operate PAA-Africa they had standardized on the most powerful versions of the R-1820 Cyclone and R-1830 Twin Wasp which became plentiful throughout Africa.)

The Wilson Report on Civil Aviation records several more Empire flying boats refuelled at Las Palmas from 9Dec1940 amongst an overall 10 round-trips by Empire flying boats UK-W.Africa Jan-May1941 and about 20 round-trips UK-W. Africa shared between 3 S.30 Empires, 2 Catalinas and 3 Boeing 314s between Jun-Oct1941. The Catalinas and Boeing 314s are not believed to have called at Las Palmas

Phillip Hayes who kindly supplied photos of BOAC Lodestars in camouflage and bare metal lists 19 BOAC Lodestars from his father's WWII logbook between 1944 and 1946. On some of his father's flights the Captain was Hubert Bowes-Lyon, cousin of the late Queen-Mother and Training Captain on BOAC Lodestars at Vaaldam, South Africa from September 1943.

The BA Museum note as examples at Las Palmas 'Clyde' G-AFCZ overnight 6/7Jan1941 and 'Clare' G-AFCX overnight 31Jan/1Feb1941.

The BOAC Lodestars from Cairo flew as far North as Adana, Turkey and G-AGIL was photographed there in bare metal. It was reportedly A.C. Critchley's personal 'mount' and decamouflaged ahead of the official directive

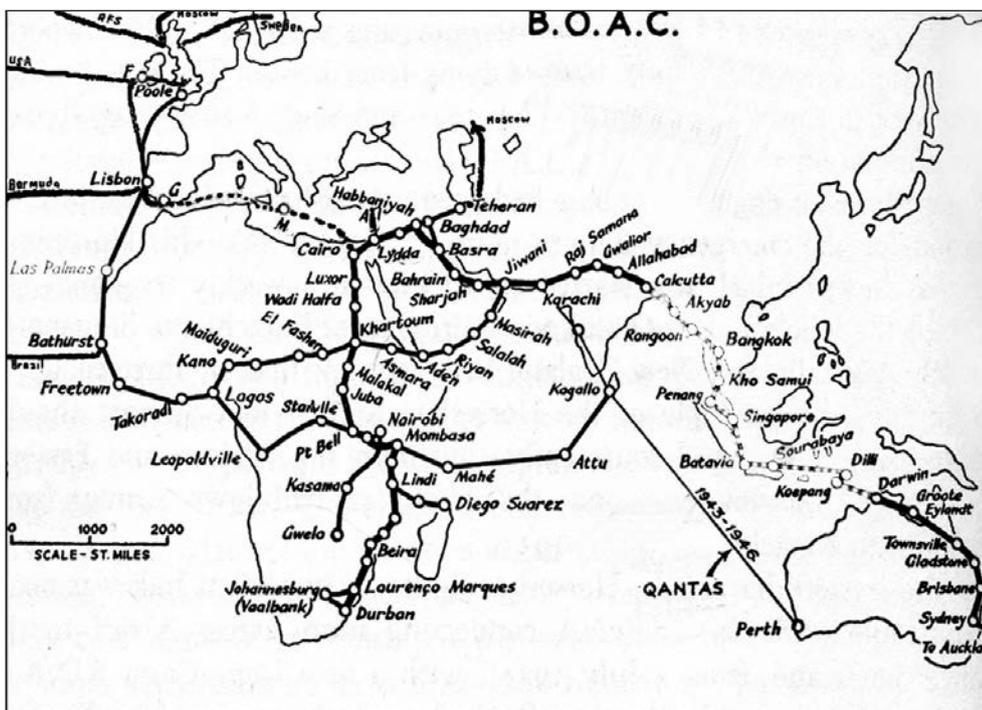
Using diagrams and information in *Flying Empire* by Brian Cassidy it seems 'Clyde' and 'Clare' had the maximum fuel capacity of 2,534 gallons in six wing tanks and three fuselage tanks (M1 system) for a still-air range of 2,754 n.m. 'Corinthian', 'Cooee' and 'Cassiopeia' ferried out for the shorter stage lengths of the Horseshoe Route had four wing tanks and additional fuselage tanks for the ferry trip (1C system?). Cassidy records that G-AFCT 'Champion' and G-AFKZ 'Cathay' followed (via Las Palmas?) each fitted with .additional fuselage tanks holding 360 gallons.

The BOAC de Havilland Flamingos flown out to Cairo served alongside the Lockheeds but there seem to be no photos of them in that theatre. Four Wellingtons 1Cs were supplied to BOAC by the SAAF between August 1942 and July 1943 for additional transport capacity marked on the nose with a Speedbird and BAW1 to 4. There is a photo of one in the Western Desert campaign in the LIFE archive online at <http://tinyurl.com/6vb2gx2>.

The A.W. Ensigns, re-engined with Cyclones, served between Cairo and W. Africa between 1943 and 1946 without accident.

BOAC's Durban base

At the Southern terminus of the 'Horseshoe Route' the Durban base was capable of the heaviest maintenance tasks on the Empire flying boat fleet and established there at a safe distance from combat zones in North and East Africa.. The pioneering Imperial Airways Captain R.P. Mollard ferried G-AFCL, the refurbished



Left: Map to illustrate the BOAC/Qantas 'horseshoe' route to Japan. (MW Collection)



Above: Mosquito G-AGFV was the first to be converted for BOAC services to Stockholm from December 1942. (via Brian Docherty)

Golden Hind, from the UK down to Durban in 1943 from where it flew the Horseshoe route and opened a new route across the Indian Ocean to Ceylon. Mollard became the Manager of No.8 line (The Horseshoe Route) towards the end of WWII and oversaw the return of the Empire flying boats to the UK for scrapping in 1947. South Africa became the last BOAC flying boat destination, the leisurely Solent service being withdrawn in 1950.

Catalina operations and the severing of the Horseshoe Route by Japan

In 1941-1942, BOAC had a total of 4 Catalinas operating UK to West Africa and between Gibraltar, Malta and Cairo. (G-AGBJ, G-AGDA, G-AGFL, G-AGFM)

The Horseshoe route was severed by the Japanese invasion of the East Indies, Singapore, Malaya and Burma, thirteen Empire flying boats were cut off in the East and Australasia and most were soon destroyed in combat. The Horseshoe Route from Durban then had to terminate at Calcutta. Qantas restored the air link between Australia and British Ceylon and India with the direct over-water Perth to Ceylon 'Double Sunrise' Catalina flights (using G-AGFL, G-AGFM and others).

There appear to be no photos available of 'Guba' as G-AGBJ and the only ones of G-AGDA 'Catalina' are of its wreckage at Poole after its fatal crash. Photos of G-AGFL and G-AGFM on the 'Double-Sunrise' service do exist. Details in David Legg's adjoining article.

BOAC UK/SWEDEN AIR SERVICES DURING WORLD WAR

It is difficult to assess the importance of the 'Ball-Bearing' flights to Sweden. The notion that they denied Sweden's ball-bearing production to Germany is fanciful... it is probable that Germany received all the bearings and steel components and iron ore they wanted from Sweden. Particularly in the early war years Sweden had to tread a careful path with the Germans, for instance they had to permit troop trains to the German garrisons in occupied Norway. The establishment of regular services by both BOAC and ABA Sweden was preceded by much diplomatic wrangling, restrictions and delay from both sides.

A Norwegian researcher of these flights (N.M) suggests:... 'the ball-bearing cargos were just one of several purposes of the flights, which included transport of diplomats, saboteurs and refugees, diplomatic mail and propaganda and (technical) instruments (and cash? MW). The route was regarded as VERY important by the Allied leaders Churchill and Roosevelt but often given low priority by the RAF and Air Ministry which regarded it as 'just a civil route'.

As the notes suggest the Norwegians exiled in Britain became frustrated with BOAC's operations leading to them operating their Lodestars independently of BOAC but still in BOAC markings, and the setting up of the large U.S.-operated Sonnie Liberator airlift from Sweden in 1944.

(A number of attempts to move freight from Sweden to Britain through the German blockade using Norwegian ships stuck in Swedish harbours were made, the first successful, the second disastrous with 80% losses. Small fast motor boats trips are also known to have been made.)

There is an intriguing note (10Dec1942) that the first Mosquito supplied to BOAC was intended for a service to Switzerland which was never realized.

Notes adapted from a research paper by Tony Doyle sourced from periodical articles; the Air Ministry Report on the Progress of Civil Aviation, 1939-45 (Wilson); Merchant Airmen (HMSO); Action Stations series, Flyghistorisk Revy special issue Nov 76 (FR), and Air Ministry manuscript ledgers.

SUMMARY OF AIRCRAFT USED BY BOAC UK-SWEDEN

Lockheed 18 Lodestar

G-AGDD, G-AGDE, G-AGEI, G-AGEJ were bought by the Norwegian Government during 1941-2. Nominally registered to BOAC they were manned by Norwegian crews on the Leuchars to Stockholm route. G-AGDD was severely damaged on 21Nov41 in a ground collision with an RAF aircraft. returned to service 27Jan42
 G-AGDE crashed into sea en route Leuchars-Stockholm 17Dec43
 G-AGEJ ditched in the sea near Smogen, Sweden on 4Apr43.
 G-AGIH, G-AGII, G-AGIJ, G-AGIK, G-AGLG, G-AGLH, G-AGLI. Supplied to the Norwegian Purchasing Commission under Lend-Lease in 1943-44.
 G-AGIH flew into the top of Kinnekulle Mountain, Sweden, 29Aug44
 G-AGLI ditched in the sea off Sidea, Sweden, 2May45

Lockheed 14-WF62

G-AFGP, G-AFGR, G-AFKD, G-AFKE, G-AFMR. Inherited from British Airways, they were employed on the short-lived Shoreham to Alexandria route and the Perth to Stockholm route (this route transferred to Leuchars later).
 G-AFKD, flew into a mountainside above Loch Lomond en route to Heston - 19 killed, 22Apr40

AW38 Whitley V

G-AGCF to G-AGCK, G-AGCU to G-AGCZ, G-AGEA to G-AGEC.

Found unsuitable on the UK-Lagos and UK-Gibraltar routes, they were introduced Leuchars-Stockholm from Oct 42, but heavily loaded Whitleys could neither climb out of reach of anti-aircraft fire over the Skaggerak nor maintain altitude on one engine. Withdrawn when Mosquitoes came into service early in 1943.

Mosquito.

First to be converted for the Stockholm route was G-AGFV in December 1942 which made the first crossing on 4Feb43. G-AGGC, G-AGGD, G-AGGE, G-AGGF, G-AGGG, G-AGGH were then converted at BOAC's Bramcote engineering base in April and May 1943. Initially used in daylight at high altitude on the southern route but, after Capt Gilbert Rae was shot up by an Fw 190 and had to belly land at Stockholm, they operated by night. Among the passengers flown in the bomb bay was Sir Malcolm Sargent, the conductor. Ball bearing return cargoes were transported in the bomb bay in baskets on hooks. G-AGKO, G-AGKP, G-AGKR later acquired in 1944.

G-AGFV Swung on take off from Bromma 4Jul1944, u/c collapsed, temporarily repaired, flown back to Leuchars 23Oct44
G-AGGD crashed while making a forced landing at Satenas aerodrome, Sweden 3Jan1944
G-AGGF destroyed by fire after crash at 2550 ft on Glenlee 17Aug1943
G-AGGG crashed on landing from Stockholm at Leuchars 25Oct1943
G-AGKP ditched in North Sea, 5 miles off Scottish coast 19Aug1944
G-AGKR missing on flight from Gothenburg airport to Leuchars 29Aug1944

BOAC Mosquito fleet size by date:
27Jan1943 to 31Mar1943 1, 30Apr1943 5, 31May1943 to 30Jun1943 7, 31Jul1943 6, 31Oct1943 5, 30Nov1943 to 1Jan1944 6, 31Jan1944 5, 29Feb1944 4, 31Sep1945 to 30Dec1945 1.

Dakota

G-AGFX, G-AGFY, G-AGFZ, G-AGGA, G-AGGB, G-AGGG (and others) used on Leuchars-Stockholm from 1943.
G-AGFZ damaged beyond repair when it overshot Bromma airport 21Apr1944

Lockheed 414-56 Hudson III

G-AGDC, G-AGDF, G-AGDK, G-AGDO transport versions, no turret, acquired from RAF.
3 were used Leuchars -Stockholm service in 1941/1942.
G-AGDF ditched in the sea off Sweden night of 22/23Jun1942, all rescued, load recovered

Liberator

Plans to use long-range LB30A Liberators over northern Norway to Sweden in 1941 were abandoned after CofA tests on G-AGCD which showed Stockholm-Bromma had too short a runway. Bromma's runway was extended in late 1943 and Liberators G-AGFO, G-AGFR, G-AGFS operated a few flights in winter 1943/1944 (also seen at Gothenburg-Torslanda).



30Jan1941. The Swedish airline ABA contacted BOAC suggesting that it would be in their interest to operate regular UK to Stockholm services for pax and mail.

BOAC asked to provide a service between Scotland and Stockholm. Aircraft would fly at night, unarmed, over the waters of the heavily defended Skagerrak within easy reach of enemy fighter aircraft. In summer there was very little darkness at night. (Source: Merchant Airmen)

TO BE CONCLUDED...

Left: Liberator III G-AGFS at Gotebotg-Torslanda (MW Collection)

Curtiss CW-20

G-AGDI Prototype of the Commando used to carry larger cargoes such as pieces of machinery from Sweden.

Lancaster

G-AGJI Partly civilianised version with nose turret faired replaced by fairing. Details of its supposed 1944 flights to Sweden unclear.

CHRONOLOGICAL NOTES ON BOAC FLIGHTS TO SWEDEN

(Also includes a few notes on the Swedish ABA DC-3 services. Between 1942-44 1905 passengers, 31846 kg mail and 270,173 kg baggage and freight were carried on 346 ABA flights covering 464,325 km on this route, and 2 DC-3s were shot down)

(Some notes too on the American Sonnie Liberator flights, and the later ABA B-17 transport flight)

There is an interesting reference on 10Dec1942 to a proposed Mosquito flight (service?) to Switzerland.

The Oct/Nov1943 note from the British Air Attache in Stockholm, Dick Maycock hints at a serious lack of capacity when BOAC, for whatever reason, failed to introduce the Liberator UK-Sweden. The Norwegians persuaded the Americans to introduce the sizeable Sonnie airlift operation.

1939/40

The weekly Lockheed 14 Perth-Stavanger, and Junkers Ju-52 Stavanger-Oslo-Stockholm services inherited from British Airways Ltd. were suspended on 9Apr1940 because of the German invasion of Norway. Ju-52 G-AFAP was abandoned to the Germans, but her crew escaped overland to Sweden and returned a week later in 'Juno' which was in Stockholm when Denmark and Norway were invaded.

9 non-scheduled direct Lockheed 14 flights Perth- Stockholm were undertaken between 8Jul1940 and 22Dec1940 plus some flights from Leuchars-Stockholm from 23Dec1940 to 31Dec1940).

Need for contact with Sweden because it was the only neutral country in Northern Europe. There was a need to counteract German propaganda and give an Allied view as well as transporting government officials and diplomats. Ball bearings were also needed, a Swedish speciality. (Source: Merchant Airmen)

22Apr1940. Lockheed 14 Lochinvar, G-AFKD, flew into a hillside above Loch Lomond, 19 killed

1941

(57 flights made eastbound and 56 westbound)

Airliners in Warpaint - Warbirds in Civvies: addendum

BOAC Catalinas

David Legg



Above: A classic image of BOAC Catalina G-AGID anchored in Rose Bay, Sydney during the war. (via H de Courcier)

The Catalina:

Brief mention was made in Part 7 of this series of the Consolidated Model 28 G-AGBJ *Guba* and Catalina G-AGDA *Catalina*. These were the first of several Catalina-type aircraft operated during WWII by BOAC.

G-AGBJ:

G-AGBJ was a Model 28-3, c/n C-3, a commercial equivalent of the US Navy PBV-2 built originally for Dr. Richard Archbold for use on an expedition to Dutch New Guinea. It was registered NC777 and named *Guba*, the second aircraft to bear this registration and name (it was not named *Guba II* as often incorrectly reported). It was used in New Guinea between June 1938 and May 1939 and then flown to Papua New Guinea and on to Sydney, Australia. Eventually it returned to the USA, being used to carry out a survey of potential flying boat bases in the Indian Ocean area en route. It arrived back in the USA on July 4th, 1939 and was exhibited at the New York World's Fair until the end of the year.

NC777 was then acquired by the British Purchasing Commission (BPC) under contract A-916. The BPC first planned to use it for transporting supplies of aluminium across the Atlantic then for training in Canada. Neither plans came to fruition but it was partially converted to military standards under contract A-1127. It was allocated the RAF serial AM258 (already issued to a Liberator) and an export license was granted on September 21st, 1940. It flew from Botwood, Newfoundland to Stranraer on October 25th/26th, arriving after a flight lasting 16.5 hours. The next day it flew on to Pembroke Dock where it was taken on charge by 209 Squadron.

Shortly after its arrival in the UK, it was transferred to BOAC at the request of Lord Beaverbrook with the intention of it being used on the Poole – Lisbon route, mainly for mail but with the provision of some passenger seating. An entry in the BA Archives suggests a delivery date of December 10th, 1940, presumably to Hythe. It was registered to the Ministry of Aircraft Production, Millbank, SW 1 as G-AGBJ on December 13th, 1940 with Certificate of Airworthiness number 6882. Between December 19th and 21st it flew a return proving trip Poole – Lisbon – Poole and on December 23rd it was flown from Pembroke Dock to BOAC's maintenance base at Hythe to undergo attention to its engines, something that was to re-occur later. On the 30th December it was registered to British Overseas Airways Corporation, Clifton,

Bristol although technically remaining the property of the Government. It retained the name *Guba*.

BOAC started using *Guba* in March 1941 after initial crew training at Pembroke Dock had been completed (although records in the BA archives suggest it may have been used on the Poole – Lisbon route and then the Poole – Lisbon – Lagos route during February). It was also known to have been used to fly General de Gaulle and his party from Southampton to Gibraltar on March 5th. On the night of May 10th/11th, 1941 it suffered damage whilst at Poole when the area was attacked by a Luftwaffe Heinkel He 111. The damage was repaired, initially at Poole and then, more permanently, at Hythe after which *Guba* flew the Lagos route until, once again, engine problems were encountered and it was out of action between August 1941 and August 1942 because of this. Records from Foynes flying boat base show that *Guba* first visited on August 6th, 1942 en route Poole – Lisbon - Lagos and that it staged through there on a total of nine occasions. In total it flew 1,343 hours with BOAC until its time with the airline ended in December 1943. During this period it had suffered technical problems, not only with its engines but with propeller bushes, generator failure and electrical problems.

Its last Africa route flight had been completed on April 7th, 1943 after which it lingered out of service at Hythe, probably too much trouble to put back into service. It was offered to Qantas as it was thought that airline might wish to use it to support its own Catalina operations between Ceylon and Perth, W.A. but the offer was declined. Instead, G-AGBJ was handed over to Saunders-Roe at Beaumaris on January 14th, 1944 with the civil registration finally being cancelled on September 13th when the following entry was recorded on the C.A. Form 113: "Aircraft will probably be reduced to salvage unless acquired by Transport Command".

Guba arrived at Beaumaris as G-AGBJ and was subsequently allocated the military serial SM706 on February 7th, 1944 on behalf of the Air Council. It was used at Beaumaris for various trials and as a transport until it was damaged by a storm, capsized and sank. It was salvaged and after useful parts were removed it was towed out to deep water and scuttled. The date of the original gale damage is not known but records show that it was launched from the Beaumaris slipway on August 10th, 1945 and this may have been the date it was scuttled as it is not recorded as returning there.

Right: Catalina G-AGDA crashed during practice landings in Poole Bay on 23rd March 1943. The shattered bow section is shown here after salvage. Clearly visible are the number CI. and the BOAC insignia. (via David Legg collection)



G-AGDA:

G-AGDA had originally been built as c/n 122 by Consolidated as a Model 28-5ME at San Diego on contract F-210, a French order diverted to the RAF. In service it became a Catalina I with the serial AH563 and it was on the strength of 240 Squadron until on June 20th, 1941 it was registered as G-AGDA to British Overseas Airways Corporation, Victoria, London with the Certificate of Airworthiness number 6887. It was delivered to BOAC two days later and given the rather confusing individual name *Catalina* and is referred to as such in many movement records. It also carried the number CI. (short for Catalina I) on the bow below the turret and above the BOAC Speedbird insignia.

Catalina was used on services from Poole to Cairo and to Malta and also on a shuttle service between Gibraltar and Malta. Later it was used on the West Africa route to Lagos and operated BOAC's last West Africa Catalina flight between 18th – 23rd March, 1943.

During its time with BOAC, *Catalina* did not escape mishap. On September 7th, 1941 it suffered damage to its hull whilst taking off from Lisbon but was serviceable again a few days later. On January 6th, 1942 it sustained damage to a float during a storm at Malta but was airworthy again by the 20th.

It seems that following its last flight back to Poole it was intended it should be used as a training aircraft for BOAC crews there. Indeed, right after its flight back from Africa on March 23rd, it went up on a training flight and crashed during its third practice water landing from the west. It was said to approach steeper and faster than normal and, upon touchdown, the *Catalina* nosed-in and broke up with an ensuing fire. G-AGDA sank with the loss of three crew although two of the pilots on board and a trainee radio operator survived. The wreck was salvaged and brought ashore at Lake on the shore of the harbour. There is some difference of opinion on the cause, pilot error being cited by the investigators but BOAC maintaining it struck debris on the water.

G-AGFL & G-AGFM:

In October, 1942 Guba and *Catalina* were joined by two further ex-RAF Catalinas on the Lisbon and West Africa routes. G-AGFL, c/n 808, was registered on October 27th to British Overseas Airways Corporation, Clifton, its previous identity being FP221. Intended for RAF service as a Catalina IB it was instead diverted to BOAC and it became '*Catalina 2*' or C2. It was delivered to Hythe from Greenock on October 27th. On the same dates, G-AGFM/'*Catalina 3*' or C3. was registered and delivered too, it being ex-FP244. It's c/n was 831. Both registrations were formally cancelled on November 28th, 1945 by which time they had long since finished their stint in the UK. In fact, both had departed from Poole, destination Ceylon, in April 1943 so they could be used on the famous Double Sunrise flights between Ceylon and Perth, W.A. operated by Qantas. G-AGFL left Poole on April 17th whilst G-AGFM had departed on the 11th. The story of these flights is outside the scope of this account – suffice to say that they became *Vega Star/1* and *Altair Star/2* respectively and ended their lives being scuttled off Rottneest Island, Freemantle, W.A., *Vega Star* on February 14th, 1946 and *Altair Star* on the 24th.

G-AGID, G-AGIE and G-AGKS:

These three Catalinas were not used on the West Africa, Lisbon and Mediterranean routes but went straight onto the Double Sunrise service

operated by Qantas. However, all three were registered to BOAC, G-AGID and G-AGIE on July 7th, 1943 and G-AGKS on March 12th, 1946. The previous identities, constructors number and subsequent names are listed below. According to record cards in the BA archives, both G-AGID and G-AGIE were delivered to Hythe from Greenock on July 13th, 1943. G-AGKS flew the same route on March 16th, 1944. G-AGID left the UK for Australia on August 15th, 1943 and arrived in Ceylon for the first time on August 26th whilst the equivalent dates for G-AGIE were August 24th and September 13th respectively. G-AGKS left Hythe on May 7th, 1944 and arrived at Perth, W.A. on the 17th. The latter aircraft proved more troublesome than the other four and was not used so frequently. It was also different to the others inasmuch as it had been built by Boeing Aircraft of Canada Ltd, not Consolidated. G-AGID and G-AGIE were deliberately sunk off Rottneest Island on January 30th and January 17th, 1946 whilst G-AGKS suffered the same fate off Rose Bay, Sydney in March the same year.

- G-AGID – c/n 1109, ex-BuAer08215 and JX575. Became *Rigel Star/3*
- G-AGIE – c/n 1111, ex-BuAer08217 and JX577. Became *Antares Star/4*
- G-AGKS – c/n 28022, ex-JX287. Became *Spica Star/5*

44-33965/FT997:

This amphibious Catalina is included for the sake of completeness. It was built by Canadian Vickers at Cartierville, Quebec as an OA-10A-VI Catalina for the USAAF, having originally been intended as a PBV-1A Catalina for the US Navy, serial BuAer67929. Its c/n was CV-476. It was loaned to 45 Group for the use of BOAC as a training aircraft at Baltimore but was returned to the USAAF in March/April 1945, eventually finding its way to the Peruvian Air Force, latterly as '379' and destined to be written off in a water landing with wheels down on the Rio Ucayali on December 23rd, 1967.

Sources:

In compiling this piece, I have referred to material in my files gathered over time from a number of sources. These include correspondence from Peter Berry, Alan Green, Peter Marson, Keith Palmer, Ragnar Ragnarsson, Wynnum Graham, John Wilson (*The Guba Story*), the Poole Flying Boat Celebration (Cats Aweigh), my own book *Consolidated PBY Catalina – the peacetime record* and material in the BA archives.

Editor's Note: David Legg is Editor of 'The Catalina News' for The Catalina Society

The FIAT G.212

By Noam Hartoch, Gregory Alegi and Dave Partington



While researching the operation of Italian-manufactured aircraft in the Middle East in the early post-war years, Air-Britain's Israeli Aviation Specialist Noam Hartoch came across the sale of a Fiat G.212 to Syria in 1949. In attempting to discover the aircraft's identity he found that little had been published on the type and therefore attempted to compile a basic production list.

With the help of some Italian magazine extracts found in the Jack Meaden Collection, Archive's Dave Partington was able to add further detail and a further detailed contribution came from Gregory Alegi in Italy.

What follows is intended basically as a production list with some unanswered questions. It is not intended to be a type history although a brief introduction is provided and we hope that some of the caption data is also informative. We have not been able to illustrate every example as yet but hope that readers may be able to contribute to the missing parts.

The Fiat G.212

This design was a direct descendant of the G.12L which had been developed post-war for the Italian airlines Alitalia and Airone as an 18-23 passenger transport. It carried on the typical Italian trimotor tradition of the day and was initially offered in several alternative versions, up to 40 passengers, as a sleeper, VIP transport or freighter.

It was an all-metal low-wing trimotor with a tailwheel undercarriage, the control surfaces were fabric-covered and the tail unit was conventional in design. The undercarriage mainwheels partially retracted into the engine nacelles in DC-3 style. Ten fuel tanks in the wings and centre-section had a total capacity of 4,490 litres (987 gallons) resulting in a 3,000 km range (1,860 miles). Power was provided by three 860hp Alfa Romeo 128 RC-18 radials in the case of the prototype but production aircraft used 1,215hp Pratt & Whitney R-1830 Twin Wasp radial with 3-blade Hamilton Standard constant-speed props.

Dimensions were: Span 96ft 3ins (29.34m), Length 76ft 6ins (23.38m), Height 19ft 2ins (5.84m); Maximum speed 233 mph (375 km/h), Cruising speed 186 mph

Above: The prototype Fiat G.212 MM61634 in an early flight still unmarked. It was the only example to have round fuselage windows and Alfa Romeo engines. (via JM Collection)

(300 km/h), Ceiling 24,600 ft (7,500m). Crew consisted of 2 pilots and one radio operator.

The prototype, model G.212CA, was serialled MM61634 and first flew at Turin-Aeritalia on 21.1.47. It was the only example with round windows and Alfa Romeo engines. Eighteen production examples were built either as G.212CP (civil) or G.212CT (military) models. Of the airliners, six were new build for Avio Linee Italiane and three (later four) for the Egyptian company SAIDE. Ten production G.212CTs were built for the Italian Air Force. Later operators included CIE Air Transport, SIPTA, Arabian Desert Airlines and the Syrian Air Force.

The first scheduled flight was operated by ALI's I-ESTE on a Milan – Rome service in April 1948. The company described the type as the Aeropullman Monterosa fleet.

Below: C/n 3 I-ESTE taking on passengers for ALI's first Monterosa service from Milan to Rome in April 1948. (via JM Collection)





Above: C/n 10 I-ENEA in Avio Linee Italiane colours with a blue cheatline. It was a regular on the Paris – Milan route from 1948. (via JM Collection)

Production

- | | | |
|-------|--|---|
| C/n 1 | G.212CA MM61634 | F/f 20.1.47 to Italian Air Force
16.12.47, del to experimental centre at
Guidonia 2.5.48, later to 46° Stormo.
Wfu 23.3.54. |
| C/n 2 | G.212CP I-ERBE
F-BCUY | Avio Linee Italiane 3.4.48.
Cie Air Transport 30.8.51 |
| C/n 3 | G.212CP I-ESTE
SU-AFY
I-ESTE
F-BCUV
I-ESTE | Avio Linee Italiane 26.3.48
SAIDE 8.11.48
Avio Linee Italiane 22.6.49
Cie Air Transport 30.8.51
Avio Linee Italiane 19.2.52 |
| C/n 4 | G.212CP I-ELSA | Avio Linee Italiane 9.6.48
W/o Keerbergen, Belgium 1.7.48,
8 killed |
| C/n 5 | G.212CP I-ELCE | Avio Linee Italiane 5.6.48
W/o Superga Hill, Turin 4.5.49,
31 killed, Including Turin soccer team |

Below: The prototype G.212 flying above the snow covered Alps north of Turin. (via JM Collection)



Above: The comfortable interior of a G.212CP with 2 + 1 seating, headrest cushions, curtains and luggage racks. (via JM Collection)

Below: C/n 10 G-ANOE in Arabian Desert Airlines titles at Beirut. The Sheikdom of Kuwait used UK registrations at the time, only being allocated the 9K- marks in 1959. (via JM Collection)



Above: MM61636 was the first G.212 to be supplied to the Accademia Aeronautica as a navigation trainer as seen here in April 1949. (via JM Collection)

Below: The unidentified SU-AGB did indeed exist and is seen here in full SAIDE colours. (via JM Collection)

Bottom: C/n 8 was supplied new to SAIDE as SU-AFE and may have been the aircraft later supplied to Syria. Airline colour scheme is green. (via JM Collection)





Left: C/n 13 MM61639 apparently taking on members of the public for an educational flight at Rome-Centocelle 2.5.53. The nose-mounted Twin Wasp is already running. (via JM Collection)

Below: MM61637 c/n 11 was the special VIP "Presidenziale" version of the G.212 with a luxury interior. (via JM Collection)

C/n 6	G.212CT MM61636	Italian Air Force 15.7.48, Aula Volante Wfu 22.2.58
C/n 7	G.212CP I-ERME SU-AFX	Avio Linee Italiane 25.8.48 SAIDE 8.11.48 W/o 17.10.49, cr on t/o Alexandria
C/n 8	G.212CP SU-AFE -?-	SAIDE 5.8.48 Syrian Air Force ? Unconfirmed, del 28.10.49, wfu 1952.
C/n 9	G.212CP SU-AFF	SAIDE 13.8.48 W/o on ground, Suez 2.11.56 in RAF attack
C/n 10	G.212CP I-ENEA F-BCUX I-ENEA OD- . . . G-ANOE	Avio Linee Italiane 21.10.48 Cie Air Transport 30.8.51 SIPTA 30.3.52 Antoine Araman, Beirut 12.12.53, ntu Sheik Duay Salman Al-Sabah 17.2.54, op by Arabian Desert Airlines, Kuwait; Abdul Razak Ibrahim El-Qadoomi 31.1.55, t/a Arabian Desert Airlines; Sheik Duay Salman Al-Sabah 4.3.58; BUT w/o 29.7.54, undershot at Kuwait, dbr. CofA expired 12.1.56, cancelled 7.7.62
C/n 11	G.212CT MM61637	Italian Air Force 9.11.48, VIP aircraft
C/n 12	G.212CT MM61638	Italian Air Force 11.6.49, Aula Volante
C/n 13	G.212CT MM61639	Italian Air Force 17.2.49
C/n 14	G.212CT MM61771	Italian Air Force 24.10.50, Avio-Cargo
C/n 15	G.212CT MM61772	Italian Air Force 30.11.50, Avio-Cargo W/o 7.2.53
C/n 16	G.212CT MM61773	Italian Air Force 16.6.51, Aula Volante "SG-1"
C/n 17	G.212CT MM61774	Italian Air Force 13.7.51, Aula Volante
C/n 18	G.212CT MM61803	Italian Air Force 3.9.52, Soccorso 142 Sqn
C/n 19	G.212CT MM61804	Italian Air Force 22.1.53, Soccorso 142 Sqn Wfu 26.1.59. To Museo Storico dell'Aeronautica Militare, Vigna de Valle.

Right: Another Aula Volante, MM61773 wearing the code SG-1 while on secondment to the Scuola de Guerra Aerea (School of Air Warfare) at Florence. (via JM Collection)



Notes:

Four ALI aircraft are said to have been transferred to Ali Flotte Reunite.

The 3 transferred to Cie Air Transport were returned to ALI when CAT went into liquidation 12.51. A fourth aircraft for CAT was reportedly allocated F-BCUU but not taken up. This may have been an error for F-BCUV. Is there any evidence that CAT actually operated their G.212s?

SAIDE = Services Aériens Internationaux d'Egypte. A fifth aircraft was registered SU-AGB, see photo, but its identity is unknown.

SIPTA = Societa Italiana per il Trasporto Aereo

The Syrian government acquired one aircraft delivered on 28.10.49 and used by No.3 Squadron from Damascus-Elmezze. It was struck off charge by 1952 and apparently Syria negotiated with SAIDE for two more. C/n 8 above is unconfirmed. A counter-theory suggests that the Syrian example may have been a Fiat G.12.

Italian Air Force: "Aula Volante" = Flying Classroom, ie Navigational Trainer. "Soccorso" = Search and Rescue.



Above: MM61638 wearing the Accademia Aeronautica code AA-5 and with the observation platform visible beneath. (via JM Collection)



The Development of Commercial Aviation in China

PART 15B

The Sino-British Air Transport Agreement of 1947

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Introduction

In Part 15A (Archive Summer 2012, pages 2012/053-072) we discussed the negotiation of the Sino-British Air Transport Agreement in 1947. In this Part we discuss the operation of this Agreement in practice and some other air transport agreements with Nationalist China.

Termination of prior agreements

Following the signature of the Sino-British Air Transport Agreement on 23rd July 1947, previous agreements between Britain and China were then formally terminated. For example, the British Ambassador in Nanking, Sir Ralph Skrine Stevenson, sent two diplomatic Notes to Dr Liu Shih-shun, Acting Minister for Foreign Affairs, on 17th October, 1947:

Note No. 566: "I have the honour, on instructions from His Majesty's Principal Secretary of State for Foreign Affairs, to inform Your Excellency that His Majesty's Government in the United Kingdom intend to terminate the Agreement regarding Air Services between Chungking and Calcutta which was embodied in the Notes exchanged between Dr. Foo Ping-sheung and Sir Horace Seymour at Chungking on 27th March, 1942. The Agreement will consequently, in accordance with the provisions of the first sentence of paragraph 6 of Sir Horace Seymour's Note, cease to have effect on 17th January, 1948. I have the honour to request that Your Excellency kindly to acknowledge the receipt of this Note."
[FO 371/65568 W7695]

Note No. 567: "I have the honour, on instructions from His Majesty's Principal Secretary of State for Foreign Affairs, to inform Your

Above: Lancastrian 'Sky Diplomat' of Skyways on the tarmac at Hong Kong's Kai Tak airport illustrates the Sino-British Air Transport Agreement in operation. (Ian D Johnson collection)

Excellency that His Majesty's Government in the United Kingdom intend to terminate the Agreement regarding Air Services between Southwest China and British Ports which was embodied in the Notes exchanged between His Excellency Dr. Wang Chung-hui and Mr J D Greenway at Chungking on 24th January, 1939. The Agreement will consequently, in accordance with the provisions of clause (3) thereof, cease to have effect on 17th October, 1948.

"I have the honour to request that Your Excellency kindly to acknowledge the receipt of this Note."
[FO 371/65568 W7696]

The following initial reply was received dated 27/10/47:

"The Ministry of Foreign Affairs present their compliments to H.B.M. Embassy and, with reference to Sir Ralph Stevenson's Notes Nos. 566 and 567, both dated 17th October, 1947 communicating the British Government's intention to terminate the Agreement regarding Air Services between Chungking and Calcutta and the Agreement regarding Air Services between Southwest China and British Ports concluded between China and Britain at Chungking in 1942 and 1939 respectively, have the honour to state that a formal Note in reply will be returned in due course after H.M. Ambassador's Notes have been considered by the Ministry in conjunction with the authorities concerned."
[FO 371/65568 W7928]

"With reference to Your Excellency's Note No. 567 of 17th October,



SKYWAYS
LIMITED
HAVE COMMENCED FREQUENT FLIGHTS
HONGKONG – SINGAPORE
Direct In 7 Hours
4-ENGINED LANCASTRIAN AIRCRAFT
FARE HK\$880
SPECIAL EXPRESS BAGGAGE & FREIGHT RATES
NEXT WEEK'S DEPARTURES:
28TH MAY
31ST. MAY
Details, and Bookings from
JARDINE MATHESON & CO. LTD.
AIRWAYS DEPT.
Tel. 30311
And The Usual Booking Agents

Above: A newspaper advertisement for Skyways Ltd which appeared in May 1947. The company was trying aggressively to break into the Hong Kong market. (Ian D Johnson collection)

1947, informing me, on instructions from His Majesty's Principal Secretary of State for Foreign Affairs, that the British Government intend to terminate the Agreement regarding Air Services between Southwest China and British Ports which was embodied in the Notes exchanged between Dr Wang Chung-hui and Mr J D Greenway at Chungking on 24th January, 1949 [sic], and that the Agreement will, in accordance with the provisions of clause (3) thereof, cease to have effect on 17th October, 1948, and requesting that a reply be returned, I have the honour to state in reply that the Chinese Government are willing to agree to the termination of the said Agreement." (Note dated 19.11.47) [FO 371/65568 W8524]

A further reply dated 29/11/47 repeats the text of Note No. 566 and adds the following response:

"... I have the honour to state that, concerning the termination of the Agreement regarding Air Services between Chungking and Calcutta, it has been discussed and agreed between the Indian and Chinese Governments that pending the conclusion of a civil air agreement between these two countries, the original agreement shall be extended for as long as necessary." [FO 371/65568 W8668]

We have not yet found a copy of the 1942 agreement in TNA files and the number of this Command Paper (if any) is not known. No details have been found in the British Library's online catalogue.

Sino-Indian Air Transport Agreement

The Director General of Civil Aviation in India wrote to Sir William Hildred, Director-General of Civil Aviation in London on 9th February, 1946 about CNAC. In his second paragraph he stated:

"C.N.A.C. are engaged in moving their base from Calcutta to Shanghai and their principal operation at present is transporting the Chinese Government from Chungking to its new seat at Nanking. The post-war plans of C.N.A.C. include air services to Japan, the Philippines, Netherlands East Indies and Singapore with Douglas C-54 aircraft and to Rangoon and Calcutta with Douglas DC-3 or Dakota aircraft. The service to Calcutta will be operated via Kunming and Bhamo. Mr. Sellett appreciated that the Chinese Government would have to negotiate an agreement with the Government of India for their post-war operations but did not know when the Chinese Government contemplated approaching the Government of India for this purpose." [BT 245/659 #118C]

The following letter was sent from the Indian Embassy, Nanking to the British Embassy, Nanking on 14th May, 1947: "You will be interested to know that we have given the Chinese Government 3 months notice for the termination of the agreement regulating the operation of the C.N.A.C. service between India and China. We have also informed them of our desire to negotiate a bilateral agreement, on a basis of reciprocity, for the operation of commercial air services between India and China.

"The Chinese Government replied expressing their agreement to the proposal to negotiate a bilateral agreement and suggesting that the Government of India should send their representatives to China for this purpose.

"I communicated this to the Government of India and they have replied as follows: They point out that China has been the sole beneficiary under the existing agreement and will continue to be so for some time since the Indian air lines are not yet ready to operate eastward services. Ordinarily, therefore, the Government of India have it in mind to invite the Chinese to send a delegation to Delhi at a later stage to negotiate a treaty of friendship, commerce and navigation they say they will have no objection to negotiating the air agreement in Nanking.

"The Government of India have asked me whether I have any observations to offer and, if not, to put their suggestion to the Chinese Government in such manner as I consider most appropriate.

"I do not quite know what the considerations are for deciding the venue of such negotiations and whether the caveat suggested by the Government of India should be entered with the Chinese Government. I would be most grateful for your advice."

The British Embassy, Nanking replied to the Indian Embassy, Nanking on 20th May, 1947:

"I must confess to being somewhat perplexed by the problem upon which you asked for my advice in your letter ... of 14th May. In the absence of any definite knowledge of the basic principles involved, I can only offer suggestions as to what seem to be practical considerations.

"It would appear prime facia that the normal thing would be for the party more urgently seeking the conclusion of the agreement to be the visitor, which in the present case obviously would be the Chinese Government who, as the Government of India observe, would be ready to operate India-China services well in advance of the Indian air-lines concerned. There is, I think, considerable advantage in negotiating these bilateral agreements on one's own home ground, as for one thing the delegation are in closer touch with their government and their technical experts, and of course it saves the costs of hotels and telegrams.

"This latter consideration would apply equally, if not more, with regard to the commercial treaty (i.e. of friendship, commerce and navigation). As, however, this is presumably more important to the Government of India in view of its comprehensive nature than a specialised air agreement, I feel as do the Government of India that it might be good tactics to defer the Chinese proposal to discuss the air agreement here so as to enhance the chances of their acceptance of the invitation for the commercial treaty negotiations to be held in India. It is unlikely in practice that the interests of India with regard to the aviation agreement would be prejudiced by being conducted here if, as must be the case, it is at the moment more important for the Chinese side to get such an agreement expedited.

"If you should proceed to communicate to the Chinese Government the concurrence of the Government of India to the holding of the air agreement talks here, it would be better in my opinion not to make any caveat, by which term I presume you mean some statement to the effect that really the venue ought to be in India but the Government of India are agreeable to waiving their rights in this respect. It would seem to me to offer no advantage to express any such reservation, which might on the contrary create a less amicable atmosphere from the very start of the negotiations. At the same time it might be a shrewd move to follow up such an accommodating response as soon as possible by an invitation to send a delegation to India to discuss the commercial treaty, which invitation might in the circumstances be rather difficult to refuse or even evade.

"I offer the above opinions with some diffidence but that is how the picture presents itself to me.



Above: A CAT C-46 makes a very low-level departure from Kai Tak over Kowloon City! (via JM Collection)

"The Ambassador who has seen this letter has, however, expressed his agreement with these views."
[FO 371/65568 W4308]

The Indian Ambassador replied as follows on 23rd May, 1947:
"Many thanks for your letter ... dated the 20th May, regarding the proposal to negotiate a Sino-Indian air agreement.
"Your reasoned views tally entirely with my own amateur reactions to the Government of India telegram; and I am replying accordingly." [FO 371/65568 W4641]

The British Embassy in Nanking wrote to the Indian Embassy in Nanking on 22nd November, 1947 to notify them of the British Government's actions re termination of previous air transport agreements (see above), and this was duly acknowledged by the Indian Embassy on 2nd December, 1947:
"The position at present is that, while you have given notice for the termination of the agreement relating to air services between Chungking and Calcutta, we have given notice for its extension pending the negotiation of a fresh agreement between India and China. Whatever the legal Pandits may think of this, the intention of our respective Governments is clear; the agreement ceases to be in force from your point of view but will continue to be in operation so far as we are concerned. The Chinese Government understand it thus, and we propose to leave it at that." [FO 371/65568 W8669]

No Sino-Indian air transport agreement for 1948 has been found yet in TNA files or on the internet. Indian bilateral air services agreements are given at <http://dgca.nic.in/bilateral/Bilateral.pdf>. The current Memorandum of Understanding with China, dated 11th March 2005, is at http://dgca.nic.in/bilateral/china_0105.pdf.

The Sino-British Air Transport Agreement in operation, 1947-1949
Survey flights

"Thus, when BOAC reopened flying-boat services to Singapore on 31 January 1946 it was with Hythes, on a three-times-weekly basis. Between 17 February and 2 April 1946 G-AGJM 'Hythe' made a 35,313-mile route-survey trip from Poole to Australia, New Zealand, Hong Kong, Shanghai and Tokyo. Captain R C Parker was in command, and the BOAC chairman, Lord Knollys, was on board. During the course of the journey the Hythe became the first British civil airliner to alight on the Wang-poo River at Shanghai, and on the Bay at Tokyo." [Woodley pp. 48-49] See also Barnes p.400.

The following letter was sent by BOAC to the Ministry of Civil Aviation (MCA) on 7th July, 1947, shortly before the Sino-British Air Transport

Agreement was signed:

"This note is to confirm our telephone conversation on Thursday last when I reminded you that in accordance with the plans laid when the D.C.A. Hong Kong was in London and as discussed with him and with George Dunnett on April 30th, our first Dakota will be ready to leave for Hong Kong about the middle of this month. We want to carry out proving flights in August both to Shanghai and Canton preparatory to opening a service first to Shanghai and as soon as possible afterwards to Canton.

"2. Unless the bilateral agreement has been signed over the weekend, ought we not consider asking Nanking to obtain a provisional agreement for the carrying out of the proving flights and the opening of the services?"

In fact the Foreign Office had anticipated this written request and sent telegram No. 747 to Nanking on 5th July, 1947: "Hong Kong Airways wish to start regular services with D.C.3 aircraft to Canton and Shanghai as provided in Agreement with effect from early August. First flights would be in nature of trials but right to carry traffic if desired is sought.

"2. Unless Agreement is likely to be signed in a matter of days we shall be glad if you will consider seeking provisional permission for operation of services from Chinese authorities. Conditions of Agreement will be observed and schedules and timetables communicated in due course." [BT 245/657 #107A]

The British Embassy, Nanking replied on 11th July, 1947 to say that the Minister for Foreign Affairs had been empowered by the Executive Yuan to sign the Agreement and 20th July had been set as a target date. "As signature should take place within a day or so thereafter I would prefer, as things now stand, not to ask for provisional permission." (The Agreement was actually signed on 23 July, 1947.) [BT 245/657 #111B?]

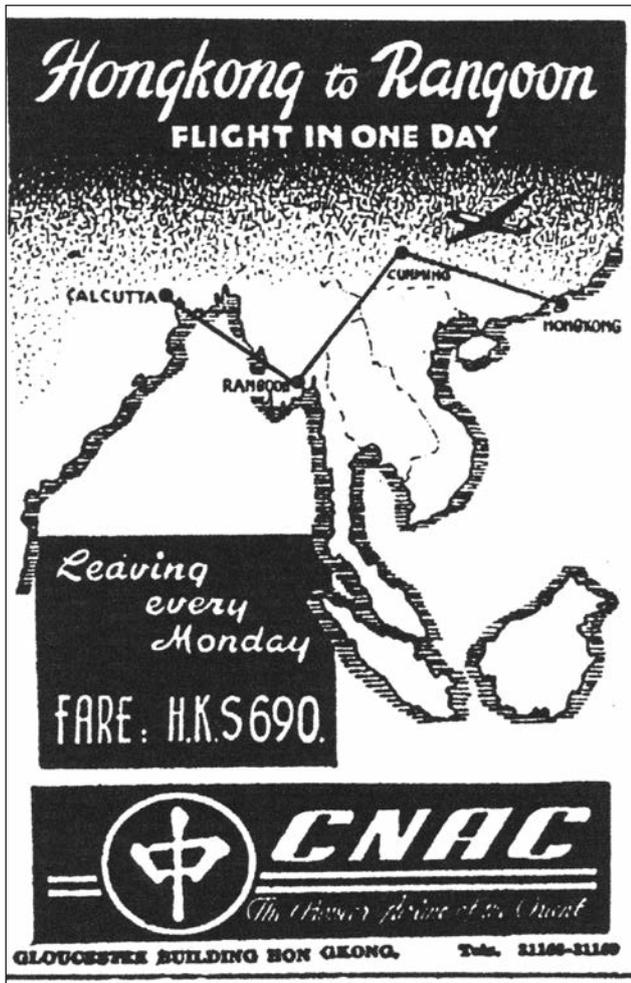
We plan to include an article on Hong Kong Airways Limited in a future edition of Archive.

Designation of British airlines, 1947

On 31 July 47 the Ministry of Civil Aviation sent the following letter to the Foreign Office:

"The U.K.-China Agreement having been signed, the next step is to designate, under Article 2, the airlines to operate the various services.

"2. Unfortunately we are not yet in a position to designate airlines for the local and regional services, but we should be glad if you would take steps to designate B.O.A.C. to operate the trunk routes Nos. 1 and 2 in Schedule II, and ask the Chinese for the appropriate operating permit as soon as possible."



Left: A newspaper advertisement for the CNAC Hong Kong to Rangoon route, published in the South China Morning Post on 3 Mar 1948. (Ian D Johnson collection)

by the Governor of Hong Kong to have not yet established themselves there.

"5. The Government of Hong Kong were, however, still anxious that the claim of colonial air-lines to participate in local and regional services should be met, and in April of this year, they sent Mr. Moss, the Hong Kong Director of Civil Aviation to London, for discussions.. Mr. Moss was briefed to represent the views of the Hong Kong Government.

"6. It was agreed in London in discussions between the Ministry of Civil Aviation, B.O.A.C. and Mr. Moss that, with the consent of the Governor of Hong Kong, a subsidiary B.O.A.C. company should be formed, to be called Hong Kong Airways. B.O.A.C. wished the three routes Hong Kong-Shanghai; Hong Kong-Canton, and Hong Kong-Macao, (which were included in the draft Anglo-Chinese civil aviation agreement then under negotiation,) to be reserved for this new company.

"7. It was thought that by the time the Anglo-Chinese agreement was signed and operating permits issued by the Chinese, and also by the time adequate hangarage was provided at Kai Tak airfield, Hong Kong Airways would be ready to start operating. Meanwhile, B.O.A.C. went ahead with withdrawing Dakota aircraft from service for conversion to Far Eastern conditions, and the first aircraft left for Hong Kong in July.

"8. Early in July, however, the Governor of Hong Kong reported that the three local airline companies mentioned in paragraph 4 above had decided to amalgamate, and, since this new amalgamated company would be ready to start operations at once, asked that the decision in favour of Hong Kong Airways might be reconsidered. The Governor based his recommendation on the fact that he wished to foster local private enterprise as much as possible, and that this amalgamation would permit local and regional British routes to be operated without subsidies and developed in an orderly manner.

"9. This latest development has been strongly opposed by B.O.A.C., and in the light of representations by them and Ministry of Civil Aviation, the Colonial Office replied to the Governor of Hong Kong in terms of telegram No. 1190 of the 28th July, (a copy of which we attach).

"10. We are unable at the moment to say what will be the result of these exchanges, since the Governor of Hong Kong has now telegraphed asking that the designation of Hong Kong Airways should be postponed until he has had a chance of considering the position in the light of strong local representations which are being made to him.

"11. We have, however, thought it best to give you this rather lengthy story, in order that you may be aware of the accuracy or otherwise of reports you may hear concerning the development of British air routes in the Far East." [FO 371/65497 W5646]

This request was communicated to the British Embassy in Nanking in telegram No. 847 of 6th August, 1947. The reason why HMG were not designating British airlines for local and regional routes was explained in a 2-page letter from the Foreign Office to Nanking dated 13th August, 1947. [FO 371/65497 W5646]

On 13th August, 1947, the General Department of the Foreign Office also wrote a 2-page letter to The Chancery, British Embassy, Nanking explaining why they were unable to designate British airlines for the local and regional routes:

"Please refer to our telegram No. 847 of the 6th August, in which we told you that it had not yet been found possible to designate British airlines to operate the local and regional routes included in the Schedule to the recently-signed Anglo-Chinese civil aviation agreement. We think it might be useful for you to know why we have been unable to designate the air-lines.

"2. The Government air corporations have always tried to ensure, as a matter of policy, that local and regional services operating from British territory should connect with and act as tributary lines to the main routes, and that local services should be operated by reliable companies under United Kingdom or Colonial control.

"3. Working on these lines, B.O.A.C. had suggested, and it was agreed in London, that a local air operating company should be established at Hong Kong, to be financed and controlled by B.O.A.C. , but without any objection to local interests taking even a majority financial share in the company if they so desired.

"4. In this scheme, they ran into opposition from the air operating companies already established in Hong Kong – Cathay Pacific Airways, Far Eastern Aviation, and Skyways. Of these, Cathay Pacific did not satisfy the normal principle that substantial ownership and effective control of a British-designated company should be held by persons belonging to the United Kingdom (or Hong Kong); Far Eastern Aviation had only the resources to run a flying training school; and Skyways were considered

In Memorandum No. 580 dated 22nd October, 1947, the British Embassy at Nanking informed the Chinese Ministry of Foreign Affairs that HMG had designated Hong Kong Airways Limited to operate Routes 6 and 7 of Schedule 2 of the Annex to the Sino-British Air Transport Agreement. [FO 371/65497 W7800 & W7929] The Ministry of Foreign Affairs notified agreement to this designation in a Memorandum dated 26.11.47 and went on to nominate CATC and CNAC on these routes (see below). [FO 371/65497 W8523] Designation of Chinese airlines, 1947

In telegram No. 1113 of 1st December, 1947 the British Embassy in Nanking informed the Foreign Office that: "Chinese Government have designated Central Air Transport Corporation and China National Aviation Corporation to operate routes 6 and 7 of Schedule 1 of Annex to Air Transport Agreement." In a Memorandum dated 26.11.47, they ask to be informed of procedure to be followed by the two Corporations in applying for operating permission. This was followed by telegram No. 1206 of 31st December, 1947 that said "Chinese authorities pressing for reply". [FO 371/65497 W8261 & W8523]

Foreign Office telegram No. 2 of 2nd January, 1948 to British Embassy, Nanking: "Your telegram No. 1206 [of 21st December].

"Please inform Chinese Government that designation of Central Air Transport Corporation and China National Aviation Corporation con-



Above: Dakota VR-HDO of Hong Kong Airways takes on passengers. This airline was set up by BOAC. (Ian D Johnson collection)

tained in their memorandum sent under your despatch No. 755 is sufficient and that no further application by the Corporations is necessary. You should hint informally to the Ministry of Foreign Affairs that operating permission will be granted as soon as B.O.A.C. and Hong Kong Airways have received operating permission for the routes for which they have been designated.

"2. As soon as B.O.A.C. and Hong Kong Airways do receive operating permission please inform Ministry of Foreign Affairs that His Majesty's Government are pleased to grant permission to C.A.T.C. and C.N.A.C. to operate routes 6 and 7 of Schedule 1." [CO 937/96/2 #2]

Nanking telegram No. 742 of 11th September, 1948 to Foreign Office: "Ministry of Foreign Affairs have now designated China National Aviation Corporation to operate route four of Schedule 1 of Annex to Sino-British Air Transport Agreement from Shanghai via Hong Kong Hoihow and Bangkok to Singapore, and request operating permission as soon as possible, as it is desired to start service early October.

"2. Assuming there is no objection to operation of service C.N.A.C. I venture to suggest that I might be authorised to hint that permission will be granted as soon as permission is granted by Chinese Government to B.O.A.C. to operate route one of Schedule 2 (i.e. London, Hong Kong, Shanghai, Japan) for which application was submitted some weeks ago." [CO 937/96/1 #8]

The Chinese Ministry of Foreign Affairs applied to the Embassy office in Canton for permission for CATC to operate route 4 Canton – Hong Kong – Bangkok – Singapore. They originally asked for CNAC to operate this route.

Singapore telegram No. 610, 2nd August 1949 to Colonial Office for Bigg from Storrer:

"I have received from Bone copies of following documents:

"(a) Memorandum from Chinese Ministry of Foreign Affairs dated 1st July, 1949 to Embassy Canton saying that they have appointed Central Air Transport Corporation to operate Route 4 Sino British Air Transport Agreement instead of China National Aviation Corporation. They requested permission accordingly and to operate route Canton – Hong Kong – Shanghai – Singapore.

"(b) Memorandum from same Ministry to Embassy Canton dated 14th July, 1949 with no reference to (a) but states China National Aviation

Corporation have now decided to operate route 4 from Canton to Batavia via Hong Kong – Saigon – and Singapore.

"2. These matters have been referred by Bone to Ministry of Civil Aviation. For my part it is immaterial whether operators are C.N.A.C. or C.A.T.C. provided, if Kulleng is to be used, all up weight must not exceed 65,000 lbs. Our views on Bangkok – Singapore section of the route were set out in paragraph 3 of Singapore telegram No. 252 of 23rd March and change from Bangkok to Saigon proposed in (b) above therefore welcomed. Presumably cabotage rights between Hong Kong and Singapore will be reserved." [CO 937/96/3 #24]

Telegram No. 714 was sent from Singapore to the Colonial Office on 17th September, 1949:

"Further to my confidential telegram No. 610 of 2nd concerning proposed C.N.A.C. operation.

"This Company is now anxious to commence operating route 4 from Canton to Batavia via Saigon and Singapore, Hong Kong having been deleted from the route presumably because of cabotage factor. Since D.C.4 aircraft with 70,700 lbs all-up-weight will be operated, this service will require routing through Tengah. C.N.A.C. are also seeking Fifth Freedom Rights at Singapore.

"2. Would appreciate early confirmation that H.M. Government has already given approval to Republic of China for operation of this route including Fifth Freedom Rights at Singapore. It is to be stressed, however, that grant of Fifth Freedom may adversely affect Malayan airways operating routes Singapore – Batavia and Singapore – Saigon." [CO 937/96/3 #60]

Breaches of the Sino-British Air Transport Agreement

The MCA's Weekly Intelligence Summary No. 459 dated 10th June, 1948 included the following two items on China:

"New C.A.T.C. service between Nanking and Hong Kong

The Central Air Transport Company (C.A.T.C.) has begun a one a week service between Nanking and Hong Kong, via Canton and Nanchang.

"C.N.A.C.'s Hong Kong-Canton service

From 20th April, the frequency of the China National Aviation Corporation's (C.N.A.C.) Hong Kong-Canton service was increased from two to four services a day." [CO 937/96/2 #12]

The Colonial Office reacted to the first of these reports by writing to the MCA on 13th July, 1948:

"We notice that on page 2 of your weekly Intelligence Summary No.

CATC TIMETABLE
WEEKLY REGULAR SCHEDULE
EFFECTIVE 7th FEBRUARY 1949

DAY	ROUTE	QAD	AIRCRAFT
MON:	HKG-STW-AMY-TNN-AMY-STW-HKG.	2330	DC-3 with 21 seats
	HKG-STW-AMY-FOO-AMY-STW-HKG.	2340	C-47
	SHA-AMY-CNT-HKG.	0000	DC-3 with 21 seats
	HKG-CNT-AMY-SHA.	0000	DC-3 with 21 seats
TUES:	HKG-STW-AMY-TPH-AMY-STW-HKG.	2330	DC-3 with 21 seats
	HKG-CNT-LIU-KMG.	0010	C-47
	HKG-CNT-SHA.	0130	C-46
	SHA-AMY-CNT-HKG.	0000	DC-3 with 21 seats
WED:	KMG-LIU-CNT-HKG.	0000	C-47
	HKG-CNT-STW-AMY-SHA.	0000	DC-3 with 21 seats
	SHA-CNT-HKG.	0130	C-46
THURS:	HKG-STW-AMY-TNN-AMY-STW-HKG.	2330	DC-3 with 21 seats
	SHA-AMY-CNT-HKG.	0000	DC-3 with 21 seats
	HKG-CNT-SHA.	0130	C-46
	HKG-AMY-FOO-SHA-NKG.	0000	DC-3 with 21 seats
FRI:	HKG-CNT-AMY-SHA.	0000	DC-3 with 21 seats
	HKG-CNT-LIU-KMG.	0010	C-47
	SHA-CNT-HKG.	0130	C-46
	HKG-NCG-CNT-HKG.	0000	DC-3 with 21 seats
SAT:	KMG-LIU-CNT-HKG.	0000	C-47
	HKG-STW-AMY-TPH-AMY-STW-HKG.	2330	DC-3 with 21 seats
	SHA-AMY-CNT-HKG.	0000	DC-3 with 21 seats
	HKG-CNT-SHA.	0130	C-46
SUN:	HKG-CNT-STW-AMY-SHA.	0000	DC-3 with 21 seats
	NKG-CKG-CNT-HKG.	2300	DC-3 with 21 seats
	SHA-CNT-HKG.	0130	C-46

SHA-BKK FLIGHT EVERY OTHER WEEK (SUNDAY)

DAY	ROUTE	QAD	AIRCRAFT
MON:	SHA-AMY-STW-CNT-STW	0100	C-46
TUES:	STW-HKG-BKK	2330	C-46
WED:	BKK-HKG-STW	0000	C-46
THURS:	STW-CNT-STW-SHA	0000	C-46

459 (dated 10th June, 1948) the beginning of a weekly service between Nanking and Hong Kong, operated by the Central Air Transport Company, is reported.

"As such a service is not provided for in Schedule I of the Annex to the Sino-British Air Transport Agreement, we shall be grateful to know whether you have any further information about these operations." [CO 937/96/2 #14]

The following is the text of a letter from Mr D F Landale, Chairman, Hong Kong Airways Ltd. to The Hon. D M MacDougall, Colonial Secretary, Hong Kong, dated 8th February 1949:

"Sir,
Sino British Bilateral Air Transport Agreement

"I refer to my two letters dated 11th December, 1948, and 7th January 1949 concerning the flagrant manner in which Chinese airlines designated in the Sino British Air Transport Agreement are violating the terms of that Treaty.

"It is some weeks since this matter was first raised, and I should be grateful if you could now let me know what action in Hong Kong Government proposes to take to deal with the intransigence of the Chinese operators and to protect the interests of the British designated airlines.

"I may say that, since my last letter, a representative of Hong Kong Airways has approached the Management of C.N.A.C. in Shanghai with a view to rationalising both routes and service frequencies. This approach has proved unfruitful. In brief, C.N.A.C. expressed the view that they considered Hong Kong to be their gateway to the South Pacific and part of China, to and from which they felt morally entitled to operate as and when they pleased, and by whatever route they chose. How such an attitude can be acceptable to His Majesty's Government is difficult to understand, as it implies complete negation of the terms of the Air Transport Agreement as well as utter disregard of the status of the Crown Colony.

"With regard to the frequencies of operation, the C.N.A.C. representative agreed to reduce the frequency of their Canton/Hong Kong operation from seven to four times daily. Within two days, however, their frequency was, on the contrary, increased to nine or ten flights daily over the Chinese New Year holiday period, and is still operating on the basis of six to eight services daily.

"It would appear that nothing is to be gained by further inter-company consultation, and that the British designated companies will continue to be unfairly handicapped, and penalized financially until some action is taken by the Hong Kong Government to support their own nominees, and to insist that the Chinese operators carry out the terms of the "Bilateral" Agreement.

"The situation at present in which the Chinese National Airline has been granted sanctuary for its operational headquarters in a British Colony and yet is allowed complete freedom to operate unauthorized routes and uneconomic frequencies, all based on Hong Kong, while its British counterpart is kept strictly to the letter of the Treaty by the Chinese authorities is both illegal and unsatisfactory."
[CO 937/96/3 #1]

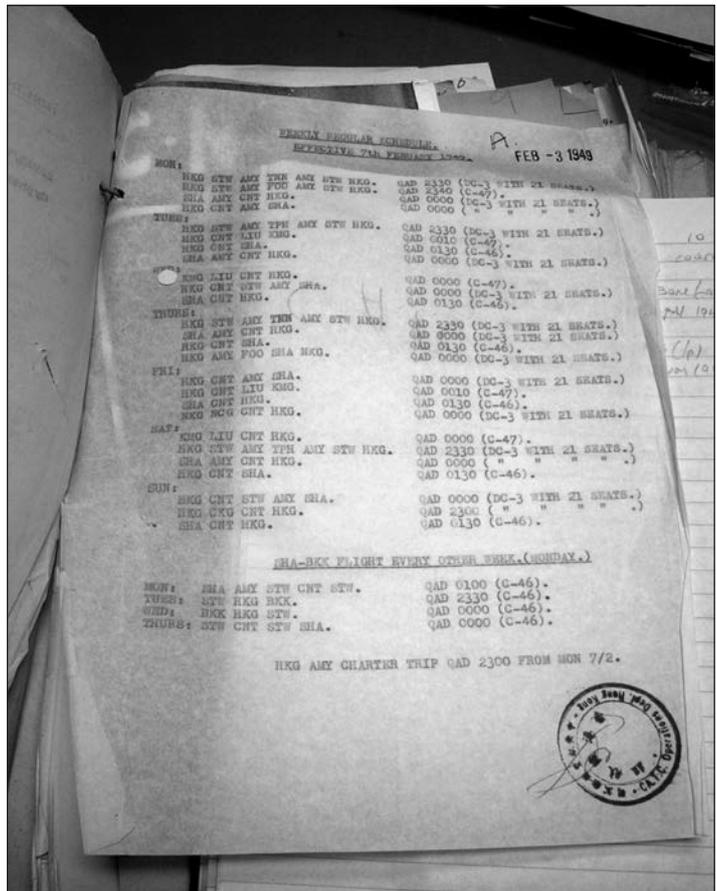
ANALYSIS OF CURRENT OPERATIONS COVERED BY SINO-BRITISH BILATERAL AGREEMENT

"The attached Schedule III details the routes which the Chinese are authorised to operate under the Sino-British Bilateral Agreement, and the actual services which the Chinese and other companies are operating.

"The following are the most important irregularities which emerge, together with proposals for dealing with them.

"Route 6: Point of Departure: Canton
Intermediate Point: Nil
Destination: Hong Kong

(i) C.N.A.C. have apparently 137 scheduled flights per month picking up and dropping paying load between Canton and Hong Kong, of which 17 are for destinations within China beyond Canton, and 120 are straight Canton/Hong Kong shuttles. In November, 1948, they actually operated 140 services.



Above: An original CATC schedule as submitted. It was used as evidence that the company was not complying with the agreement. (M. S. Best Collection)

(ii) C.A.T.C. have 57 scheduled flights per month on the Canton/Hong Kong route, all of them picking up and dropping load between Canton and Hong Kong, although all are for destinations within China beyond Canton. In November 1948, they actually operated 78 services.

(iii) Chinese companies schedule a total of 194 services per month to and from Canton and beyond as against Hong Kong Airways' 120 per month. In November 1948, they actually operated 218 services as against Hong Kong Airways' 123 services.

(iv) Additional services and charters are out on by Chinese companies without consultation. C.N.A.C. complain if Hong Kong Airways put on an extra flight.

"Suggested Action:
Chinese operators to reduce their services over the Canton/Hong Kong sector by approximately 50 services per month, and Hong Kong Airways to increase their frequency by a similar number of services, giving a total frequency of some 170 per month for each of the two countries.

"Route 7: Point of Departure: Shanghai
Intermediate Points: Fookchow, Amoy, Swatow
Destination: Hong Kong

(i) C.N.A.C. schedule a daily DC-4 direct service between Shanghai and Hong Kong, and vice versa (plus any additional services or charters they care to put on without consultation). Their scheduled passenger load capacity is, therefore, approximately 30 x 44 = 1,320 scheduled seats per month in each direction, as against Hong Kong Airways' 400 odd seats to which we are limited.

In November 1948, C.N.A.C. actually operated 45 direct services between Shanghai and Hong Kong with 44 seater Skymasters, as against their scheduled frequency of once daily, and Hong Kong Airways operated 11 services with 17 seater Dakotas, C.N.A.C., there-

Right: The original Schedule of Regular Flights submitted by CNAC.. (M. S. Best Collection)

fore, offered some 1980 seats in each direction as against Hong Kong Airways' 187 seats.

"Suggested Action:

No action is suggested in regard to Chinese airlines since a seat limitation restricting the offering made by Hong Kong Airways for a period of 2 years was agreed to in the negotiations for the Sino-British bilateral.

"But it would be a contradiction in terms for the British authorities on the one hand to agree to a seat limitation clause against a British chosen instrument, included for the purpose of protecting Chinese aviation in its infancy (sic) and on the other hand for those same authorities to permit other airlines to operate unscheduled and charter services between China and Hong Kong.

"The following companies have operated or hope to operate in the sense outlined above:-

- Braathens, S.A.F.E.,
- P.O.A.S.,
- T.A.A.,
- C.P.A.

It is suggested that such activity should cease forthwith." [CO 937/96/3 #1]

The statements by Mr Landale are supported by evidence in a letter from CNAC to All Booking agents dated 4th January, 1949: "We take pleasure to announce that as effective tomorrow January 5th, our daily shuttle between Hongkong and Canton will be increased from 4 round trips daily to seven round trips daily. Their departure time out of Hongkong will be as following:

"Hongkong-Canton

1st flight	leaving Kaitak at	6:05 a.m.
2nd		8:55 a.m.
3rd		10:25 a.m.
4th		12:45 a.m.
5th		1:30 p.m.
6th		3:05 p.m.
7th		3:50 p.m.

"Hongkong-Canton fare at HK\$35.00 remains unchanged. Check-in time at the CNAC office Peninsula Hotel is at 45 minutes earlier to the departure time.

"We also wish to advise you that our two daily Hongkong-Swato-Amoy schedules are now revised to depart Hongkong at 7:00 a.m. and 11:15 a.m. respectively instead of the original departure time of 7:00 a.m. and 12:10 p.m.

"We are sure you will find the above service more convenient for the public and trust you will do your utmost to promote our sales." [CO 937/96/3 #1]

See also CNAC Time Table out of Hong Kong, effective March 18th, 1949. [CO 937/96/3 #10]

HKG AMY CHARTER TRIP QAD 2300 FROM MON 7/2. [CO 937/96/3 #10] (Image very difficult to read.)

中國航空股份有限公司
CHINA NATIONAL AVIATION CORPORATION
定期航班表
Schedule of Regular Flights

Revised December 11, 1948
Effective December 12, 1948

中華民國三十八年十二月十一日修正
中華民國三十八年十二月十二日發行

航線 ROUTES		編號 F. Nos.	星期一 MON	星期二 TUE	星期三 WED	星期四 THU	星期五 FRI	星期六 SAT	星期日 SUN
上海	南京 青島 北平	411							●→
SHA	NKG-TAO-PPG	412							←●
上海	天津	405							●→
SHA	TAO	406							←●
北京	濟南 蘭州	1471							●→
PPG	NHS-LAN	1472							←●
上海	漢口 重慶	305							●→
SHA	HKW-CKG	306							←●
上海	南京 重慶	301							●→
SHA	NKG-HKW-CKG	302							←●
上海	漢口 昆明	341							●→
SHA	HKW-CKG-KMG	342							←●
上海	漢口 昆明 蘭州	343							●→
SHA	HKW-CKG-KMG-LAN	344							←●
上海	漢口 西昌	351							●→
SHA	HKW-CKG-SCG	352							←●
上海	漢口 重慶 昆明	331							●→
SHA	HKW-CKG-KMG	332							←●
上海	漢口 重慶 成都	361							●→
SHA	HKW-CKG-CTU	362							←●
上海	漢口 昆明	1301							●→
SHA	HKW-CKG	1302							←●
上海	南京 漢口 西安 漢口	337							●→
SHA	NKG-HKW-SIA-HKW	338							←●
上海	南京 漢口 西安 蘭州	335							●→
SHA	NKG-HKW-SIA-LAN	336							←●
上海	台北	207							●→
SHA	TPH	208							←●
上海	台北 福州	215							●→
SHA	TPH-FOO	216							←●
上海	台北 廈門	237							●→
SHA	TPH-AMY	238							←●
上海	福州 廈門	233							●→
SHA	FOO-AMY	234							←●
上海	福州 廈門 香港	235							●→
SHA	FOO-AMY-HKG	236							←●
上海	福州 廈門 香港	2036							●→
SHA	FOO-AMY-HKG	2037							←●
上海	廈門 廣州 香港	2038							●→
SHA	AMY-CNT-HKG	2039							←●
上海	台北 香港	227							●→
SHA	TPH-HKG	228							←●
上海	福州 台北 香港	227F							●→
SHA	FOO-TPH-HKG	228F							←●
上海	廈門 汕頭 廣州 香港	1205							●→
SHA	AMY-SWT-CNT-HKG	1206							←●
香港	廣州 海口	1241							●→
HKG	CNT-HAK	1242							←●
香港	廣州 海口 汕頭	1247							●→
HKG	CNT-HAK-YLK	1248							←●
香港	廣州 香港	1253							●→
HKG	SWT-CNT	1254							←●
香港	汕頭 台北	1255							●→
HKG	SWT-TPH	1256							←●
香港	汕頭 廈門	291							●→
HKG	SWT-AMY	292							←●
香港	廣州	221							●→
HKG	CNT	222							←●
上海	北平	1313							●→
SHA	PPG	1314							←●
上海	汕頭	1215							●→
SHA	SWT	1216							←●
上海	香港	601							●→
SHA	HKG	602							←●
香港	昆明 仰光	671							●→
HKG	KMG-RGN	672							←●
香港	仰光 加爾各答	673							●→
HKG	RGN-CCU	674							←●
上海	檀香山 舊金山	911							●→
SHA	HNL-SFO	912							←●

LEGEND 說明:
 ●→ One-way trip 單程
 ←● Round trip 往返
 ●→ and ←● Round and forth weeks of the month 每月往返兩次
 ●→ and ←● and weeks of the month 每月往返四次
 H=via Hongkong 經香港
 S=Honkong-Shanghai Portion of F.I. 911 經香港上海段
 Prepared by Passenger Service Division, Business Department, 中國航空公司客運部

RECEIVED
12 MAR 1949
S.

A meeting was held at the Ministry of Civil Aviation, London on 13th May, 1949 to further consider the development of air services based on Hong Kong. One item was to consider the fact that CNAC and CATC were now basing their operations on Hong Kong. Another item was to consider breaches of the Sino-British Air Transport Agreement. The unauthorised routes operated by CNAC and CATC were compared with Schedule I to the Annex to the Agreement [see Archive page 2012/067] and are listed in Foreign Office telegram No.60 below. [See also CO 937/96/3 #28]

As a result of this meeting, a 3-page letter was sent to the Chancery at the British Embassy offices in Canton with detailed instructions for discussions with the Chinese Ministry of Foreign Affairs. [See CO 937/96/3 #36] In addition, the Foreign Office sent telegram No. 60 of 19th June, 1949 to the Embassy offices in Canton:

"1. Instructions now on their way to you by bag set out in full the lines on which we are asking you to make formal approach to the Chinese authorities about the unauthorised operation by CNAC and CATC of routes to Hong Kong not covered by the bilateral Air Agreement. Meanwhile we understand that Bone is seeing Chinese Minister of Communications tomorrow 20th June, when, subject to your views, we would like him to take up our case orally. We are however anxious that nothing may be said which would prejudice your subsequent approach, and would therefore be grateful if, should there be no objection, you would ask Bone to speak to the Minister on the following lines:-



Above: Cathay Pacific Airways was the third of the Hong Kong based airlines to operate under the Sino-British Air Transport Agreement. Catalina VR-HDS is pictured receiving attention at Kai Tak. (Ian D Johnson collection)

"2. He should represent to the Minister that CNAC and CATC have been operating on the following routes which are not covered by the Agreement:

(a) Shanghai – (Foochow) – Taipeh – Hong Kong.

This is equivalent to the unauthorised insertion of Taipeh in Column 2 of Route 7.

(b) Canton – Swatow – Hong Kong.

This is equivalent to the unauthorised insertion of Swatow in Column 2 of Route 6.

(c) Shanghai – Hong Kong – Kunming – Rangoon – Calcutta.

Kunming is in Column 1 of Route 3, not a point to be served between Hong Kong and Rangoon.

(d) Tainan – Amoy – Swatow – Hong Kong.

There is no route in Schedule I to cover this.

(e) Chungking – Canton – Hong Kong – Chungking.

Although it might be maintained that a Chinese airline can operate Canton – Hong Kong under Route 6 and Canton – Chungking as a cabotage sector, there is no route entitling it to fly direct between Hong Kong and Chungking.

"Bone should state that it would be unreasonable to expect us to acquiesce in the operation of these services, and we would expect that the Chinese authorities will either

(a) revise the route schedules of the Agreement through the normal channel or

(b) apply for temporary operating permits.

"3. The second point to which we would like Bone to draw the attention of the Chinese Minister of Communications is the requirement that Hong Kong Airways submit statistics before they are allowed to

increase frequencies. This we regard as unjustifiable under the terms of the Agreement, and Bone should request that instructions be given to the competent Chinese authorities not to make this requirement in future. Should the Minister, in this connexion instance the agreement on frequency on route 6, Bone should point out that this agreement is between airlines, and was only made necessary by the Chinese insistence on the prior submission of statistics.

"4. It may be possible for Bone in the course of discussion to obtain concessions e.g. the right of entry for United Kingdom airlines to points in China; and we would be grateful for whatever he could do in this regard. We would not wish however as a result of these discussions to be committed to any particular settlement. Above all, we do not want the discussions to form an excuse for the Chinese putting on record their views on what specific routes we should or should not have. Bone might undertake to report any suggestions made, but otherwise to reserve our position.

"5. The instructions referred to in paragraph 1 above will make clear our motives in desiring additional formal representations to be made by you on this matter. For this reason, we would prefer (and you will no doubt agree) that Bone should confine himself on this occasion only to a statement of our case." [CO 937/96/3 #42]

The following telegram (No. 601 of 18th June, 1949) was sent from Hong Kong to the Colonial Office:

"The Air Advisory Board have strongly recommended that letters should be addressed to Chinese Airlines informing them that certain of their air routes are not in accordance with the air agreement, that no formal application was made to operate them and that all air routes not covered by that agreement must cease within a stipulated period, for example, one fortnight.

"2. The reasons for this recommendation are:

(I) that official representations to the Chinese Government (as requested in my secret despatch No. 35 to Ambassador Nanking, copied to you as No. 12 of 22nd March) do not appear to have been made, except as regards route 6;

(II) that Hong Kong Airways are growing restive at continued breaches of the agreement and have requested my assistance in obtaining similar facilities outside the agreement.

Right: Official CNAC Route Map dated 11 December 1948. (M. S. Best Collection)

"3. My intention is first to get Chinese Airlines back within the agreement and the perhaps to negotiate on an equal basis for further facilities outside the agreement. This, I consider, a better policy than seeking, for British Airlines, facilities outside the agreement already possessed by Chinese Airlines.

"4. I do not propose to take action proposed by Air Advisory Board however, pending an early reply to my telegram under reference, since I do not wish to do anything which might harm negotiations which I understand Civil Air Attaché is being requested to undertake, but I would press for early instructions to be sent to him since it is of the greatest importance that the Chinese be confined to the agreement before the communists take over full control of Chinese Airlines." [CO 937/96/3 #37]

The Colonial Office replied on 21st June (telegram No. 775), explaining what they were doing through the Embassy office in Canton. (A copy of that letter was sent to Hong Kong for information.)

The following reply was received from Canton (No. 94, 29th June, 1949):

"Bone attended postponed meeting at Ministry of Communications today with Director General of Transportation. After dealing with paragraph 3 he outlined services named in paragraph 1 at present operated by Chinese air lines which fall outside the Agreement. The reply made was that Air Agreement was confined to British and Chinese services operating in connexion with four designated Chinese air fields and that at the time the Agreement was drawn up services such as Amoy Hong Kong, Chungking Hong Kong, etc. were already in operation and there was an understanding that these would continue. The Chinese maintain that fact that these services have for so long been permitted to operate without protest from Hong Kong authorities is proof of this understanding. Sir John Baldwin or Mr North of the Ministry of Civil Aviation could state whether this understanding did in fact exist and what services it covers. Statement was made to Director General of Transport that any understanding of this sort should have been included in an air agreement formally drawn up and request in paragraph 2 of your telegram No. 60 was made. Reference paragraph 4. Bone complained that Chinese Government had granted Philippine air lines rights for a regular charter service to Amoy an airfield not designated for international use. No request for concessions for British air lines to operate services to any particular places was made. It was understood that Ministry of Communications contemplate making Amoy an international airfield when money is available for its improvement.

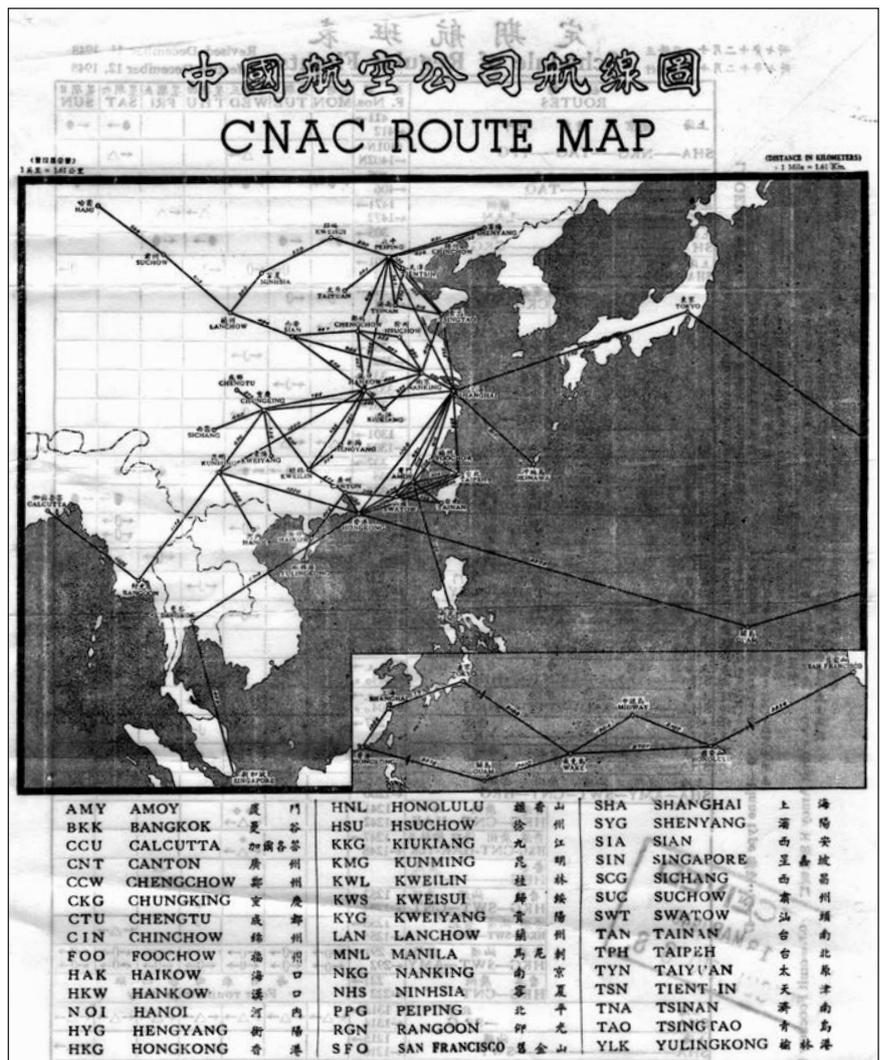
"2. In the circumstances I am not taking any action with Ministry until position has been cleared up." [CO 937/96/3 #44]

The following telegram (No. 169) was sent to Canton by the Foreign Office on 22nd August, 1949:

"Careful examination of the minutes of the negotiations has failed to reveal anything to substantiate the Chinese argument; and the Ministry of Civil Aviation emphatically deny that any "understanding" existed on points not covered by the published Agreement.

"2. Chinese authorities must be aware that the whole object of the Agreement was to obtain cover for all routes they desired to operate to and through United Kingdom territory. Further, they must know that according to Article IX(2) any modifications or additions to the Annex and route-schedules can be made only after consultation with the aeronautical authorities of the United Kingdom.

"3. It is true that we have not hitherto protested against these opera-



tions; but the fact that we have not yet done so cannot be interpreted as any admission on our part that Chinese airlines have any right to continue the services concerned without our authority.

"4. We are at a loss to understand how the Chinese authorities can put forward seriously an argument that can so easily be refuted; and regard it as a pretext to waste time. We would therefore be grateful if you would now put in a written protest on the lines of General Department's letter of 16th June (W 3165/81/802), adding the substance of paragraphs 1, 2 and 3 above. You should go on to offer the Chinese authorities the alternative courses either (a) of giving instructions to the airlines concerned to cease operations to Hong Kong on the routes specified, or (b) of applying for their incorporation in the schedules to the Agreement (or for temporary operating permits).

"5. You should inform the authorities that in the latter case, we would expect to be given reciprocal rights on the following six routes:

- (a) Hong Kong – Taipeh – Foochow
- (b) Hong Kong – Swatow – Canton
- (c) Hong Kong – Kunming – Bangkok – Rangoon – Calcutta
- (d) Hong Kong – Swatow – Amoy – Tainan
- (e) Hong Kong – Canton – Chungking
- (f) Hong Kong – Canton – Liuchow.

"6. we would be grateful for an early reply."

Canton replied to the Foreign Office on 27th August, 1949 (telegram No. 177):

"I have despatched memorandum as instructed ...

"2. Your paragraph 5. You will be aware that Fuchow has fallen (I have deleted it). Canton, Amoy, Swatow and eventually Chungking are gen-

erally expected to fall. I of course appreciate that this does not affect agreement as proposed in paragraph 3 of your letter of 16th June. The Chinese however may find our attitude rather surprising.”
[CO 937/96/3 #55]

Canton's Memorandum No. 181 of 27th August, 1949 is included as document #58 in TNA file CO 937/96/3. The closure of Chinese airports as a result of the civil war is considered below.

Hong Kong provided the following details in telegram No. 972 of 19th September 1949:

“On 24 August 1948 C.A.T.C. started operating Shanghai/H.K./Bangkok i.e. route No. 3 of the Agreement and continued until Shanghai fell.

“2. In July 1949 C.A.T.C. started operating Canton/H.K./Bangkok.

“3. It was not known here that C.A.T.C. had not been designated for this route. D.C.A. states that past procedure had been for designations according to article 2 of the Agreement to be affected through the Embassy in Nanking or Embassy Officer Canton while Civil Air Attaché was expected to keep a watching brief to ensure that the terms of the Agreement were adhered to. Since the flight Canton/H.K./Bangkok was a scheduled route it has been assumed that a designation had been properly made.

“4. This procedure is evidently unsatisfactory and on Bone's return from U.K. I shall discuss methods of ensuring that routes may not be operated until an airline has been properly designated.

“5. D.C.A. has heard no reports that C.A.T.C. propose to extend the route to Calcutta.

“6. Neither C.A.T.C. nor C.N.A.C. are as yet operating to Singapore.”
[CO 937/96/3 #61]

Restrictions on the use of Chinese airspace

Telegram No. 717 of 3rd September, 1948 was sent from the British Air Attaché, Nanking to ACAS(I) at the Air Ministry via the Foreign Office:

“Learned from conversation today with United States Attaché that secret order has been issued by Chinese Government forbidding all foreign aircraft except Russian to fly west of Lanchow 036005N 103044E. Order is believed to be the result of strong Soviet complaint of obvious spying by United States aircraft in Soviet sphere of influence. Areas affected by this ban are provinces of Tsinghai and Sinkiang. Understand Russians invoked 9 year old Sino-Soviet aviation agreement of which copy not held here but believed to give U.S.S.R. exclusive right to fly over Sinkiang. This agreement due renewal September 1949. Chinese Foreign Office admitted knowledge of order and stated it was issued by Ministry of National Defence on instructions from highest authority but refused further information. The ban was discovered when United States Minister Nanking flying in American official aircraft was refused permission to fly on to Urumchi 043058N 087026E from Lanchow on vague grounds that such a flight would involve the Chinese Government in difficulties with the Soviet Government. Understood the matter has been referred to Washington for further action.”

On 7th September, 1948 the Air Ministry sent a copy of this telegram to the China Department, Foreign Office with the following note:

“2. We are not very concerned with this alleged order by the Chinese Government forbidding all foreign aircraft, except Russian, to fly west of Lanchow. However, it is likely that this order contravenes international air regulations. Therefore, I am passing a copy back to you in case you wish to take it up in your own Department or with the Ministry of Civil Aviation.”

The British Air Attaché sent a further telegram (No. 751) to ACAS(I) on 8th September 1948:

“A request for clearance of a R.A.F. Dakota to fly His Majesty's Charge d'Affaires on an official visit to the Hankow railway has been refused by the Chinese Government. Also refused was clearance for A.A.A. to fly same aircraft to Hong Kong and Yunnanfu. Aircraft held Hong Kong pending result of protest by the Charge d'Affaires. Embassy so far unable to extract satisfactory answer from the Chinese authorities.”

The Foreign Office belatedly replied to the Air Ministry on 27th October, 1948:

“2. You may be interested in three further telegrams from Nanking, No. 716 of the 1st September, 723 of the 4th September and 24 Saving of the 14th September, copies of which I enclose. From the last two you will see that the Chinese Government have now refused clearance for a special British aircraft which was to have taken L.H. Lamb, our Charge d'Affaires, on an official visit to Hankow and Peking. The reason given was that the route lay over areas in which military operations are taking place.

“3. It does not appear, however, that the Chinese refusal is contrary to any international air regulations recognised by the United Kingdom. China is a signatory to the Chicago Convention of 1944, Article 3 of which expressly excludes “state aircraft” (into which category British and American Embassy aircraft presumably fall). The operation of a scheduled international air service over or into the territory of a contracting state for any purpose is expressly subject, under Article 6 of the Convention to the permission of the contracting state concerned; and this presumably covers the Russian airline from Alma Ata in Soviet Kazakhstan to Hami in Sinkiang. The only right which China seems to have granted unconditionally is that of over-flying and non-traffic stopping to aircraft other than State aircraft or aircraft employed on a scheduled service (Article 8); and even this is subject to qualifications which the Chinese could no doubt reasonably invoke in the present instances. China does not appear to have undertaken any further obligations under the International Air Services Transit Agreement (to which the United Kingdom is a party). It is true that under the international Air Transit Agreement China has granted all five freedoms; but as the United Kingdom is not a party to this agreement we could not complain against the Chinese refusal, although the Americans might do so under this agreement.”

[FO 371/69647 F12208]

The following is included in telegram No. 723 of 4th September 1948 from Nanking to the FO:

“The announcement by Chinese Government spokesman that the Soviet Government had been notified of the Chinese desire for the termination of the Sinkiang Air Line agreement on expiry next year, has aroused great interest and brought into prominence the sudden withdrawal by the Chinese Government of permission to United States Minister to proceed from Lanchow to Urumchi in the United States Embassy aircraft.

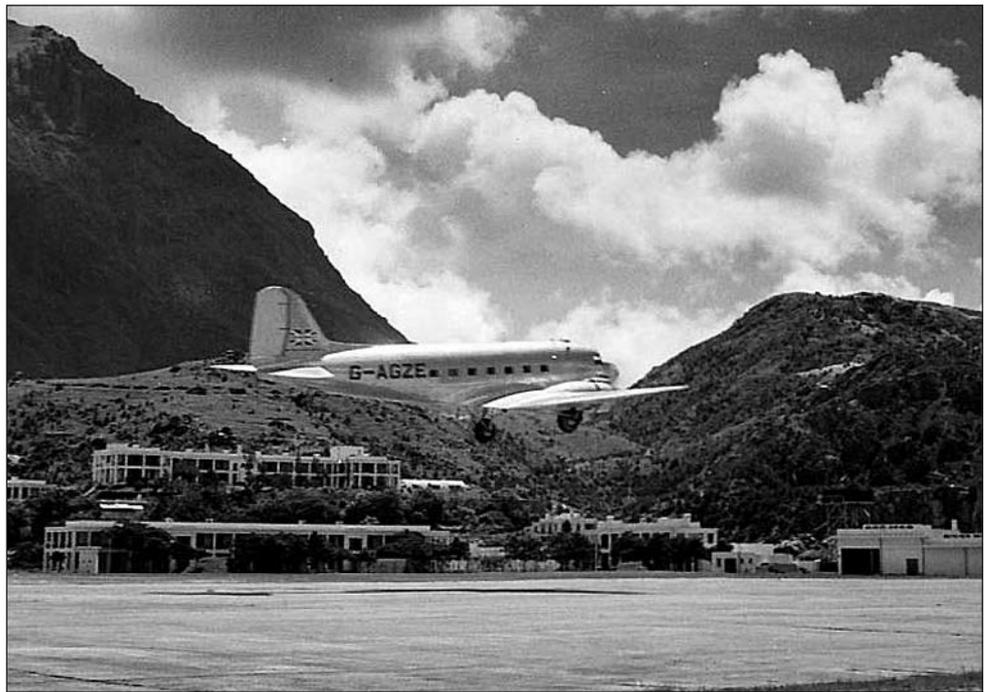
“2. I was confidentially informed by representatives of the United States Embassy that the reason given for the above abrupt action was to the effect that otherwise the Soviet Government might claim similar privileges. One Chinese Government spokesman however explained the incident as the normal exercise of discretion of competent authorities “in the light of technical and security conditions”.

“3. Yesterday I received brief communication from Ministry of Foreign Affairs refusing clearance for official visit which I proposed to make to Hankow and Peking in His Majesty's Ambassador's aircraft next week for which formal application had been made no less than three weeks ago. The Vice Minister for Foreign Affairs, to whom I subsequently made personal representations, told me today that this last minute refusal “had nothing to do with Sinkiang”, but was in pursuance of the Chinese Government's decision to prohibit flights over China by aircraft of Foreign Diplomatic Missions for “reasons which will become apparent later on”.

“4. I interpret these cryptic and unsatisfactory explanations to be result of discussions of Sino-Soviet issues not limited to Sinkiang Air Line which must now be in progress. It is obvious that in this case the Chinese Government must be in a dilemma thereby possibly antagonising United States opinion and to re-assert Chinese rights in South Manchuria at the risk of friction. There is a revived impression here that conversations have been renewed between the Chinese Government and the Soviet Ambassador and that the Chinese Government while soliciting United States material assistance, are not averse to seeking negotiated settlement of Civil War through the medium of the Soviet Government. This is more than likely, but in any case I have no doubt that the Chinese Government have decided to resort to the game of playing the Soviet Government against the United States Government and vice versa.” [FO 371/69647 F12311]

Fuller background to these telegrams is given in a 4-page letter to the Foreign Office dated 7th September, 1948. The following translation of a Memorandum from the Chinese Ministry of Foreign Affairs dated 2nd September 1948 was enclosed:

Right: BOAC aircraft, including Dakota G-AGZE, initially operated services on behalf of Hong Kong Airways.
(Ian D Johnson collection)



"The Ministry of Foreign Affairs present their compliments to His Britannic Majesty's Embassy and with reference to the Embassy's memorandum No. 530 of the 17th August 1946 have the honour to state that the matter was referred to the competent authorities for consideration and action. A reply has now been received stating that since the places through which it is proposed that the aircraft should pass in the first flight mentioned in the Embassy's memorandum are in areas in which there is much military activity, it is regretted that clearance cannot be granted. As regards the second flight, since there are several CNAC and CATC flights between Hong Kong and Nanking and Kunming each week by which members of the Embassy can travel, it would seem unnecessary to despatch a special aircraft." [FO 371/69647 F13018]

The main content of Nanking No. 24 Saving of 14th September, 1948 is as follows:

"Chinese Government at eleventh hour refused clearance for special British aircraft from Hong Kong in which I proposed making official visit to Hankow and Peking.

"2. Though reasons given for refusal was military operations on the route can only be a pretext as civil airlines are still operating regularly. In conjunction with previous refusal of clearance for United States Embassy aircraft to proceed to Sinkiang this is more likely a symptom of Chinese Government obstructive policy.

"3. United States Embassy and I are making independent representations in the hopes of prevailing on Chinese Government to listen to reason. Moreover as two aircraft of United States Embassy Service Attachés have since somewhat unexpectedly obtained clearance for Hong Kong I propose to press Chinese Government again for reconsideration of what seems to be a unilateral withdrawal of special aircraft facilities for his Majesty's Ambassador agreed upon with Chinese Government.

"4. I should be very glad if it would be possible in the meanwhile for the aircraft detailed for my trip to stand by at Hong Kong in case Chinese Government might suddenly reverse their negative attitude in which event it might be good tactics to test their sincerity by proposing a flight at once.

"5. I fully appreciate however that the aircraft may be needed for some more important purpose elsewhere. If so I would naturally not wish its retention at Hong Kong on the above chance. I would nevertheless express the hope that a special aircraft might again be available about the middle of October when we would try to accomplish a journey to Peking by air in connexion with examination of army officers studying Chinese." [FO 371/69647 F13936]

On 23rd September, the Foreign Secretary sent the following letter (No. 292) to the Charge d'Affaires (Mr L H Lamb) at Nanking:

"2. I approve your action in addressing representations to the Vice-Minister for Foreign Affairs and the terms in which these representations were couched." [FO 371/69647 F13018]

Foreign Office telegram to Nanking No. 759, 8th October 1948:

"Minister-Counsellor of Chinese Embassy called at Foreign Office on 7th October, and opportunity was taken to express to him our concern

at Chinese Government's refusal to give clearance to aircraft used by His Majesty's Diplomatic Representative in China. It was also emphasized to him that we were not impressed with the reason given for refusal. Doctor Tuan undertook to communicate to the Chinese Government our concern over this question." [FO 371/64697 F14000]

Foreign Office telegram to Nanking No. 761, 14th October 1948:

"Chinese Embassy inform us that they learn from Nanking that clearance has now been given for your visit in Ambassador's aircraft to Hankow and Peking. Dr. Tuan was thanked for the Embassy's intervention."

In telegram No. 867, 19th October, 1948 Nanking reported "Written confirmation now received." [FO 371/64697 F14336]

Translation of Memorandum from Ministry of Foreign Affairs dated 12/10/48:

"The Ministry of Foreign Affairs present their compliments to H.B.M. Embassy and, with reference to the Embassy's memorandum dated 28th September proposing that a passenger aircraft of the Royal Air Force should fly from Hongkong to Nanking on the 14th October, to carry Mr. L.H. Lamb, Minister of the Embassy, and others from Nanking to Peiping on the 16th, return from Peiping to Nanking on the 23rd October, and return to Hongkong on 24th October, have the honour to state that the Chinese Government are agreeable to the proposal." [FO 371/69647 F15213]

The US side of this story is told in FRUS, 1948, Volume VII, pp.729-754 (see below).

Closure of Chinese airports

As the Chinese Communist forces drove the Nationalist forces out of many parts of China, the Nationalist Government was obliged to close the international airfields nominated in the Sino-British Air Transport Agreement and open others as alternatives. The Chinese civil war has been described in Part 8A. (Archive Summer 2009 pp. 2009/075-092)

The following Memorandum was sent from the Ministry of Foreign Affairs to HBM Embassy on 17th June, 1949: "The Ministry of Foreign Affairs present their compliments to H.B.M. Embassy, and have the honour to state that according to the Sino-British Air Transportation Agreement of 23rd July, 1947, Shanghai is included in both air lines 1 and 2, operated by the B.O.A.C. and in Line 7, operated by the Hong Kong Airways, as set forth in Appendix 2.

"In view of the special conditions prevailing at present in certain parts of the country, the Ministry consider that flights to Shanghai by planes of these air companies are necessarily attended with danger, and that, therefore, their use of the Shanghai station should temporarily be sus-



Left: A newspaper advertisement for CNAC, published in the South China Morning Post on 9 Jan 1948. (Ian D Johnson collection)

international airports: Kunming, Taipeh, Chungking, Mengtze. [FO 371/76338 W6438]

The Chinese Embassy in London wrote to the Foreign Office on 6th December 1949 to say that the international airfield at Chungking had been closed and a new one at Chengtu would be opened. [FO 371/76339 W6703]

The Chinese Embassy in London wrote to the Foreign Office on 9th December 1949 to say that Chengtu Airport would be opened forthwith to international traffic. [FO 371/76339 W6805]

On 19th December 1949 the Chinese Embassy in London wrote to the Foreign Office to say that an international airfield had been opened at Taipeh, Formosa. [FO 371/76339 W7037]

Designation of British airlines for new airports in China
The following is a translation of a Memorandum from the Ministry of Foreign Affairs dated 16th September, 1949:

"The Ministry of Foreign Affairs present their compliments to H.B.M. Embassy, and have the honour to refer to the latter's memoranda Nos. 175 and 181 of 19th August and 27th August respectively, proposing rearrangements of air-routes and frequency of services between Hong Kong and China for the aircraft of Messrs. Hong Kong Airways.

"In reply the Ministry wish to state that they have referred the matter to the competent civil aviation authorities, who have now given their opinion as follows:-

"1. The majority of the inhabitants of Hong Kong and of the leased territory of Kowloon are Chinese. This, together with geographical reasons, had made the relations between these two places and China, in respect of communications and economy, extremely close. Aircraft of Chinese aviation companies had begun flying to or through Hong Kong long before the Sino-British Civil Aviation Agreement was entered into, and much has been contributed by them towards the prosperity of the two places and the development of cultural and economic relations between Great Britain and China.

"2. The entering into effect of the Sino-British Civil Aviation Agreement has not in any way affected the flying of aircraft of any Chinese aviation company to or through Hong Kong. On the understanding that this fact is recognised, and so long as Hong Kong Airways have discontinued the operation of the Hong Kong-Shanghai line, the Chinese Civil Aviation authorities agree, as a temporary measure, to allow aircraft of this British Company to fly from Hong Kong to Amoy or Swatow instead of to Shanghai. The Company, after having made their decision – as to whether they are to operate a Hong Kong-Amoy or a Hong Kong-Swatow line – and having accordingly informed the competent Chinese civil aviation authorities and other Chinese authorities concerned, may then start running the new line. Moreover, the competent Chinese civil aviation authorities are prepared to allow the aircraft of this British Company to use the Kunming airfield, should they in future find it impossible for them to make use of the Canton airfield for their Hong Kong-Canton run.

"3. As regards the alteration of frequency of services on the Canton Hong Kong route, Chinese aviation companies have a free hand to increase or decrease them and the same applies to Hong Kong Airways.

"It is requested that the above information be transmitted to the parties concerned.
[FO 371/76337 W5218]

Following the progressive closure of airports on mainland China, it was necessary to designate British airlines to routes from Hong Kong to the newly nominated international civil airports in China.

Telegram of 17th November 1949 from Hong Kong to the Secretary of State for the Colonies No. 1232:

"Hong Kong Airways willing and able to operate at once to Chungking, Kunming and Taipeh. Cathay Pacific Airways willing and able to operate at once to Hoihow. This distribution of routes is of course in accordance with agreement between the two companies.

pended, otherwise they must hold themselves responsible for any danger to their planes, including those incurred through military actions taken by the Chinese Government.

"It is requested that this information be communicated to the Air Companies concerned." [CO 937/96/3 #47]

On 12th November, 1949, HM's Consul at Tamsui sent telegram No. 184 to the Foreign Office:

"Minister for Foreign Affairs who arrived at Taipei from Chungking called me for conference this morning and discussed following points:-

"1. He informed me that Chinese Government gave permission for British Airlines to use Chungking, Kunming and Taipei. He stated that delay in obtaining approval was due to objections by Chinese Air Force. He confirmed that facilities were available at Chungking and Kunming immediately but clearance at Taipei would be subject to discussion between himself, Minister of Communications and Chinese Air Force. On this subject he promised to communicate with me later this evening.

"2. He said these arrangements had been made by October 27th and tried to impress on me that they were not connected with the defection of Chinese air lines.

"3. Minister for Foreign Affairs was in conference with Chiang Kai-shek last night and subject of air communications from Formosa was discussed. In my opinion defection of Chinese air lines has led to this sudden decision to permit British air lines to operate.

"4. Chinese approval for British air lines to operate to Chungking, Kunming and Taipei was telegraphed by me separately to the Governor Hong Kong today (telegram No. 71). [FO 371/76337 W6094, see also W6058 & W6250]

On 16 November 1949 the Chinese CAA wrote to the British Civil Air Attaché, Far East to say that the following airports were opened as



Above: In common with many other airlines at the time, Cathay Pacific Airways relied heavily on Douglas Commercial products. Here we see examples of the DC-3, DC-4 and DC-6 at Kai Tak. (Ian D Johnson collection)

"2. Colonel Tso Chi Chang Director of Civil Aeronautics Administration suggested to D.C.A. that formal agreement of which he produced a draft be made between them valid for 30 days according to which Hong Kong Government and Chinese Government would each permit non scheduled and charter flights between Hong Kong and Nationalist territory on an unlimited basis subject to various conditions. One condition was that British firms would be H.K.A. and C.P.A. Chinese carriers would be Civil Air Transport and such other Chinese lines as might be designated.

"3. D.C.A. has been instructed to inform Colonel Tso that negotiations are proceeding in London through normal diplomatic channels and that pending the outcome of such discussions unscheduled and charter flights can be arranged only on a flight by flight basis each application being considered on its merits.

"4. In accordance with permission given by Chinese Government H.K.A. made survey flight to Taipeh yesterday and permission has been given for a first unscheduled flight on 19th November.

"5. Position remains that application for unscheduled flights made by Hong Kong or Chinese companies are being considered individually on their merits."
[CO 937/96/3 #119, FO 371/76338 W6367]

Hong Kong telegram No. 1248 of 23rd November, 1949 was from Air Attaché Bone:

"It seems important to state that no mention occurred in interviews with Yeh or Colonel Tso as to possibility of Nationalist Air Lines getting reciprocal facilities to operate scheduled services to British territory from the airports newly rated for international use. My attitude to Colonel Tso's proposal was that I was merely prepared to transmit it to H.M.G. I made no comment except to say that under Sino British Air Agreement C.A.T. were not designated and could not operate any scheduled services whatsoever until Chinese Ambassador in London had applied for its designation. It may seem unnecessary to emphasise the foregoing but it seems probable that the communists will use the existing Sino British Air Agreement and the manner in which it has been implemented as their basis when negotiations for a fresh air agreement start." [FO 371/76338 W6397]

Note that the Chinese airlines, CATC and CNAC, had been grounded by the Chinese CAA on 13th November 1949, following the defection of 12 aircraft to Communist China on 9th November 1949. (See Part 13A, Archive, Spring 2011, p. 2011/010.)

Other Chinese International Air Transport Agreements

The Chinese probably requested revision of their agreement with the USA because air services between Hong Kong and China were reserved exclusively for British and Chinese airlines. The following was included in telegram No. 676 of 9th July 1947 from the Nanking to the Foreign Office:

"Lin subsequently called on Bryan and enquired unofficially whether we should be willing to agree with the Chinese that Hong Kong – Shanghai traffic should be reserved to Chinese and British interests alone. Bryan told him that he thought British authorities concerned would be unlikely to agree to this proposition but that he would put it up and let him know our reaction.

"2. I think that we should take the line that it is entirely a question for the Chinese to decide whether or not they intend to deny traffic rights on the Hong Kong – Shanghai route to any third country."
[BT 245/657 #109A]

A UN cumulative index (No. 41, dated 2005) of international treaties that includes air transport agreements but does not seem to be a complete listing for the period covered, is given at <http://treaties.un.org/doc/Publication/Cumulative%20Index/UNTS%20Volume%20No%202201-2250/cumindex.chrono.en.pdf>.

See also http://untreaty.un.org/ilc/documentation/english/a_cn4_243.pdf.

Air transport agreements between China and France

A provisional bilateral air transport agreement between France and the Republic of China was signed on 17 December 1946. The following letter was sent by the British Ambassador in Nanking (Sir Ralph Skrine Stevenson) to the Foreign Secretary (The RT Hon Clement R Attlee) on 22nd December 1946:

"I have the honour to report that, according to the official Central News Agency, an exchange of notes, constituting an interim agreement on airlines between China and French Indo-China, took place on the 14th of December between Dr. Wang Shih-chieh, the Minister of Foreign Affairs, representing China and Monsieur Jacques Mayrier, the French Ambassador, on behalf of the French Government.

"2. The text of the agreement has not yet been published but the summary published by the Central News Agency states that La



Above: CNAC C-54 XT-T02 (via JM Collection)

Compagnie Air France is authorised by the Chinese Government to operate a commercial air line between any one point in French Indo-China and Shanghai. In return, one of the two Chinese-owned aviation companies, the China National Aviation Corporation and the Central Air Transport Corporation, is authorised to run a similar line between any one point in China and Saigon. Canton and Amoy in China and Hanoi and Tourane in French Indo-China are designated as technical stops for repairs and refuelling.

"3. The summary adds that each line is temporarily scheduled to make one round trip each fortnight but that new schedules with more flights may be arranged where necessary. The agreement is effective for a period of six months from the 1st of January, 1947." [FO 371/65494 W336]

Air transport agreement between China and the Netherlands

The following telegram No. 670 dated 8th July 1947 was sent by the British Embassy, Nanking to the Foreign Office for the Ministry of Civil Aviation from Bryan:

"Scheltoma, member of Netherlands Delegation at present negotiating with Chinese for an air agreement, tells me that, when they asked the Chinese for traffic rights between Hong Kong and Shanghai on Batavia-Shanghai route Andrew Lin, Chairman of the Chinese Delegation, said we had agreed with the Chinese that no third country would be given such rights between Hong Kong and any point in China. Lin suggested if they did not believe this they should ask us and added that 70% of the traffic on this route was reserved to Chinese and 30% to British. Scheltoma asked me if this was true and, in the circumstances, I informed him in the strictest confidence of 50 seat limitation between Hong Kong and Shanghai, emphasising that it was a temporary agreement between the Governments for a period of two years.

"2. As far as I know the question of this preliminary (reservation of?) Hong Kong traffic to China and Britain alone was not even discussed during our negotiations, and I so (informed?) Scheltoma. He suggested, however, that it might be considered implied in the agreement for limited British participation during the first two years.

"3. Scheltoma undertook that the Dutch would not inform the Chinese that we had told them about this limitation unless we agreed to their doing so. Do you see any objection in the circumstances? I should be grateful for immediate reply.

"4. I am afraid that when the agreement is signed the Chinese will probably in any case allow the news of the 50 seat limitation to leak out. Would you in that event wish us to issue explanatory statement? If so, we could produce one but you may prefer to telegraph a draft." [BT 245/657 #110B]

The bilateral air transport agreement between China and the Netherlands was signed on 6 December 1947. This was based on the Chicago standard form and incorporates the principles of the Bermuda Final Act. Frequencies were not specifically limited but "regional restrictions" are mentioned. Hong Kong – Shanghai traffic qualifiedly reserved to carriers of China and UK. A copy of the Air Agreement between China and the Netherlands is included in TNA files FO 371/65497 dossier W8759 and CO 937/96/3 #22 (ref. CIV.26227).

Air transport agreement between China and Thailand

A bilateral air transport agreement between China and Siam was initialled on 23 July 1947. This was based on the Chicago standard form and incorporated the principles of the Bermuda Final Act as modified by predetermined frequencies and the qualified reservation of Hong Kong – Shanghai traffic to the air carriers of China and the United Kingdom. The right to withhold and revoke certificates is related to the compliance with laws and regulations rather than to substantial ownership and effective control.

The following additional documents (in English and Chinese) were registered with ICAO as No. 2919 on 13 September 1955:

Exchange of notes constituting a provisional air agreement. Taipei, 29 September 1951

Exchange of notes constituting an agreement extending the validity of the above-mentioned Agreement until 30 September 1952. Taipei, 28 March 1952

Exchange of notes constituting an agreement extending the validity of the above-mentioned Agreement until 31 March 1954. Taipei, 27 September 1952

Exchange of notes constituting an agreement extending the validity of the above-mentioned Agreement until 31 March 1954. Taipei, 31 March 1953

Exchange of notes constituting an agreement extending the validity of the above-mentioned Agreement for a further period of one year until 31 March 1955 and thereafter for further successive periods of one year each. Taipei, 31 March 1954

Sino-Soviet Airline Agreement
Government Information Office, Daily Bulletin No. 431, October 20, 1948:

Government indicates willingness to sign new Sino-Soviet Airline Agreement

"The Chinese Government has notified the Soviet Union that it will agree in principle to sign a new Sino-Soviet airline contract following the termination of the old one in September, 1949, the Nanking Daily News reported today.

"A spokesman of the Ministry of Foreign Affairs told the paper that while the Government has indicated its willingness to sign such a pact with the Soviet Union, it has made no proposal as to when negotiations are to begin.

"Early last September, the Chinese Government informed Soviet Russia of its desire to discontinue the Sino-Soviet air agreement covering the Alma Ata-Hami route upon its date of expiration."
[FO 371/64697 F17393]

As the Communist Chinese and Soviet governments signed the agreement to form SKOGA on 27 March 1950, we assume that a new agreement with the Nationalist Chinese was never signed.
Revision of US – China air transport agreement

Exchange of Notes, December 1946

The air transport agreement between China and the USA was described in Part 15A, pages 2012/057-059. On 29 October 1947 the Chinese government informed the U.S. Embassy in China that they sought the revision of this agreement. As the account of the diplomatic negotiations relating to this proposed revision would take 12 pages of Archive, this material will be posted in the Files section of the Air-Britain AB-IX forum at <http://groups.yahoo.com/group/ab-ix/files/Commercial%20Aviation%20in%20China%20/>

Chronology

17 December 1946	Provisional China - France Agreement
20 December 1946	China – USA Agreement signed
23 July 1947	China – UK Air Transport Agreement signed
23 July 1947	China – Siam Air Transport Agreement (initialled)
6 December 1947	China – Netherlands Agreement signed

Abbreviations

BOAC	British Overseas Airways Corporation
CAA	Civil Aeronautics Administration
CAB	Civil Aeronautics Board
CATC	Central Air Transport Corporation
CCAA	Chinese Civil Aeronautics Administration
CNAC	China National Aviation Corporation
CO	Colonial Office
CPA	Cathay Pacific Airways
DCA	Director of Civil Aviation
Deptel	Department of State telegram
Embtel	US Embassy telegram
FO	Foreign Office
FRUS	Foreign Relations of the United States
HBM	His Britannic Majesty
HMG	His Majesty's Government
HKA	Hong Kong Airways
HMSO	His Majesty's Stationery Office
ICAO	International Civil Aviation Organisation
MCA	Ministry of Civil Aviation
PAA	Pan American Airways
POAS	Pacific Overseas Airlines (Siam) Ltd
SCAP	Supreme Commander, Allied Powers, Japan
TAA	Trans-Asiatic Airlines
TIAS	Department of State Treaties and Other International Acts Series
TNA	The National Archives
urtel	your telegram

Acknowledgements

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FRUS files

Negotiation of civil air transport agreement between the United States and China, signed at Nanking, December 20, 1946, pp. 1228-1260 (PDF): <http://digital.library.wisc.edu/1711.dl/FRUS.FRUS1946v10>

Request of Chinese Government for revision of the Sino-American Air Transport Agreement of December 20, 1946 pp. 1423-1427 (PDF): <http://digital.library.wisc.edu/1711.dl/FRUS/FRUS1947v07>

Sinkiang: continued political deadlock in province; refusal by the Chinese government to permit flights of American military attaché's air-plate [sic] to Sinkiang; interest of the United States in possible termi-

nation of Sino-Soviet air agreement, pp. 729-754 (PDF): <http://digital.library.wisc.edu/1711.dl/FRUS.FRUS1948v07>

Negotiations respecting revision of the Air Transport Agreement of December 20, 1946, pp. 775-800 (PDF): <http://digital.library.wisc.edu/1711.dl/FRUS.FRUS1948v08.i0017>

TNA files

Colonial Office (code CO)

TNA ref.	title in TNA catalogue	years
937/96/1	China: air services	1948
937/96/2	Agreements and negotiations: China	1948
937/96/3	Agreements and negotiations: China	1949
937/96/4	Agreements and negotiations: China	1949

Foreign Office (code FO)

TNA ref.	title in TNA catalogue	years
371/65497	Anglo-Chinese air negotiations.	1947
371/65568	Air negotiations between China and India.	1947
371/69647	Chinese restrictions on air flights over Chinese territory.	1948
371/76335	UK-China air services agreement. Unauthorised operation of air route schedules by Chinese airlines. Suspension of BOAC services to Shanghai.	1949
371/76336	UK-China air services agreement. Unauthorised operation of air route schedules by Chinese airlines. Suspension of BOAC services to Shanghai.	1949
371/76337	UK-China air services agreement. Unauthorised operation of air route schedules by Chinese airlines. Suspension of BOAC services to Shanghai.	1949
371/76338	UK-China air services agreement. Unauthorised operation of air route schedules by Chinese airlines. Suspension of BOAC services to Shanghai.	1949
371/76339	UK-China air services agreement. Unauthorised operation of air route schedules by Chinese airlines. Suspension of BOAC services to Shanghai.	1949
	TNA report that unfortunately relevant files for 1948 have been destroyed.	

Ministry of Civil Aviation (code BT)

TNA ref.	title in TNA catalogue	years
245/658	British participation in civil aviation in China	1941-45
245/659	British participation in civil aviation in China	1944-47
245/660	British participation in civil aviation in China	1947-48

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BOAC: an illustrated history, Charles Woodley, Tempus Publishing Ltd, 2004, ISBN 0 7524 3161 7
Exchange of Notes between the Government of the United Kingdom and the Chinese Government regarding the Air Service between South-West China and British Ports. Treaty Series No. 52 (1939), Chungking, January 24, 1939, HMSO, Cmd. 6122 [BT 245/658 #26A; FO 371/54585 W8638]
Shorts Aircraft since 1900, C H Barnes, revised by Derek N James, Putnam Aeronautical Books, 1989, ISBN 0-85177-819-4
The National Archives (TNA) catalogue:
<http://www.nationalarchives.gov.uk/catalogue/>

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Editor's Note:

Martin Best's ground-breaking series on the development of commercial aviation in China is a major piece of original research, presented for the first time in *Archive*. A series of articles such as this is brought to life by the inclusion of the widest possible range of contemporary illustrations, not just of the aircraft involved, but also, as in this article, original documents, advertisements, maps and portraits of key people. I would appeal to anyone who might have illustrations suitable for future instalments to submit them to the Editor for use.

The Helmy Aerogypt

HEAD-ON VIEW No.44



During the 1930s, a young Egyptian medical student based in London, despite having only limited flying experience, decided to design an aircraft that would improve safety and handling at critically low speeds. Ultimately his projected design was intended to be scaled up to become a large passenger / freight transport to be built in his native Egypt.

Saleh Helmy sought to solve the low-speed lift problem by using an aerofoil-shaped fuselage – not a new idea in itself of course – and combining it with an adjustable additional aerofoil attached to the roof – which was a new idea. This “Helmy Flap” was patented and received some theoretical approval and its designer set about building a prototype at home in Maidenhead, later moving the construction to Heston.

Helmy Aircraft was set up in 1937 to build this proof-of-concept model which was called the Aerogypt. Although usually credited with doing most of the work himself, it seems that Helmy may have had some assistance as an advertisement for a designer had been placed as early as April 1934.

The original design of the Aerogypt (later to be referred to as the Mk.I) was for a plywood monocoque fuselage 19 feet long (5.8m), slab sided

Above: This side-view of the Aerogypt shows the aerofoil-shaped profile of the fuselage with the Helmy Flap in position. The small windows, sloping screen and large engine nacelles must have restricted pilot visibility somewhat. (via JM Collection)

but wider at the top, with an aerofoil profile. It enclosed a 4-seat cabin with a wide door for entry on each side and a steeply-sloping wind-screen which resulted in rather reduced forward visibility. The tail unit appeared to be rather small by comparison, emphasised perhaps by the large tailwheel.

The wings, which were also ply-covered, were of only 26 ft 4 ins span (8.02m) and of shallow section. Power was provided by three 22hp Douglas Sprite 2-cyl air-cooled engines, one on each wing and one in the nose. The wing engines were incorporated into rather bulky trousered undercarriage mainwheel units. Two 7.5 gallon (34 litre) fuel tanks were fitted. There were no flaps, just ailerons outboard of the engine nacelles.

Below: Viewed from the rear, the Helmy Flap shows a cut-out section to allow air to flow between it and the fuselage when raised. The squared-off end of the fuselage has two small trim tabs fitted rather than on the elevators. (via JM Collection)





Above: The Helmy Flap is here being held in its open position and the rear end has slid forward on the rails attached to the fuselage roof. No levers or supports are visible. (JM Collection)



Left: Close-up of the Flap being raised manually. To raise it in flight would have required extremely robust fittings and could have had negative effects on the aircraft's stability. (Aeroplane via JM Collection)

During one early flight the aircraft overturned on landing. Whether this was in any way due to the presence of the Flap (whether operated or not) is unknown but when the aircraft was repaired it was to be as Mk.II, without the flap but otherwise hardly changed. Lack of any photographic evidence of the flap mechanism or of it actually in use in flight, leads to the conclusion that it was never used as intended. After all, it should have been the principal feature of the Aerogypt's development programme.

The actual Helmy Flap was attached at the rear to runners on the fuselage roof, while the front, supported on rods, could be raised manually by a control lever in the cockpit. This was designed to increase the lifting effect, acting like a large wing slot surface, with air flowing not only over the aerofoil section fuselage but also between it and the Flap. For this system to work in flight, particularly on larger models, very strong linkages would be required.

While photos exist of the Flap in place, we have been unable to trace any showing the lever system and support rods. In theory any increased lift and low speed performance gain achieved by this system would have been reduced by tail surface control problems, drag and CofG alteration in flight.

Having been registered G-AFFG with c/n 3 (so what were 1 and 2?) on 17.2.38 in the name of Miss Dorothy Arkell, Helmy's fiancé, the Aerogypt first took to the air at Heston in February 1939. It was piloted by the designer himself, despite his very limited flying experience – in fact Miss Arkell had many more hours experience herself.

More flights and modifications followed despite the advent to War. The Aerogypt was inspected at Heston on 31.8.39 but was not impressed and development work continued. G-AFFG then became the Aerogypt Mk.III with enlarged fin and rudder area and 'zulu shield' shaped end-plates fitted to the tailplane, revisions which hinted at directional control problems, and with modifications to the undercarriage fairings. The aircraft remained active for a while, Authorisation To Fly No.163 being issued 15.12.39 and extended until 26.9.40 when it expired.

Helmy, having joined the RAF as an engineer, was given permission to work on the Aerogypt in his own time and it was moved to White Waltham in 1941 where further developments took place. In the process the company name was changed early in 1945 to Aerogypt High Speed Development Co Ltd. The Authorisation To Fly was re-issued on 10.1.44 and was to be gradually extended until 5.5.46.

On 12.1.46 the newly-completed Aerogypt Mk.IV was rolled out. The three Sprites had been replaced by two 65hp Continental A-65s located in larger, rather ugly, nacelles which were low enough to provide little



Left: In its Mk.II condition the Aerogypt had the Helmy Flap removed but was otherwise little altered. (via JM Collection)



Left: An early photograph of the Aerogypt Mk.I at Heston in March 1929. The Helmy Flap is in position and the designer is helping his fiancé Dorothy Arkell out of the aircraft. (via JM Collection)

Below: With its tail supported on a packing case the Aerogypt II stands in flying position in the hangar at Heston, accompanied by Saleh Helmy. (Aeroplane via JM Collection)

ground clearance for the propellers. The nose engine was replaced by a wind generator, giving the impression of a tiny central power unit.

Equally drastic was the conversion to a tricycle undercarriage, for which the nose was lengthened and the nosewheel raked well forward while the mainwheels were moved further back. These mainwheels were self-castoring, another example of Helmy's engineering inventiveness, but their extra weight and the increased frontal area of the new cowlings must have created some penalty.

Performance however, was greatly improved, with a maximum speed of 160 mph (257 kph), cruise at 145 mph (233 kmh), stall at 50 mph (80 kph) and a rate of climb of 600 ft/min (183 m/min).

The Mk.IV was test-flown by Capt Ralph Henderson of the ATA but on one early flight a propeller was broken in a ground strike, perhaps as a result of excessive undercarriage travel. Development and test flying continued until on 29.10.46 the Aerogypt, now quoted as c/n 5, was granted a Temporary CofA No.8653 to allow for final testing and for the designer and his wife to fly it to Egypt, the plan being to revive his plans to put the aircraft into production there with government support.



Above: In Mk.III form the Aerogypt still had its three Sprite engines but had acquired 'zulu shield' endplates on the tailplane with the elevators extended outboard in an attempt to improve lateral control. (JM Collection)

Right: Work in progress in September 1944 at White Waltham involved the installation of the Continental engines and construction of the new tricycle undercarriage. (JM Collection)



Departing from White Waltham on 26.11.47, the couple flew the Aerogypt to Northolt for customs clearance on the first leg of their journey. On approach the tailwheel caught a wire above the perimeter fence, stalled and crashed onto the field. The Helmys were relatively unharmed but when a crane was brought in to move the Aerogypt a lifting cable broke and dropped the aircraft ten feet to the ground, completing its effective destruction.

Registration G-AFFG was cancelled on 31.1.50 but the aircraft's fuselage remained in the White Waltham area for some years, being used as a chicken shed – rather oddly with the Helmy Flap replaced on its roof.





Above: The Head-on View of G-AFFG in Mk.IV condition at White Waltham with Miss Arkell (Mrs Helmy by now?) standing on the starboard wing against a background of Fairchild Arguses and an Anson. The frontal area of the new nacelles is evident, as is the broadening of the fuselage cross section towards the roof. Pilot's forward visibility is somewhat limited. The small propeller on the nose is for the wind-powered generator inside. (via JM Collection)

Left This view of the completed Mk.IV in early 1946 shows the longer nose and raked-forward nosewheel leg. The mainwheels, having been moved to the rear of the nacelles, are now fitted with the Helmy-designed castoring system. Additional chord and height has clearly been added to the rudder. (via JM Collection)



Above left: Flt Lt Helmy on the left, demonstrating the self-castoring undercarriage which he designed to improve crosswind performance on landing and take-off. (via JM Collection)

Above: Helmy seated at the controls of the Aerogypt IV which had fairly basic instrumentation. The corner of the roof has been glazed to improve vision but the pilot is seated a long way back from the screen. (via JM Collection)



Left: The last resting place of the Aerogypt near White Waltham. The fuselage was being used as a chicken shed and, rather oddly, the Helmy Flap had been restored to its original position. (B N Stainer via JM Collection)

EXTRAORDINARY FLIGHTS No 2

...KISSINGER'S 'SIDE TRIP' TO PEKING IN A PIA 707

by Michael West

Right: No photograph exists of the secret flight made to Peking by Henry Kissinger in July 1971. This photograph shows the captain for the flight, M T Baig (sixth from right) and Chief Purser Abdul Hayee (first on left). (Capt M T Baig Family Collection)



Richard Nixon had been elected US President in 1969 and he and his foreign policy advisor Henry Kissinger assessed that re-opening links with China, almost non-existent since the early Fifties, could get America out of its Vietnam war impasse, and would alter the power balance with the Soviet Union in America's favour. Nixon later reflected that leaving 'a billion people in angry isolation' was dangerous. Approaches to the Chinese had to be made clandestinely to avoid a public backlash early in the process, from the friends of Taiwan and die-hard anti-communists in the U.S., so Nixon and Kissinger made sure the U.S. State Department was not involved. The Americans were close to the Pakistan Government at the time and encouraging messages started to arrive from Peking in late 1970 in diplomatic notes passed by hand via the Pakistani leadership .

On 27th April 1971 an invitation to visit China was received from Premier Chou-en-Lai via President Yahya Khan of Pakistan: "...therefore the Chinese Government reaffirms its willingness to receive publicly in Peking a special representative of the President of the U.S. (for instance, Mr Kissinger) or the U.S. Secretary of State or even the President of the U.S. himself for direct meeting and discussions. Of course, if the U.S. President considers that the time is not yet right the matter may be deferred to a later date... public arrangements to be made through the good offices of President Yahya Khan."

There was no way Kissinger could just fly to Peking in a USAF aircraft in the diplomatic climate of the time. Instead Nixon, Kissinger and a tiny group of aides set up a trip through Asia for Kissinger in Air Force One which would take him through Islamabad, Pakistan from where PIA would spirit him to Peking for a weekend visit in one of their Boeing 707s. The mission was called Polo I within the group and they used terms like 'the principal traveller' and 'side trip' for the secret diversion. Pakistan's President Yahya Khan arranged for the PIA 707 to be at the Americans' disposal for the Islamabad-Peking sector on the 8th July.

PIA Chief Purser Abdul Hayee has written an account of the flight on the History of PIA website at <http://tinyurl.com/6m3qle0>.

PIA had developed a security check-list for VVIP flights which entailed securing the aircraft during pre-flight maintenance with armed guards and using a flight crew with prior national security clearance. Abdul Hayee had such clearance (and had been on jets since PIA's first 707 operations). He was summoned to Rawalpindi's Intercontinental Hotel where a crew was being assembled under Captain M T Baig for a flight at short notice to an unknown destination in strict secrecy.

On the night of 6/7th July the crew was told to be ready for a 3am departure. The PIA 707 was parked in a Pakistan Air Force hangar on the military side of Rawalpindi/Islamabad's Chaklala Airport. They departed for Peking in the early hours, carrying only a Chinese navigator. On the return flight after a brief turnaround they carried back to Chaklala a few Chinese officials including a female interpreter ('Nancy' T'ang Weng-Shen , born in Brooklyn).

On the night of 8/9th July Kissinger complained of stomach pains (as planned) at an official dinner in Islamabad and a day's recuperation at a hilltop villa at Nathiagali was suggested. The limousines left for Nathiagali but Kissinger slipped out unseen through a side entrance.

At Chaklala Captain Baig's crew were told to be ready for a 2am departure with the 707 concealed in the military hangar. The Chinese passengers reboarded, then at 2am a VW Beetle driven by Foreign Secretary Sultan Mohammad Khan pulled up by the 707 with Kissinger as passenger. Purser Abdul Hayee ushered the Americans on board and Kissinger introduced his aides, Lord, Holdridge and Smyser and his armed Secret Service agents Jack Ready and Gary McLeod (for whom the trip was a worry as their charge was going off with the Communist Chinese in a foreign aircraft).

The route was over mountainous Northern Pakistan and the Tibetan plateau. Abdul Hayee pointed out the dramatic K2 mountain range to Kissinger who was surprised overall at the amount of barren desert they overflew. After the American breakfast served by PIA, Kissinger got somewhat agitated that his bag with a change of shirt had been left

behind in the complicated getaway. Abdul Hayee reassured him that the Chinese would be able to launder his shirt, but according to Kissinger's account of the trip a shirt was borrowed from the much taller John Holdridge and made to fit with rubber bands. Meanwhile at the Nathiagali retreat Kissinger's aide Halperin phoned the US Embassy in Islamabad extending the 'recuperation' period to 48 hours (in line with the plan).

Kissinger started discussions with the Chinese officials on the journey (when did he ever sleep?). He joked that the Chinese interpreter (born in Brooklyn) was more eligible for the US Presidency than him (he was born in Germany). The flight took about 5 hours (Peking was 3 hours ahead of Islamabad).

So Kissinger arrived at a Peking military airfield around noon on 9th July. His arrival and greeting by Marshal Yeh Chien-Ying and Chi Ch'ao-Chu was filmed and photographed by the Chinese (newsreel at <http://tinyurl.com/688ohgw>)

Kissinger met with Chou En Lai that afternoon, then again the next day after visiting The Forbidden City, and briefly again on the 11th before departure. An agenda was agreed for a second visit by Kissinger in October (this time to be in Air Force One) and for a visit by Nixon in 1972 . In some ways Taiwan was a more difficult subject than Vietnam in the discussions.

Declassified documents now reveal Kissinger's words to Chou-En-Lai:

"In 1954 Secretary Dulles* believed that it was America's mission to fight Communism all around the world and for the U.S. to be the principal force, to engage itself in every struggle at every point of the world at any point of time. President Nixon operates on a different philosophy. We do not deal with communism in the abstract, but with specific Communist States on the basis of their specific actions towards us, and not as an abstract crusade. We believe that if people want to defend themselves, they must do it on the basis of their own efforts and not on the basis of the efforts of a country 10,000 miles away. So when we offer to withdraw from Vietnam, it is not in order to devise some trick to re-enter in some other manner but rather that we want to base our foreign policy on the realities of the present and not on the dreams of the past. I can assure the Prime Minister that any agreement that he makes with us will be kept in the letter and in the spirit."



Above: Henry Kissinger meets Chou En Lai in Beijing in 1971 and begins a revolution in U. S. diplomatic history. (State Department)

(* Dulles had refused to even shake Chou-En-Lai's hand at the Geneva Conference in 1954.)

Chou-en-Lai's response was: "The first point is that all foreign troops of the United states and the troops of other countries which followed the United states into Indochina should be withdrawn. The second point is that the people of the three countries of Indo-China should be left alone to decide their own respective fates."

Kissinger replied: "We agree on both points."

Such statements could not be made public at the time because of the potential backlash, and were declassified long after America withdrew from Indochina.

The PIA 707 left Peking with the Kissinger team around midday on the 11th July and arrived back at the military side of Chaklala airfield at 3pm local time . Kissinger was taken to call on President Yahya Khan by limousine via a roundabout route so that he appeared to arrive from Nathiagali (if grilled by the press he had Abdul Hayee's description of Nathiagali to fall back on) and by 6pm he was back on Air Force One heading for Paris for yet another meeting with North Vietnam's negotiator Le Duc Tho only 18 hours after leaving China.

News of his China visit was released on the 15th July and his October trip and the Nixon trip in 1972 proceeded as planned on Air Force One.

It took several more years of bombs and bloodshed before Peace returned to Indochina by which time Nixon was out of power. Kissinger however remained influential and a relentless traveller (on Concorde whenever possible, it seems).

The visit was a turning point in modern Chinese history

Unfortunately the PIA History site has no record of the call-sign or registration for Kissinger's PIA 707.

With thanks to Abbas Ali (History of PIA website), Abdul Hayee, Ms. Naila Baig (the late Captain M T Baig's daughter), 'Henry Kissinger The White House Years' TV 'Kissinger' Niall Ferguson Channel 4

Footnote: MT Baig had crewed the PIA Boeing 720B which set the FAI speed record for London to Karachi on its delivery flight in 1962

Editor's footnote: extensive coverage of these events, with original documents, may be found at <http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB66/>

Left: Captain M T Baig who flew Kissinger to Peking in July 1971 (Capt M T Baig Family Collection)

F-1922

The French Civil Aircraft Register from 1922

Part 33

By Bernard Martin, Dave Sparrow and Robert Espérou



F-Update 1930 (contined)

The F-AKxx series begun in the last issue was reserved for prototypes, many of them military, for the French government between 1930 and 1938. Very few were listed in the official civil registers, while Ministry of Air records were lost during the War, so manufacturers' literature and photographs often became the sole source. As the marks were frequently of temporary usage it seems that reallocations were probably common. In other cases the marks may not have been applied to the aircraft. Known registrations are as follows, mostly without CofR numbers:

New Registrations

F-AKCA SPCA III Type 30	01
F-AKCB SPCA III Type30	02
F-AKCD Breguet 270	08
F-AKCI ANF Mureaux 130.A2	01
F-AKCK Dewoitine 500	01
F-AKCR Villiers 310	01
F-AKCS Latécoère 380	01/1051
F-AKCT Wibault Penhoet 360T5 CoR 3122. Etat Francais (18.4.32)	01
F-AKCU Latecoere 300 Etat Français; for Aeropostale [not deld]. Crashed on first flight, Etang de Berre, Marseilles 17.12.31; rebuilt 1.32. To French mil.	01
F-AKCX Farman 72	01
F-AKCY (1) SPCA VII Type 41T Built 1931.	01
F-AKCY (2) Guilmmin J.42 Built 1933	01
F-AK CZ Hanriot 437 Type change to Hanriot 435/1. re-registered F-ALQZ, .32.	01
F-AKDB (1) Bernard 74 (3231) Etat Francais. (8.8.32) Destroyed 7.12.32.	01
F-AKDB (2) Bernard 20 Built 1932.	01

Above: F-AKCT was the prototype Wibault 360 T5 of 1931. A five-passenger 'limousine', it was powered by a single 230hp Salmson 9 Ab. (via JM Collection)



Above: Hardly a beauty, the SPCA 30 F-AKCA was a multi-seat fighter with a bomb aimer/observer position high on the nose, tandem pilot cockpit, belly gunner and two lateral gun posts. Engines were two 650hp Lorraine 18 Kd. (via JM Collection)

Below: F-AKCI was the prototype ANF Mureaux 130 reconnaissance aircraft of 1929, here in military colours. The parasol wing and undercarriage system are heavily-supported, there is a rear gunner position and the 500hp Hispano-Suiza 12 Hb has a large radiator visible below the cowling. (via JM Collection)



F-AKDD Latecoere 490	01
F-AKDE Gourdou-Leseurre 24X	01
F-AKDG Nieuport 72C.1	01
F-AKDI Latecoere 340 Destroyed 2.4.30.	01
F-AKDL Potez 25	01
F-AKDO LeO 12 Type change to LeO 123.	1
F-AKDQ Breguet 270 Type change to Breguet 271.	03
F-AKDR Dewoitine 28	01



Left: The famous Dewoitine D 33 "Trait d'Union" seen on 11.7.31 at Le Bourget prior to departure for Tokyo on a record attempt. Ropes are being used to turn the massive propeller. Registered F-AKDV the aircraft was written off when severe icing over Siberia resulted in engine failure but the crew of Doret, Le Brix and Mesmin survived. (via JM Collection)

Below: The sole example of the Dewoitine D 30, 10-seater, F-AKDU first flew on 21.5.31. (via JM Collection)

- | | |
|--|----|
| F-AKDS Dewoitine 28 | 02 |
| F-AKDU Dewoitine 30
Re-registered F-ALXF. | 01 |
| F-AKDV Dewoitine 33 | 01 |
| F-AKDX LeO H.24
Ex F-AKBX previously c/n 1. | 01 |
| F-AKDY SPCA 218/2
(3293) f/f 21.12.29 (as SPCA VII type 40T); redesigned as SPCA 218 late .32. Etat Français 9.1.33 ; loan Gouvernement General de Madagascar/Service de la Navigation Aérienne de Madagascar .34. Scrapped .38. | 01 |
| F-AKDZ SPCA 218/2
(3796) f/f 13.4.30 (as SPCA VII type 40T); redesigned as SPCA 218 .34 (possibly interim as SPCA 135C?). Etat Français 8.6.34; loan Gouvernement General de Madagascar/Service de la Navigation Aérienne de Madagascar .34. Scrapped .38. | 02 |
| F-AKEB SPCA 60T Hermes | 01 |
| F-AKEJ Besson MB.36 | 01 |
| F-AKEK Wibault 280.T10
(3084) Etat Français 11.3.32; loan Cie Internationale de Navigation Aérienne, Paris. Mod to Wibault 281.T10. Mod to Wibault 282.T12. Regd 4.33 to Cie Internationale de Navigation Aérienne, Paris. To Cie Air France; named "Le Frondeur". | 01 |
| F-AKEL Wibault 280.T10
(3199) Etat Français 7.7.32; loan to CIDNA, Paris. Mod to Wibault 282.T12. To Air France [38]; named "Le Rapide". | 02 |



F-AKEM Rohrbach Ro.10 Romar V 32

F-AKEN Breguet 270 02

F-AKEO Breguet 270 04

F-AKEP Breguet 271 05



Above: SPCA 218/2 trimotor F-AKDY nose down in soft sand 700 km from Tamanrasset (Algeria) on 19.3.33. The 'Postal Monoplane' was flown out undamaged. (via JM Coln.)

Left: SPCA also produced flying boats, model 60T "Hermes" F-AKEB seen here on take-off for its first flight. (via JM Collection)



Right: The Wibault 280 T10 F-AKEK appeared at the Paris Salon 11.32 after modification to 282 T10 standard. The GR7 Titan Major engines remained uncowed and the aircraft was shown in full CIDNA titles.
(via JM Collection)



Below: Wibault 282 T12 F-AKEL is seen later in Air France service as "Le Rapide" and had been fitted with a retractable undercarriage which resulted in a speed gain of 12 mph.
(via JM Collection)



Above: F-AKEO was one of the Breguet 270 prototypes for a reconnaissance requirement. The unusual design had lower stub wings and a steel beam rear fuselage. It was powered by a 500 hp Hispano-Suiza 12Hb and went into production for the forces of France, Chile and Venezuela. (via JM Collection)

F-AKER Farman 192.R4 01
F-AKEX Bernard 80GR 01.
 Type change to Bernard 81GR; then 84.
F-AKEY Farman 310 floatplane 01
 Built .31. Crashed 3.32.
F-AKEZ Breguet 330 01
 Flown Paris-Hanoi 1.32 (3 days 4 hrs 17 mn)
F-AKFB Dewoitine 430 01
 Type change to Dewoitine 432. Re-registered F-AMRU.
F-AKFC Gourdou-Leseurre 430 01
F-AKFD Peyret-Mauboussin XI 01
F-AKFE Dewoitine 31 1
 (4218) Etat Français (29.6.35.)

F-AKFF Dewoitine 480 01
 Type change to Dewoitine 482.
F-AKFG Dewoitine 481 01
 Type change to Dewoitine 482 (02), then Dewoitine 483 (02).



Above: The Gourdou-Leseurre 430 no.01 was a design for a dive bomber. Here it is seen with a 'bomb' in place but the high wing has been removed and registration F-AKFC is not worn.

Left: Dewoitine also made lightplanes. D.481 F-AKFG was an attractive example.
(both via JM Collection)





Left: The Société Provençale de Constructions Aéronautiques, or SPCA for short, clearly produced a wide range of types in the '30s. F-AKFH was a 'Petit Colonial' type 80 with a single 300hp GR 7, seen on display at the 1932 Salon.

(via JM Collection)

Below: The SPCA 90 'Colonial' trimotor development F-AKFJ with three GR 7Kd radials did not enter airline service.

(via JM Collection)



Above: Breguet 27S biplane F-AKFM named "Joe III" in which Maryse Hilsz flew to Tokyo via Indo-China from 26.1.34 to 6.3.34. (via JM Collection)



Right: The Bernard 74 single-seat fighter design was based on the earlier Bernard 72 Coupe Michelin racer. F-AKFL is seen here as type 74-02 fitted with a 360hp Gnome-Rhône 7Kd in late 1931 at Villacoublay. (via JM Collection)



F-AKFH SPCA 80	01
F-AKFI SPCA 81 Type changed to SPCA 82	01
F-AKFJ SPCA 90 Colonial	01
F-AKFK Farman 1000 Type changed to Farman 1001	01
F-AKFL Bernard 74 Re-registered F-AROK	02
F-AKFM Breguet 27/S (3519) Etat Français 7.9.33 ; op by Maryse Hilsz; named "Joe III" for Tokyo flight 1.34. Stored Villacoublay and reported sold to Spanish Republicans 10.36. (Converted from Breguet 330-02.)	2
F-AKFP ANF Mureaux 110R.2	01
F-AKFQ Nieuport 580R.2	01
F-AKFR Nieuport 580R.2	02
F-AKFS Potez 37	01

F-AKFT Potez 27 (02)
Type changed to Potez 371.

F-AKFW Loire 60 (01)

F-AKGB Loire 30 (01)
Type changed to Loire 301.

To be continued . . .

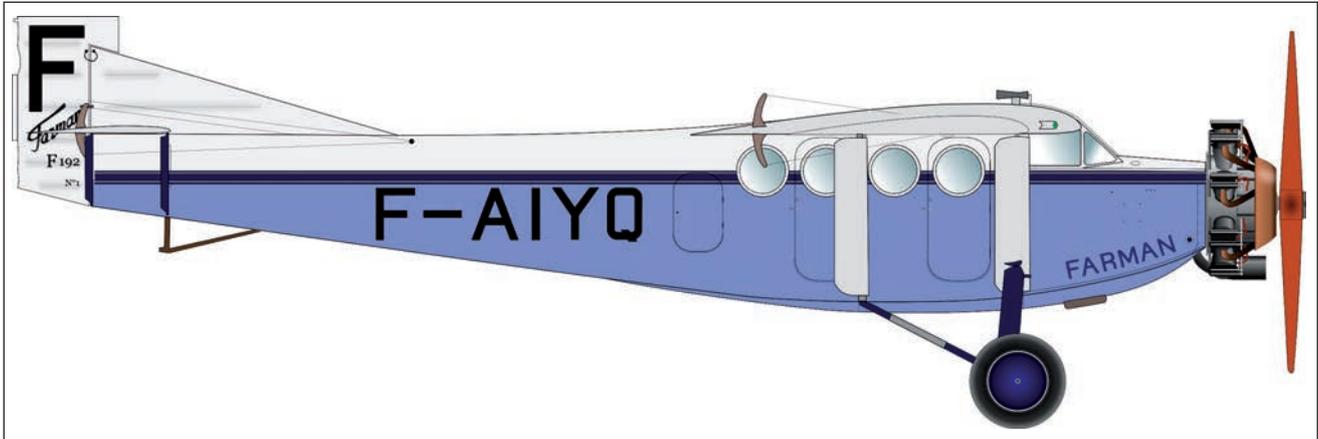


Above: The Loire 30 was designed as a night reconnaissance aircraft but was unsuccessful and was then fitted with this bulbous nose which it is thought may have housed blind-flying equipment. The three-engine layout of two tractor and one pusher Salmson 9Ab was a further unusual feature. (via JM Collection)

The FARMAN 190 and its derivatives

Michel Barrière

PART EIGHT



Farman F.192 (Salmson 9 AB)

In 1929, Farman adapted a Salmson 9 Ab motor of 230 h.p to fit in the F.190. This engine, widely used in transport and training aircraft, was reasonably priced and this version was cheapest of the series. However, it was heavier than the F.190 by about 100 kilograms. In Farman's nomenclature, this version was named the 'F.192', although during 1930 the name 'F.191' was temporarily used.

The Farman F.192 was not destined to be employed by large air companies. By contrast, it was widely used for government aircraft and export markets, as well as for aero clubs and air services, often second hand. In all, approximately 30 F.192 were constructed or converted.

The construction numbers are not known. We have reconstructed a production list based on the chronology of deliveries ; the supposed numbers are given in brackets [nn].

Individual F.192 histories:

F.192 no 1, c/n 7119 F-AIYQ

F.192 n°1 was produced from F.190 No 9, c/n 7119. It was used for type certification during the spring of 1929 and underwent a series of comparative tests with the other versions conducted at Toussus and Villacoublay in the autumn of 1929.

It was registered on 17 December 1930 with Cdl no 2653 and the registration F-AIYQ. It was used by the Air-Service company until May 1932. It was then sold to Henri Le Tournir, a car transporter who set up at Tours the air service company "Lignes aériennes Henri Le Tournir". The change of ownership was recorded on 8 June. The F.192 was destined to provide sightseeing flights over the châteaux of the Loire and to give trial flights, piloted by one of the three company pilots : Marcel Guillet, Maurice and Louis Thoraval.

During 1932 et 1933, the aircraft took part in most of the meetings organised by the local associations, the Aéro-Club de Touraine and Les Ailes de Touraine.

In August 1933, the F.192 was put up for sale. It had not been sold when, on 17 March 1934, a storm beat down upon Tours at Parçay-Meslay, destroying the Bessonneau hangar which housed several aircraft, destroying the F.192 No 1 which was cancelled from the register in December. As a result of this incident, Henri Le Tournir ceased his aerial activities.

Above: The prototype F.192 (F.192 no 1). It retained its Farman company livery throughout its life. (Artwork: M. Barrière)

Below: The prototype F.192 with Salmson 9Ab engine (via JM Collection)



F.192 no 2, c/n 7134 F-AJCD

The manufacture of F.192 No 2, rebuilt from F.190 No 19, c/n 7134, was complete by June 1929. With certificate no 2330, the aircraft was delivered to Entreprises de Photos Aériennes Moreau during the second half of June. It was registered much later on 20 December 1929.

On this aircraft, three openings were made in the fuselage to permit vertical and oblique photography. Named "L'Avion Bleu III", it was often used for aerial propaganda on behalf of the Ligue Aéronautique de France.

This aircraft was later modified and equipped with a tailwheel, receiving a new certificate from the Bureau Veritas on 11 August 1934. During the first quarter of 1938, on an unspecified mission, the aircraft flew 1184 hours.

Requisitioned in 1940, it was issued to the Châteaudun Air Depot (Entrepôt de l'Air) and based at Étampes. On 26 February, it performed a mission at Buc, piloted by a crew from Étampes. While landing at very low speed it was forced into the ground by a gust of wind while close to



Above: F.192 no 2 immediately after its delivery to Entreprises de Photos Aériennes Moreau in 1929. (Artwork: Michel Barrière)



the hangars and was badly damaged. Although judged repairable, it seems likely that repair was not a priority at that time.

F.192 no 3, c/n 7156 F-AJJB

Born on 7 December 1893, Marcel Goulette graduated as an engineer in 1914 from the École Nationale Supérieure des Arts et Métiers (ENSAM). Assigned to the Engineers, he fought courageously and was on several occasions severely wounded or gassed. He remained in fragile health the remainder of his life. After retiring from the Army, he signed up for the Air Force. Still convalescing, he was appointed deputy head of the Section Technique de l'Aéronautique and gained his pilot's wings.

Once the war was over he pursued a career in industry, maintaining his links with military aviation as a captain in the reserves. He was initially associated with René Couzinet, another former student of the Arts et Métiers, and then moved to become managing director of the Albert aircraft company.

In 1929, he decided to mount an expedition to Madagascar, Réunion and Mauritius. Despite his limited personal resources, he acquired the frame of F.190 No 35, c/n 7156, to which he fitted a Salmson 9 Ab. This F.192 No 3, produced at Billancourt in September 1929, was test-flown by Coupet on 26 September. It was registered on 10 October 1929 in the name of Marcel Goulette with CdN/CdI 2291 and the registration F-AJJB. It was equipped with 550-litre fuel tanks and a reserve of 120 litres in the cabin, as well as an oil reservoir fitted in the leading edge of the port wing.

Unknown at the time, Marcel Goulette found little support. Apart from assistance from Salmson, he received grants from the Ministry for Colonies and Madagascar and several publicity contracts; he received confirmation from the Postal Ministry that his expedition constituted a postal link with French Équatorial Africa, French West Africa, the Belgian Congo, Northern Rhodesia, Mozambique, Madagascar, Réunion and Mauritius: the transported mail would pay a surcharge, which would give Goulette an additional income.

For his mission, Marcel Goulette recruited two aviators of the 34th RA: an experienced pilot, René Marchesseau, and the mechanic Jean-

Above: F-AJCD as it appeared in 1938. It has a revised colour scheme in the style of the SGTA, and a tail-wheel has been fitted.

(Artwork: Michel Barrière)

Michel Bourgeois. Decorated with a tricolour band, the aircraft took off from Le Bourget on 17 October 1929. It staged via Perpignan, Los Alcazares, Oran and Colomb-Béchar. At dawn on the 19th the team arrived at Adrar and departed again for Reggan, Gao Niamey (20/10), Zinder (21/10), Fort-Lamy, then Fort-Archambault (22/10), Bangui, Coquilhatville (23/10), Luebo, Kanda-Kanda (24/10), Élisabethville, Broken Hill (25/10) and Quelimane (26/10). On the 27th, it was at rest on the ground at Ivato in Tananarive, having established a record of 10 days, 8 hours and 40 minutes for this flight of 12,400 km.

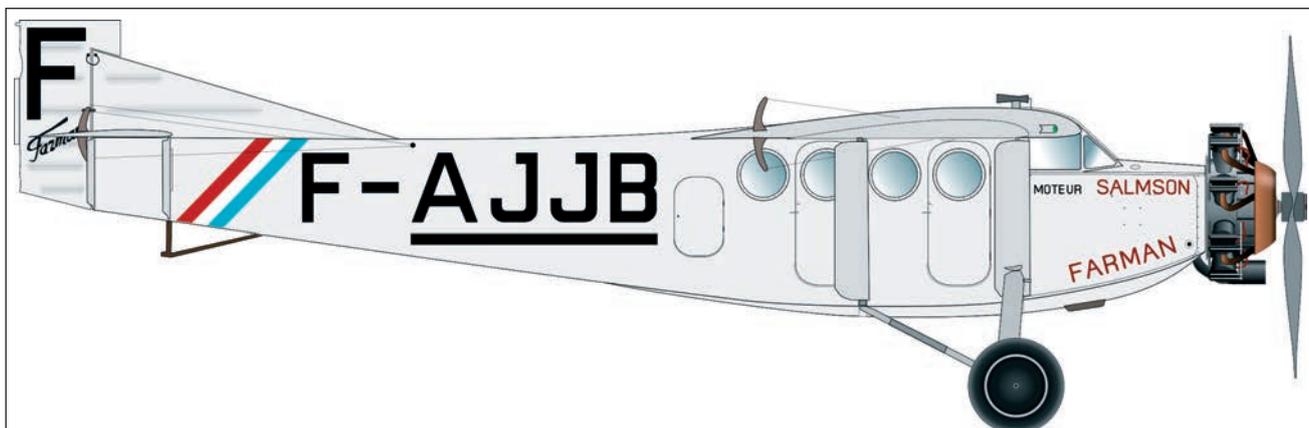
Suffering from pneumonia complicated by a bout of malaria, Marcel Goulette was hospitalised for 12 days. On 5 November, Bailly, Reginensi et Marsot beat his record with an 8-day flight in their F.190 F-AJJG.

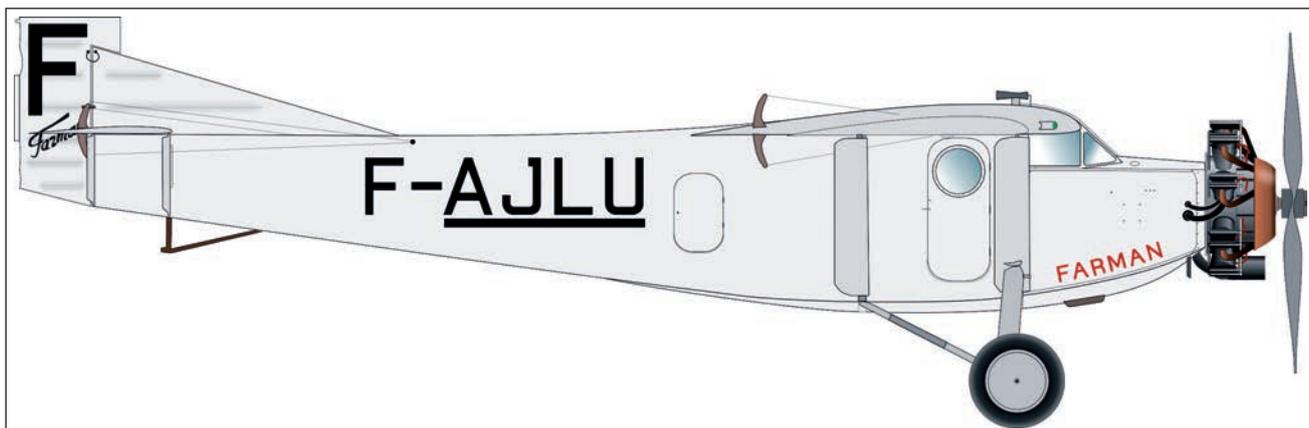
Goulette had intended to stay for a month in Madagascar to attempt the first aerial link with Réunion. On 16 November, the Farman began a major tour around the island of Madagascar, landing on the 16th at Maevatanana, and at Majunga on the 17th before returning to Tananarive on the 18th.

On 22 November, the crew investigated the Tamatave region, on the East coast of Madagascar and identified a former marsh suitable for use. To be able to turn back in the event of problems, a supplementary tank of 200 litres was manufactured locally with the assistance of the Tananarive Public Works Authority and installed in the cabin.

On 22 November, the Farman returned to Tamatave but nosed over landing in the sandy ground, without much damage apart from a bent propeller. It was repaired cold by Bourgeois and flight-tested by Marchesseau. On 26 November, the crew made the 800 km flight over the Indian Ocean separating Madagascar from Réunion in 5 hours 30 minutes. They returned on 2 December but landed at Ivato with a failed engine due to lack of oil pressure.

Below: F-AJJB in its special colour scheme for Marcel Goulette's expedition to Madagascar. (Artwork: Michel Barrière)





Above: F.192 no 4 as piloted by Lena Bernstein for her attempt on the world female duration record on 1 May 1930 (Artwork: Michel Barrière)

On 8 December at 1.00 am, the F.192 now named "Paris-Madagascar-Ile Bourbon" set out for the return flight with a new engine. As they were passing the islet Juan de Nova, the crew detected a fuel leak and decided to land. They circled for an hour before landing at dawn on ground covered with shrubs which tore off the tailplane. Goulette and Marchesseau returned to Madagascar on the packet-boat "Maréchal Gallieni" which came to their aid; Bourgeois remained on the island with the aircraft. On 28 January Marchesseau and Goulette returned with the required spare parts and, on 1 February, they departed for Ivato.

On 6 February the repaired F-AJJB departed for Quelimane, and then Élisabethville, where the take-off on the 7th resulted in nosing over. They waited more than a month for a new propellor. The aircraft left Élisabethville again on 19 March for Luluabourg and Brazzaville. On the 22nd it departed again for Bangui and Fort Archambault, Kano then Niamey on the 23rd, where the crankshaft failed.

Another attempt, another repair. Departing on 22 April for Gao, the Farman crash-landed in the desert, breaking off one landing gear leg which damaged the fuselage. The aircraft was destroyed, without serious injury to the crew. A search was mounted by aircraft of Commander Vuillemin of the Compagnie Générale Transafricaine, and the crew was rescued on 28 April and repatriated to France via Lisbon on 30 April, arriving at Le Bourget on 5 May.

F.192 no 4, c/n [7161] F-AJLU

We do not know the origin of this F.192 c/n [7161], registered in the name of Miss Claire Camus, possibly a colleague of Farman as the aircraft belonged to the company. Farman agreed to lend the plane to Lena Bernstein to attempt to beat the female endurance record of 27 hours set by Maryse Bastié prior to mounting an expedition Paris-Tokyo.

At the beginning of 1930, the aircraft was prepared for the record attempt, reaching a weight of 2550 kg with 1900 litres of fuel and 130 litres of oil. About 1400 litres of fuel were held in supplementary tanks installed in the cabin from which most of the windows had been removed. No longer meeting the type specification, the aircraft could only fly at Toussus.

F.192 No 4 was tested by Coupet on 21 February 1930. Lena Bernstein took the aircraft over on 6 March to gain familiarity with the record route. Her first attempted take-off on 16 March ended in a collapsed landing gear. On 22 March, after 9 hours in flight, Lena Bernstein could not open a blocked fuel valve and gave up.

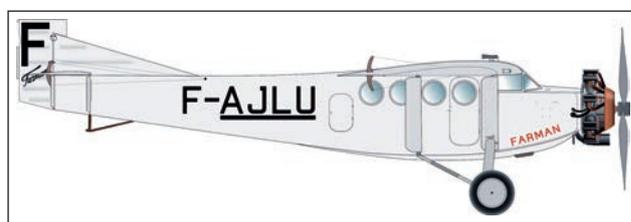
On 23 March she tried again, but had to land again on the following morning because oil consumption was too high. After modifications to the oil tanks, she made another attempt on 5 April which was interrupted at dawn on the 6th after 20 hours in the air.

On 1 May 1930 Lena Bernstein set out for her fifth attempt, performing four ground loops before managing to lift off. She carried off the female endurance record with a flight of 35 hours, 46 minutes and 55 seconds over Le Bourget, also beating the single-pilot record of Lindbergh.

After the record was gained, F-AJLU was restored to standard. Lena Bernstein made a quick trip to Croydon on 11 May. On 5 June, the aircraft, still the property of Farman, was registered with C of A / C of R 2410 in the name of Lena Bernstein. From May to August, Lena Bernstein took part in numerous meetings, notably the National Air Days at Vincennes on 8 and 9 June, before preparing for her Paris-Tokyo flight.

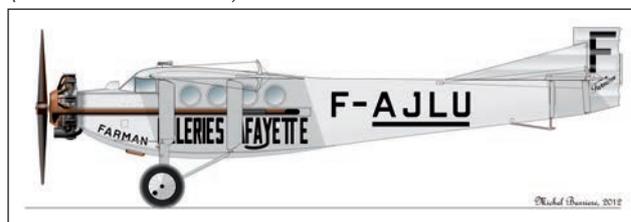
At the beginning of September, Lena gained experience on a Guerchais while Farman prepared the F.190. She planned to depart at the beginning of October, but she struck a refuelling installation while taxiing which necessitated repairs.

On 28 October, she was denied permission for a maximum-weight departure from Le Bourget. It was only on 8 November 1930 that Lena Bernstein and her mechanic Guillon took off for Tokyo. They stopped at Rome (08/11), Athens (09/11), Aleppo (10/11). On the morning of the 11th she set out for Baghdad, then continued towards Basrah but a sand-storm made her turn back. As night fell, she struck a mound of earth and the aircraft nosed over. F-AJLU, severely damaged, was

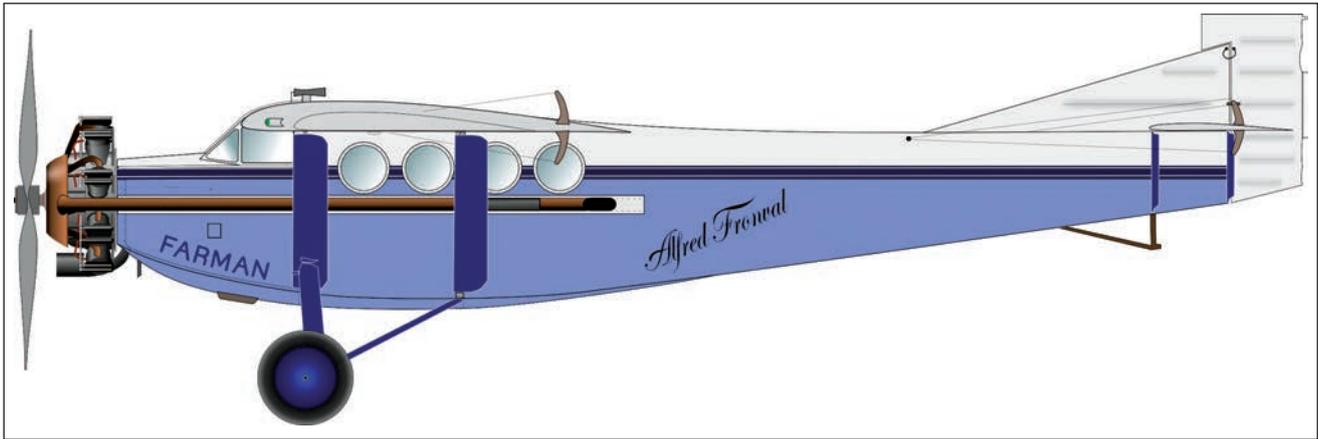


Above: F.192 no 4 with cabin windows restored, as flown by Lena Bernstein during 1930 (Artwork: Michel Barrière)

Below: F.192 no 4 as painted for the abortive expedition to Tokyo. The flight was sponsored by Les Galeries Lafayette. (Artwork: Michel Barrière)



Above: F.192 no 4 in its post-war guise as a para-dropping aircraft. It is now the sole surviving example, in the reserve collection of the Musée de l'Air et de l'Espace at Le Bourget. (Artwork: Michel Barrière)



taken by truck to Beirut and returned to France by sea. The crew departed from Beirut on 28/11 by Air Orient and arrived in Paris on 1 December.

Returned to Farman, F.192 No 4 was rebuilt with a new fuselage (c/n 7248) and sold to the French state at the beginning of 1931, modified, it seems, into an F.290.

In 1937, the Compagnie Aérienne Française (CAF) bought from the state three aircraft from the stock of the Aéronautique Nationale. The former F-AJLU was one of these. The aircraft were rebuilt by CAF and converted into F.192s with streamlined windshields. Under the number AIR 2-010884, F.192 No 4 received the registration F-AQCP.

In 1938, on the liquidation of CAF, F-AQCP was retained by Jean Heinrich, CEO of Compagnie Aérienne Française. Requisitioned in 1939, it survived the war, still belonging to Heinrich who, in 1950, sold it for 700,000 francs to R. Fiel (Meulan). Reregistered F-BAOP, it was then based at Mantes.

On 7 June 1951, it was sold for 1,750,000 francs to the Service de l'Aviation Légère et Sportive (S.A.L.S.). It served successively in various clubs. Initially loaned to the Club Henri Guillaumet de La Courneuve and based at Creil, it was modified for parachutists by enlarging the rear door. F-BAOP, painted in red, was then loaned to the Centre Inter Clubs de Parachutisme d'Île de France, at Gizy-les-Nobles; to the Centre de Parachutisme de Bourgogne-Franche-Comté, at Chalon-sur-Saône; and finally in 1957 to the Centre Régional de Parachutisme de Lille-Bondues.

On 4 April 1960, S.A.L.S. made a gift of it to the Musée de l'Air, and F-BAOP was retired on 17 septembre 1971. It has been partially restored and is displayed as F.192 No 3 F-AJJB, although its characteristics are far removed from those of that aircraft. It was later taken off display and placed in reserve, and then after several years it was restored and displayed again in 2009.

F.192 no [5], c/n [7171] R-171

Test flights of this F.192, destined for Argentina, took place in February 1930, at the same time as F.192 No 4 of Lena Bernstein; it was therefore without doubt F.192 No 5. The aircraft was ordered by Georges de Sonchein, a naturalised French engineer of Russian origin, who set himself up in Argentina in 1930 as commercial agent for many French companies.



Above: F.192 no 5 was registered R-171 in Argentina but the registration was not displayed externally. It was flown by Georges de Sonchein, agent for French commercial aviation in Latin America. (Artwork: Michel Barrière)

The F.192 made its first flight in Argentina at El Palomar on 15 juin 1930. It was registered on 7 July 1930 as an "F.191" in the name of Georges de Sonchein with the registration R-171. It was named "Alfred Fronval", in memory of a pilot whose displays had impressed spectators since his arrival in South America in 1924.

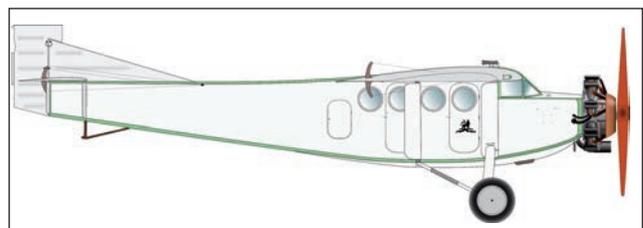
Georges de Sonchein wanted to achieve a major propaganda flight with the F.192 in South America. In August 1930, he presented the aircraft to the Brazilian Air Force which immediately requisitioned it in view of the active revolutionary movement in the north of the country. Sent on a special mission in that region, the F.192 crashed at Belmonte (Bahia) on 08/11/30. Georges de Sonchein had to wait until 1932 to be paid for the aircraft: following a decree for compensation signed on 11 May, by the end of the year he received the sum of \$126,551.900, equivalent to 218,948 francs, the price of a new aircraft.

F.192 no [6], c/n [7179]

In spring 1930, the Emperor of Ethiopia (known as 'The Négus') ordered a Farman F.192. At that time, there were no longer any aircraft in Ethiopia capable of transporting mail or personnel. The Junkers W33 purchased in 1929 had crashed in December and André Maillet, Director of Ethiopian Aviation, had taken the opportunity to send its German crew home.

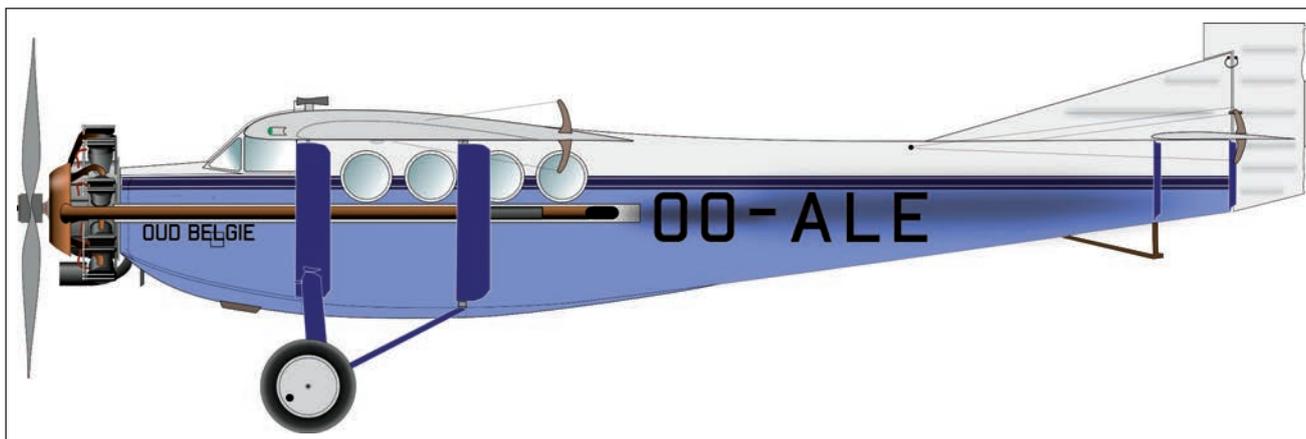
The F.192, completed in May, was certified by the Bureau Veritas at the end of June, at the same time as F.192 No 7 destined for Belgium. It departed in a crate for Djibouti where it was put into service by Maillet's crews. Named the "Farman blanc" ('The White Farman'), it sported roundels in Ethiopian colours but no registration. Its equipment had been reduced to a minimum, without Messier brakes or leading edge tanks, but with high-capacity oil tanks (520/550 litres).

On 13 February 1932, it crashed in a wooded area at Woll-Woll, during a postal flight to Djibouti.



Above: F.192 no 6, the 'White Farman' ordered by 'The Négus', the Emperor of Ethiopia. It survived for less than two years and was replaced by no 12. (Artwork: Michel Barrière)

Left: The "White Farman", at Akaki, Ethiopia 1935. Two of the first Ethiopian pilots, Asfaw Ali and Baharu Kaba are posed in front of it. (O G Nordbo via JM Collection)



Above: F.192 no 7, delivered to Belgium as OO-ALE in 1930. (Artwork: Michel Barrière)

F.192 no 7, c/n [7201] F-AJRX, OO-ALE

F.192 No 7, (F.190 fuselage No [48], c/n [7201]) was registered on 25 July 1930 with CofA 2475 and registered in the name of Alfred Pilain. Pilot and aircraft dealer, Pilain would in 1936 become one of those involved in the SFTA, the organisation arranging the transfer of aircraft to the Spanish Republic.

In fact, on 27 June 1930 the aircraft, as soon as it had been approved by the Bureau Veritas, flew to Antwerp, piloted by Marcel Lallouette and Pilain. It was registered in Belgium on 25 October with CofR 229 and the registration OO-ALE in the name of S.A. d'Exploitation et de Représentation Aéronautique (AERA). Based at Antwerp, it was named "Oud België" (Old Belgium). In 1935, the company and its aircraft moved to Knokke-le-Zoute. The aircraft was then painted in a new livery.

On 7 January 1938, the Farman was registered in the names of M. and H. Abeele, and based at Ostende. It is believed to have been destroyed by enemy action at Stene in May 1940.

F.192 no [8 to 11], c/n ?

These aircraft have not been identified. They are probably the four F.195s for Venezuela assembled at Toussus and delivered in August which are designated as F.192s in the logbook of Lucien Coupet.

F.192 no [12], c/n [7179]

F.190 fuselage no 45, c/n [7179], relates to an aircraft produced in 1930. According to the chronology of deliveries, it is probably an F.198 delivered to Toussus at the beginning of August, described in the press as 'a superb F.190... fitted with a 230 hp Renault engine, equipped like a luxury limousine.' It was destined for a textile tycoon, Armand Esders. Life member of the Aéro-Club de France, member of the Club Roland Garros, and owner of several aircraft, Esders would later be responsi-



Above: The Farman presented to the Négus, but originally built for Armand Esders, no 12, in its original colours, refuelling on its delivery flight. (O G Nordbo via JM Collection)

Right: Captains Marie and Baradez, and mechanic Demeaux standing in front of F.192 no 12. (Collection Chevrier)

ble for the development of Deauville and its airport Deauville-Aviation. In July 1930, he already owned a Morane Moth named "Jade Vert 1^{er}" and the F.202 F-AJPJ "Jade Vert II^e". In July, he hired the man who would become his personal pilot, Edouard Deckert, a former representative of French aviation in Bolivia and Chile.

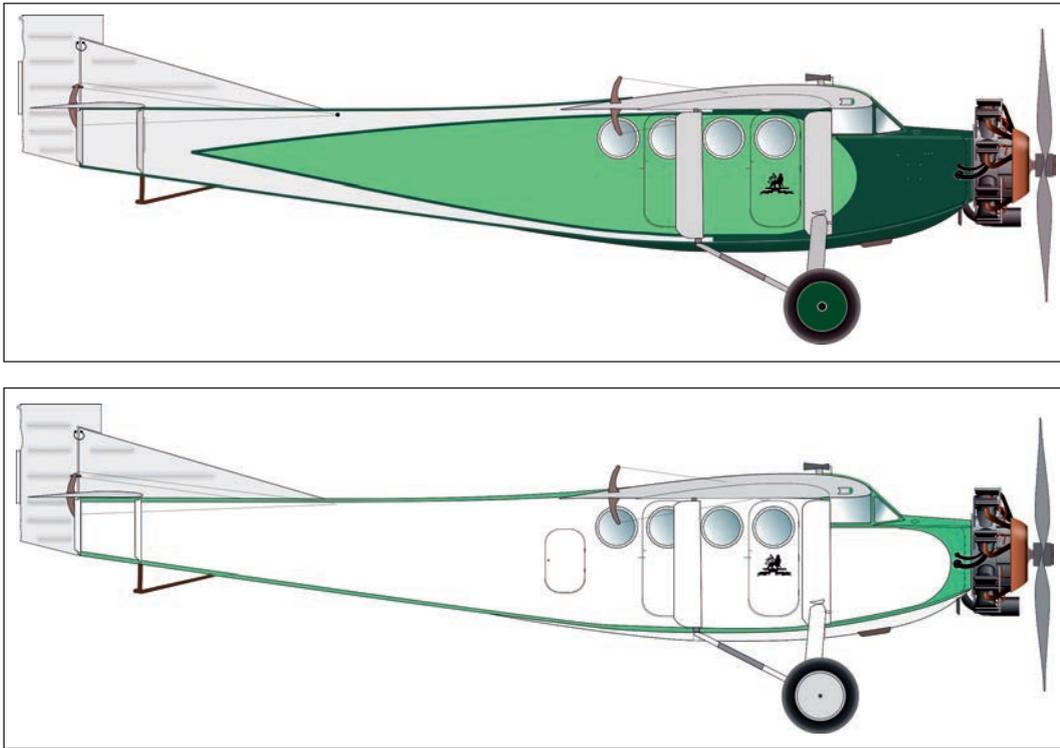
The name planned for his F.198 was "Jade Vert III^e". Its livery in two tones of green, jade green and Nile green, identical to that of his F.200 and his Bugatti Royale, was of an exceptionally fine lacquered finish. The interior fittings of the aircraft were especially luxurious, representing the highest achievements of Esder's textile empire.

The aircraft was never seen again after its delivery. Its registration is unknown, possibly F-AJNM or AJNX? The probable explanation of this disappearance is the decision of the French government on 20 August to offer an F.192 to the Emperor of Ethiopia for his coronation, the aircraft needing to be delivered to Addis Ababa by 1 November. The fuselage of the aircraft was jade green, Nile green and silver; the interior was luxuriously finished in green silk brocade; the cabin was equipped with a reclining seat, a small table, bevelled mirrors, a clock, a bouquet-holder... this was clearly the 'F.190' of Esders, fitted with a Salmson engine, a new canopy, high-capacity fuel tanks and an oil tank in the leading edge of the starboard wing. In view of its future use at Addis Ababa, at an elevation of 2,600 metres, the Salmson engine was supercharged; for the delivery flight benzole was used as an octane enhancer and the metal propeller was replaced by a wooden one. It was equipped with Messier brakes.

Captain Jean Baradez was tasked by the Aviation Minister to take responsibility for the preparation of the aircraft and its transportation to Ethiopia. In view of the urgency, delivery was by air; the crew chosen by Baradez consisted of Captain Eugène Marie (pilot) and Warrant Officer Yvan Demeaux (mechanic), both with extensive experience of operations in Africa. For the flight the aircraft, carrying 220 kg of spare parts, received small French roundels on the wings.

The departure from Le Bourget took place on 18 October. Despite an emergency landing in Turkey because of fuel shortage, and unfavourable weather conditions, the Farman arrived at Djibouti on 30 October. The crew spent the night cleaning and painting the aircraft to remove the traces of the journey and the French roundels. On the 31st,





Left: Two illustrations of F.192 no 12, built for industrialist Armand Esders but diverted by the French government as a coronation present for the Emperor Haile Selassie in November 1930. It had a luxurious interior and a specially lacquered two-tone green exterior, as shown in the upper picture. The lower image depicts it some years later following the invasion by the Italians; the luxury gift pressed into service for military missions before being destroyed by Italian fighters in 1936. (Artwork: Michel Barrière)

the aircraft lifted off from Djibouti bound for Addis-Ababa race-course. On 1 November, Marshal Franchet d'Esperey officially presented to the Négus the gifts of the French government: the Farman and a 75-lb cannon.

Like F.192 no 6, it was used for VIP transport, postal flights and for reconnaissance of future air routes to Djibouti - Sudan - Egypt. In 1932, the Farman still carried its original green livery; it was later repainted white with Ethiopian roundels on the wings

In 1935, the aircraft flew observation and liaison missions during the war against Italy. On 1 January 1936, René Drouillet, listing Ethiopian aircraft, mentioned the F.192 as damaged. Based at Addis-Ababa, it was burnt out during a strafing attack by Italian fighters on the airport of Akaki on 4 April 1936, shortly before the fall of the Ethiopian capital.

F.192 no 13, c/n 7178 F-AJTU

F.192 no 13 was delivered in October 1930. With a standard fuel tank of 360 litres, it was registered on 17 November 1930 with CdN 1774 and CdI 2626. It was based at Toussus-le-Noble and luxuriously appointed. It was offered to Esders as a replacement for the aircraft presented to the Négus, possibly acquired by the government as a colonial aircraft and reconverted. Esders kept it for less than a year.

In October 1931, this F.192 was delivered to Mr Coty. On 24 October 1931, shortly after Esders had taken delivery of F.192 no 14, F.192 no 13 was registered to Roland Coty, director of Coty perfumes and of the newspaper "L'Ami des Sports", a car driver, son of the perfumier et proprietor of the newspaper Figaro (and patron of aviation). Roland Coty's chief pilot was Delage, who made many flights with the aircraft.

On 15 March 1937, F-AJTU was registered to Louis Lejeune (Esbyly), then, on 13 April 1938, to Jean-Baptiste Salis.

On 9 June 1938, it was registered in the name of Julien Latscha, director of a transport company and agent for Air France at Montbéliard. Julien Latscha played a key role in the establishment of the Aéro-Club of Montbéliard and in the development of the airport of Courcelles-Montbéliard. In 1938, he financed the setting up of a maintenance base at the airport and acquired the Farman, "a superb, high-performance 8-seat transport aircraft". He managed these enterprises through the company "Aéro-Service Latscha", created for this purpose. The aircraft was used for introductory flights, touring and trips. It was requisitioned in 1940 and nothing more is known.

F.192 no 14, c/n 7224 F-ALAQ

This 'Grand Touring' version of the F.192 was built for Armand Esders (as a replacement for no 12) and delivered to Lucien Coupet on 15 July 1931. Esders took delivery the same month and participated in a rally at Deauville with the aircraft which he named "Jade Vert IV". It was registered on 28 September 1931 with CdN 1773/ CdI 2977. It was equipped with a 370-litre fuel tank, a metal propellor and a movable engine-mount. Like Esders' other aircraft, it was painted in a two-tone green scheme with a lacquer finish 'whose polish contrasted favourably with the rough finish generally furnished by the manufacturer.' The aircraft was luxuriously equipped, 'comparable with the most beautiful sedan'. To reduce noise, the baggage compartment was installed between the cabin and the cockpit. The walls of the cabin were finished in silk-cotton (kapok).

Piloted by Deckert, Esders and his family, all members of the Aéro-Club de France, employed the Farman regularly between 1932 and 1934 for leisure travel, often flying from Paris to the Atlantic coast. Esders made little use of the aircraft for business, considering that it could guarantee the required reliability and punctuality.

In April and May 1933, Mr and Mrs Esders, piloted by Deckert, travelled to Morocco via Madrid and Séville, visiting Casablanca, Rabat, Fez, Marrakech, Meknès, Agadir and Taroudant before returning to France. In August of the same year, also piloted by Deckert, Esders made an extensive tour of Scandinavia, including Bergen and the Northern Cape, flying over the frozen Arctic Ocean.

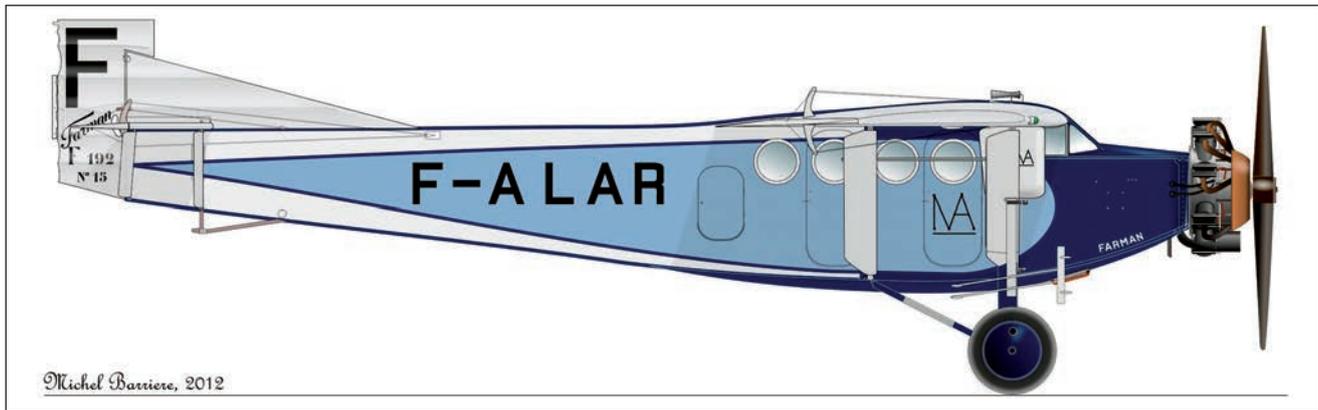
In June 1935 the F.192 was acquired by Jean Couitéas of Faucomberge, the registration being completed in July. Based at Le Bourget, the aircraft actually flew at the Aéro-Club of Normandie.

On 30 April 1936, it was registered in the name of Jean Horlaville, an active member of the Aéro-Club of Normandie (with an open mortgage in the name of Jean Couitéas of Faucomberge). Based at Rouen, this professional pilot used the Farman for presentations and introductory flights around the North-West of France.

In 1939, F.192 n°14 was mobilised as a medical aircraft.

F.192 no 15, c/n 7225 F-ALAR

In mid-December 1930, Farman completed the construction of an F.192 equipped with a Constantin weathervane in his workshops at Toussus-le-Noble. This automatic aero-mechanical stabilisation device



Above: F.192 no 15, used for development and trials of the Constantin weathervane and the Gianoli I.V.A. stabiliser. (Artwork: Michel Barrière)

had been patented in 1923 by its inventor, Louis Constantin, a tireless propagandist for his project. It was familiar to Farman who had equipped the F.71 F-AGFY with the device, which his engineer-pilot André Desaleux had been testing since the beginning of 1930.

Piloted by Desaleux, F.192 no 15, equipped with a secondary pilot's position without rudder controls, made its first flights on 21 December at Orly, on the occasion of the first International Congress on Aviation Security. It was certified by the Bureau Veritas during the first fortnight of January 1931 and registered on 27 January with CdN 1980 and Cdl 2684 and the registration F-ALAR, in the name of Commandant Verdy and Jean Couitéas of Faucamberge, administrators of the Société des Brevets d'Aviation Constantin, which was formally created in April 1931.

Constantin held 50% of the company's capital of 2,000,000 francs. Among the directors was Marcel Gianoli, himself inventor of an automatic stabilisation device, and engineer with the Couzinet company which used Constantin weathervanes.

On 13 May 1931, Lieutenant Hurel, chief engineer of the CAMS company, and Mr Gilles, chief engineer of the Aéronavale (Air Union) evaluated the device, prior to conducting tests on a CAMS flying boat of Air Orient in 1932.

In 1931 and 1932, Desaleux undertook regular tests and demonstrations of the Constantin weathervane. On Sunday 17 January 1932, an Italian delegation arrived to evaluate the device. It consisted of Commander Florio, creator of the "Targa Florio", General Plecio, air attaché and wartime air ace, accompanied by Captain Romano, pilot and engineer, and General Liotta, Inspector of Italian naval aviation. Following their report, Constantin was invited to Rome to present his stabilisation device to General Balbo.

On 26 February, the F.192 flew to Rome, piloted by Desaleux, with Mrs Desaleux, Constantin and Chausson, managing director of the Société des Brevets d'Aviation Constantin, on board.

The demonstrations commenced at Centocello on 5 March in the presence of General Valle flew the Farman extensively. On 7 March, General Balbo observed the tests. On 9 March, the F.192 returned to France.

In August and September 1932, the F.192 was tested by the S.T.Aé. of the French Army which produced a favourable report on the device - from which Constantin circulated extracts to a wide audience. The engineers were, however, far from convinced by this device, which was heavy, aerodynamically costly and lacked control of the heading, whilst recognising that its low price offered opportunities for its employment in touring aircraft.

The press and legislators raged against this opposition to progress, and to French solutions, manifested by "*la Technique*". In June 1933 the S.T.Aé. conducted a new series of tests at Villacoublay with the F.192 but, in parallel, they were evaluating rival systems, both French and foreign, finally selecting the British Jaeger-Smith system. In July 1936, the Ministry of Aviation nevertheless purchased a system from Constantin with a view to placing it at the disposal of touring pilots.

In January 1933, the F.192 was equipped with a Gianoli I.V.A. stabiliser. Still piloted by Desaleux, it was used for trials and demonstrations for several months.

In December 1933, F-ALAR was registered in the name of Benoit Oblin, a Paris garage-owner, freemason and politician, and member of the central committee of the Radical Party. On 1 January 1934, Benoit Oblin set up a de commercial transport company, "Air Tourisme", for which he employed a professional pilot, Verdier. The company's capital was 100,000 francs, of which the "Farman F.190, 230 hp, Salmson engine" represented 64,000 francs. From February to April 1934, Verdier was training on the F.192 at Toussus. In March, the aircraft was officially registered to Air Tourisme.

On 25 October 1934, christened by Miss Lisbeth de Morini, F-ALAR, piloted by Verdier, was hired by the *Chicago Tribune* to prepare a report on North Africa and the Mediterranean. It transported the director of tourism services of the *Chicago Tribune* in Paris, Mr André Herbert, and his secretary, René Garnier. The tour lasted 5 weeks and visited Barcelona, Tangier, Rabat, Casablanca, Marrakech, Fez, Meknès, and Oran. On 1 November, they were at Algiers-Maison Blanche, then continued to Biskra, Constantine, Philippeville and Tunis, then the Italian coast via Palermo, Naples, Rome, Genoa. They returned to Paris via the Côte d'Azur and the valley of the Rhône. This successful tourist operation led to Benoit Oblin receiving the légion d'honneur.

In 1935 and 1936, the Farman was used for flights within Europe on demand, for example to Manchester, Karlsbad, Czechoslovakia, etc. When civil war broke out in Spain, Benoit Oblin, although a supporter of the Republican cause but in favour of the general principle of non-intervention, refused to sell his aircraft which he considered not suitable for an armed conflict. Subsequently, however, he used his company to transfer fighter and bomber aircraft to Spain.

On 10 January 1937, F-ALAR suffered a night landing accident at le Bourget. The five occupants were unharmed, but the aircraft was 75% damaged, and was cancelled as destroyed in February.

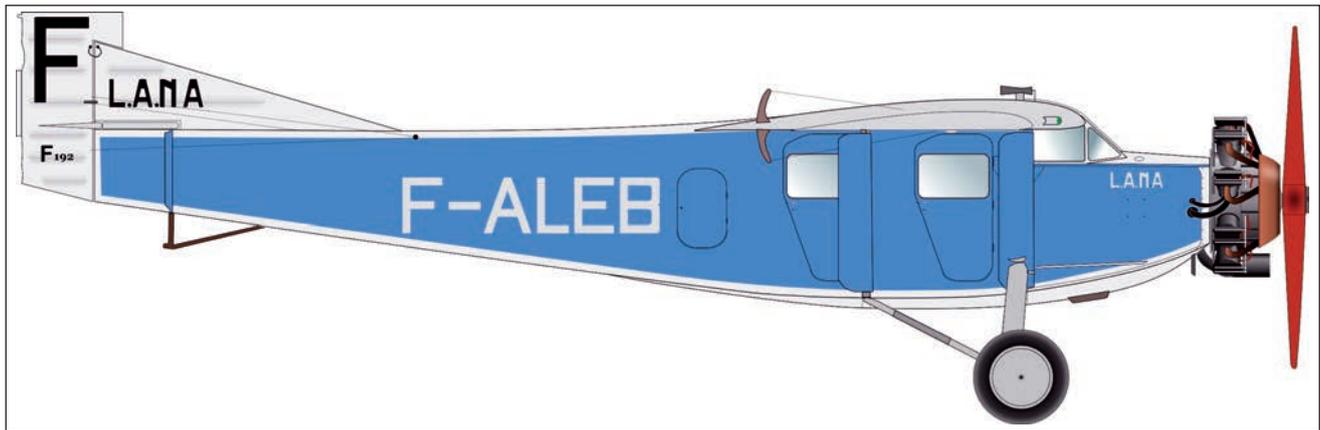
F.192 no 16, c/n ?

In our present state of knowledge, we believe that F.192 nos 16 and 18 were, with F.190 no 53, three of the four Farman 190 acquired by the French state and destined for the Ministry of Colonies under the 'single-engine colonial' programme (of which one of the prototypes was the Farman 196). Very little is known about these aircraft (see F.192 no 18).

An article appearing in "*Les Ailes*" for 30 July 1931 states that four aircraft equipped with different engines were undergoing official trials with the Service Technique.

F.192 no 17, c/n 7234 F-ALEB, F-APEB

F.192 no 17 for the company "Lignes Télégraphiques et Téléphoniques Nord Africaines" was completed by February-March 1931. It was accepted by Coupet on 20 June 1931, and registered on 6 July with CdN 2004/ Cdl 2866 as F-ALEB. Departing Toussus on 17 July de, Lucien Coupet ferried it to Casablanca via Biarritz, Madrid and Seville.



It arrived at Algiers on 20 September, piloted by Marcel Kraft and Auguste Villard.

On 1 December 1934 it was registered to Henri Germain who had set up Lignes Aériennes Nord-Africaines (LANA). It served the company well along with F.190 no 52 F-ALAP.

On 19 August 1935 (notified by letter the following day), it was registered F-APEB.

Following the withdrawal of subsidies, LANA ceased operations in 1936. On 10 March 1937, F.192 no 17 was registered to the Entreprise de Photo-aériennes Moreau. It visited Saldis from Kiss on 21 August 1938. Its ultimate fate is unknown.

F.192 no 18, c/n ?

This aircraft could be the F.190 "Farm 18" belonging to the 1st escadrille of the A.O.F. and based at Bamako (see profile page 2011/144). The engine of this aircraft was a GR 5 Ba, but its installation is somewhat unusual and a photograph recently found in the archives at Vincennes shows that a medical F.192, sadly not identifiable, was indeed used by this unit; it could therefore be a local conversion of F.192 no 18. NB: contrary to what has been previously published, this is not F.190 no 18 whose destruction is now proven (cf. *Air Adventure* by William Seabrook).

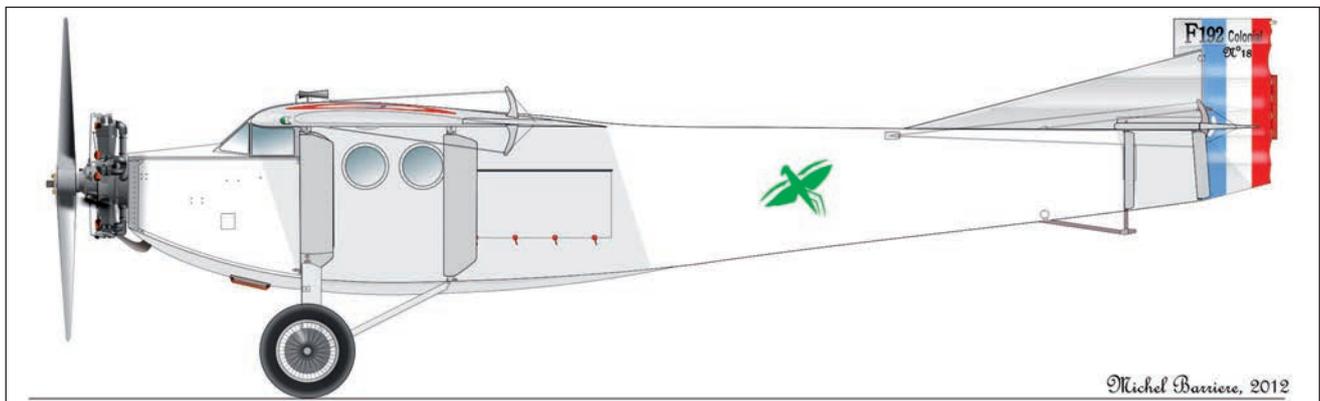
F.192 no 19, c/n 7131 F-AJBS

Conversion in October 1931 of F.190 n°16 (q.v.)

F.192 no 20, c/n 7328 F-AMTO

F.192 no 20 was registered on 22 December 1933 with the reference AIR 2-3410 and the CdI 3636, to François Moreau for the Entreprises Photo-Aériennes Moreau. It was named "L'Avion Bleu IV". According to

Below: It has now been confirmed that F.190 'Farm 18' was originally F.192 no 18. The badge of the Bamako squadron, probably adopted locally, was a green locust, as also carried by the unit's Potez 25s. (Artwork: M. Barrière)



Above: F.192 no 17 spent its career, like several other examples of the type, in North Africa. It was subsequently registered F-APEB. (Artwork: M. Barrière)

the archives of the Bureau Veritas, it may have been constructed from a spare F.199 fuselage at the factory.

On 22 May 1934, piloted by A. Ehrardt, F-AMTO landed at Barcelona, coming from Perpignan. It carried one passenger, mail and some cargo. It departed the next day to Alicante to return to North Africa. It made a forced landing on the beach at Djidjelli and was dismantled and then transported to the airfield to be rebuilt. It returned to Le Bourget on 10 July.

In 1935 and 1936, the Entreprise de Photo-Aériennes Moreau was tasked, under the direction of Mr Belime, director of the Office of Niger, with a mission to investigate the possibility of using aircraft in the colonies of French West Africa, particularly Sudan, for domestic and inter-colony postal services, personnel transport and aerial mapping. It was understood that an engine of 230 hp might be insufficient for safety in the face of tropical storms.

On 3 April 1935, it was registered as converted into an F192/1 by replacing the Salmson 9 Ab de 230 hp by a Salmson 9 Aba de 280 hp. Its CdN was renewed. It was used for testing of the new variant, as it was registered after F.192/1 no 2, which was produced in that form.

On 26 October 1938, it visited Le Bourget. On that occasion, the validity of the CdN was suspended, no doubt temporarily. Its ultimate fate is unknown.

F.192 no [21?], c/n 7122 YR-ABU

Conversion, probably in May 1934, of F.190 n°12 (q.v.)

TO BE CONTINUED...

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COVER PHOTO

Seen visiting the AAAA National Fly In at Cowra, NSW on 23.3.12, VH-UTI c/n 109 is one of only two British Aircraft Eagle 2s still flying, the other being the former G-AFAX now in Spain. The type is featured in the Head-on View series in this issue. (Dave Welch)



CLOSING DATE for contributions to next ARCHIVE: February 1st 2013

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HEAD-ON VIEW - WHAT IS IT? Number 46

This one is a tiny foreigner, single-seater and not much ground clearance, but it was the forerunner of a sporting family, many of them British. Full details next time. (via JM Collection)

In this issue . . .

In this issue a number of well-established series continue, which are complemented by a major piece of new research.

Michael Draper introduced to some of the murlier corners of Nigerian aviation with his article in the Summer 2011 issue. He returns to the theme with an in-depth account of Hank Warton's involvement in the Biafran Affair.

Martin Best moves on in this issue to consider the important role played by Civil Air Transport during the Korean War.

Michael West's researches into the wartime role of BOAC continue with some detailed notes about the difficulties of maintaining the service to neutral Sweden.

Dave Partington continues to provide invaluable help behind the scenes and has located many of the images in this issue.

As we conclude another successful year for *Archive*, I would like to encourage all of you who have a research project lurking on your shelves to see whether it might find a place in *Archive* in the months to come..

Robert Swan

BOOK REVIEW:

Complete Civil Aircraft Register of Argentina 1938-2011 (Vol.1, LV-A to LV-M). Michael Magnusson and Gabriel Pavlovic. Softback 30x21cm, 336 pages. ISBN 978-987-27833-0-3 - Available from Air-Britain Sales - £22.50.

This long-awaited reference is the result of many years' research in the official archives covering (with the second volume) around 9,000 registrations. Beginning with a Spanish and English summary of the background to the register, the bulk of the book is taken up with landscape-format tables of the data which cover the registration, manufacturer and type, c/n, last owner and base, registration date, last change date and brief summary of previous identity, significant events and fate. This data uses standard or easily understood abbreviations, basically in English.

Pages of photographs are interspersed with the data tables and although size and quality vary it must be said that many are rare. Interest is added by some pages showing aero club or manufacturers logos and samples of press advertising.

There are several indices which actually cover LV-N to LV-Z as well, keeping everything in one place - Volume 2 is expected to be available next year. These include the Type/Registration cross reference, military/civil cross reference, re-registrations, LV-P delivery marks, an airfields map and even photos of some airfields which can be useful in identifying aircraft backgrounds.

An extremely useful addition to any civil enthusiast's reference shelf, this book provides the answers to a lot of questions and is likely to stimulate much further research once it is in your possession - a veritable mine of information! (DP)

REMINDER: If your Air-Britain subscription is due to expire at the end of December, please help the Membership Secretary by renewing as soon as possible, before the Christmas break. Please renew online if you can, at <https://www.air-britain.co.uk/actmembers/acatalog/>.

COMPLETE CIVIL REGISTERS: 15

X- UN- YU- YUGOSLAVIA

With thanks to the following for their contributions to this issue:

John Wegg, Vojislav Jereb and Ognjan Petrović.

Right: Boeing 737-2H5 YU-AOF on lease to AvioGenex makes an evening arrival at Manchester on 3.10.90. (H John Black)



The post-war Yugoslavian Civil Aircraft Register (continued)

YU-AOA to AOZ series: 2-engined jet airliners

YU-AOA	Airbus Industrie A320-231	043	17.5.89	Built .88, ff 19.10.88, test regn F-WWDO; to Adria Airways Ljubljana 17.5.89 as YU-AOA; CofR 1570; lsd to Aero Lloyd .7.91 - 10.91; regn cld 26.12.91 and became SL-AAA (interim Slovenian regn); S5-AAA 29.4.92 Adria Airways, Ljubljana; leased to Cretan Airways as SX-BAS 2.6.93 to 20.1.95, S5-AAA again 3.2.95; lsd to KTHY 5.95 - 10.95; lsd Afriqiyah 1.07 - 10.09; last revenue flight 9.11.10 Tirana – Ljubljana. Wfu.
YU-AOB	Airbus Industrie A320-231	028	26.4.90	Built .88, ff 29.12.88, test regn F-WWDE; 5B-DAT 19.5.89; leased from Cyprus Airways to Adria Airways 26.4.90 as YU-AOB; returned to owner 12.12.90 and again became 5B-DAT; to Aeroturbin Inc N820AT 30.3.05. Wfu.
YU-AOC	not used			
YU-AOD	Airbus Industrie A320-231	113	10.9.90	Built .90, ff 5.7.90, test regn F-WWIH; to Adria Airways 10.09.90 as YU-AOD; CofR 1590; regn cld 26.12.91; to SL-AAB 27.2.92, lsd Transmed 2.4.92 - 2.5.92; S5-AAB 30.3.93 Adria, SX-BAT 3.6.93 Cretan; returned to S5-AAB 8.11.94, lsd Air Malta 3.96 - 11.96; lsd Afriqiyah 6.06 - 4.08; S5-AAB; to Myanmar Airways International as XY-AGI 25.12.09; active.
YU-AOE	Airbus Industrie A320-231	114	10.9.90	Built .90, ff 9.7.90, test regn F-WWII; to Adria Airways 10.09.90 as YU-AOE; CofR 1591; damaged by bombing, Ljubljana 28.6.91, flown Toulouse for repairs 7.91; regn cld 26.12.91 to SL-AAC; returned 1.92; lsd to Transmed 3-31.5.92 then to WDL Avn 11.92; regd S5-AAC 1.4.93 Adria, lsd Pegasus 4.93 - 10.93; to SX-BAU 30.3.94 - 3.11.94 Cretan; S5-AAC; lsd Air Maldives 12.96 - 3.98, S5-AAC; to Myanmar Airways International as XY-AGG 2.10.09; active.
YU-AOF	Boeing 737-2K5	25596/763	5.4.90	Built .81, ff 7.5.81, ex N8279V, D-AHLD (29.5.81), N2941W (3.82), D-AHLD (5.86); lsd to AvioGenex 4.90 as YU-AOF, used also by Bouraq (in AvioGenex colours), wfu 5.92-9.94; became N231TA 12.11.96 and C6-BFM Bahamasair 30.7.04; active.
YU-AOG	Boeing 737-2K5	22601/833	5.4.90	Built 82, ff 18.1.82, test regn N1800B; ex D-AHLI (12.1.82); AvioGenex 5.5.90. as YU-AOG; wfu 5.92 and

lsd to Saudi Arabia HZ-SIR 5.9.92; to N233TA TACA 12.11.96; C6-BFW Bahamasair 24.11.04; active.

YU-AOH, AOI, AOJ, AOK, AOL, AOM, AON, AOO, AOP, AOR, AOS and AOT have all been used in Serbia or Montenegro since the break-up of the Yugoslav Federation and as such are not listed here.

YU-AOU to YU-AOZ have not been used yet, neither have any later series commencing YU-A.

YU-BAA series: 1. 1940 ferry registrations

The first use of YU-BAx series was listed on page 2009/010. The marks were issued specifically for ferry flights of 20 Avro-built Bristol Blenheim Mk.1s (RYAF B-1) which transferred from RAF stocks to Military Aeronautics (or Royal Yugoslav Air Force) to supplement local production. Delivery took place to Zemun in 2.40 and 3.40 via Aston Down, Bordeaux and Milan.

Although listed previously an error occurred, with YU-BAQ not being used so we are repeating the basics for completeness. All are Bristol Blenheim Mk.1 and RYAF serials changed to 4 figures in late 1940:

YU-BAA	ex L6825	RYAF s/n 43	later 3543
YU-BAB	ex L6826	RYAF s/n 44	later 3544
YU-BAC	ex L6827	RYAF s/n 45	later 3545
YU-BAD	ex L6824	RYAF s/n 46	later 3546
YU-BAE	ex L6823	RYAF s/n 47	later 3547
YU-BAF	ex L6817	RYAF s/n 48	later 3548
YU-BAG	ex L6813	RYAF s/n 49	later 3549
YU-BAH	ex L6814	RYAF s/n 50	later 3550
YU-BAI	ex L6833	RYAF s/n 51	later 3551
YU-BAJ	ex L6834	RYAF s/n 52	later 3552
YU-BAK	ex L6830	RYAF s/n 53	later 3553
YU-BAL	ex L6828	RYAF s/n 54	later 3554
YU-BAM	ex L6829	RYAF s/n 55	later 3555
YU-BAN	ex L6831	RYAF s/n 56	later 3556
YU-BAO	ex L6832	RYAF s/n 57	later 3557
YU-BAP	ex L6820	RYAF s/n 58	later 3558
YU-BAR	ex L6821	RYAF s/n 59	later 3559
YU-BAS	ex L6818	RYAF s/n 60	later 3560
YU-BAT	ex L6819	RYAF s/n 61	ater 3561
YU-BAU	ex L6822	RYAF s/n 62	later 3562

YU-BAA series: 2. 1947-1948 Li-2 JUSTA airliners

The second use of YU-BAx series, now as one of the first post-war Yugoslav civil registration series.

JUSTA (Jugoslovensko-sovjetska transportna Avijacija, literally Yugoslav-Soviet Transport Aviation, meaning Yugoslav-Soviet Transport Airline Co) was formed in 1947 and operated for some two



Left: A Lisunov Li-2P YU-BAD with dual markings of YAF 7009 code 13 at Zemun aerodrome in 1947. (Foto centar)

Below: A line of bare metal L1-2s at Zemun in 1948 featuring YU-BAF, BAE, BAA and BAC. (Foto centar)



years. After an Informbureau resolution all relations between Yugoslavia and USSR broke down, JUSTA ceased to exist in 8.49, and all Lisunov aircraft gradually returned to USSR with Hungarian crews.

YU-BAA	Lisunov Li-2P srs 7	18425606	25.7.47	Dld 7.47; first CofA 25.7.47; JUSTA 9.47 (the first of twelve Li-2Ps in the fleet of mutual Yugoslav-Soviet Transport Airline Co); also carried Yugoslav Air Force code no 15; not flown from 3.10.48 (both engines overhauled). Returned to Soviet Union 10.9.49.
YU-BAB	Lisunov Li-2P srs 7	18427003	9.47	Dld and first CofA .47; JUSTA 9.47. Returned to USSR 10.9.49; to Lithuania as CCCP-L1268, 25.12.50.
YU-BAC	Lisunov Li-2P srs 7	18427004	9.47	Dld and first CofA .47; JUSTA 9.47. Returned to Soviet Union 10.9.40.
YU-BAD	Lisunov Li-2P srs 7	18427005	9.47	Dld and first CofA .47; JUSTA 9.47; carried YAF s/n 7009 and code no 13 on tail; crashed on mount Rumija near Podgorica, Montenegro, 27.11.47.
YU-BAE	Lisunov Li-2P srs 7	18427010	9.47	Dld and first CofA .47; JUSTA 10.1.48. Military tail marking (code no) 16; returned to Soviet Union 10.9.49.
YU-BAF	Lisunov Li-2P srs 7	18427007	9.47	Dld and first CofA .47; JUSTA 13.1.48; YAF s/n 7014, code no 27; returned to Soviet Union 10.9.49.
YU-BAG	Lisunov Li-2P srs 7	18427509	9.47	Dld and first CofA .47; JUSTA 15.1.48; returned to Soviet Union 10.9.49.
YU-BAH	Lisunov Li-2P srs 7	18427503	9.47	Dld and first CofA .47; JUSTA 28.1.48; returned to Soviet Union 10.9.49.
YU-BAI	Lisunov Li-2P srs 7	18427008	9.47	Dld and first CofA .47; JUSTA 25.2.48; returned to Soviet Union 10.9.49.
YU-BAJ	Lisunov Li-2P srs 8	18427510	9.47	Dld and first CofA .47, JUSTA 3.3.48; not flown from 20.9.48 (port engine overhauled); returned to Soviet Union 10.9.49.
YU-BAP	Lisunov Li-2T srs 7	18426603	9.47	Dld and first CofA .47; JUSTA 9.47; returned to Soviet Union 11.9.49.
YU-BAR	Lisunov Li-2T srs 7	18426604	9.47	Dld and first CofA .48; JUSTA 23.1.48; returned to Soviet Union 11.9.49.

There were no other registrations used in this series.

YU-BAA series: 3. Non-airline singles and twins, from 1959.

The third use of YU-BAx series and the second use in post war time but continuing beyond YU-BAx as a major series.

YU-BAA	Boeing N2S Stearman	?	.59	Noted in Yugoslav Register as JP 205136; Privredna avijacija (ie Agricultural Aviation) Jugoslovenski Aerotransport (JAT), Belgrade, CofR 264; damaged 27.4.62; crashed and burnt 31.7.63 near village Darda, Belje, Vojvodina.
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Left: Lisunov Li-2P YU-BAF (YAF 7914 code 27) of JUSTA with engines running at Zemun in 1948. (Foto centar via O M Petrović)

The British Klemm / B A Eagle

HEAD-ON VIEW No.45



In July 1932 Lord Carberry took delivery of a new three-seat, fixed undercarriage, cabin monoplane at Heston. This was D-2299, demonstrator of the Klemm L.32, c/n 402, which eventually in October 1934 became G-ACYU. In the meantime a second example, CH-360 c/n 668, had already been registered as G-ACLH in the UK on 2.11.33.

The attractions of a cabin monoplane, in an age of open cockpits and biplanes, were recognised by potential customers and also by Major E F Stephen who had founded the British Klemm Aeroplane Co Ltd at Hanworth in 1933 to manufacture a British version of the Klemm L.25 as the B K Swallow. The company's chief designer, George Handasyde, was given the task of improving the L.32 concept and came up with what was in fact a completely new aircraft of similar appearance. His was the B K Eagle, a 130 hp DH Gipsy Major powered, folding wing, retractable undercarriage cabin monoplane. The fuselage forward of the rear spar was of steel tube, the rear fuselage and wings of wooden frame and the whole was plywood covered except for the fabric control surfaces and metal cowlings.

The prototype B K .1 Eagle was G-ACRG c/n 1 registered on 23.3.34 and CofA issued 6.7.34 to the manufacturers at Hanworth. It was powered by a 130 hp Gipsy Major whereas G-ACPU c/n 2, registered

Above: G-AFAX at the Air-Britain Fly-in at Wellesbourne on 27.6.93. It is still flying as G-AFAX in Spain but with a small EC-KVR below the tailplane. (Dave Partington)

in April 1934 with a CofA also on 6.7.34, was a racing version with a 200 hp Gipsy IV. The latter was built for E L Gandar Dower and took part in the King's Cup Race on 13-14.7.34 flown by A C S Irwin. Both aircraft were publically demonstrated at Hanworth on 19.7.34.

Apart from the clean lines and three-seat cabin comfort, the most interesting features of the Eagle 1 were the combination of folding wings and retractable undercarriage. The wing, which had a 3-degree dihedral, contained an 18-gallon fuel tank on each side in the centre section between the two spars. The undercarriage main legs were attached to the front spar, retracting outwards into the outer wing sections. To fold the wing, an angled section of the outer wing trailing edge was raised to reveal the hinge point around which the outer wing was rotated.

The cabin was notable for spaciousness and good visibility. The adjustable pilot's seat was centrally-placed on top of the front spar with a two-seat bench behind it above the rear spar. Entry was by a door on either side into which sliding windows were fitted and roof lights gave a good view upwards and to some extent rearwards. To the right of the pilot was the winding mechanism for the manually-retracted undercarriage. Behind the rear seat was an ample luggage compartment.

The horn-balanced rudder

Below: The prototype B.K.1 Eagle G-ACRG on an early flight. Notable features are the long exhaust, mass balance ailerons, wire-braced tailplane, top-decking stringers and the wide entrance door. (Aeroplane via JM Collection)





Above: The Klemm L.32 D-2299 demonstrator which later became G-ACYU. C/n 402, it was originally an L.32V with 150 hp Argus As.8R radial but with a 125 hp DH Gipsy III as seen here it was an L.32X. (JM Collection)



Left: With the doors open G-ACRG shows the ease of entry to the cabin via the wing footway, handle behind the rear window, and single pilot's seat. Note the square-cornered sliding window in the door and the single navigation light on the roof. (Aeroplane via JM Collection)

Cup in June 1935 flown by owner Lord Willoughby de Broke.

By the time of the 1935 King's Cup, on 7th September, G-ACPU and G-ACRG had been rebuilt as Eagle 2s and the latter was fitted with a high-compression Gipsy Major which produced a speed of 143.02 mph flown by company test pilot Flt Lt J B Wilson. Eagle and pilot were more successful in the Folkestone Trophy race at Lympne a week later, coming second at 139.75 mph, and then repeating this finish in the London – Cardiff Race the following week at 152.5 mph.

was a tall, rounded unit, the base of which was angled above the extended rear fuselage. The tailplane was wire-braced and below it was a castoring tailwheel.

Performance of the Eagle 1 produced a maximum level speed of 148 mph, cruise of 130 mph, landing speed 45 mph, take-off fully loaded in 195 yards and range of 650 miles at an AUW of 2,300 lbs. It was said that the retractable undercarriage was responsible for 18 to 20 mph of the maximum speed. All this at an ex-works price of £1,250 in 1935.

Following the 1934 King's Cup G-ACPU was converted to standard with a 130 hp Gipsy Major, though both of the initial Eagle 1s were later rebuilt as Eagle 2s. At some point G-ACPU was fitted with a fixed trousered undercarriage, the only known example in this form. Four further Eagle 1s were built, c/n 25 G-ACR and c/n 30 G-ACVU, the intermediate c/ns being allocated to Swallows, followed by a new sequence beginning at c/n 105 as CR-MAI and 106 as VH-USP. G-ACVU was entered in the McRobertson Race from England to Australia in October 1934. It was flown by Flt Lt Geoffrey Shaw but failed to complete the race when its undercarriage collapsed on landing at Bushire.

In April 1935 the British Klemm Aeroplane Co Ltd was renamed and reorganised, becoming the British Aircraft Manufacturing Co Ltd. At the same time the Eagle was modified and re-designed as the B A Eagle 2. Externally the main differences involved a more rounded, increased chord, mass-balanced rudder and built-up top decking resulting in a deeper rear fuselage. A new Eagle 2, the scarlet G-ADES c/n 111, won the SBAC Challenge

Meanwhile, Eagle 2 G-ADFB c/n 112 "Seikai" was flown from Hanworth to Tokyo, despite numerous delaying incidents, between 12th May and 13th August 1935 by Katsutaro Ano. Spanish pilot Juan Pombo crossed the South Atlantic from Bathurst to Port Natal, only the second such solo crossing, in Eagle 2 c/n 108 "Santander" on 20-21st May 1935. However, c/n 108 crashed at Port Natal on 26th May and was replaced by c/n 115 in which he completed his intended flight to Mexico City after making a record South Atlantic crossing with his wife as passenger.

Below: G-AFAX at the Air-Britain Fly-in at Wellesbourne on 27.6.93 demonstrates its useful wing-folding ability. (Dave Partington)





Left: The first B K Eagle 2 G-ACZT makes a demonstration beat-up across Hanworth. Good visibility from the cockpit is apparent. (Aeroplane via JM Collection)

Below: G-ACZT shows the modified rudder of the Eagle 2 and excellent all-round visibility. This photo has also been published with the name "Eagle" and company details removed from the cowling. (Aeroplane via JM Collection)

Further modifications were introduced late in 1935 commencing with c/n 121; c/n 120 apparently not being used in order to emphasise the model change. The lengthways central cabin roof member was removed and the windscreen structure simplified, the sliding windows in the doors were given rounded front corners. Less visible was the chain-operated undercarriage retraction system, replacing the former cable system, and the Dunlop hydraulic brakes.

Early success in air races was not to be repeated, the handicappers clearly becoming wise to the Eagle's potential. Even with a cabin top specially lowered by 3 inches, Amy Mollison was unsuccessful in G-ACRG in the 1936 King's Cup (although ironically the Double Eagle G-AEIN took second place). C G M Alington in G-ADID attempted the Schlessinger Air Race to Johannesburg in September 1936 but suffered undercarriage collapse following a forced landing in Bavaria, his aircraft being rebuilt later. Major J C Hargreaves took part in the 1937 Oases Rally in his Egypt-based G-ADJO; the 1937 King's Cup featured G-ACRG and G-ADID; G-AFIC took part in 1938 with A E Clouston; and a number of lesser races also featured Eagles prior to G-AFKH's final pre-war entry in the Isle of Man Race in May 1939.

Twenty-three examples of the modified Eagle 2 were built, including eight for overseas customers, while nine of those first registered in the UK were later sold abroad. There were, however, two more one-off variations. C/n 119 G-ADJS was owned by the Villiers Hay Development Co and used as a flying test bed for their Amherst Villiers Maya 125 hp 4-cyl air-cooled engine.

C/n 138 was completed with a fixed undercarriage as G-AFAX and moved with its second owner to Rangoon, escaping to Australia during the War and becoming VH-ACN there. This Eagle was one of only six post-war survivors, returning to the UK to be restored as G-AFAX in 1987 before finding its way to Spain in 2008 where it now represents EC-CBB in a museum. Among the survivors was the last Eagle built HB-EBE which was written off in July 1949, VP-TAM in Barbados did not last long, CF-AYH crashed in August 1948 and VH-UTG in July



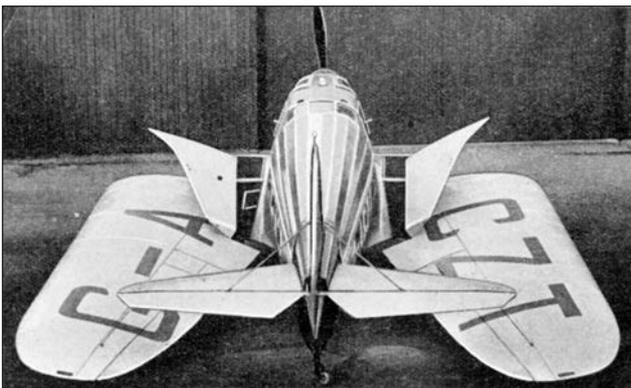
1950. This left only VH-UTI c/n 109 which is still flying today in its original 1935 marks with Robert Fox of Kellyville, NSW.

The fact that one of the final survivors was the fixed-gear version and that VH-UTI has a strengthened undercarriage, is doubtless significant. A large number of Eagles suffered from undercarriage collapse on landing, in particular the impressed examples. This was believed to be because the oil-filled hydraulic shock absorbers reacted on ground contact but did not return like true oleos. Thus a one-wheel touchdown or landing on uneven ground would result in one leg being shorter than the other and on the next contact a ground loop could be the consequence. Three-point landings on tarmac runways were to be preferred!

The Eagle was used by private owners for racing or touring, by charter firms and as a company transport, but the single pilot's position made it unsuitable for training although basic dual controls could be fitted centrally behind the front seat. Despite its accident record it was seen in wartime as a natural communications aircraft for impressments at home and overseas.

Production had slowed in 1937 despite healthy earlier sales and the company clearly suffered from financial problems resulting in a Receiver being called in in February 1938. Three remaining Eagles were completed and sold in that year.

Left: Eagle G-ACZT with wings folded. The angled trailing edge sections are raised to allow the outer sections to rotate backwards. (JM Collection)



Right: Close-up of the revised tail unit of the Eagle 2 G-ACZT. The British Klemm company logo is still shown on the fin as this was built before the company name change of April 1935. (Aeroplane via JM Collection)





Above: VH-UUY c/n 128 when owned by Ian Hope, seen tied down at Bathurst, NSW where it later became derelict. (Howard Levy via JM Collection)



Left: The pilot's position of G-ADJO showing full instrumentation. The aircraft data plate above the compass reads "British Aircraft Manufacturing Co Ltd Type BK.1 Series II Constructors No.122". The manual undercarriage retraction wheel is on the pilot's right. (Aeroplane via JM Collection)

Below: The fuselage of VH-UTI c/n 109 awaiting engine, wings and tail during rebuild in 1974 by the Challinor brothers at Murwillumbah, NSW. This is now one of only two flying surviving Eagles. (G P Challinor via JM Collection)



Above left: The replacement Eagle for EC-CBB "Santander" seen outside the Panair hangar at Pará, Brazil, on 27 June 1935. This must be c/n 115 sent as a replacement fuselage for c/n 108 which crashed on 26.5.35. In the upper photo, from left to right, are: British Aircraft engineer Mawson who was sent out with the new fuselage; the pilot Juan Ignacio Pombo; and local manager Haynes. Full story on p.99/89 of Archive. In the lower photo, it is seen at Pará, Brazil where it is seen with wings folded on 27.6.35 prior to continuing its flight from Spain to Mexico City. (via Luis Tavares)

Above right: British Aircraft's advert for the Eagle 2 emphasising the type's advantages and recent successes in the June 1935 SBAC Challenge Cup and South Atlantic crossing. The fully-equipped price of £1,250 is notable. (JM Collection)

The B.A. "Eagle" ...

ESTABLISHES NEW STANDARDS OF SAFETY AND COMFORT

COMFORT. In addition to the pilot, luxury accommodation for two passengers and luggage.

SAFETY. Top speed 150 m.p.h.; landing at 45 m.p.h.; cruising at 130 m.p.h. The ideal machine for private owners as well as charter companies.

QUALITY. The B.A. "Eagle" is outstanding value at £1,250.

With Gipsy Major 130 h.p. engine, dual control, folding wings, retractable undercarriage and wheel brakes, completely equipped. (Reid-Sigrist turn and bank indicator, electric petrol gauge, pitch indicator, etc.)

ECONOMY. Fully loaded, range 650 miles. Petrol and oil under 11d per mile.

● The B.A. "Eagle" won the Society of British Aircraft Constructors' Challenge Cup, averaging 133½ m.p.h. for triangular course 139 miles, also the South Atlantic non-stop record, Bathurst to Natal, Brazil, 16 hours 40 minutes for 2,000 miles.

PRODUCTION

Intended only as an outline with registrations and fates – but perhaps someone would like to expand this into a “Whole Truth” article?

B.K.1 Eagle 1

1	G-ACRG	Regd 23.4.34. Crashed 6.38.
2	G-ACPU	4.34. Impressed 10.4.41 (DR609), 2679M 15.9.41 as instructional airframe.
25	G-ACTR	14.6.34. Cld 9.34, VH-USI 14.12.34. Crashed Mascot 24.1.37.
30	G-ACVU	13.7.34. Ditched in Mediterranean off Corsica 13.4.36.

B. A. Eagle 2

105	CR-MAI	10.34. “Gaza IV”. Fate unknown.	
106	VH-USP	1.35. ZK-AEA 14.3.36 “Zealandia”. Crashed Eumungerie, NSW 24.5.36.	
107	G-ACZT	19.11.34. Destroyed by enemy action, Ards 5.5.41.	
108	EC-CBB	10.5.35. “Santander”, crashed Port Natal, Brazil 26.5.35.(Rebuilt using frame of c/n 115, qv)	
109	VH-UTI	4.35. Current and active, 2012.	
110	G-ADEJ	27.3.35. Crashed 12.35.	
111	G-ADES	29.5.35. (CH-442), HB-DES 9.3.36. Crashed, cld .46.	
112	G-ADFB	12.4.35. “Seikai”, flown to Japan, arr 8.35. J-BOOB 10.35. Crashed at Nagoya 5.36, cld 6.36.	
113	VH-UTG	4.35. W/o Moree, NSW 28.7.50, cld 11.50.	
114	EC-CBC	15.7.35. Ex EC-W46. To (EC-AGD) .38. Did not survive Civil War, cld 12.11.40.	
115	EC-CBB(2)?	Replacement for c/n 108. Cld 12.11.40, remained in Mexico, preserved?	
116	G-ADYY	9.12.35. VP-TAM 7.45. Derelict, Barbados 1949.	
117	YR-ADA	6.4.35. F-AQDA 19.2.37.	
118	G-ADID	29.5.35. Impressed 6.10.41 as HM500. Fate unknown.	
119	G-ADJS	6.35. Impressed 10.4.41 (DR610), 2680M 15.9.41 as instructional airframe. 120	Not used
121	G-ADGJ	7.5.35. VT-AHT 7.36. Cld 31.12.41.	
122	G-ADJO	13.6.35. F-ARIO 9.12.38.	
123	VP-KBS	3.9.35. Broken up 7.39.	
124	G-ADPN	28.8.35. Crashed at Cardiff 20.9.36.	
125	G-ADPO	8.35. Scrapped at Hanworth 1940.	
126	G-AEER	21.3.36. Crashed at Breedon-on-the-Hill 2.10.37.	
127	G-AEGO	28.4.36. Impressed 6.8.41 HM506, soc 27.7.42 after u/c collapse.	
128	VH-UUY	16.4.36. Wfu and ‘rotted away’, Bathurst, NSW by 1966. Regn cld 11.7.69. Parts used to restore c/n 109.	
129	VR-SAP	4.8.36. Impressed by Malayan Volunteer Air Force. Destroyed by Japanese at Penang 9.12.41.	
130	G-ADVT	10.35. Impressed 14.3.41 DP847. U/c collapse Linton-on-Ouse 19.10.43. Soc.	
131	G-AEKI	26.6.36. Impressed 31.7.41 ES948. U/c collapse Colerne 29.6.43. Soc 3.3.44.	
132	G-AENE	16.9.36. F-AQNE 6.9.37.	
133	G-AEFZ	15.4.36. Impressed 30.6.41 ES944. U/c collapse Turnhouse 29.5.43. Soc 27.7.43.	
134	CF-AYH	12.5.36. Ground-looped 12.8.48 Lethbridge, Alta. Dbr.	
135	VT-	Supplied to Maharajah of Cochin. Details unknown.	
136	F-APDG	15.9.36. Fate unknown.	
137	G-AERB	11.36. F-ARRB 26.10.38. Fate unknown.	
138	G-AFAX	29.7.37. VH-ACN 3.40. G-AFAX 27.10.87. EC-KVR 6.3.09 (still marked as G-AFAX). Currently airworthy at Fundacion infante de Orleans, Cuatro Vientos, Madrid.	
139	CF-BBF	15.5.37. Hit wires, cr on take-off Windsor, Ont, 5.6.37.	
140	VP-KCI	8.6.37. Impressed 3.9.39 as K9. Fate unknown.	
141	G-AFIC	23.6.38. VT-AKO 10.38. Impressed 9.42 MA945. Soc 30.11.43 census.	
142	G-AFKH	28.9.38. HB-EBE .39. Crashed at Fribourg 28.7.49 (or cld 25.7.49?).	
143	G-AFIS	8.7.38. VT-AKP 1.39. Impressed 3.11.40 AW183. Soc 30.11.43 census. (This was also with the Maharajah of Cochin – see c/n 135)	

End of production.

Below: One of two Canadian-registered Eagles, CF-AYH c/n 134 is seen at Toronto in 1937 but was written-off in August 1948 following a ground loop. (JM Collection)



Below: EC-CBC c/n 114 which was delivered to LAPE in 1935 as seen here. It was later used by the Republicans during the Civil War but did not survive. (JM Collection)



Dimensions and performance (Gipsy Major)

Span:	30ft 3in (12m)
Length:	26ft 0in (7.9m)
Height:	6ft 9in (2.05m)
Width, wings folded:	14ft 10in (4.52m)
Empty weight:	1,350 lbs (614 kgs)
Loaded weight:	2,300 lbs (1,046 kgs)
Max speed:	148 mph (236 km/h)
Cruising speed:	130 mph (208 km/h)
Landing speed:	45 mph (72 km/h)
Ceiling:	16,000 ft (4,850m)
Range:	650 miles (1,040 km)
Running cost:	1d/mile



Top: G-ACPU c/n 2 prior to the King's Cup in 1934. The stub exhausts of the 6-cyl Gipsy Six engine can be seen, the undercarriage fairings have been removed and the race number 39 has still to be added to the white disc on the fin/rudder. (Aeroplane via JM Collection)

Above Right: G-ADID as No.10, named "Frobisher", preparing for departure for the Schlessinger race to Johannesburg in September 1936. It became another victim of undercarriage collapse en route but was repaired and later impressed. (Aeroplane via JM Collection)



Above Left: The open cockpit of G-ADJO c/n 122 shows the removal of the central cabin roof member, rounded corners of the door window and elasticated door pocket. The pointed door base was common to all the Eagle 2 series. (Aeroplane via JM Collection)

Left: The Eagle's undercarriage retracted outwards, the legs being protected by narrow doors, also visible is the hinged leading-edge cover plate for the wing folding lock and the rather complex windscreen construction. (Aeroplane via JM Collection)

Below: A pleasing air-to-air shot of G-ACRG, still with original horn-balanced rudder, after repainting. (Aeroplane via JM Collection)



Hank Warton – His early days, Super Constellations and the Biafra Arms/Relief Airlift

Michael Draper



Michael Draper presents a wider perspective on Biafra's one-time principal gun-runner, Henry Arthur Warton. Based on interviews with Hank Warton, Burt Katlin, Red Mettrick and Father Tony Byrne.

"Hank Warton was a cowboy.....", reckoned Father Anthony Byrne, the Irish priest who helped establish the massive relief airlift into the Biafran war zone, "..... but he never cheated me out of a penny!". That Byrne, an Irish Holy Ghost Order missionary priest from Dublin, and Warton, a German-American gun-runner from Miami, forged such a close relationship in a war-torn West African rebel state is just one of the many curious ironies that emerged from this particularly bloody conflict.

For most of his life, Warton had an uncanny knack of being in the right place at the right time. Even in the pre-war days at the start of Nazi atrocities against Jews in his native Germany, the 21-year old Heinrich Wartski managed, in 1938, to escape and make his way by ship to Colombia. Then, via Panama, Costa Rica, Guatemala, Mexico and to Cuba where, for a year, he lived in the German Quarter. There was a three-year wait for an American visa but Heinrich Wartski was impatient and struck a deal with two crew members of a Danish sugar boat willing to smuggle him into the US. The boat sailed to Philadelphia where the crew smuggled him through a warehouse and into town. He made his way to New York but when the draft was announced there was a constant danger of arrest for any male unable to identify himself. The young Henry "Hank" Warton therefore decided to register for call-up, claiming that he was born in Brooklyn. After a short while he chose to admit to having entered the USA illegally.

Despite his illegal entry, the authorities contacted the US Consulate in Havana and asked if an out-of-court visa could be issued. They agreed and Warton travelled to Cuba to collect his visa, taking a three-week holiday in Cuba at the same time. After his return to New York, he was called-up in August 1941 for US Army service and after spending a

Above: Biafra's two Fouga Magisters were airfreighted from Austria to Lisbon aboard Trans Mediterranean Airways CL-44 N604SA. Because of the difficulty in getting them aboard the L-1049D 5T-TAC, the fuselages were air-freighted to São Tomé aboard an Aer Turas Bristol 170. The wings were able to be loaded aboard Warton's L-1049D, visible in the background beneath the CL-44 port tailplane. Within a couple of days the Super Constellation blew up at Bissau with the Magister wings aboard it. (Alex "Sandy" Rumley)

year at the Long Island Induction Center, he was posted to the US Army Intelligence Corps. Recognising his fluency in German, Warton was posted to a Prisoner-Of-War camp and encouraged to mix with the prisoners to gain any scrap of intelligence. It was during this period, Warton later related to the author, that he befriended a German master forger whom he looked after with "favours"; it led to a lifelong relationship that would pay dividends in years to come.

Demobbed in November 1945, Warton took advantage of a national civilian pilot training program, gained his commercial licence in 1947 and is reported to have joined Al Schwimmer's LAPSA, flying C-46 Commando freight flights into the newly-formed state of Israel. Certainly, he later found work, as did many other commercial pilots, on the Distant Early Warning Line project (DEW Line), flying cargo into remote strips just north of the Arctic Circle. Flying in some of the worst weather conditions proved to be hugely demanding but offered an ideal opportunity to develop skills as well as building up flying hours.

Warton returned south in 1956 and joined a Cuban-based company, Expreso Aéreo Interamericano, SA, again flying C-46 Commandos on the Havana-Miami route. He later joined National Airlines, becoming a regular co-pilot on Convair 340s on routes out of Miami before transferring (as a captain) to Idlewild in 1957, flying Convairs, DC-6s and occasionally L-1049H Super Constellations. But he returned to Cuba in 1958 to take a position with Cubana, yet again flying C-46s. Nonetheless Warton always had a yearning to return to Europe and especially to Germany. In May 1959, he secured a captain's position with Hamburg-based Continentale Airlines, undertaking various long-



Left: Despite Hank Warton being closely associated with Super Constellations, he always claimed to be a “100% Douglas man”. He was most comfortable in the left-hand seat of a “Douglas”, as in this view of former Sudflug DC-7C D-ABAR after it was acquired by the Churches but crewed by Warton’s pilots. (Terry Spencer)

haul charters on behalf of Cathay Pacific and Korean Airlines. With 1,372 hours of Continentale flying hours logged, on DC-4s, Warton left Continentale in June 1960 and joined Syrian Airways, regularly flying DC-4 freight flights out of Damascus. He had, at the same time, applied to join ELAL and, to all intents and purposes, was taken onto ELAL’s payroll although the Israelis were quite happy to have him stay in Syria and report back the nature of his cargo flights. (It is open to conjecture as to who Warton was really flying for – Israelis or the Arabs!)

Warton – the Entrepreneur

By Mid-1961, after a short spell with Balair AG, Hank Warton began to set sights on launching his own operation. He formed Atlanta Airways (although he also used the name Africa Air and Trans Africa Airways) but it didn’t always go to plan and the following is a typical scenario that faced the entrepreneur.

He had successfully persuaded SABENA to sub-contract a DC-4 to operate on their behalf in Leopoldville under their contract with the UN peace-keeping force in the Congo. But at the time Hank did not have an aircraft to his name although he had secured an offer of a DC-4 from Miami-based Marshall Landy. Armed with a promising sub-contract deal, Hank flew to Miami to complete the transaction, but Landy had to admit that the aircraft he had in mind had just been leased, along with several others, to Interocean Airways. Although a setback, in Warton’s mind it was only a minor one and he immediately turned to George Batchelor who had an aircraft leasing business in Los Angeles, California. Batchelor was uneasy about Hank’s plans, but being equally canny, agreed to lease a DC-4 to Hank on the condition that they share the profits as partners. (It is strongly suspected that Batchelor and Warton formed Congair Corporation for this collaboration). At the time, Batchelor was in the process of buying two DC-4s from Northwest Airlines and suggested that Hank head down to Minneapolis/St Paul (where the aircraft was positioned), enlist a crew and get ready to fly it out to Europe.

Having flown alongside him whilst with Continentale, Hank had few qualms in recruiting Australian captain, Kenneth Begg as his co-pilot; he also persuaded another former Continentale crew member, Burton “Burt” Katlin, to take on the role of navigator. While they waited for

Warton to finalise the aircraft’s purchase, the two stayed at a St Paul hotel where Batchelor and his fiancée, Betty, had a large and impressive suite. But George became increasingly doubtful about whether Warton was telling him the entire truth and sought Katlin’s opinion as to whether or not Warton did actually have a contract with SABENA. From George’s hotel suite, Katlin called George Contillon (SABENA’s charter contract manager) and received, not just assurance, but also that they were expecting Warton and the aircraft “very shortly”. Nevertheless, George remained uneasy and, despite the aircraft ready to leave the US, he withdrew his lease agreement on the grounds that Hank had not arranged to have any life-saving equipment for the Atlantic crossing, and claimed that he no longer had faith in the venture. Katlin managed to placate Batchelor, discussed the problem with Hank, and then suggested that they try and borrow equipment from a nearby US Naval base. Katlin pleaded on Warton’s behalf and presented his US Air Force Reserve Officer ID. An astute and understanding officer agreed to provide sufficient life rafts and life vests which Katlin, in turn, agreed to return as soon as the aircraft arrived in Europe. George Batchelor was eventually satisfied and released N6404 to Warton. The DC-4 flew out of Minneapolis on 28 May 1961, en route to Gander for an overnight stay before completing the ferry to Brussels. After a two-day rest at Brussels, Warton then flew N6404 to Leopoldville, via Tripoli and Kano. Katlin returned to Brussels where he had an aircraft parts company, Meanwhile, Warton was in business.

There was a final turn in Warton’s first private venture. Some time later, George Batchelor flew to SABENA’s Brussels HQ to pick up a \$250,000 cheque for his share in Hank’s Congo operation. While in Brussels he decided to call up Katlin and the two celebrated at Chez Paul Au Gaité, Brussels’ most popular night club at the time.

By most accounts Warton had tried to re-register the DC-4 in the name of his company, Atlanta Airways but on the Liberian register, as EL-ADR. (The US marks N6404 were cancelled on 5 March 1962 and the Liberian marks reported as allocated two days later. Remaining on the Liberian register, Warton changed the registered owner to Africa Air on 20 May and finally in his own name, Henry A. Warton, on 30 October 1962). Whether these marks were official or otherwise has been hard to establish but certainly Batchelor got to hear of these changes and promptly sold his share in the DC-4 to Marshall Landy, whereupon it was restored, in Marshall M. Landy’s name, as N6404 on 5 December 1962.

With his Congo operation effectively at an end, Hank reset his sights on establishing a freight business within Europe. Again, he turned to his partner Marshall Landy from whom he leased a former Continental Airlines DC-3, N16067, and immediately set about ferrying it from Miami to West Germany. He secured, on January 5 1963 an export



Above: Facilities were scant at the small German airfield at Herzogenaurach where Hank Warton was to establish a base for a flower-running operation. This June 1963 view shows the control tower and terminal building, such that it was. (Henry A. Warton)

Right: Marshall Landy helped Hank Warton out on a number of occasions with aircraft leases, including DC-4 N6404, seen here at Frankfurt/Rhein-Main in April 1963. Interestingly, the only markings visible are the letters "T.A.F.A." below the stars and stripes flag. It is assumed that this referred to Trans Africa Airways, one of Warton's many freighting companies. (Henry A. Warton)



licence, valid for 60 days, enabling the DC-3 to be flown "under VFR rules, from Miami to Hamburg, via Gander and Shannon, for inspection and certification by a foreign company". Curiously, the documentation shows the aircraft as registered to Continentale Deutsche Luftreederei of Hamburg.

Hank Warton planned to use the DC-3 on a regular flower run from Albenga, in northern Italy to Nuremberg, Germany. The cheapest place he could find to operate from was a small private airfield at Herzogenaurach. Hank met with the owner who showed him the runway; it was just long enough for a DC-3. In order to familiarize himself with the grass strip, Hank flew N16067 over the airfield on 4 March 1963 and then chose to land. However, he landed with a tailwind, had insufficient distance to stop, and the aircraft ran into a ditch and nosed-over, causing damage to the props and engines. More serious damage was caused by the crane that dragged the aircraft out of the ditch. As a result, the aircraft was abandoned, as were Hank's plans to launch his flower run.

By now, Hank Warton had married and divorced twice. His second wife, Berlin film star Birke Bruck, who he married in December 1960, gave him a son, Daniel. But business, it seems, always came first in the Warton household and after a few weeks back in the US, Warton returned to Germany in April 1963 to pick up a lucrative freighting contract with Lufthansa. Once again, Marshall Landy provided Hank with aircraft, involving two C-46 Commandos (N355W and N2074A) and an extended lease on DC-4 N6404. Operating under the name of Atlanta Airways (although the DC-4 did, for a while, carry the initials T.A.F.A. on the fin), the Lufthansa contract provided a good income; even moreso when, in September 1963 Warton also gained a deal to fly the New York Times from Frankfurt to Le Bourget, Paris and return with copies of the US Forces newspaper, "Stars & Stripes". However, he lost the Lufthansa contract in February 1964 when Capitol Airways undercut his price and took over the operation.

Having tasted the "waters of Africa" Warton always felt that his future was back on the dark continent. He became involved in a complex

operation on behalf of the Tutsi King of Burundi. Burundi had achieved independence in July 1962 but a tense period of political assassinations took the country into turmoil. Warton became involved in assisting the kingdom with establishing a

national airline. That the scheme held out promise for Warton was illustrated when he launched the Burundi Pilot Licence scheme, sanctioned by no less than the King himself.

The aircraft chosen to launch the airline was a former Overseas Aviation Canadair DC-4M which was painted up with the spurious markings "BR-HBP". Ostensibly owned by a German entrepreneur, Heinrich J Heuer (although Warton had a share in it), the aircraft was caught up in administrative problems when it was impounded at Amsterdam-Schiphol after Heuer had been extradited to Germany to face charges of fraud. Warton followed Heuer to Germany claiming that he was owed money and managed to get hold of the aircraft's papers in lieu of payment. Then, with the help of the Burundian embassy in Paris, Warton convinced the authorities at Schiphol to release the aircraft to him and, following an engine change, was allowed to undertake a local test-flight on 19 December 1965. It remains a mystery as to why the Dutch agreed to the flight, considering that some 6,000 guilders was owed in parking and landing fees. Less surprising, however, was that instead of landing back at Schiphol, Warton flew the DC-4M to Frankfurt from where, after a hasty refuelling, he flew on to a small Italian airfield, Villanova di Albenga. (In fairness to Hank Warton, he did return to Holland on a scheduled flight from Geneva a few days later and paid the outstanding bills in full). The DC-4M remained at Albenga for some months, again running up parking fees until, again, it was impounded as a result of non-payment.

Gun-running to Biafra

When, in 1966, Nigeria's Eastern Region began its road to secession (to eventually become the independent "rebel" state of Biafra), Hank Warton was already established as part of a loose circle of entrepreneurial flyers willing to ferry anything to anywhere whether legal or otherwise. That the Eastern Nigeria Region was secretly building up a stockpile of arms, became public knowledge following the infamous DC-4M incident of October 1966. It started when Warton flew the DC-4M, by now carrying the marks "I-ACOA" out of Albenga on 8 October 1966 – again under the pretence of a local test-flight – to Nice and then on to Rotterdam-Zestienhoven where it arrived later the same evening. The brief stopover at Nice allowed a quick meeting with French arms dealer, Paul Favier, who was effectively financing the operation

MINISTÉRIO DAS COMUNICAÇÕES
CONSELHO ADMINISTRATIVO DO AEROPORTO DE LISBOA

N.º 251

Matricula: 5N-07G
Avião Tipo: L 1049
Peso máximo à decolagem: 62370 Kgs

Proprietário: ETABLISSEMENT JEAN GODET
data e hora de chegada: 05.17.36 ETD 18.03.00
data e hora da partida: 18.03.29

N.º de passageiros embarcados em Lisboa: Com taxa Sem taxa
Peso de carga desembarcada em Lisboa: Com taxa Sem taxa
Peso de carga embarcada em Lisboa: Com taxa 10.700 Kgs Sem taxa

CONTA

d) Taxa de aterragem/descolagem	63F x 40x00	2.520x00
N) Taxa de iluminação e balizagem	A x 200x00	200x00
c) Taxa de estacionamento ao ar livre	A3 x 378x00	4.914x00
d) Taxa de estacionamento em banger		
e) Taxa de passageiros		00000
f) Taxa de carga	10.700 x 1800	16.050x00
g) Taxa de carga		541x20
h) Taxa de carga		420x00
Al		24.645x20
Recém-demitido Total e pagar:		24.646x00

Recém do Sr. TAP (TERMO TAXAS) a importância de escudos VINTE E QUATRO MIL SEISCENTOS E QUARENTA E SEIS
Aeroporto de Lisboa, 18 de AGOSTO de 1968

NOTA DE DESPESA
MIS. REG. DE 250169
P.º CONSELHO ADMINISTRATIVO

Left: The "Grey Ghost", 5N-07G, returned to Lisbon at 17:36 on 5 August 1968 after a round trip to Uli. She remained at Lisbon for almost two weeks before taking on a 10,700kg (10.5 UK ton) cargo ahead of a planned departure on 18 August. This document, issued by the Conselho Administrativo de Aeroporto de Lisboa (the official body managing Lisbon airport) shows the owner as Établissement Jean Godet; another receipt shows it as owned by Atlanta Airways. It was Godet who acted as "middle man" in the sale to Biafra back in 1967, but thought to have remained involved in its operation, despite Hank Warton being contracted to operate it with his crews. The invoice, which amounts to 24,646 Portuguese Escudos included 2,520 Esc for landing/take-off tax, 200 Esc for lighting and beacons tax, 4914Esc for Ramp parking, 16050Esc cargo tax, 541Esc for washing and 420Esc for the police service. Gun-running did not come cheap!



Above: The official airworthiness document relating to L-1049G-82 D-ALOF (c/n 4642) as part of the sale by Lufthansa to Hank Warton's company, North American Aircraft Trading Corporation. Of note is that the false Mauritanian registration 5T-TAG is shown on the document. Lufthansa wanted the marks applied for the flight out of Germany, but Larry Raab managed to persuade Lufthansa to allow one flight to Lisbon under German registry.

(although it has been said that Biafra's influential benefactor, Baron Christian von Oppenheim, was somewhere behind the scenes).

Warton had moved quickly to recruit a crew for the DC-4M. He had already flown to Brussels to meet with long-term friend, Burt Katlin who was offered the role of navigator. Katlin was also Europe-based and owned a C-46 Commando (N9841F) which Orvis Nelson (the former head of Transocean Airlines) had, not long beforehand, managed to fly out of the Congo and positioned it to Albenga, Italy. (Ironically, Warton's DC-4M was parked next to Katlin's C-46 at Albenga). Katlin and Nelson had planned to use the C-46 on a series of flower charters to Scandinavia. But neither Katlin, nor Nelson, were yet ready to start operations; in any case, Katlin had just been tasked with taking a CIA DC-7 to Tokyo and therefore was forced to turn Warton's offer down, but he did suggest that Orvis Nelson might like to join Warton instead. As an aside to these events, Burt Katlin had a "bone to pick" with Warton. Just before Hank visited Katlin, "somebody" had broken into his C-46, removed the UHF radio and re-installed it into the DC-4M! However, "picking bones" was never a serious issue between this group of flyers.

Shortly after midnight on 8 October, a Swiss-registered Piper Aztec (HB-LDG) landed at Zestienhoven with four passengers aboard, one of whom was the arms dealer, Paul Favier. The aircraft stayed overnight before departing the next morning on its return to Geneva. In the meantime, Warton had received his orders as well as an advance cash part-payment and the Dutch were satisfied with the flight and cargo documentation. Throughout the following day, the DC-4M was loaded with crates of guns and ammunition.

The devious route taken by Warton and Nelson is well-known, as are the details of the crash which left Warton with back injuries that dogged him for the rest of his life. Local Cameroonian natives, who were first at

the remote crash site near Garoua, travelled to fetch a doctor who was brought up by canoe and an overland trek. The same natives made stretchers out of wooden lids from the ammunition boxes but many of the stretcher-bearers were of different height and as the two injured pilots were hoisted above the heads of the bearers the journey was decidedly uncomfortable.

Charged with various offences relating to the aircraft and its cargo, Warton and Nelson faced a frustrating wait for a decision on their future. They were allowed movement around Garoua on the condition that the two pilots did not attempt to leave the country. They argued furiously. Nelson suspected Warton of holding back money he felt was owed to him. Eventually, Warton's girl-friend, Ziggy Harder, flew in to Douala and promptly booked a return passage for herself aboard a ship bound for Europe. She managed to spirit Warton aboard on the pretence that he was just a visitor, but he remained in Ziggy's cabin when the ship sailed. Hank Warton was back in business.

By June 1967 the situation in Eastern Nigeria had changed dramatically. The Region had declared itself as the independent state of Biafra and civil war had broken out. Biafra urgently needed weapons and Hank Warton was again in a position to supply. He then set about acquiring an L-1049G and turned this time to his one-time partner, George Batchelor. Batchelor had purchased the entire Iberia fleet and had them registered to his company, International Aerodyne Inc. They were all re-registered in the US and sanctioned for a "one-way" transatlantic flight to Miami for certification etc. Warton selected the former EC-AQN, now registered as N8025.

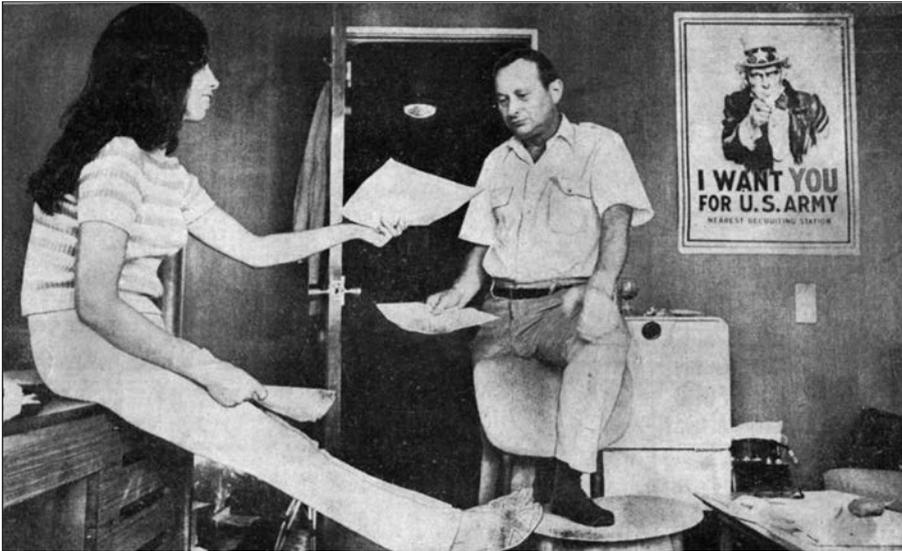
In the meantime, the new owner set about recruiting a crew. Again, first to get a call was Burt Katlin, still living in Belgium and still flying for the CIA. Warton invited Katlin down to Madrid to discuss ferrying the L-1049G from Madrid to Lisbon. Larry Raab, another Miami-based American but at the time employed as a line Captain with Lufthansa, also took a call from Warton. Whether or not the crew members were aware that the aircraft was authorized only to fly Madrid to Miami was immaterial; their brief was to fly it to Lisbon.

Warton, Raab and Katlin checked into an exquisite Madrid hotel on 28 June 1967 where they were later joined by the rotund but jolly Paul Favier. It was Favier who was now effectively financing the purchase of the Iberia L-1049G, having agreed to re-imburse Warton for the loss of the ill-fated DC-4M. Favier turned up, Warton later recalled to the author, with a "cigar-box containing in excess of \$100,000" – enough money to purchase the former Iberia L-1049G. With business concluded, Favier then insisted on topping off the evening with an elaborate dinner with "framboise" eau de vie served in full ten-ounce drinking glasses. Even to the three Americans, the Frenchman's ability to take in all of this "potent digestive" and then ask for more was nothing short of staggering.

On the following day the crew ferried the L-1049G the short distance to Lisbon where, after landing and completing post-flight checks, all three checked into a small hotel in the coastal resort of Estoril and began planning the flight south to Biafra. Burt Katlin, a long-time navigator who knew Africa well, plotted a course that involved refuelling in Bissau and then on to São Tomé island, a route that kept them well away from Biafra and without requiring diplomatic over-flight clearance from any other African countries.

With flight arrangements completed, Hank Warton left the group in order to meet with Favier and finalise the financial arrangements. Larry Raab and Burt Katlin, in the meantime, checked into Lisbon's Ritz hotel and prepared to enjoy some luxurious accommodation until Warton returned.

When Warton did return the three-man crew filed a flight-plan, boarded the aircraft and settled to depart. But just minutes before their scheduled departure, they were instructed to return to the airport terminal where they were told that the Portuguese airport authorities had refused to allow a departure until Warton had met with a representative of the US Embassy in Lisbon and granted US Government approval for the operation. The concern of the US Government was that a certificate had been issued solely for a ferry flight from Madrid to Miami, but had felt obliged to withdraw it when they learnt that the aircraft would be flying commercially between Portugal and Biafra. At that point Hank Warton went off to find Favier in order to resolve the situation and in a manner that would be acceptable to the Portuguese.



Left: Hank Warton ran his Biafran gun-running operation from Suite 228 at the Tivoli Hotel, Lisbon with Ziggy Harder, his long-time secretary and “companion”. Both are seen in relaxed mode, in August 1968. They were together for over 30 years, during which Ziggy lost count of the number of times that she had “gotten Hank out of some jam or other”. The wall poster suggests that “Uncle Sam” wanted him, but the Biafrans needed him even more. (M.I. Draper Archive)

The Vatican Incident

The incident opened with a planned visit to Biafra by two Papal delegates, Mnsgr Dominic Conway (then Rector of the Irish College in Rome) and Mnsgr Georges

Rochau (Director, International Affairs of Secours Catholique in France). Both men had failed in their attempt to be flown in to Biafra by the International Red Cross via Lagos. On learning of this, Biafra-based missionary, Fr Anthony Byrne and Bishop Godfrey Okoye (Catholic Bishop of Port Harcourt) both flew north to Lisbon to meet with the Monsignors. Byrne persuaded Warton to take the Papal delegates aboard an arms flight about to depart Lisbon but, fearing the fall-out should the press hear about it, they refused to travel aboard an aircraft that was fully-loaded with arms and ammunition.

Meanwhile, Larry Raab and Burt Katlin waited at the Lisbon ‘Ritz Hotel’ for several days without any monetary compensation apart from having their room and board paid for. They ordered the best dinners that the Ritz restaurant could offer. As Katlin later recalled, “a stream of waiters clad in black ties and tails served us each night with such delicacies as cold and delicious Gazpacho, the best prepared Portuguese salads and steaks, crêpe Suzettes flambé with ice cream, good Portuguese Dão wines, “eau de vie” or Cognac and finally a Cuban cigar!” (Hank Warton later recalled the distress he encountered over the extravagance of that first hotel bill!)

Several weeks passed before Hank Warton managed to satisfy the Portuguese authorities with what he was led to believe was a genuine Mauritanian registration (5T-TAC), secured by Paul Favier. By the time they were ready to go it was mutually agreed that the navigator role had become superfluous at which point Burt Katlin returned home to Belgium.

In operating the Lisbon-Port Harcourt, Biafra arms run with 5T-TAC, Warton was making two round trips per week. But the Biafrans, now fighting a war on three fronts demanded that Warton step up the frequency of flights. Warton needed more aircraft and purchased a former TAP L-1049G (to become 5T-TAF). Towards the end of 1967, he acquired three L-1049Gs from Lufthansa (which became 5T-TAG, 5T-TAH and 5T-TAK) at a knock-down price of \$35,000 each. The price paid reflected his having friends within Lufthansa who had the authority to accept whatever Warton was prepared to offer. He hired more mercenary pilots and flight engineers. Business was good but it wasn't long before he faced his first setback with the loss of his first L-1049G, on 8 February 1968.

Warton tried a different tack. Until that time no one organisation or body had ever chartered an entire aircraft on the airlift to Biafra but he did offer one of his L-1049Gs for the exclusive use of the Papal mission if CARITAS Internationalis paid \$25,000 and that the Biafran Government agreed to the flight. Surprisingly, CARITAS agreed to the offer, but Mr Ikpa, the Biafran representative in Lisbon, flatly refused to agree to any exclusive charter flight arrangement. Bishop Okoye then tried to secure approval by telex between Lisbon and the Biafran Government, now based at Umuahia. Okoye's quest was frustratingly delayed by indecisive Biafran ministers. However, it became known that a large quantity of drugs and medicines was sitting at Lisbon awaiting shipment to Biafra; they asked to be flown south with the drugs.

On 5 February 1968 the drugs were loaded aboard L-1049G 5T-TAG. The aircraft was not full to capacity and as the Monsignors embarked, Ikpa insisted that the load be made up with Biafran Government supplies and that other Biafran passengers should also travel aboard the flight. Reasoning that because CARITAS was funding the flight, the Papal delegates not unnaturally disagreed with the Biafran's instruction. The Biafrans, who were becoming increasingly frustrated with the delay, then refused to allow the aircraft to depart Lisbon unless it was



Left and Right: After the explosion at Bissau on 2 June 1968, all that remained of 5T-TAC was its characteristic triple fins. Was it sabotaged in order to deny the Biafrans their Fouga Magister jets? Who knows! (Henry A. Warton)





Above: L-1049G 5T-TAH lays over at São Tomé in August 1968 having just returned from Uli after sustaining damage there in a heavy landing several nights beforehand. The marks 'N8025', applied for the last of the Warton-International Red Cross flights, could clearly be seen beneath the paintwork for a long while afterwards. For a while it was used for spares until made (just) airworthy for one final flight out to Abidjan on 28 September - with its No.2 propeller feathered. (Terry Spencer)

fully-loaded. At the last minute, and in order to appease the Biafran instruction, the available space was filled with dried milk powder brought up from the CARITAS-Portugal store. The L-1049G was finally allowed to leave Lisbon.

As the aircraft rounded the West African coastline an engine fire forced an emergency landing at Bissau. The Papal delegates disembarked and the entire cargo was unloaded so that the aircraft could return empty to Lisbon on three engines for urgent repairs. A second L-1049G (5T-TAC) arrived at Bissau shortly afterwards and which was also bound for Biafra. The delegates were offered seats aboard this aircraft to ensure they kept to their schedule but a problem arose over the nature of the cargo inside this second aircraft. An inspection revealed it to contain large bales of cloth, sacks of salt and a large number of metal boxes. The crew convincingly claimed that the boxes contained new Biafran banknotes and not ammunition. Thankfully, the cargo also included sacks of milk powder from the CARITAS-Portugal store as well as several important Biafran passengers, including Dr M.I. Okpara, the former Eastern Nigeria Premier. The delegates, keen to complete their mission to Biafra, reluctantly agreed to travel on the aircraft and were flown on to Port Harcourt where the aircraft landed safely in darkness in the late evening of 7 February.

After unloading was completed the L-1049G (5T-TAC) took-off from Port Harcourt and routed back to Bissau to pick up Father Kilbride, Sister Michael Joseph and the cargo of drugs and American milk powder that had been unloaded several nights beforehand. On the night of 8 February 5T-TAC, with a three-man crew (Captain "Roy Ball", co-pilot George "Robbie" Robertson and a Flight Engineer, Nino Cicerino) returned to Port Harcourt. Unbeknown to the crew, heavy rain had fallen a little earlier and the aircraft touched down with one main-wheel on wet earth at the start of the runway. According to missionary Father Doran, who watched the landing, the dragging action of the mud tore off the main-wheel and part of the aircraft's undercarriage. The Super Constellation tilted, an engine became detached, and 5T-TAC eventually came to rest upside down with its damaged wing in flames. Ground staff at Port Harcourt fearing the aircraft to be carrying explosives, all fled. To the relief of onlookers Father Kilbride, Sister Joseph and the crew emerged unscathed and then helped to extinguish the fire and save some of the cargo of drugs and medicines.

The Model 'D' Super Connie (5T-TAC)

The one disadvantage of the three Lufthansa L1049Gs was that they were passenger variants. The aircraft lost at Port Harcourt, 5T-TAC, was also a -G variant although had been fitted with a rear freight door whilst with Iberia. Warton needed a replacement freighter version, an L-1049D or L-1049H.

In Miami, Hank's partner, Bertram Peterson, was known to be carrying out some rudimentary maintenance on an Argentine-registered L-1049D (LV-ILW), owned by Marshall Landy. (It is highly likely that this particular aircraft had been upgraded to L-1049H status during its service with Seaboard & Western Airlines and thus offered a slightly increased range over the standard L-1049D). Landy and Warton had long enjoyed a close and trusted relationship, so much so that Warton cabled Peterson with instructions to conclude a deal with Landy. He then cabled another old friend, Derick "Red" Mettrick, to ask if he would flight test the aircraft and, if there were no problems, to then ferry it to Lisbon. Mettrick agreed and test-flew the Super Connie on 11 March 1968. Declared fit for purpose and with a negotiated price tag of \$12,000 for a lease-purchase arrangement, Warton then arranged for a loan from his Swiss banker, Hans Seligman-Schurch, to finance the deal with Marshall Landy. The bank issued a cheque four days later for \$8,921.55 that was broken down as follows:

- (i) \$5,000 one month sent in advance. Date to start when aircraft is ready for service. Mr Landy will be notified.
- (ii) \$2,648 to cover the gasoline bill for ferry trip (from Miami) to Lisbon and which will be adjusted when the bill is received from Mr Landy.
- (iii) \$500 as an advance to Captain Mettrick for the ferry trip from Miami.
- (iv) \$773.55 to cover "your bill for miscellaneous expenses"

Warton also arranged for the aircraft to be fully serviced by T.A.P at Lisbon and agreed that "as soon as North American Aircraft Trading Corporation (Warton's company) receives the bill from T.A.P we will make adjustments and forward your check for the balance due on the original \$12,500 to get the aircraft ready."

Accompanied by his wife, Janette, "Red" Mettrick, flew LV-ILW out of Miami International on 12 March and headed out to St Croix in the Leeward Islands. Normally Mettrick would have routed through San Juan, Puerto Rico but previous experience of San Juan airport was of a chaotic and normally lengthy refuelling process; St Croix was far better organised. And Mettrick was in a hurry. From St Croix, Mettrick flew 'ILW to Sal, on the Portuguese Cape Verde Islands and where the aircraft took on more fuel – sufficient for the final leg north to Lisbon. It was during the stopover at Sal that Mettrick carried out Warton's final instruction – to change the registration letters to 5T-TAC. It was the second of Warton's aircraft to carry such marks. Immediately after landing at Lisbon, Warton had the aircraft moved into T.A.P's maintenance hangar essentially to fix fuel leaks in tanks 2A and 3A but there were a number of other malfunctioning items to attend to.



Left: Routine maintenance, especially with engines, was often carried out "alfresco", especially on São Tomé island where this view was taken in early September 1968. The four-bladed propeller instantly identifies this as one of Warton's DC-7Cs but his Super Constellations were treated in exactly the same manner. (M.I. Draper Archive)

Warton Super Connies landed; one was a W.C.C. relief flight that had diverted to São Tomé on the night of 16/17 May due to heavy fighting around Port Harcourt airport; the other an ammunition flight. In spite of this, Warton was still having to cancel flights, often due to the poor state of his aircraft. By June 1968 Warton had also been forced to cancel five planned Red Cross flights and the W.C.C. schedule was similarly severely affected. By 24 April only four W.C.C. flights had taken place; two more took place on 3 June and 12 June 1968, between them carrying 37 tons of relief material. Warton made one more W.C.C L-1049G flight in June. An eighth W.C.C flight (the 6th from Lisbon direct to Biafra) departed Lisbon on 6 July – it should have left on 3 July but Warton demanded some proof of payment before allowing his crew to take-off.

Warton counter-claimed (up to his dying days) that a couple of 5-gallon acid bottles had inadvertently been left beside the freight door and had ignited under direct sunlight. To add colour to the tale is the fact that the aircraft's captain, a well-known South African mercenary pilot, made a hasty exit from Bissau and was never seen again. (It was later suggested that he had fled to Lisbon to collect his bounty!)

Warton's Relief Flights

By March 1968 Biafra's civilian population was facing a dire food shortage and likely starvation. Refugees, fleeing from the Nigerian Army added to Biafra's problems. It was not just arms and ammunition that was sorely needed, but food and medicines as well. Warton had exclusive rights to flights into Biafra by "owning" the landing codes for Biafra's airport at Port Harcourt (and later at Uli Strip after Port Harcourt fell). It was a situation that haunted and frustrated the relief agencies. With no alternative but to concede to Warton's monopoly, the Protestant World Council of Churches turned to Warton and chartered an L-1049G from Lisbon to Port Harcourt on 22 March 1968. Catholic priest, Fr Tony Byrne, now based on the island of São Tomé, also negotiated a deal with Warton for space aboard his aircraft. With the full support of the Vatican agency, CARITAS Internationalis, Byrne flew to Lisbon to meet Warton. The deal involved "blocks of six charter flights at \$3,800 per flight" whereupon Warton agreed to undertake one free flight for every six flights he completed. The first Catholic/Warton flight took place during the night of 26/27 March 1968 when an L-1049G flew relief material from the island to Port Harcourt.

The International Red Cross (ICRC) had managed to get a handful of flights into Biafra, but as a result of Geneva wanting to do everything "by the book"; the flights were achieved only after overcoming complex and time-consuming diplomatic and political difficulties. (Fr Byrne later recalled the ridiculous politics that emerged from Geneva. "After all", he claimed, "if your neighbour's house is on fire, you don't seek his permission to help put it out!") Eventually, the Red Cross was also forced to turn to Warton and signed a contract for five flights from Fernando Póo to Biafra. Warton positioned an L-1049G to the island and the first Red Cross flight took place on 8 April 1968.

The impounding of 5T-TAF in Malta and the loss of 5T-TAC at Bissau left Warton with just three aircraft, 5T-TAG, 5T-TAH and 5T-TAK. None of the three were without snags and Warton was constantly facing delays and cancellation of flights. The situation in Biafra was not made easier following the capture of Port Harcourt airfield by Nigerian forces. But for a length of road near the village of Uli which was turned into a landing strip, Biafra was now effectively cut off from the outside world.

Uli Strip came into use on the night of 20/21 May 1968 when two

The Loss of 5T-TAG

In order to help restore confidence in his operation, Warton allocated one of his L-1049Gs (5T-TAG) exclusively for short shuttles between São Tomé and Uli. Flights by 'TAG took place as follows:

14.6.68	1 shuttle	Rice, salt, beans, medicine, petrol, "Fathers' Chop" and 10 bicycles.
15.6.68	2 shuttles	Unspecified cargo
16.6.68	2 shuttles	Unspecified cargo
17.6.68	1 shuttle	Salt
18.6.68	2 shuttles	Salt on both flights
19.6.68	2 shuttles	One flight with salt; one flight with beans
20.6.68	1 shuttle	Drugs and medicines

In the meantime, and having had to cancel a number of Red Cross relief flights, Warton was in danger of losing his ICRC contract. By mid-June 1968 only nine Red Cross flights had been completed and despite the risk of upsetting the Churches and the Biafran military, Larry Raab (flying 5T-TAH) took-off from São Tomé at 11:00 on 28 June for the short hop to Fernando Póo. Loading was completed by late afternoon allowing Raab to depart the island just after dusk to make the 10th ICRC flight to Biafra. Raab then flew from Uli direct to Lisbon. On the following night, 5T-TAG was flown from São Tomé to Fernando Póo by Augie Martin to operate the 11th shuttle. After a quick turnaround at Uli, Martin flew 5T-TAG back to São Tomé, Warton having now set aside 5T-TAG and Augie Martin's crew to concentrate solely on ICRC flights. The 12th Red Cross flight was scheduled for 30 June and, as usual, Martin flew 5T-TAG to Fernando Póo during the afternoon to take on 10½ tons of relief material. When the aircraft arrived overhead Uli at around 20:20 hrs, Augie Martin found himself facing tropical thunderstorms but chose to attempt a landing anyway. Unfortunately, Martin turned onto final approach to Uli at too low an altitude and the aircraft struck rising ground about 1½ miles south of the Strip. Augie Martin, his co-pilot Jesse Meade and his flight engineer Thomas "Bull" Brown were killed instantly, as was Martin's wife who was riding as passenger. It is almost inconceivable that Martin and his crew were the first fatalities on the airlift since it began almost a year beforehand.

Red Cross & The Churches

The next ICRC flight, the 13th was flown by L-1049G 5T-TAH, but as the investigation into the crash of 5T-TAG got under way so the findings had wide repercussions, not least that the aircraft had been carrying a false registration. The International Red Cross challenged Warton and insisted that any further flights should be with legally-registered aircraft. Warton, of course, still had paperwork showing that L-1049G N8025 (the former Iberia aircraft that had subsequently crashed at Port Harcourt) was legally registered to his company and told the São Tomé

crews to repaint 5T-TAH with the marks N8025. So, when the erstwhile 5T-TAH landed at Fernando Póo on 15th July (as N8025) to perform the 14th ICRC flight to Biafra, everything appeared to be "above board".

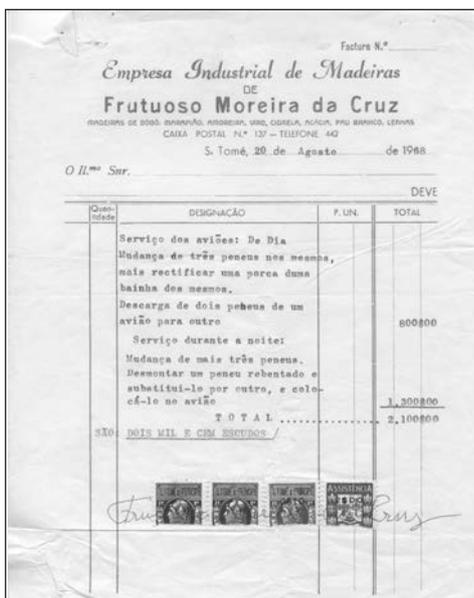
The church operation from São Tomé continued to use Warton's aircraft, whether legally registered or not but, frustrated at the infrequency of Warton's operation, elected to purchase a fleet of former Sudflug DC-7Cs. The first of these arrived at Lisbon towards the end of July 1968 and as more arrived so DC-7Cs, albeit crewed by Warton's pilots in view of the fact that Warton had exclusive ownership of the Uli Strip landing codes, were slotted into the São Tomé operation.

In the meantime Warton, now down to just two L-1049Gs, had started a new series of flights for the churches on the night of 7 July 1968. Fr Byrne went in to Uli on the first flight, flown by Warton's chief pilot Larry Raab, and remained on board for the onward flight to Lisbon. Warton's other L-1049G also flew in to Uli that night with five tons of tuna fish and five tons of beans. This aircraft returned empty to São Tomé and while Byrne was away, Fr Billy Butler organised the rosters and cargo operation. A third CARITAS flight took place on the night of 8 July, carrying 10 tons of tuna fish but no flights were made on the nights of 9th, 10th, 11th, 12th July due to non-availability of aircraft.

On 13 July 1968 a Warton L-1049G was flown from Lisbon to Uli with a cargo of baby-food from the UK. The flight, chartered by Oxfam for £10,000, later flew empty south to São Tomé to resume the church flights.

On 14 July 1968 Capt Malcolm flew a Warton L-1049G from São Tomé to Uli with a cargo consisting of 4½ tons of tuna, 14 bicycles, 90 parcels for Irish priests, 2 tons of salt, car batteries, 2 drums of petrol, 4 cartons of cheese, 4 drums of kerosene and a bale of blankets. This was Warton's 28th flight for CARITAS but on its approach to Uli the aircraft came under heavy fire from offshore Nigerian naval boats. The aircraft landed safely at Uli, but when it returned to São Tomé the crew refused to fly again and some crew members resigned. On the following day, all of Hank Warton's crew members on São Tomé island – except one who remained with the L-1049G - flew back to Lisbon on Warton's other aircraft.

On 22 July 1968 Larry Raab arrived at São Tomé with a new crew for the L-1049G left on São Tomé island since 14 July. Raab, together with Fr Billy Butler then flew the L-1049G into Uli via a new route around the east of Mount Cameroon. The flight landed safely but it had taken 2.15hrs instead of the usual 1.40hrs. The detour ensured safety but added crucial time to the flight. The new route in to Biafra was not continued with.



On 26 July 1968 Fr Butler recorded 7 tons of milk powder being flown in to Uli for the WCC feeding stations inside Biafra. The aircraft flew on to Lisbon to resume the arms flights. In the meantime, the church's newly-acquired DC-7Cs began relief flights from São

Left: Tyres were a constant headache for the L-1049Gs, including 5N-07G. This bill describes changing three tyres and the fixing of a bolt in one of the wheels (costing 800Esc) whilst during the night three more tyres were replaced (1300Esc), plus one tyre that is thought to have burst on landing at Uli Strip.



Above: São Tomé, December 1968 and some of Hank Warton's stock of "useable" tyres are still stored against the old hangar wall. In the background is the Braathens DC-6B LN-SUD, then operating for the joint church relief airlift. (Michael I Draper)

Tomé to Uli, the first of which flew in 8 tons of tinned meat on the night of 28 July. Gradually, the L-1049Gs were taken off the WCC and CARITAS relief roster. The 31st CARITAS flight, on 29 July, was made by an L-1049G and flew in hospital equipment, bicycles, salt and 8 tons of milk powder. Further L-1049G CARITAS night flights are known to have been made on 30 July (the 32nd), 31 July (33rd and 34th), the second shuttle coming under heavy anti-aircraft fire. Quick loading and unloading led to three shuttles on the night of 1 August (36th, 37th and 38th flights), at least two of which were by L-1049Gs. The next L-1049G flight for CARITAS, the agency's 46th was made on 4 August when 5T-TAH flew in 10½ tons of flour and sugar. That marked the last L-1049G Super Constellation relief flight as Warton was by now under enormous pressure to increase his arms flights.

The Grey Ghost (5N-07G)

One Super Connie that had operated the Lisbon-Biafra shuttle from the earliest of days was, in fact, owned by the Biafrans and widely referred to as the "Grey Ghost". A former Air France L-1049G, it operated with the ludicrously illegal marks, 5N-07G and did so under the harshest of conditions yet with the minimum of maintenance. For much of its early days on the Biafra run, it was crewed by a group of French mercenary pilots. When the Biafran Air Force F-27 Friendship crashed over Lagos in November 1967 (see Archive, Summer 2011 issue) the Biafrans lost almost all of their regular "Grey Ghost" crew. As a consequence, the L-1049G stood idle on São Tomé island for several months. It was said to be "in a deplorable condition with one engine failed, 32 bullet and shrapnel holes, worn-out tyres, an inoperative electrical and hydraulic system and hardly a radio or instrument in working condition." Keen to get the aircraft back into service on the arms run, the Biafrans asked Hank Warton to take over responsibility for it. Despite its appalling condition, Warton did manage to convince several of his pilots to ferry the "Grey Ghost" back to Lisbon on three engines, a task not unentirely involving hard cash!

With holes patched, engine repaired and dead instruments replaced, 5N-07G was returned to service in June 1968. The flight log for the "Grey Ghost" reveals that runs to Biafra took place as follows:



Left: Old friends reunited. Seated at the pool-side beside Hank Warton's Miami apartment are Bob Major (left), Hank Warton (centre) and Burt Katlin (right). All three accused each other of having tried to stitch each other up at some time or other, but all three remained the best of pals throughout! The author and Lasse Jensen (producer of the film, "Jesus Christ Airlines") stand behind them. One of the author's interviews with Hank was interrupted by a telephone call to report that his yacht, suitably named "Hanky Panky" had been seized in the Bahamas with 20,000 illicit cigarettes on board. Hank was still "at it" to the very end! (Michael I Draper)

4.6.68 Departed Lisbon am for round trip Lisbon-Bissau-Uli-São Tomé, and one extra São Tomé-Uli shuttle before returning direct to Lisbon. Crew: Walter Wright, George Robertson, 'Ozzie' Nübler and "Bull" Brown.

8.6.68 Departed Lisbon am for round trip Lisbon-Bissau-Uli-São Tomé-Lisbon, Biafra; returned to Lisbon 9.6.68.

26.6.68 Departed Lisbon am for round trip Lisbon-Bissau-Uli-São Tomé, with one extra São Tomé-Uli shuttle and on to Lisbon. Crew: Walter Wright, George Robertson, 'Ozzie' Nübler and Richard Holzman.

6.7.68 Departed Lisbon am for round trip Lisbon-Bissau-Uli-São Tomé-Lisbon. Crew: Reid, R. Grider, 'Ozzie' Nübler and Richard Holzman.

11.7.68 Departed Lisbon late pm for round trip Lisbon-Bissau-Uli-São Tomé-Lisbon. Returned to Lisbon 13.7.68. Crew: R. Grider, Walter Wright, Daniell, Xanthopoulos.

13.7.68 Departed Lisbon late pm for round trip Lisbon-Bissau-São Tomé-Uli-Lisbon. Crew: R. Grider, McAllister, John Fluney and Richard Holzman.

Between 14.7.68 and 23.7.68 5N-07G made a flight south to Biafra and on to São Tomé.

23.7.68 Operated a São Tomé-Biafra-São Tomé shuttle. Crew: McAllister, Pearce, 'Ozzie' Nübler, Lucas. Later returned to Lisbon.

27.7.68 Departed Lisbon late pm for round trip Lisbon-Bissau-São Tomé-Uli-São Tomé-Lisbon. Returned to Lisbon 30.7.68 with faulty ADF. Crew: McAllister, Pearce, 'Ozzie' Nübler, Lucas. Return crew: McAllister, Pearce, Rex Holding, Kruger

2.8.68 Departed Lisbon am for round trip Lisbon-Bissau-São Tomé-Uli-São Tomé-Lisbon. Returned to Lisbon 5.8.68. Crew: Bob Major, Miller, Rex Holding, Bob Archer

18.8.68 Departed Lisbon am for round trip Lisbon-Bissau-São Tomé-Uli-Lisbon. Returned to Lisbon 21.8.68. Crew: Walter Wright, Manuel Reis, Darling, Patrick Quinlan

23.8.68 Departed Lisbon am for round trip Lisbon-Bissau-Uli-São Tomé-Lisbon. Returned to Lisbon 24.8.68. Crew: Manuel Reis, George Robertson, Darling, Jack Crosson

Right: L-1049G 5N-07G, Biafra's "Grey Ghost" flew from Lisbon to Bissau on 18 August 1968 on the first leg of a round trip to Uli Strip. At Bissau, she took on 16,590 litres (3,649 Imp gallons) of 115/145 Avgas, enough to make Uli and then the hop to São Tomé. Departure from Bissau was timed to arrive over Uli under cover of darkness. Note that the client was "Capt Warton", resident at the Estoril Sol Hotel, one of Portugal's finest coastal hotels at the time. The fuel bill is signed for by Warton's pilot, Walter Wright.

25.8.68 Departed Lisbon am for round trip (plus shuttle) Lisbon-Bissau-Uli-São Tomé-Uli-São Tomé-Lisbon. Returned to Lisbon 28.8.68. Crew: Manuel Reis, George Robertson, Darling, Jack Crosson

1.9.68 Departed Lisbon am for round trip (plus extra shuttle) Lisbon-Bissau-Uli-São Tomé-Uli-São Tomé-Lisbon. Returned to Lisbon 3.9.68. Crew: Manuel Reis, George Robertson, Darling, E. Heyse.

5.9.68 Departed Lisbon am and routed Lisbon-Bissau-Uli-São Tomé with extra shuttle São Tomé-Uli-São Tomé-Lisbon. Returned to Lisbon 6.9.68. Crew: Manuel Reis, George Robertson, Darling, E. Heyse

8.9.68 Departed Lisbon am and routed Lisbon-Bissau-Uli-São Tomé with two extra shuttles São Tomé-Uli-São Tomé-Uli-São Tomé-Lisbon. Returned to Lisbon 10.9.68. Crew: Manuel Reis, Walter Wright, Rex Holding. Crew change at São Tomé: Manuel Reis, Walter Wright, 'Ozzie' Nübler

11-18.9.68 Departed Lisbon am and routed Lisbon-Bissau-Uli-São Tomé with two extra shuttles São Tomé-Uli-São Tomé-Uli-São Tomé-Lisbon. (See text). Crew: Manuel Reis, Pearce, Jack Crosson, Bob Archer

Although Hank tried to have his flights depart Lisbon before 06:00 (and most did), departures did tend to depend on the aircraft's state of serviceability and Warton's ability to roster a complete crew. There were other factors that delayed flights, such as adverse weather over Biafra. Landing a Super Connie on a roadway in heavy rain during a black African night was not for amateurs. There were other operational difficulties. On 1 September, for example, 5N-07G took-off from Lisbon at 06:18 (local) and landed at Bissau at 11:15 where one of Warton's own L-1049Gs (5N-TAH) had landed with engine trouble. As there was space aboard the "Grey Ghost", a proportion of TAH's cargo of ammunition was speedily transferred across. Refuelled and loaded to the limit, 5N-07G departed Bissau at 12:30 and flew direct to Biafra's Uli Strip where it landed under cover of darkness some

AVIACAO		Nº 1106	
Bissau 18.8.68		AVIACAO	
Capitão	Estoril Sol - Estoril	Lisboa	1107G
115/145	16540	11563	11933
Lisbon		Bissau	
1140	30020	3038150	
1260	300870	300980	
		8200	8330
16540		3113	
Walter Wright		Walter Wright	

THE SHELL COMPANY OF WEST AFRICA LIMITED
ANGOLA & S. TOMÉ

SHELL AVIATION SERVICE

TO	Receipt N° 2180
	Accounting Ref N°

AIRCRAFT SERVICE STATION S. TOMÉ DATE 19. 8. 1968

Cover/Comps N°	Expiry Date	AIRCRAFT Type <u>COAST</u> Reg N° <u>5N-07G</u>
Owner's Name	Owner's Address <u>CAP. RAAB</u>	
Pilot's Name		

SHELL PRODUCTS	QUANTITIES			AMOUNT	
	Galle	Litre	Words	Net Price	Total
Fuel	<u>115/145</u>	<u>5905</u>	<u>cuco mi uerocuco e cuco uita</u>	<u>1/342</u>	<u>20 195,00</u>
Engine Oil	<u>W-150</u>	<u>335</u>	<u>Singabo e tanta e</u>	<u>1/347</u>	<u>1990,00</u>
Special Products			<u>Tarea do Transporta</u>		<u>160,00</u>
			<u>Passa de 6 cab 402 20</u>		<u>177,00</u>
DUTIES, TAXES & FEES INCLUDED IN ABOVE PRICES					
Product	Local Currency	Rate of Exchange	Price	Rate Redeemable at Time of Delivery	Total
Fuel					<u>22 548,00</u>
Engine Oil					
Special Products					

Supervisor's Comments: PERMITS WITH TARE DE 6 CAB 402 20

Signature: [Signature]

I acknowledge receipt of the above quantities
Signature: [Signature]

Outboard <u>2400</u>	Maint	Alter	Stall N°
Serviced <u>2405</u>	Rebuild	Before	Vehicle N°
Completed <u>2440</u>	Difference		Supervisor's N° <u>1 Sealup</u>

Aircraft Coding From B Going To B

MOB. AV 66

Left: 5N-07G took on 5,905 litres of fuel on 19 August 1968 for a São Tomé-Uli-São Tomé shuttle. On this occasion, Warton's chief pilot, Larry Raab, is shown as the owner! Note that the receipt states that the aircraft has come from "B" and going to "B" (a rather nebulous reference which could have implied Bissau or Biafra).

The Final Countdown

There is little doubt that the Biafrans wanted to sever their link with Warton. The author witnessed a heated showdown with Biafran officials in the Pousada Gerónimo bar on the night of 15 August. Clearly Warton was now on borrowed time and was finding it difficult to make up lost flights. L-1049G 5T-TAK landed at São Tomé on 3 September with a full cargo of ammunition. It was flown in to Biafra that night just as the Biafran Army, now virtually out of bullets, was desperately trying to defend the town of Aba. The Biafrans were forced to retreat, allowing Nigerian troops to march into Aba almost unopposed. Umuahia, Biafra's nerve centre and just a few miles to the north, was now seriously under threat. Within days, Hank Warton was ordered to fly down to São Tomé island and explain his position. He did so on 16 September but his explanations fell on deaf ears. By now, the Biafrans had organised a new arms supply chain through Rhodesia's Jack Malloch. Within hours, Warton was ordered off the island, together with his two L-1049Gs (5T-TAH and 5T-TAK) by none less than the island's Governor. Henry Arthur Warton had ridden his luck and lost.

Warton was acutely aware that his role as Biafra's principal runner of guns and ammunition was ending. His L-1049Gs were technically owned by his company, North American Aircraft Trading Corporation, but just before the end he undertook some last minute transactions. He "sold" L-1049G 5T-TAK to his other company, ARCO Ltd on 2 September 1968 for \$15,000. It was sold "as is, where is". He also "sold" L-1049G 5T-TAF to ARCO Ltd for \$38,000 on the same date – despite it having languished on the island of Malta for seven months. Warton's other L-1049G, 5T-TAH, remained grounded at Abidjan but was sold by North American Aircraft Trading to the Raab-Setton Company (of 7 Rue de l'Isly, Paris 8e) on 17 October 1969 for \$28,000. The only other development occurred on 9 September 1970 when 5T-TAF was sold by ARCO back to North American Aircraft Trading Corporation. But, as everybody knows, it never left the island.

Although Warton had ceased to be involved with arms flights to Biafra, his DC-7C fleet, with his crews and now legally registered in Bermuda, continued to be used on the Churches relief airlift until February 1969.

And what became of the "Grey Ghost"? After arriving at Lisbon on 18 September 1968, 5N-07G remained at Lisbon for a couple of months to undergo some essential repair work. Several characters then became key figures in the new operation, often referred to as "Phoenix Airlines". Former Warton pilot, David Brown, on hearing that the Swedish operator Internord had gone bust, called one of the redundant pilots, Sigvard Stenkilsson with an offer to join the Biafran operation as a First Officer. Stenkilsson flew down to Lisbon on 15 December 1968 only to be met by Manuel Reis. Since Stenkilsson had never seen a Constellation before, let alone fly one, he underwent a checkout flight with Reis on a short ferry from Lisbon to Faro, now the base for Biafra's arms runs. Later the same day, Reis and Stenkilsson flew 5N-07G out of Faro for a run to Biafra but the aircraft suffered an engine failure, necessitating an emergency landing at Bissau. During the night, its cargo was transferred to another "Phoenix" Super Constellation (almost certainly HP-475) before Reis flew 5N-07G back to Lisbon on three engines. It is strongly suspected that this was, in fact, the final flight of the "Grey Ghost".

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Acknowledgement

The author is grateful for the help of Luis Tavares in translating some of the Portuguese documents.

eight hours later. Empty and in need of fuel, Robertson flew 5N-07G out of Uli and landed safely at São Tomé at 01:10 on the morning of 2 September. The crew rested at the Pousada Gerónimo throughout the day before flying out at 17:15 for a brief shuttle into Uli, carrying a mixed cargo. It returned to the island at 00:15, in the early hours of 3 September. Again, fully refuelled and with several Biafran Government officials on board, Manuel Reis, flew 5N-07G out of São Tomé at 02:00 for the long haul north to Lisbon.

Apart from Uli Strip being little more than a converted roadway in Biafra's bush, there were other dangers. One unexpected event befell 5N-07G on the night of 11/12 September when it departed Lisbon with a flight-plan to Bissau and Uli. Manuel Reis (a former T.A.P. L-1049G captain who had had the distinction of having flown the last Lisbon to Portuguese Goa flight) was again in command with Pearce, Jack Crosson and Bob Archer making up the crew. But as Reis approached Biafra, he was warned of difficulties at Uli and decided instead to divert to São Tomé where he landed at 22:25. The reason for Uli controllers closing down was not for the usual reason of bad weather, but was based on fears that the Nigerian Army was within shelling distance of the Strip. For a day, Reis and his crew rested on the island until news came through that Uli was back in operation. The Super Connie took-off from São Tomé at 01:05 on 13 September and landed safely at Uli, albeit in almost total darkness following a partial failure of the Strip's landing lights. Then came the shock; the Nigerian Army was, after all, within shelling distance, sending the Biafrans into a panic-stricken dash for the bush. Reis knew that with a full load on board, the Uli strip was not long enough to get airborne safely and so he and his crew began to unload the cargo themselves. But they needed assistance to re-start the aircraft's engines for the return flight and there was simply nobody on the strip, apart from crews of several other stranded aircraft. For several days and nights the crew, fearing an advance by Nigerian troops, could do nothing other than stay put and wait. Eventually, news filtered through that the Biafrans had pushed the enemy back and airport workers began to return to the Strip. For five days the "Grey Ghost" had sat in the "Government Pan" in a corner of Uli Strip. Safely out of Biafra, the aircraft and a very relieved crew returned to São Tomé at 04:15 on 18 September, where it took on fuel and left for Lisbon at 06:00.

Airliners in Warpaint - Warbirds in Civvies: 9

BOAC At War - Part IV

Michael West



UK/SWEDEN AIR SERVICES DURING WORLD WAR 2

Comprehensive notes on the civilian flights between the UK and neutral Sweden prepared by Tony Doyle from CAA, British Airways and National Archives records and HMSO publications e.g. 'Merchant Airmen'

(The aircraft used on the route were listed in part III).

DATE NARRATIVE

1939/40

British Airways operated a Perth-Stockholm service via Stavanger and Oslo, once a week until 9/4/40 when service was suspended because of the German invasion of Norway. Flights Perth-Stavanger = Lockheed 14, Stavanger-Stockholm Ju52. One of the Ju52s, 'Jason' was caught in Oslo and abandoned to the Germans, but her crew escaped overland to Sweden and returned a week later in 'Juno' which was in Stockholm when Denmark and Norway were invaded.

Irregular direct services (9 in all using Lockheed 14) between Perth and S were afterwards undertaken. (8/7 to 22/12 are recorded plus flights from Leuchars-Stockholm from 23/12 to 31/12).

Merchant Airmen. Need for contact with Sweden because it was the only neutral country in Northern Europe. There was a need to counteract German propaganda and give an Allied view as well as transport-

Above: Captain Ron Ashley descends from his Mosquito at RAF Leuchars after another flight from Sweden. (BOAC)

ing government officials and diplomats. Ball bearings were also needed, a Swedish speciality.

22/4/40. Lockheed 14 Lochinvar, G-AFKD, flew into a hillside above Loch Lomond, 19 killed

1941

(57 flights made eastbound and 56 westbound)

30Jan1941. The Swedish airline ABA contacted BOAC suggesting that it would be in their interest to operate regular UK to Stockholm services for pax and mail.

BOAC asked to provide a service between Scotland and Stockholm. Aircraft would fly at night, unarmed, over the waters of the heavily defended Skagerrak within easy reach of enemy fighter aircraft. In summer there was very little darkness at night. (Source: Merchant Airmen)

Initial staffing (at Leuchars) was 3 aircrew, a traffic officer, an engineer and a motor transport driver. There was only one aircraft, an escaped LOT Polish Lockheed 14, G-AGBG (ex SP-BNF), known as 'Bashful Gertie, the Terror of the Skagerrak'. After some months' service the Lockheed was stranded at Bromma in Sweden with a blown engine. The RAF supplied Hudsons to take its place. The route was flown at altitude via the Skagerrak with the crew and passengers on oxygen.

UK Air Attache in Sweden sent message, 19Feb1941, that unless fuel was made available to ABA then it would not be possible to refuel



Above: A line-up of BOAC Lodestars, believed to be at Port Sudan. (Phillip Hayes Collection)

special flights by BOAC after early summer. This presumably relates to aviation fuel supplies in Stockholm which would have had to be shipped into Sweden on the sea convoys allowed safe passage by the Germans (The BA Museum record their Mosquito flights were refuelled by Shell at Stockholm with no problem).

BOAC restarted the service in March 1941. Leuchars-Stockholm was 789 miles, 57 flights being made eastbound and 56 westbound during the year using 1 Lockheed 14, 2 Hudson IIIs and 2 Lockheed Lodestars. The latter were provided by the Norwegian Government, operated by BOAC with the view to using Norwegian personnel 'in due course'.

Message 3Apr1941 to HM Representative, Stockholm and to Helsinki that Consolidated Liberator would be available for the Scandinavian route in about 2 weeks.

On 8Apr1941 the question of ABA operating to Leuchars was raised with the Minister by the DG (presumably DGCA?).

G-AGBG Lockheed 14 arrived in UK from Stockholm. It had been delayed by weather since 8Jul1941. A converted Hudson III bomber flew to Stockholm on 17/18 July and returned 18/20 (?) July.

23Sep1941 The captured Ju52 G-AFAP was sighted at Bromma on 22Sep1941 with Lufthansa marked D-AEHB.

Nov1941 UK government agreed, subject to certain safeguards, to the operation by ABA of a reciprocal service between Sweden and the UK. Operations had not, however, started before the end of the year.

21Nov1941 Norwegian Lodestar G-AGDD Loch Losna was severely damaged in a ground collision with an RAF aircraft at Leuchars, possibly Hudson T9440 of 320 Squadron. Lodestar returned to service 27Jan1942.

3Dec1941 (Message for DDOSI). Hudson III G-AGDC, G-AGDF in course of conversion at Bramcote.

8Dec1941 A third Hudson III, G-AGDK, should be available within next

few weeks. A fourth Hudson to be allotted to BOAC soon. G-AGDD, Norwegian Lodestar damaged 21Nov1941, may soon be repaired by the RAF. There should ultimately be on this service 2 Lodestars and 4 Hudsons.

1942

(172 flights made eastbound and 170 westbound.)

Types used: Hudson III (until 11Aug1942), Whitley (from 9Aug1942 to 24Oct1942), Lodestar (with Norwegian crews). A few special flights were made by a Curtiss CW-20 G-AGDI (5 in all) and a Mosquito. Aircraft attacked but got to Sweden 21/22Jun1942, no one seriously injured. Service suspended until 15Aug42 then about 3 times a week.

The following buildings were erected at Leuchars for the use of BOAC: Terminal buildings, Workshops, Stores, Operations building and administration offices. Terminal buildings were also erected at Aberdeen for ABA.

Agreement 21Feb1942 for ABA to start service, to be kept secret, only special passengers agreed by Embassy may travel. Using Swedish registered DC3s Stockholm-Aberdeen.

5Mar1942 (Progress meeting.) CW20 may fly to Stockholm, additional load capacity useful.

From 17/18Mar1942 intended that a nightly service operate each way. If an aircraft cannot leave one night then the service will be doubled the following night. Norwegian crews to replace British. Possibility of operating from Dyce rather than Leuchars.

19Mar1942 note: 3 Hudsons (G-AGDC, G-AGDF and G-AGDK plus one more) will be used on Stockholm services with 2 Lodestars G-AGDD and G-AGDE.

24Mar1942 (from Air Attache in Sweden). Re scheduled services to Stockholm. 36 hours' notice required of aircraft's arrival. No objection to using any Swedish airfield in an emergency. Swedes friendly!

27Mar1942 Service inaugurated between Stockholm and Aberdeen by ABA with DC3 aircraft, all-orange colour scheme and 'Sweden' on the side indicating neutrality. Flights at night, at high altitude using cloud cover and with radio silence.

9Mar42 BOAC stated at a progress meeting that they did not wish to move from Leuchars to Dyce.

25Apr1942 Note on repatriation of British nationals from Sweden, the flight was 5 miles up some of the way.

21May1942 At a progress meeting it was suggested that frequency of services might be reduced because of German awareness.

24May1942 Flight made in daylight hours for first time, no difficulty. (Unclear whether BOAC or ABA).



18Jun1942 (Progress Meeting). CW-20 being repaired, then will make several flights to Stockholm before returning to the Gibraltar-Malta shuttle.

19Jun1942 (from Washington). A Lodestar (Norwegian) has been delivered to UK and is to be used on UK-Stockholm service.

21-22Jun42 ABA DC3 SE-BAG 'Gripen' attacked by hostile aircraft enroute to Stockholm. None of the occupants with serious injuries, but aircraft hit in many places. Service suspended until 15Aug1942. Attacked over the northern tip of Denmark, attributed to an over-enthusiastic German fighter pilot.

23Jun42. Hudson III G-AGDF ditched and sank off Smogen, Sweden 22/6, engine trouble. All survived, freight salvaged.

3July1942 (From Ministry of Supply). Re Special flights by Whitleys to Stockholm to collect small parts and roller bearings urgently required by Russia.

10July1942 (Message) Stockholm to Air Min. Permission for G-AGEB and C to land at Bromma has been granted.

10July1942 (Message) Stockholm to Air Ministry. Freight consists 8 grinding machines weight each estimated 2500 kilos. Not expected to be ready for shipment until July 18th. It is appreciated that CW20 flights are for this load and aircraft is then to be released.

4Aug1942 Experimental flight using Mosquito DK301 from Horsham St Faith to Stockholm and return. (Source :Bowman Mosquito book).

24Aug1942 (Progress meeting.) No need for 36 hours notice to Swedes. BOAC now allowed 30 services per month without notice. Need for machinery, tools, ball-bearings for Ministry of Supply. Aircraft allocated to service:- 2 Lodestars plus 2 more being modified, 2 Whitleys in substitution for withdrawn Hudsons, 2 Whitleys on special work for USSR, 1 CW-20 shortly to start flights carrying heavy machinery.

17Sep1942. (Progress Meeting.) Suggested that Whitleys best employed on UK-Gibraltar route and Hudsons best if transferred to UK-Sweden route because of higher ceiling.

30Sep1942. (Movement report) Norwegian Lodestar G-AGEJ on UK Stockholm service.

***Above:** Captain Nigel Pelly and his wife at Buckingham Palace in 1945 after his OBE investiture. He had managed the BOAC Mosquito operations to Sweden and had flown Chamberlain to Germany from Heston in 1938 during the Munich talks with Hitler. (Mandy Warren Collection)*

10Oct1942 (Progress Meeting.) Whitleys to be withdrawn from Stockholm run 15Oct1942. To be used for shuttling to Foynes (to connect with seaplane services). Hudsons to return to Stockholm run from Mediterranean.

7Oct1942 (Movement report.) CW-20 Leuchars-Stockholm special flight.

29Oct42 2 Norwegian Lodestars G-AGEI and G-AGEJ were given their C of A on 20Aug1942 and they were put on Stockholm service making 4 Lodestars on this service.

5Nov1942 From DDOSI. 41 Group to issue to BOAC on loan for one month an Albemarle aircraft in stripped condition so that BOAC could try out its suitability for Stockholm route. The prototype York aircraft to be handed to BOAC for an experimental flight to Stockholm.

12Nov1942. (Progress meeting.) Air Staff had agreed to allocate provisionally 5 Albemarles to BOAC for reinforcing the Stockholm run.

19Nov1942 (Movement report.) First Albemarle arrived Whitchurch 18/11.

26Nov1942 (Progress meeting.) An Albemarle delivered to BOAC for test purposes, payload good.

10Dec1942 Proposals for a service to Switzerland seemed to be having problems so it was suggested that the Mosquito the 'DG' allocated to BOAC for this service should be retained for the Stockholm route.

28Dec1942. (Note of meeting in AMSO's room.) UK-Sweden, Albemarles unsuitable, 5 C47s to be allocated .

31Dec1942 (Progress meeting) Albemarles unsuitable for Stockholm service. Mosquito for Stockholm run, great hopes of its success.

1943

341 return flights. . A maximum of 60 return services monthly agreed by Swedes to include both BOAC and Norwegians. Types used: Hudsons, Lodestars, a Liberator III (1 experimental and 2



Left: BOAC Mosquito G-AGGC at Gothenburg-Torslanda ca. 1944. (Rydellius photo)

return flights calling at Gothenburg for re-fuelling) and Mosquitos (from 4Feb1943).(plus ABA's DC3s between 12Mar1943 and 12May1943 and between 30Sep1943 and 31Dec1943). Between 15 May and 15 August during the light nights only Mosquitos used. BOAC agreement with Norwegians was terminated 16/10 and the operation with Lodestars became solely Norwegian but, at a meeting held at Leuchars on 15/11/43 it was agreed that their service should retain the facade of being operated by BOAC (9 single flights from 15/10). 2 Mosquitos and 2 Lodestars lost during year. Extensive new offices were erected at Leuchars for BOAC, Customs and security requirements.

A separate report states that civil aircraft to be operated during the year from Leuchars are: BOAC 5 Mosquitos, 1 DC3, 1 Liberator or York plus Norwegian Lodestars. Maintenance elsewhere (Bramcote later Croydon)

Jan1943 Discussion re exchange of CW20 for C-47 from USA.and Mr Eden's note re desirability of enabling Norwegians to travel to UK to 'join up'.

Jan1943 Note on alternative landing grounds, Wick, Kinloss, Aberdeen (Dyce), Prestwick, and in Sweden, Satenas, Visky, Gothenburg, Karlsborg, Norrköping.

14Jan1943 (Progress meeting.) 5 Dakotas, C-47s, have been allotted to BOAC for UK-Sweden services. Suggestion that 4 Lodestars on Stockholm run be kept there but 2 Hudsons returned to RAF.

18Jan1943. (Progress meeting.) 5 Dakotas (Jan 43) for Stockholm run. When these arrive 2 RAF Hudsons would be returned. Norwegian Lodestars to be operated by Nowegians alone. Keep on the Mosquitos, Yorks questionable - inquiry into modification possibilities.

4Feb1943 First Mosquito service using G-AGFV.

22Feb1943 (from ADOCA.) 4 Dakotas delivered to BOAC for Stockholm services, 5th to follow soon. Registration marks AGFX, AGFY, AGFZ, AGGA and AGGB.

25Feb1943 (Progress meeting.) In future it is hoped to employ 12 aircraft on Swedish service, 5 Dakotas, 4 Lodestars, 2 Hudson III and 1 Mosquito, frequency aimed at 26 and a half services a week.

2Mar1943 Swedish government approves flights by 5 Dakotas and withdraws permission for flights by 5 Whitleys previously granted.

4Mar1943 (Air Ministry, Bristol to BOAC.) Suggestion that CW-20 is either used for scrap or as temporary accommodation at Lyneham. No longer serviceable as an aircraft.

5Mar1943. Swedish delegation visit. Thurman thinks that BOAC will be able to use Gothenburg (which is being extended) as from May 1944.

6Mar1943. (J H Riddoch.) Runways at Bromma to be extended by the end of 1943.

8Mar1943. (Movement reports.) Dakota G-AGGA arrived Whitchurch 7/3/43.

15Mar1943 (Planning Committee.) Spares required for Dakotas- none at present. Two further Mosquitos probably obtained for fast runs UK-Sweden.

15Mar1943. (Planning Committee.) Re Norwegian Lodestars-possibly to be maintained by Norwegians but to be under control of BOAC. File no. SR760 parts 1 and 2 (either BOAC or Air Ministry?) exists containing a complete history of the operation of the Norwegian Lodestars and also including a list of the Norwegian personnel.

17Mar43 GPO quotes air postage rates from UK-Sweden 8 pence for the first oz and 5 pence for each succeeding oz

19Mar1943 (Note) states that there was available space for 360 lbs of parcel post per week on Swedish service but not during the Summer period. A deterrent rate was charged.

29Mar1943 (Planning Committee.) DG(CA?) has been promised 2 Mark IV Mosquitos for Sweden service and he has asked for 4 more to obtain a higher frequency during Summer. Norwegian Lodestars to be maintained by BOAC as before. At Leuchars some hangars to be handed over to BOAC.

3/4/43 Minute. For March 1 Dakota G-AGGA added. Following withdrawn by BOAC.....Albemarle 14Mar1943. and 2 Hudson VI.

3/4Apr1943 G-AGEJ Lodestar ditched in the sea off Smogen, all 8 onboard missing.

12Apr1943 (Planning Committee.) 6 Mosquitos allocated for UK-Sweden, 2 to be delivered almost immediately. 2 Hudsons, 3 Lodestars, 3 Dakotas to be withdrawn from UK-Sweden service in Summer whilst Mosquitos are operating. Repair and overhaul await the Lockheeds. 5 Dakotas will probably be used for ad hoc services.

23/24Apr1943 Aircraft piloted by Captain Gilbert Rae was attacked at 17000 ft by an FW190. A cannon attack was made from astern, the starboard wing and fuselage were holed, the hydraulics were shattered and the escape hatch was shot off sucking everything moveable from the cabin. The Mosquito used its speed to escape and landed with wheels up and without flaps at more than 120 mph (at Barkaby). The aircraft was damaged but was in service again before long. (Merchant airmen)

Daylight flights were abandoned, the Mosquitos flew at night and other types were withdrawn temporarily. It was during this period that the Air Ministry asked for 2 officials to be flown to Sweden urgently to discuss the continued supply of ball bearings because the Germans were trying to cut off the supply. The bomb bays of two Mosquitos were padded with felt and fitted with safety belts. The compartment was barely large enough for a man to lie down inside and not high enough for him to sit upright. Access was through the bomb doors and there was no access to the crew area. An electric light was rigged in the bomb bay and an intercom. Sandwiches and a flask of coffee were provided. (Merchant Airmen)

7May1943 ABA service suspended until 7 August because of light nights.

22May1943 (Munitions Assignment Board, Washington.) Norwegians asked for 6 Lodestars for ferrying Norwegians from Sweden to UK, 4 to be assigned (2 in June, 2 in Sep).

24May1943. (Planning Committee.) Mosquito only for UK-Sweden service. Impracticable for Hudson III aircraft because of lack of cloud

cover.

26May1943 (Transport Interpretation Policy Committee.) BOAC has 11 Dakotas, 3 more due end of June. 5 Stockholm Dakotas withdrawn at moment for service elsewhere.

2Jun1943 (DGCA to FO.) Norwegians unsuccessful in obtaining Dakotas from USA but they have been allotted 4 Lodestars.

22Jun1943 (Planning Committee.) Mosquitos good on UK-Stockholm. BOAC wish to keep them there in winter too. If Swedes think we are obstructing their efforts to obtain aircraft for their service to UK they might restrict our services to Sweden especially if Norwegians operate their 4 new Lodestars. Requirements for service (Dakotas) agreed... UK-Sweden (from mid-Aug) 5 aircraft. Provisional allocation of Yorks:- 4Oct1943 for UK-W. Africa. 4Nov1943 for UK-Sweden. This allocation due for review end July.

Jul1943 Captain Gilbert Rae was again attacked when heading for Scotland with a passenger in a Mosquito. Two German fighters attacked the aircraft in bright moonlight at a height of 23000 ft over the Skagerrak. The aircraft dived violently in a series of turns to sea level where, at full throttle, they were able to pull away from the fighters. So violent was the evasive action that Radio Officer J S W Payne was thrown about the cabin and needed a fortnight to recover from his injuries. There was no reply from the passenger when they called him on the intercom and it transpired that he had been knocked unconscious for 20 minutes but was fine when the aircraft landed at Leuchars. Captain Rae later lost his life on this service. (Merchant Airmen).

19Jul1943 (Planning Committee.) Possibility of re-routing this service to provide a more secure route. In view of enemy action it may be necessary for crews and aircraft to operate under civil guise?????. Neutral route in question. With the acquisition of additional aircraft, the number of services on this route will exceed the number for which permission has been given by the Swedish government. D.O.C.A should seek an increase in the permitted number of flights. Lancaster aircraft better suited to UK-Stockholm service than a Dakota.

23Jul1943 (Minutes of meeting on Sealyham route to Russia.) UK-Stockholm route. Recommendation that Liberator III should be used this winter until the Yorks are available even if the proposed extension to Russia failed to materialise.

28Jul1943 (Message Carl Florman to A Norlin /ABA) stating that BOAC intend putting large 4-engined planes on from Scotland to Stockholm and in that way to organise a line eventually from New York to Scotland and Moscow. ABA and SILA wish to join in on a 50% basis.

31Jul1943 (DDOA.) Number of Yorks available at end of the year will only be 33 instead of 56. BOAC are therefore to have their allocation

Below: G-AFYO, CB-24D, first Sonnie flight, falsely marked by the Americans in Sweden to look like a BOAC Liberator. (Rydelius photo)



reduced from 8 to 5 aircraft.

Aug1943 During the month ending July 24th 1943, BOAC aircraft completed 27 return services to Stockholm.

18Aug1943 (OS Nav.) Accident to Mosquito G-AGGF, 17Aug1943. Pilot Capt Wilkins and Radio Officer Beaumont missing, no passengers carried. Aircraft left Leuchars for Stockholm at 2016 GMT, at 2108 she signalled the intention to return to Leuchars but no reason was given. Last wireless contact 2136. Place of accident is not known as wreckage has not been found to date, it disappeared after having reached the Tay. Rescue aircraft searching. Report of broken telegraph poles near Aberfeldy, search land west of a line Montrose-Crail (see later report, 8Sep1943).

26Aug1943 (Note to Washington) Safety margin on UK-Stockholm route inadequate, Swedish Government being pressed to agree to alternative route. Swedes may be influenced by the knowledge that we have some voice in the allocation of US aircraft. It is therefore desirable that no offer of US aircraft even on conditions previously suggested should be made until question of alternative route has been settled. State Dept. to consider and postpone reply to Norlin.

27Aug1943 ABA lost DC3, SE-BAF 'Gladen' on flight to Sweden. 3 passengers and a crew of 4 were lost. Mechanical failure initially suspected but, some years after the War, a secret document surfaced in Germany confirming that the aircraft was shot down by a German fighter off the northern tip of Denmark. Germany had participated in the search operation for the aircraft to help mask the actions of the Luftwaffe. The pilot was the Chief Pilot and Operations Manager of ABA, Capt K G Lindner.

27Aug1943 (Daily Digest.) On Thursday evening 26Aug1943 AA Artillery near the Bofors armament works fired warning shots at a British aircraft which then altered its course.

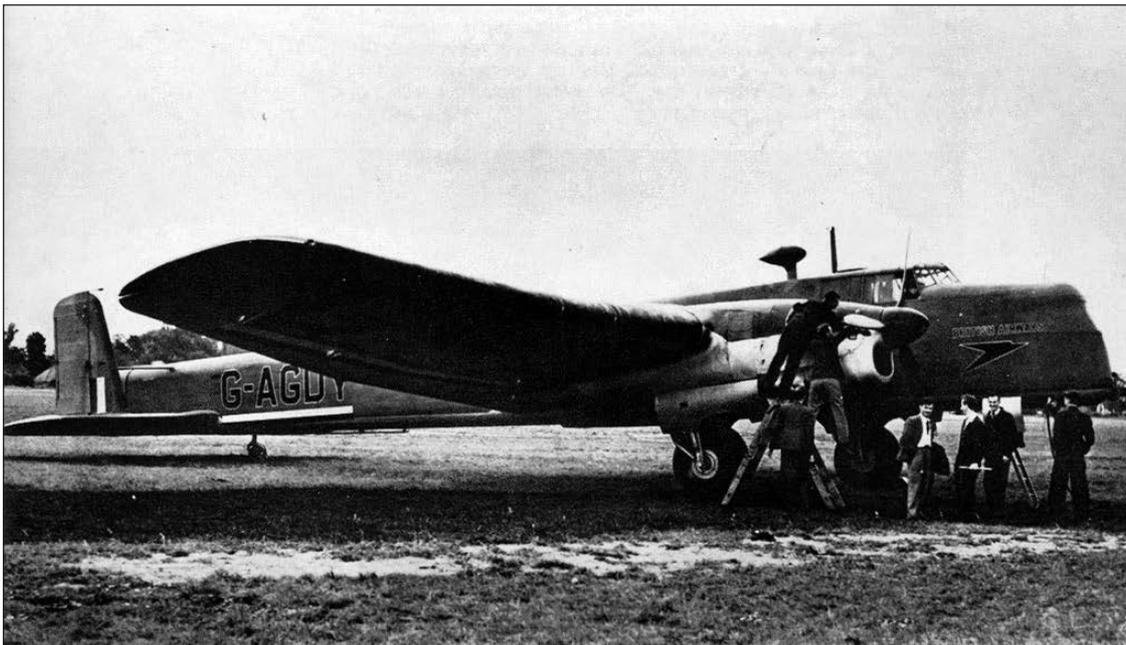
31Aug1943 (Planning committee.) British minister in Stockholm has been asked to secure the agreement of the Swedish Government to an aircraft crossing the frontier over a specified corridor. BOAC will have Liberator IIIs available for the service in about 3 weeks' time. It was agreed that Mark IIIs should be used for this operation provided that the resumption of the service to Russia was not thereby prejudiced. 2 Hudson IIIs now allocated to this service and which would not have a worthwhile payload operating by the longer route should be transferred to UK/Eire shuttle operations.

BOAC not to accept responsibility for the modification or maintenance of Norwegian Lodestars (7 in all). These are not to operate on the longer route to Sweden now being planned. The Norwegians might be asked to assist on the service to the Orkneys and Shetlands or other local services.

1Sep1943 BOAC operated first Dakota flight (Flyghistorik Revy).

4Sep1943 (Message to Foreign Office.) It has been decided to permit BOAC aircraft to use the proposed route over Swedish and Norwegian frontier in both directions. In view of helpful attitude by Swedish authorities, Norlin should be given full support in acquisition of 4 C54As in the US. The inadequate safety margin on the existing UK-Stockholm route applies to the use of ABA's present DC3 type. These aircraft are not suitable to operate safely on this route and could not be economically used on the new route proposed for BOAC. Loss of one of ABA's 3 aircraft has reduced the traffic to the UK by a third. This is a serious reduction when we require as much freight space as possible for Ministry of Supply. Suggestion that Nolin is given a hint regarding alternative route.

8Sep1943. (Major Jones.) Report on loss of Mosquito G-AGGF, finding of wreckage. Comprehensive report by Air Officer



Above: Whitley G-AGDY was found no more suitable for Swedish flights than for the Gibraltar-Malta shuttle. (BOAC photo)

of the Department of Civil Aviation on 25th and 26th Aug 1943 on events leading up to the accident and subsequent enquiry. Wreckage was found yesterday, 7-9-43, near Invermark (?) Lodge at the head of Glen Usk, Kincardineshire, and has been identified as Mosquito G-AGGF. The bodies of Capt Wilkins and Radio Officer Beaumont have been taken to RAF Station Edgell. Log books have been salvaged.

22Sep1943 (R B Maycock (Air Attache)) Encloses copy of regulations on new north corridor. Application has been made for an additional corridor for aircraft that require to use the aerodrome at Gothenburg (Torslanda). The Swedish authorities are unlikely to grant any better route at present than Yttermalung-Orebro-Bjurvik.

23Sep1943. (Planning Committee (Joint Air Transport)). Swedes have now agreed a route crossing the Norwegian frontier east and west between 60 degrees 30' N and 62 degrees 20' N and thence by a defined corridor to Bromma. We had asked for a corridor to Gothenburg (Torslanda), this was refused for defence reasons. Air Attache recommended that we should not press further for this corridor until experience had been gained of the new route to Bromma. Sanction for the Bromma route was given on condition that provision is made of suitable D/F equipment. An exploratory flight by a Dakota to Bromma was planned for 27Sep1943 The Air Attache is also endeavouring to obtain special permission for a trial flight by a Liberator III to Gothenburg (Torslanda) by the new corridor.

Discussions with Admiral Larsen. BOAC can no longer maintain and operate the Norwegian Lodestars, the existing agreement must be determined. If Larsen wishes to continue operating, then he must do so under his own arrangements. Larsen is free to do this or to discuss with Transport Command alternative uses for the aircraft. Larsen is inclined to continue the service but is to discuss the matter with his government. Transport Command could usefully employ these aircraft as a service not a military unit.

29Sep1943 (Message.) Captain Martin Hamre reports G-AGGG Mosquito attacked by enemy fighter aircraft at Skagen on Danish coast, no damage. Swedish Air Force heard radio, probably in North Denmark, directing enemy aircraft. The Mosquito evaded the enemy fighters.

1Oct1943. (Movement report.) Experimental flight 30Sep1943 Leuchars-Wick-Stockholm with Dakota G-AGFX.

3-9Oct1943 Experimental flight by Liberator G-AGFS, Lyneham-Leuchars-Stockholm.

12Oct1943. (Movement Report) A proving flight was made on 8/9Oct1943 with Liberator III (FS) (G-A G F S) Stockholm - Gothenburg (Torslanda) - Leuchars - Lyneham. No load was carried because Bromma will not be ready for the Liberators until at least 6/11/43.

16Oct1943. (Conference at Swedish ministry, 15Oct1943.) Representatives of BOAC, ABA and AA (Air

Attache) attended. No decisions expected. Conference was to explore possibilities of reaching agreement. Flights by Liberator to Torslanda via Bromma may commence forthwith.

23Oct1943 ABA service suspended because DC3, SE-BAG 'Gripen' was shot down on the previous night on a scheduled eastbound service by a Ju88. One passenger and one of the crew were the only survivors of the 11 passengers and 4 crew. The service had not been resumed by the end of the year because of intense negotiations with Germany

25Oct1943 Service using Liberators inaugurated by G-AGFR but later discontinued after 3 flights save one flight made 5Feb1944.

26Oct1943. (OS Nav, Major Jones.) Loss of Mosquito G-AGGG at 2139 GMT on 25Oct1943. Aircraft circuted the aerodrome at Leuchars and crashed roughly 2 miles north at Tentsmuir. Cause of the accident was failure of the port engine (about 400 miles out the aircraft came right back to Leuchars with one engine) and not enemy action. Aircraft was badly smashed up but is not believed to have caught fire. Two crew and one passenger were killed namely Captain Martin Hamre, Radio Officer Haug and an American passenger, Paul Rogers

Oct/Nov1943? (Air Attache message to Air Ministry.) Runway at Bromma extended to 1600 yards was expected by Oct1943 but note says completion by Jan 44. Capt Moll (ex- KLM?) landed with a Liberator on 29Oct1943 at Save (Gothenburg) in mistake for Torslanda. The Swedes agreed to a special direct corridor for Liberators to and from Torslanda. Long (backlog) list of pax and urgent freight, withdrawal of Liberators following a long period of inactivity, an unexpected calamity (?). Situation serious.

2Nov1943 (Spoke Clarke OS Nav.) Bromma not yet ready for Liberators, they (can?) probably land there light.

12Nov1943 (The Aeroplane.) A number of Mosquito III and IV bombers have been converted for civil use and are used on BOAC routes. They are all fitted with long range fuel tanks and are camouflaged in normal BOAC colours.

15Nov1943. (Major Jones.) Gothenburg is now included as an optional stop for all types of aircraft when the weather is unsuitable for landing at Bromma or loads are not suitable.

15Nov1943. (Meeting at Leuchars.) Aircraft to be based at Leuchars. BOAC 5 Mosquitos, 1 Dakota and 1 Liberator or York, the last two aircraft to be maintained elsewhere. Norwegian 5 Lodestars.

18Nov1943. (Interavia.) British civil aircraft (DH98 Mosquito?) attacked by a German aircraft, tail damaged, on the night the 'Gripen' was shot down, 22Oct1943. Aircraft arrived in Stockholm.

22Nov1943 (AM to MAP.) Request 41 Group allot and issue one Mosquito mark III to BOAC for training purposes on temporary loan for 3 months.

28Nov1943 Mosquito HJ985 delivered to BOAC (at Leuchars) for crew training. (Bowman Mosquito book)

30Nov1943. (Planning committee.) Appreciation of BOAC for dual control Mosquito for training and for speeding up the 5th Liberator for training.

3Dec1943 CW-20 G-AGDI St Louis MAP write off???

17Dec1943 Norwegian Lodestar crashed in sea off Leuchars.

1944

490 flights made eastbound and 484 westbound

Dakotas, Mosquitos and a Liberator (8 flights in each direction) were used until the end of March when the Liberator was transferred and the Dakotas were withdrawn during the light nights, Apr-Aug, they also did not fly during the moonlight period each month. 3 Mosquito VIs to be delivered to BOAC about 10Apr1944 and will probably be available for service about 23/4 to replace Dakotas and Liberators during the summer solstice. The Norwegians continued to operate a service with Lodestars. Air Ministry approval was given for further accommodation at Leuchars for BOAC.

4Jan1944 and 4Feb1944. (Major Jones and DDO(A).) Accident to Mosquito G-AGGD 3Jan1944 at Satenas. Pilot, Capt Hunt, time 1906 GMT. Aircraft was landing at Satenas with radio trouble. It crash landed, damaging the undercarriage seriously. Both aircrews were bent and the wings were also damaged (Struck off 6Feb1944). No passengers, crew uninjured.-Capt Hunt, Radio Officer Blackburn. Decision to reduce G-AGGD to spares.

10/11Jan1944 Capt John H White crossed the North Sea three times covering a distance of 2400 miles in 9.36 flying hours. He spent only three quarters of an hour on the ground and flew the whole distance by hand, on instruments at night. He was later posted missing when G-AGKR failed to arrive at Leuchars on 29Aug1944

21Jan1944 Mosquito LR524 delivered to BOAC for crew training (Bowman Mosquito book)

22Jan1944 (statement from Mr Finch) Aerodrome surface conditions in Sweden will make it possible to operate Liberator III aircraft in a week's time to Stockholm. There is a possibility of operating throughout the month, including the moonlight period, with these aircraft. Route used by Dakotas and proposed for Liberators was Leuchars to any point on the Norwegian/Sweden frontier then to Yttermalung radio beacon and then along the corridor to Bromma. Mentions that the risks of interception on this route are also discussed on the file (RS 1324).

4Feb1944 (Fleet reductions) Training Mosquito HJ985 returned to RAF off loan Jan1944.

5Feb1944 Single flight by Liberator G-AGFO, Leuchars-Stockholm.

10Feb1944 G-AGJI Lancastrian allotted to BOAC development unit. Aim was to use the aircraft on trial flights to Portugal and Sweden. Swedish government agreed to occasional flights between UK and Stockholm 6Mar1944 to 31Dec1944.

2Mar1944. (JATCP meeting.) BOAC have asked for more Mosquitos for the UK-Stockholm summer operations, preferably Mark XVIIs, and if possible the exchange of the four existing aircraft for Mark XVIIs. At least two additional to bring the fleet up to six.

5Mar1944 ABA DC3 SE-BAC 'Falken' operated from 5Mar1944 to 14Apr1944, the route used was over southern Norway and the aircraft was highly illuminated following the shooting down of 'Gripen' on 22Oct1943.

16Mar1944. (Air Ministry) 3 Mosquitos Mark VI fitted with Merlin 23 engines are to be issued to BOAC on indefinite loan. All armament to be removed, bomb bays to be retained, no auxiliary tanks required in bomb bays, civilian camouflage required. Minor modifications, including provision of ballast will be carried out by BOAC. Request HQ 41 Group allot and issue aircraft to Croydon by 31Mar1944.

20Mar1944 (BOAC.) Three Mosquito Vis to be delivered to BOAC about the 10Apr1944 and will probably be available for service about 23Apr1944. These aircraft are to replace Liberators and Dakotas on the UK-Sweden service during the period early April to August when there is risk of enemy interception for the Liberators and Dakotas.

29Mar1944. (AM to BOAC.) Arrangement made for release of six Merlin 23 engines to install in the 3 Mosquito Mark VI allotted to BOAC. The three aircraft are to be delivered complete with wing drop tanks. Aircraft acceptable to civil standard day camouflage. BOAC to carry out any necessary alterations.

Mar1944 A detachment of the US 492nd Bomb Group, the Carpetbaggers, arrived at Leuchars for clandestine flights in support of the Norwegian underground. The unit was commanded by Colonel Bernt Balchen, a famous Arctic pilot of pre-War days, and two projects were involved. Ball Project was the dropping of equipment and agents from black painted Liberators whilst The Sonnie Project ferried ex-internees and escaped Norwegians of military age back from Sweden. The Sonnie aircraft were painted green and carried US civil registrations.

From April 1944 to June 25 1945, Sonnie Liberators and C-47s brought a total of 4304 passengers from Stockholm to the UK in some 550 flights, including Norwegians, American aircrew internees and the nationals of at least six other countries. The flights were almost the only dependable means of communication between the American Legation in Stockholm and the outside world. The Leuchars unit was eventually given the Meritorious Service Award in recognition of its achievements in all weathers. Seven aircraft of the Ball Project were shot down and one Sonnie Liberator was lost in collision with a Swedish mountain. (Action Stations) (see A-B Archive Sep2009)

14Apr1944. ABA services suspended by British because of impending invasion of Normandy with the resulting sensitivity about unauthorised observations from the air.

21Apr1944 DC3 G-AGFZ damaged beyond repair when it overshot on landing at Bromma. The wreckage was bought by ABA and given the name "Ugglan" but it never flew again and was cannibalized for their other DC3s. (FR)).

4July1944 Mosquito G-AGFV swung on take-off at Bromma, undercarriage collapsed. Aircraft temporarily repaired and flown back to Leuchars 23Oct1944.

19Aug1944 Mosquito G-AGKP lost 5 miles off Scottish coast when coming in to land.

28/29Aug1944 Norwegian-crewed Lodestar G-AGIH col-



Left: Lodestar G-AGII at Gothenburg-Torslanda. This aircraft was nominally operated by BOAC but was actually Norwegian-operated. (Rydellius photo)



Above: BOAC Captains O. P. Jones and Ron Ashley clear Customs at Stockholm-Bromma, November 1944, on a 'Ball-Bearing' flight (Stephen Greensted collection)

lided with the top of Kinnekulle at Lake Vanern in the evening killing all 11 on board. The plane had taken off from Bromma that evening and was transporting Norwegian pilot training candidates to Scotland when it crashed in poor weather. (FR) Separate note in FR number killed as 12 with 4 injured, Norwegian pilot.

29Aug1944 Mosquito G-AGKR missing on journey Stockholm-UK, Pilot Capt. John H White.

Aug1944 (IC 56895.) Accident report on Norwegian aircraft Lodestar G-AGIH registered in name of BOAC. (Flew into Kinnekulle mountain, Sweden. 3 crew and 8 passengers killed).

9Oct1944 to 31Dec1944, 3 B17F were used in 14 passenger layout by ABA. These USAAF aircraft had landed in neutral Sweden and were 'confiscated' by the Swedes. The destination was now Prestwick and the aircraft were painted a low visibility olive scheme rather than orange.

17Oct1944 Dakotas extend Leuchars-Stockholm to Helsinki, Finland with a call at Turku on the return flight.

19Oct1944 U.S. 'Sonnie' C-87 Liberator 43-30619 flying from the UK to Bromma was diverted to Torslanda because of bad weather. The aircraft crashed with the loss of the 6 crew northwest of Alingsas. Cargo was 110 drums of oil. The aircraft was marked with the civil registration NC18618 and had been using the radio code NWK instead of its correct code of NYR.

7Nov1944 ABA B17 SE-BAK 'Jim' made an unscheduled landing at Sumburgh, its cargo of ball bearings having been jettisoned over the North Sea to lighten the load. BOAC collected the 14 passengers on the following day but it was 23Nov1944 before the aircraft finally arrived at Prestwick and its return to Sweden was delayed until 15Dec1944 while Scottish Aviation replaced the fourth and final engine.

24Nov1944 BOAC mission to sell planes to Sweden. The delegation flew to Bromma by York. On 6Dec1944 York G-AGJC left Northolt for Leuchars and then Stockholm and Gothenburg (7Dec1944). Returned

13Dec1944, aim was to allow BOAC's Managing Director Brigadier General Critchley to inspect station at Stockholm.

30Nov1944 The Mosquitos were withdrawn from 30Nov1944 apart from one standby aircraft because crews were urgently required by BOAC for other duties.

4Dec1944 Mosquito LR524 returned to RAF (Bowman Mosquito book)

1945

336 flights (168 round-trips?)* between 1Jan1945 and 3Jun1945. Dakotas and one standby Mosquito used. Extensions were made to Helsinki every Thursday whenever operationally possible for priority loads. The Norwegians operated Lodestars from Leuchars to Stockholm until 8Jul1945 but used Dakotas from Oslo to London from 9Jul1945. Lodestars were used once every 2 days between Oslo and Turnhouse from 1Oct1945 to 8Nov1945

ABA were flying Stockholm-Prestwick from Jan-21May1945, then Stockholm-Gothenburg-Prestwick until 2Jul1945 then Stockholm-Gothenburg-Croydon(London) from 3Jul1945 to the end of the year using DC-3s.

1945 Mosquito HJ898 being used by BOAC for crew training (Bowman Mosquito book)

11Apr45 Dakotas were again withdrawn although 2 Dakotas remained at Leuchars 'to operate in favourable weather conditions'.

12Apr45 to 18May1945 Mosquitos used again Leuchars-Stockholm.

2May1945 Norwegian Lodestar G-AGLI lost its bearings when en route to Bromma. The pilot ditched the aircraft in Sikeafjarden off Umea, about 570 km north of Stockholm. The aircraft sank after 10 minutes but all 9 persons on board were rescued by fishermen. (FR)

19May1945 Dakotas used Leuchars-Stockholm, hostilities in Europe ceased mid-May, service changed to Croydon-Stockholm from early June. Fare UK-Sweden was Swedish Kr700.

5Jun1945 (message) BOAC approached the Swedish authorities requesting permission to cross Swedish/Norwegian frontier using Dakotas and Lodestars, refuel at Ostermund, Swedes agreed.

* Air Ministry estimated that between 1941-44 about 1200 flights took place Stockholm-Leuchars. The annual figures add up to about 1220 flights (by BOAC) if the 1945 figure was 168 round-trips, and it is assumed the ABA and Sonnie flights are calculated separately (346 and 550 round-trips? respectively).

Navigational and landing beacons/Communications

In 1942 a Standard Beam Approach (SBA) was provided at Leuchars and additional radio beacons were provided in Sweden. In 1943 a Marconi/Adcock H/F Direction Finding system was installed near Bromma. ABA could land at Leuchars in emergency. Point to point communication between UK and Sweden was restricted to certain agreed international signals.

Met information was provided at Perth in 1941 and later at Leuchars by a temporary forecaster. In 1942 staff at Leuchars were increased and information was transmitted from Leuchars to the British authorities in Sweden to aid Westbound flights. In Dec1941 a Met Officer was appointed to the UK Legation in Stockholm for this purpose. Because of security detailed forecasts were not transmitted to ABA in Sweden but only a 'suitable' or 'unsuitable' message. Met services were extended in 1943 to cover Gothenburg and the Legation got an extra Met Officer. 'In Jul 1944 the Met staff in Stockholm were strengthened by the posting of two female met assistants'.

The Development of Commercial Aviation in China

PART 16

Civil Air Transport and the Korean War, 1950-1953

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Above: Civil Air Transport's large fleet of C-46s bore the brunt of their effort to support the United Nations forces in Korea during the war. B-848 is seen at Kai Tak on an unknown date. (Ian D Johnson collection)

Introduction

The history of Civil Air Transport (CAT) in mainland China was described in Part 11 (Archive Autumn 2010, pages 2010/95 to 2010/124 & 2010/177) of this series of articles on the airlines of Nationalist China. Part 13A of the history of Civil Air Transport, Inc. (CATI) was published in Archive Spring 2011 edition, pages 2011/009 to 2011/026, whereas Part 13B was uploaded to the AB-IX group Files web page. (Please see list of references for URL link.)

The history of Civil Air Transport on Taiwan will be described in a number of articles covering the war in Korea, operations in Burma, Indochina, Indonesia, New Zealand, and Tibet and also paramilitary and airline operations in Taiwan and Japan. In this first article, we consider only operations in Korea and New Zealand in the period from 1950 to 1953.

CAT moves to Taiwan

Following the victory of Communist forces in mainland China in 1949, CAT transferred its operations from Kai Tak, Hong Kong to Taiwan (Formosa) with the Nationalist Government of the Republic of China.

During December 1949, CAT evacuated its remaining aircraft from Kai Tak, so all of its fleet was on Taiwan in January 1950. Although 26 aircraft were transferred to C.A.T., Inc. at 317-325 South State St., Dover, Delaware, USA and registered on the US civil aircraft register as

N8400C to N8425C on 5th January 1950, it is not known if N-numbers were worn by all these aircraft. (See Archive Part 13 p. 2011/023). It is thought that these re-registrations were to prevent the British Government from handing the aircraft over to the Communist Chinese when the UK recognised the new Chinese government in January 1950.

Flying US-registered aircraft, however, required a special Airline Transport Rating, so on 15th January 1950 a group of eight CAT pilots and three co-pilots left Taiwan to return to America to acquire these ratings. Four other Captains were already on leave in the USA and a number of others would follow later.

The aircraft were soon restored to the Chinese register, usually with new marks, as in the case of the C-46 fleet, and initially with XT- prefixes but later changed to B- prefixes, probably in mid 1951 (see below). The N-numbers were cancelled in March, April or May 1950. (Archive p.2011/023). Chinese civil aircraft registers were discussed in Part 12 (Archive Winter 2010, pages 2010/163 to 2010/177).

The transition from Civil Air Transport (CAT) to CAT Incorporated went smoothly. The same initials decorated the fuselages of the airline's C-46s and were used in advertising. Chennault remained highly visible in Taipei, moving up to be chairman of the board, and Willauer became president. Brennan continued to concentrate on financial matters as executive vice-president. Chief Engineer Grundy, Chief Pilot Rousselot, and other supervisory personnel stayed at their posts. The two CIA employees who took over executive positions fitted in well. Cox, as vice-president, assumed managerial duties with the airline while retaining his responsibility for OPC's covert activities in East Asia. Terhaar, accountant from the agency's Office of Finance, moved up to treasurer. Both men had been active in the airline's affairs since the end of



Above: The CAT fleet of C-54s also played a significant role during the war. C-54A B-1002 is seen here in the later colour scheme at Kai Tak. (Ian D Johnson collection)

1949, so their 'promotions' raised few eyebrows. Indeed, no more than a handful of CAT personnel were aware of new owners, much less of their identities.

It soon became clear, however, that significant changes had taken place in the airline's top management. Chennault's position altered dramatically. The general had posed a special dilemma for the CIA, which wanted to capitalise on his friendship with Chiang Kai-shek to assure continued good relations between CAT and the Nationalist government. But Washington distrusted the intimacy between the general and the generalissimo, fearing that certain covert operations involving anti-Communist but not pro-Nationalist groups on the mainland might be revealed to Taipei. The CIA attempted to solve this problem by advancing Chennault to chairman of the board (an empty title). Although still able to exert some influence on basic decisions, Chennault had no operational responsibility for the airline and was used, for the most part, only when problems developed with the Chinese government. Whether this arrangement provided the desired security seems questionable.

Willauer signed a 2-year management contract at \$36,000 per year and became CAT's chief operating officer. Based in Hong Kong (which remained the airline's financial and managerial headquarters) and given a fairly free hand in running the company, including authority over personnel and finances, he needed prior approval for only "all major business or operational changes in the nature or locality of the activities of the Company." Willauer now reported to the CIA. Corcoran and his Washington associates no longer had any interest in the airline, although they continued active in the affairs of CATI, the company engaged in legal action to recover the disputed aircraft in Hong (see Parts 13A & 13B).

In practice, Willauer delegated responsibility for day-to-day supervision of the airline (except finance) to Director of Operations Rosbert, who was stationed at Taipei.

Rosbert had little to do at first because business was poor during the early summer of 1950. The war in Korea had little impact on the airline. Flying hours remained at the depressed level of 500 per month, and Whiting Willauer one again had to pack his suitcase and set out in search of airlift contracts. [Leary pp.113, 114]

With the fall of mainland China, CAT only had a limited route network and new work was urgently needed. At the same time, Chennault and Willauer had massive debts, following the purchases of CATC and CNAC in December 1949, and were unable to raise funds by selling the 70 newly-acquired aircraft that had been detained in Hong Kong. In

May 1950, CAT had the following scheduled flights:

flight no.	route	frequency
200-201	Taipei – Hong Kong – Taipei	daily
300-400	Taipei – Hwalien – Taitung – Tainan – Makung – Taipei	6 times per week
500	Taipei – Tainan – Taipei	daily
100-101	Singapore – Bangkok Hong Kong – Taipei – Tokyo	once weekly

[Leeker Japan p.15]

On 6th June 1950, CAT inaugurated a new weekly airfreight service linking Taipei and Tokyo.

The Korean War

At 4:40 a.m. on 25th June, 1950 the Korean War broke out.

Mao Zedong had been forewarned. The North Korean leader, Kim Il Sung, had flown to Beijing six weeks earlier to tell him that Moscow had approved a military offensive to reunify the peninsula. Stalin, wily as ever, had laid down a condition: Kim must first get Mao's approval. "If you get kicked in the teeth," the Soviet leader had told him, "I shall not lift a finger." The implication was that Mao would then have to bail the Korean out. In his discussions in China, Kim had omitted that part of the conversation.

In Beijing, the war was deeply unwelcome. Not only was there uncertainty over how America would react, but the Chinese were themselves at that stage preparing to invade Taiwan. Mao had been suspicious enough of Kim's story to send a message to Stalin, asking him to confirm that he had approved the attack. This Stalin did, but took care in his reply to place the ball squarely in Mao's court: a final decision, he said, must be taken by "the Chinese and Korean comrades together". If the Chinese disagreed, the decision should be postponed. That left Mao with no real choice. A hundred thousand Koreans had fought alongside Chinese troops in Manchuria. How could he tell Kim that he must not try to 'liberate' his own land? The North Korean was informed that China acquiesced.

But mistrust on both sides continued. Kim decreed that the Chinese be kept in the dark about the date of the attack, and excluded from the military planning.

To Chiang Kai-shek, the war was a godsend. Six months earlier, Truman had made clear that the US would not intervene to protect the nationalists, should Taiwan be attacked. In April, Chinese troops had made a large-scale amphibious landing on the island of Hainan, off the coast of Guangdong, crushing nationalist resistance in two weeks and killing or wounding 33,000 KMT soldiers. It looked like, and was, a dress



Above: Korea in 1950 on the eve of the outbreak of war. The line running from east to west is the 38th Parallel, the line of temporary division between the communist north and the capitalist south. (Sue Bushell)

rehearsal for the invasion of Taiwan itself. The next step would be attacks on Quemoy and the other offshore islands, followed by the final assault, to take place the following year.

Korea changed all that. The US might turn a blind eye to what all sides agreed was a continuation of the Chinese civil war. It could hardly do the same when a Soviet client-state in the northern part of the Korean peninsula undertook armed aggression against what was in effect a US protectorate in the south. On 27th June, Washington announced that it would send troops to support South Korea's Syngman Rhee, and, for good measure, that the US Seventh Fleet would neutralise the Taiwan Straits.

Mao's initial response was limited. Chinese anti-aircraft units were moved to the North Korean side of the border to defend the bridges across the Yalu River, and reinforcements were sent from the south to Manchuria, on the grounds that, as one Chinese commander put it, "one must prepare an umbrella before it rains". The plan to attack Quemoy was put on hold.

At the end of July, however, as the North Korean forces continued their triumphant march southward, Mao began to grow alarmed. He could see, as Kim Il Sung could not, that the Korean lines were becoming overextended and vulnerable to an American counter-attack. At a

Politburo meeting on 4th August, Mao raised for the first time the possibility that Chinese forces might have to intervene directly to help the North Koreans, even at the risk of US nuclear retaliation. The problem, he told his colleagues, was that if the Americans won, 'their appetite would grow with eating'. China would face the threat of US air raids against Manchurian and east China coast cities; amphibious attacks by nationalist units across the Taiwan Straits; even, perhaps, a combined operation involving the French forces fighting Ho Chi Minh's armies across China's southern border in Vietnam.

Two weeks later, Mao's fears deepened. One of Zhou Enlai's military analysts was convinced that the US Commander, General Douglas MacArthur, would make his move at Inchon, on the narrow waist of Korea, just south of the 38th parallel, the nominal dividing line between North and South. When Mao looked at the map, the young analyst convinced him too. He ordered the PLA to deploy another half-million men along the Manchurian border, and to begin planning for a war lasting at least a year.

At the same time, he sent Kim an urgent warning.

Kim ignored him. So did Stalin. On 15th September, the Inchon landings began, and the North Korean army disintegrated. Kim sent two of his top lieutenants to Beijing with a frantic plea for help. Stalin added his voice, offering Soviet air cover if Mao would send in ground forces to prevent a Korean collapse. [Short pp.425-426]

A history of the Korean War has been written by Max Hastings and the air war by Robert Jackson and Robert F Futrell (see list of references below).

Air transport

In 1950, the formation best placed to mount a military response against North Korea was the United States Fifth Air Force which, based on the Japanese Home Islands since 1945, formed the front line of America's air defences in the Far East against the potential air threat from the Soviet Union. A transport echelon, the 374th Troop Carrier Wing, operated out of Tachikawa Air Base with two squadrons of Douglas C-54s. [Jackson p.9]

374th TCG Order of Battle, 1 July 1950

6th TCS	C-54	Tachikawa
21st TCS	C-54	Tachikawa
22nd TCS	C-54	Tachikawa

[Jackson pp.154]

In January 1951 the 315th Air Division was activated and assumed operational command and control of all Combat Cargo Command units in the Korean theatre. At the time, these were the 374th Troop Carrier Wing, with two squadrons of Douglas C-54s at Tachikawa and a third, the 21st, with C-47s, at Itazuke; the 61st Troop Carrier Group, with three squadrons of C-54s at Ashiya; the 437th Troop Carrier Wing, with four squadrons of Curtiss C-46s at Brady Air Base, Kyushu; the 314th Troop Carrier Group, with four squadrons of Fairchild C-119s at Ashiya; and No. 13 Flight, Royal Hellenic Air Force, with C-47s at Itazuke. This was to be joined later in the year by a transport detachment of the Royal Thai Air Force. British Commonwealth air transport units operated independently of USAF control. The centralisation of air transport assets under the 315th Air Division went a long way towards ensuring the individual aircraft types serving with the various transport units were utilised to their fullest advantage. The 314th Group's C-119s, which were best suited to airborne operations and dropping large loads, were located close to the main depot of the 187th Airborne Regimental Combat Team (RCT), while the 374th Wing's C-54s, situated near Haneda international airport, were well placed for hauling cargoes over long distances. The C-46s and C-47s, particularly the latter, were suitable for flying cargo into Korea's smaller airstrips, and flights of the 437th Wing and the 21st Squadron were based on airfields near the main supply depots. [Jackson p.119]

Airfields in Korea

Because alternate place names appeared on different maps, the FEAF soon had to demand that all names of towns and villages be accompanied by identifying geographical coordinates, and early in July 1950 it would assign a "K-site" number to each airfield in Korea for the pur-



Above: CAT assisted the U. S. Air Force airlift in East Asia. This C-54 was kept in superb condition for use by the top brass, including General MacArthur, during the Korean War. Unfortunately the serial is not visible. (Charles Trask via JM Collection)

poses of exact identification. [Futrell p.65] No complete listing has been found in references consulted.

code	airfield
K-1	Pusan West
K-2	Taegu
K-3	Pohang
K-4	?
K-5	Taejon
K-6	Pyongtaek-ni
K-7	?
K-8	Kunsan
K-9	Pusan East
K-10	Chinhae
K-11	?
K-12	?
K-13	Suwon
K-14	Kimpo
K-15	?
K-16	Seoul Municipal
K-17	?
K-18	Kangnung
K-23	Pyongyang
K-24	Pyongyang East
K-27	Yonpo
K-29	Sinanju
K-37	Taegu West
K-46	Hoengsong
K-47	Chunchon
K-55	Osan-ni

[Futrell; Jackson pp. 16, 154-156, 159]

Operation AD

The Korean War should have provided full employment for CAT's idle fleet, especially when the Far East Air Force (FEAF) was struggling to meet airlift requirements, but political problems caused initial complications. The airline's equipment continued to bear the flag of Nationalist China despite the change of ownership, and Washington's attitude toward the regime on Taiwan remained ambiguous. Although President Truman extended a measure of protection to the island when the Seventh Fleet moved into the Straits of Formosa in late June, he declined Chiang Kai-shek's offer to send thirty-three thousand troops to Korea, in part, fearing the presence of Nationalist soldiers might provoke a military countermove from Peking. Searching for ways to permit CAT's participation in the war, Burrige suggested to Chennault that Chiang Kai-shek be asked to volunteer transport for the United

Nations effort in Korea. Taipei then could charter CAT's aircraft for the task. This idea never got off the ground.

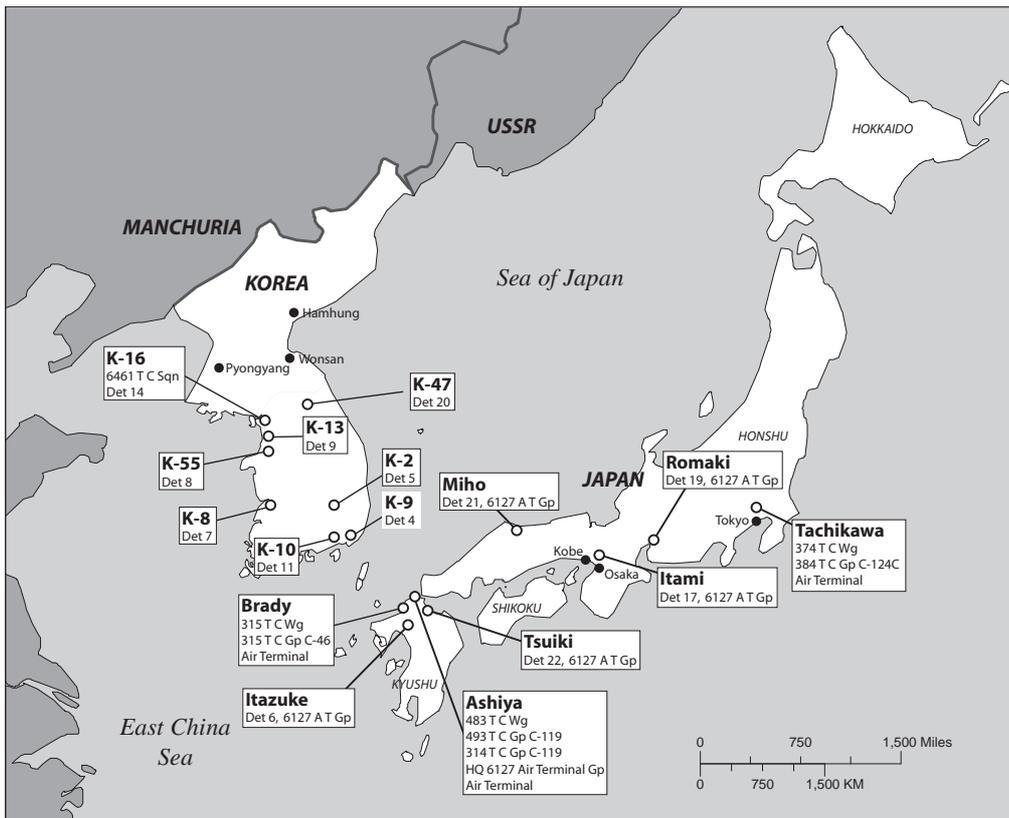
In July CAT did get a foot in the door when Cox made arrangements through intelligence sources for three aircraft to operate between Japan and Korea (Operation AD). Based at Tachikawa, and on 24-hour call, the aircraft transported sensitive personnel and performed other urgent missions. Wider use of CAT in support of covert projects followed.

Fortunately for CAT, urgent military requirements for air transport eventually eroded official concern over registration markings. For nearly two months, the 374th Troop Carrier Wing (two squadrons of four-engine C-54s and one squadron of C-47s), the only transport unit in the Far East, had been making a maximum effort in support of American units in Korea. Relief came in late August with the arrival of the 314th Troop Carrier Group (C-119s) from the United States and formation of the First Provisional Group (C-46s) from aircraft and personnel available in the theatre; but the Air Force remained hard-pressed to meet the demands of UN forces. With General Douglas MacArthur planning a bold "end run" offensive for September, and with additional transport squadrons not due in Japan until November, FEAF needed all the help it could find. [Leary pp.115-117]

Operation BOOKLIFT

On 25th August 1950 General MacArthur's headquarters approved a major airlift contract for CAT, subject to negotiation of details. This meant that CAT could look forward to a very busy and hopefully profitable autumn and winter and even more important to Chennault and Willauer that CAT would be used in the anti-Communist drive. As Rosbert arranged to have stored C-46s checked and test flown, Cox and Burrige negotiated with the Air Force's Far East Air Material Command (FEAMCOM). Agreement was reached on 8th September. Under the terms of contract AF 92 (504)-5, CAT would fly between points designated by the commanding general of FEAMCOM, carrying cargo and personnel as ordered. Relieved of responsibility for loss of cargo (except in case of gross or wilful negligence) and protected against loss of aircraft and/or crew to enemy action, CAT would be paid on a sliding scale, based on monthly use, with a rate of \$307 per hour for over five hundred hours a month. The airline was guaranteed four hours daily use for each aircraft called into service. With authority to spend up to \$1.5 million, FEAMCOM did not set any time limit for the contract.

In the course of discussions with FEAMCOM, CAT officials led the Air Force to believe that 28 aircraft could be made available at short notice. This error on the far side of optimism would prove troublesome. CAT owned nineteen C-46s and one C-47. Although most of these could quickly be put in flyable condition, the airline needed two C-46s and the C-47 to maintain commercial schedules. CAT also retained custody of eight C-46s that had been leased from the Chinese Civil Aeronautics Administration (CAA) in May 1948; however, use of these aircraft would require both a new agreement with the CAA and extensive work to remove preservatives, i.e. to "un-pickle" them. CAT officials apparently



Above: The map shows the locations of the bases in Korea and Japan used by CAT to support United Nations operations in the period 1950-53 (Sue Bushell)

believed they would have ample time for a planned, orderly reconstitution of the airline. They were mistaken. Operation BOOKLIFT began with four aircraft on 10th September 1950. Within two weeks, as UN forces in Korea began a rapid build-up following the Inchon landing on 15th September, the Air Force ordered full mobilization of the promised 28 aircraft.

The engineering department shouldered the heaviest burden in the struggle to meet FEAMCOM's requirements. Chief Engineer Grundy had to prepare CAT's aircraft for service, install de-icing equipment, unpickle the CAA C-46s, set up a line maintenance organisation at Tachikawa, and rapidly expand facilities at Tainan. Despite the temptation – and pressure – to cut corners, he maintained rigorous standards of workmanship. In the hectic months ahead, CAT would not suffer a single major accident that could be attributed to mechanical problems.

Recruitment of personnel also took priority in September. Crew strength grew to 25 during the month as Roussetot called back pilots from leave without pay and hired locally available airmen. Technical positions on the ground were harder to fill. Because there were few trained mechanics on Taiwan, Grundy and personnel director Reese T Bradburn went to Hong Kong to look for former CNAC and CATC employees. They had little trouble attracting applicants. Hundreds of qualified people, lured by high wages, sought jobs with CAT, but officials on Taiwan brought recruitment to a virtual standstill by insisting on lengthy political screening to ensure non-Communist back-

Right: CAT leased Cessna 195s to Japanese newspaper companies to carry news and mail when few suitable aircraft were available in Japan post-war. This example, B-987, worked for the Asahi Shimbun whose logo it wears. (Ian D Johnson collection)



grounds of prospective employees. Government restrictions would not allow sufficient personnel to come from Hong Kong quickly enough. Rumours reaching Hong Kong that Nationalist authorities had seized and executed several new workers did not help recruitment.

Another setback occurred on 27th September 1950, when C-46 XT-862 was lost. George V Calhoun, a newly hired copilot who had flown as a captain with CATC, inadvertently opened the right throttle and left cowl flap, instead of both cowl flaps, after landing at Iwakuni AB, Japan. The aircraft veered off the runway onto rough ground, the landing gear sheared off, and the left wing crumpled. There were no injuries, but this C-46 would never fly again.

Despite the many problems, flight operations increased dramatically in September. CAT flew 1,665 hours, nearly 300% over the number for August and the highest total since the autumn of 1949.

This was a tremendous rate of build-up but FEAF was still not satisfied, because they were demanding 28 planes, even though it was impossible to produce that number immediately.

With work on un-pickling the CAA C-46s at a standstill because of a lack of manpower and with FEAMCOM threatening to cancel its contract, CAT searched the Far East for readily available aircraft. In early October Rosbert worked out an arrangement with Monson W Shaver, operations manager of Trans-Asiatic Airways, to charter five C-47s, complete with crews. He made a similar agreement with Max A Springweiler and William A Dudding, owners and operators of International Air Transport, to lease their single C-47. Painted with CAT insignia, the six aircraft were flying BOOKLIFT missions by 10th October. At this stage, it is assumed that these six C-47s were operated with their original registrations.

Unfortunately, these charter operations lasted only a week. Following takeoff from Taegu, Korea, in marginal weather, Bill Dudding immediately switched to autopilot, a questionable technique that was observed by a ranking Air Force officer who happened to be on board. When this officer's damning report reached Tokyo, FEAF cancelled CAT's authority to carry passengers, charging the airline with violation of several safety regulations. Willauer responded by terminating the C-47 charters



Above: C-46 XT-862 was an early casualty when it veered off the runway at Iwakuni Air Base, Japan, on 27 Sep 1950. The aircraft was damaged beyond repair (Dr Joe F. Leeker)

on 17 October. This immediately decreased their fleet by six badly needed aircraft but it had to be done to save the contract. [Leary pp. 117-119]

The story of the use of International Air Transport's "Saint Paul" (XT-811/VR-HEX/ B-809) in Korea has been told in Part 9 (Archive, Winter 2009, pages 2009/163 to 2009/180).

For a time, CAT hoped for help from the Chinese Air Force (CAF). Using his influence with Chiang Kai-shek, Chennault obtained permission to charter – for \$3,360 a month, each, in advance – twelve flyable C-46s from CAF stocks. The transports arrived in such poor mechanical condition, however, that only three were considered safe enough to be flown to Japan. (No registrations are known for these C-46s.) CAT cancelled the lease agreement at the end of the month when the more reliable CAA C-46s came into service.

CAT never managed to station 28 aircraft in Japan during October 1950; nevertheless flying hours soared to 3,450 – double September's total. Demand for air support remained high as UN forces crossed the 38th parallel and drove north toward the Yalu River. Based at FEAMCOM's sprawling complex at Tachikawa AB, just outside Tokyo, CAT hauled high-priority cargo, mail, and personnel to Korea, bringing back wounded to hospitals in Japan. The airline carried all types of cargo to practically every airstrip in Korea capable of landing a C-46, including ammunition, gasoline, rations, aircraft parts and engines, medical supplies, tents and cots, machinery, kitchen equipment, weapons, barbed wire and fence pickets. Ammunition airlifts included bombs, machine gun and small arms bullets, artillery shells, and napalm tanks and mix.

CAT functioned as a military squadron, performing the same tasks and taking the same risks as Air Force transport units. A typical mission began before dawn at Tachikawa. While Chief Mechanic Ronald E Lewis supervised pre-departure checks of the aircraft, FEAMCOM employees loaded a mixed cargo of mail and aircraft parts. Briefed on weather, loads, and operational conditions by John K Fogg, a meteorologist who was filling in as operations manager, the crew boarded and the C-46 took off into the cool early morning air. Catching a picture postcard glimpse of Mount Fuji, they set a westerly course for Pusan after reaching cruising altitude. Four hours later, the transport touched down on the battered airstrip at K-1 (Pusan). While the crew looked for sandwiches and coffee, Korean labourers offloaded cargo and prepared the aircraft to carry wounded soldiers. It took less than an hour to cross the Straits of Tsushima and reach Itazuki Air Base on the northern end of Kyushu, where ambulances were waiting to take the wounded to a nearby army hospital at Fukuoka. The C-46 then hopped over to the adjacent airhead at Ashiya and picked up a load of artillery

shells for Taegu (K-2). Fortunately, landing at K-2 had become less of an adventure since the 822nd Engineering Aviation Battalion had covered the potholed, sod-and-gravel runway with 5,700 feet of pierced steel planking (PSP). More wounded came aboard at Taegu. The crew might not return to Tachikawa for several days. Little wonder that, individually, CAT's captains averaged over 150 hours in the air during October 1950.

BOOKLIFT activities increased when CAT received orders to detach six aircraft and ground personnel for service with the Combat Cargo Command at Ashiya. Established on 10th September by Major General William H Tunner, Combat Cargo imposed order on the chaos of early wartime air transport operations. Tunner, a firm believer in centralised control, relied on techniques perfected during the Berlin Airlift to produce maximum efficient use of aircraft and crews. Gone were the days when pilots would leave Ashiya for Korea at their own discretion, locate a major river near Pusan, then follow the railroad tracks to Taegu. Pilots now adhered to rigorous schedules and flew specific airway channels at set altitudes. The key to Tunner's system, one historian has emphasised, lay in "a strong headquarters transport movement control centre responsible for booking missions for all aircraft, keeping track of movements in flight, and diverting or stopping them from time to time in Korea to fly additional sorties or pick up cargo, personnel or air evacuations."

CAT's detachment reached Ashiya on the evening of 24th October, James R Stewart and his staff had barely had time to stow their gear in tents and grab a few hours of sleep before operations began at dawn on the 25th. The first day, CAT flew fifteen round trips from the wind-swept former Japanese fighter strip to Korea, averaging eleven thousand pounds per trip. And this was only a taste of what lay ahead. Caught up in the hectic whirl of Combat Cargo, the six aircraft seemed constantly in the air, shuttling supplies to Kimpo, Pyongyang, and Wonsan as the Eight Army swept northward. Thanks to the efficiency of Tunner's organisation, the Ashiya detachment, with 25% of CAT's aircraft in Japan, was doing 75% of all BOOKLIFT flying within three weeks after arrival.

CAT's operations reached a peak in November with 22 C-46s and two C-47s assigned to BOOKLIFT. Rousselot had thirty captains and 55 copilots on the payroll, enough to handle aircrew requirements for the foreseeable future. Although still short of line maintenance personnel and hard-pressed with engine changes and hundred-hour inspections, engineering now had 464 employees, giving Grundy a small breathing space. "The biggest problem," Rosbert noted, "remains shortage of parts, which becomes more critical every day." CAT had a potential of six thousand hours a month, demonstrated on 21st November when twenty-two aircraft compiled 208 flying hours. But with the lack of critical parts grounding planes for a day or more, the airline accumulated only 3,825 hours during the month.

The war changed dramatically in late November. As early as 10th November, intelligence sources had detected large Chinese formations north of Hamhung, confirming early indications that a new enemy had crossed the Yalu and lay concealed in the snowy mountains of north-central Korea. But reports of the Chinese presence between the UN columns advancing up the east and west coasts produced no significant alterations in MacArthur's plans. Like Custer at the Little Bighorn, writes General Matthew B Ridgeway, the supreme commander "had neither eyes nor ears for information that might deter him from the swift



Above: C-46F XT-44 crashed at Yonpo on 8 Dec 1950 while evacuating wounded soldiers. The situation of the base was so insecure that the aircraft was set on fire to prevent it from falling into enemy hands. (Dr Joe F. Leeker)

attainment of his objective – the destruction of the last remnants of the North Korean Peoples' Army and the pacification of the entire peninsula." MacArthur's troops, like Custer's, would pay a high price for the great man's wilful blindness.

One new foe was painfully evident. As UN soldiers marched northward, they began to experience the first effects of a North Korean winter. Siberian weather such as most Americans had never known moved into the war zone, blanketing the region with snow and sending blasts of arctic wind to numb the extremities of the living and freeze the dead where they fell. But the chilled men pressed onward to the Yalu river, buoyed by MacArthur's promise to have them home by Christmas.

On 28th November the Chinese struck.

To the blare of bugles and the shrill sound of whistles, masses of Communist troops surged down the icy mountains, overwhelming forward units of the UN advance and throwing MacArthur's campaign into reverse. On the west coast, the Eighth Army fell back, broke contact with the enemy, and hurried southward in relatively good order considering the circumstances. Combat Cargo Command assisted the retreat, first operating from Sinanju, ferrying out Fifth Air Force personnel and equipment along with Eighth Army wounded. The evacuation of Pyongyang soon followed, the last aircraft departing the North Korean capital on 4th December. Air Force squadrons throughout Japan, including CAT, mounted an all-out effort in support of the retreating UN forces.

The situation on the east coast was far more perilous. After the initial Chinese onslaught, most units of the battered X Corps retired to safety without serious incident, taking up positions in the Hungnam-Hamhung area. Advance elements, however, were not so fortunate. The surging Chinese flowed around and cut off two regiments of the First Marine Division, trapping the Americans in rugged country close to the ice-bound Chosin reservoir. Thus was the stage set for the most dramatic episode of the war, with air support playing a crucial role.

The beleaguered marines withstood a series of Chinese frontal assaults. Then, supplied by airdrops, they fought their way in subzero temperatures along a winding mountain road toward divisional headquarters at Hagaru. Exhausted, the two regiments reached the small village, just south of the reservoir, on 3rd December. Here the trapped men carved a crude airstrip out of the frozen ground that allowed Combat Cargo Command C-47s to establish a twenty-minute air shuttle between Hagaru and Yonpo, the major airfield of the Hungnam-Hamhung perimeter.

General Tunner flew into Hagaru on 5th December. "The first sight that met my eyes," he recalled, was "the wounded men, waiting patiently to be loaded on board and flown over the mountains away from this place.

Some were on litters, some on crutches. Behind the wounded a tent flap had been erected. Under it were long rows of what appeared to be round mattresses. They were the dead, each corpse placed on a mattress cover, which was then tied around the top. Frozen stiff, the bodies were stacked like logs. They too, were flown out of Hagaru."

The shuttle airlifted the wounded along with the frozen dead to Yonpo, where C-54s and C-46s waited to fly the casualties to Japan. Altogether Combat Cargo evacuated 4,689 wounded out of Hagaru, losing only two aircraft in the face of treacherous operating conditions. No longer encumbered by their burden of wounded, the marines broke out of Hagaru on 7th December, linking up two days later with a task force from the Third Division.

CAT did not take part in the Hagaru-Yonpo shuttle, but the airline's C-46s did assist in evacuation of wounded from Yonpo, losing an aircraft in the

process. On 8th December Captain Paul Du Pree in XT-44 crashed at Yonpo in marginal weather. One passenger, a medic from the 801st Medical Air Evacuation Squadron, was killed. The crew suffered minor injuries. With no time to repair the aircraft because of Chinese pressure on the UN perimeter, Rousselot ordered the plane doused with gasoline and burned.

The accident at Yonpo turned out to be only the beginning of CAT's troubles. The following day, C-46 XT-852 en route from Tachikawa to Korea ploughed into the side of Mount Fuji at the 8,000-foot level. Captain Robert Heising, a conscientious pilot who may have been blown into the side of Fuji by high winds, died in the crash, along with co-pilot Jimmy W H Chang and radio operator T W Wen. CAT completed the ill-fated cycle of three on 10th December, when C-46 XT-846, commanded by Robert L Brongersma, crashed on takeoff from Taegu after the landing gear had been raised prematurely. Fortunately, there were no injuries, and the aircraft could be repaired.

While CAT laboured through this spate of misfortunes, Combat Cargo Command geared up to evacuate from Yonpo X Corps personnel and equipment that would not go by sea. Tunner launched a maximum effort on 14th December. In four days of round-the-clock flying, frequently in bad weather, Air Force and CAT aircraft carried to Japan 228 casualties, 3,891 passengers, and 2,088.6 tons of cargo.

The Chinese advance ground to a halt in early January, following the capture of Seoul. The Eighth Army regrouped south of the Han River, then resumed offensive operations in mid-February under the command of General Ridgway. After hard fighting, UN troops entered Seoul on 15th March.

CAT's role in direct support of combat units ended as the front stabilized around the thirty-eighth parallel. Always a bit apprehensive about the presence of "civilians" in their bailiwick, Air Force brass – now with sufficient transport to meet any emergency – relegated CAT to the "milk run". For the rest of the war, BOOKLIFT flying consisted primarily of scheduled flights within Japan and to Okinawa, Iwo Jima, Guam and elsewhere throughout the Far East. [Leary pp. 119-124]

CAT flew more than fifteen thousand BOOKLIFT missions during the Korean War, carrying 27,000 tons of supplies and mail and thousands of wounded. From September 1950 to January 1951, the airline played an especially important role in direct support of combat operations. "At a time when air transportation was critically short," General Tunner wrote to Willauer, "you made available to us your aircraft and your trained personnel in the quantities required." CAT, he concluded, had done an "outstanding job." [Leary p.126]

Despite this accolade, there is no mention of Civil Air Transport in the index of the official USAF history of the Korean War. [Futrell p.788]

A/C TYPE	A/C TOTAL TIME	ENGINE TSO		TIME NEXT SVC DUE				A/C STATUS	ETA	ETR	ETD
		NO.1	NO.2	NO.1	NO.2	NO.3	NO.4				
B-844	C-46D	1432637	15889	41606			4	1511	A/C BLSD		0760
B-846	C-46D	537827	59712	21049	30	90		1545	IN FLIGHT		
B-848	C-46A	1432637	15889	41606			4	1511	A/C BLSD		0760
B-854	C-46DM	1432637	15889	41606			4	1511	IN FLIGHT		
B-858	C-46D	271654	65132	65215			14	1327	A/C BLSD		0900
B-860	C-46D	128723	1628	90121			31	1315	T/A SVC		
B-866	C-46D										
B-870	C-46D										
B-138	C-46F	818142	1452	65119	39	99		4763	A/C BLSD		
B-148	C-46F										
B-150	C-46F										
B-154	C-46F										

Above: The CAT C-46 Maintenance Board. Unfortunately the date is not known. (Ward Reimer)

CAT support for the CIA in Japan and Korea

CAT's airlift contribution to FEAR was important but did not compare to its crucial support of Office of Policy Coordination (OPC) operations in Japan and Korea. Hans V Tofte, head of covert activities, 1950-51, considered the airline "absolutely invaluable" during the early phase of the Korean War.

An OSS veteran with a distinguished wartime record in paramilitary operations, Tofte had been recruited by Frank Wisner at the outbreak of the Korean War to take charge of OPC in Japan. He arrived in Tokyo on 16th July 1950, carrying general instructions to establish an escape-and-evasion network to assist fliers brought down behind enemy lines and to begin preparations for guerrilla warfare. Tofte faced a formidable task. OPC's six-man detachment in Japan headed by George E Aurell, maintained a tenuous liaison with MacArthur's headquarters (SCAP). Only the previous May the CIA had secured permission from a reluctant General MacArthur to enter Japan. The supreme commander had not permitted OSS to operate in his theatre during World War II, and he clearly was not happy with the presence of people and activities beyond his control. Major General Charles A Willoughby, SCAP intelligence chief, barely tolerated Tofte.

Ignoring Willoughby's threats to throw OPC out of the theatre, Tofte started work on establishing the infrastructure for future operations. He set up six CIA stations in Japan, the major one at Atsugi Naval Air Station, fifty miles south of Tokyo. Colwell Beers, Tofte's capable deputy, took charge of the Atsugi complex, which included training facilities at Chigasaki, an isolated area on Sagami Bay. OPC activities in Korea centred around a large training base on Yong-do Island in the Bay of Pusan.

Initial operations in the autumn of 1950 emphasised the rescue of American pilots who had been shot down behind enemy lines. Tofte contacted the U.S. Air Force's Office of Special Investigations (OSI), which had responsibility for escape and evasion. Working with Major Julian M Niemczyk, chief of the OSI's Counter-Intelligence Division, he established a network of agents in North Korea to assist downed American pilots. OPC-trained personnel manned coastal islands on both sides of the Korean peninsula near the thirty-eighth parallel. Pilots in trouble were to head for these sanctuaries. If downed inland, the fliers should try to contact friendly Koreans, who were strung out in a belt across the peninsula. Lookout posts every ten miles along both coasts would radio for assistance when the pilots reached the shoreline.

Tofte used CAT from the beginning. He knew the airline personnel and procedures from having worked after World War II as a traffic manager for American Overseas Airlines. Al Cox had sent three C-46s to Japan in July for "AD" operations. In early September E V Wong flew a Cessna 195 from Taipei to Tokyo, adding a light plane to Tofte's growing fleet. The airline performed hundreds of transportation errands, large and small, as OPC quickly became the largest American

paramilitary force since OSS.

Tofte recalled a classic instance of the freedom of action afforded by the ability to use CAT. This came during a dispute with MacArthur's headquarters over the use of gold bars for the escape-and-evasion programme. Tofte wanted a supply of one-ounce gold bars, bearing the widely recognised chop of the old Bank of China, for pilots to carry and use to pay Koreans for assistance if they were forced down. The bars could be obtained easily on Taiwan, but General Willoughby objected (as he usually did), citing currency regulations that prohibited such imports. Ignoring Willoughby, Tofte took a CAT plane to Taiwan, purchased \$700,000 worth of gold bars, and returned to Japan within twenty-four hours. As CAT's chief pilot put it, with evident admiration, Tofte "really got things done."

By the end of 1950 the escape-and-evasion network was in place, the Atsugi-Chigasaki complex had been completed, and OPC had more than a thousand men in Japan. As the battlefield stabilised at the thirty-eighth parallel, emphasis shifted to guerrilla operations in North Korea. Tofte located thousands of North Korean evacuees in refugee camps around Pusan. After careful screening by South Korean officials, hundreds of these young men were accepted for training on Yong-do Island. CAT flew leaders and skilled personnel to Chigasaki for advanced schooling.

Tofte sent forty-four guerrilla teams and attached intelligence units into North Korea between April and December 1951. Most went by sea; some were parachuted in by CAT. Operating south of the Yalu River from Antung in the west to Rashin and Yuki in the northeast, the guerrillas sabotaged trains and ambushed truck convoys, disrupting the flow of supplies from Manchuria and eastern Siberia. Tofte knew this area well. During the 1930s he had worked in Manchuria for the Danish East Asiatic Company and had taken long big-game hunting vacations in the border region. Able to identify vital border crossings along the little-known northern frontier, he could place his units in position to cause maximum damage.

Tofte considered the programme "tremendously successful." Although only twelve hundred guerrillas were involved, the CIA intercepted messages from Peking, warning Chinese field commanders in Korea that fifty thousand troops were operating behind their lines.

Within the short space of three months, CAT's flying time increased from five hundred hours a month with three aircraft to nearly four thousand hours with twenty-six aircraft. This explosive growth placed a tremendous strain on the organisation. But CAT's staff, from coolies to captains, responded with the "can-do" spirit that had been nurtured on the mainland. In a situation fraught with potential disaster, the untiring efforts of Rosbert, Rousselot, Grundy, and others ensured a relatively smooth transition.

The airline also made a crucial contribution to OPC activities in Japan and Korea. It provided airlift for a variety of covert projects, allowing OPC to ignore SCAP's cumbersome restrictions and to shuttle hundreds of guerrillas and agents between CIA training and staging camps throughout the Far East. As Tofte acknowledged, "CIA could never have accumulated an outstanding record in the early stages of the Korean War without CAT." [Leary pp.124-126]

CAT C-46s in New Zealand

"Straits Air Freight Express (SAFE) was founded in 1950 when New Zealand Railways called for tenders to operate a Rail-Air link across the Cook Strait between Wellington at the bottom of the North Island to Blenheim at the top of the South Island."

"Tom O'Connell, who was appointed General Manager, directed from the New Zealand end the setting up of operations which used Curtiss C-46 Commandos leased in from Civil Air Transport for the first few months. SAFE had investigated the hiring of suitable freighters from the UK, USA and Australia, but to no avail. While the search went on, the 1951 watersiders' strike commenced and Tom finally managed to find



Above: CAT C-46 B-860 in the later colour scheme with a Hong Kong Airways Viscount behind, which dates this photo between 1957 and 1959. (Ian D Johnson collection)

the Commandos from the American owned and Chinese registered airline which was based in Formosa (now Taiwan). The Commandos were registered XT-840, XT-844, XT-846 and XT-864, with the first two arriving at Paraparaumu on 12 April 1951. Two days later they commenced trials on the Paraparaumu-Woodbourne route and regular operations commenced on 16 April. During the flight trials, the American pilots qualified for their New Zealand licenses. At the end of May the third Commando arrived and the fourth one a little later. Generally, however, only three were operated at one time with the fourth being available in case of mechanical breakdown of one of the others. The Curtiss aircraft could carry double the freight load of a DC-3 and during their short stay in New Zealand, the Commandos made 1300 crossings of Cook Strait and carried 7800 tons of freight. The pilots, however, were not happy as they were paid per flying hour and as each flight was of only 30 minutes duration, with approximately an hour turnaround between each flight, they had to work seven days a week to make less money than they made flying in their home territory! Towards the end of their stay in New Zealand the 'XT' registrations were changed to 'B' registrations with the aircraft retaining their numerical identities."

"Once the Bristol Freighters arrived, the need for the Commandos lessened and the first one left Woodbourne on 28 June 1951 bound for Brisbane with wool for the Taiwanese market. The second aircraft moved to Auckland on 18 July where it waited for the last two to join it on 23 July and finally on 27 July, all three departed for Formosa." [Sheehan pp. 209-211, 224] See also King pp. 157-158.

XT-reg.	B-reg.	c/n
XT-840	B-840	22359
XT-844	B-844	22353
XT-846	B-846	22215
XT-864	B-864	22362

[King p. 158; Sheehan pp. 209-211, 224]

Chronology

1950	
24Mar	CIA signs option to purchase CAT
25Jun	North Koreans invade South Korea start the Korean War
July	Operation AD began
23Aug	Formation of Airdale Corporation and CAT Incorporated
10Sep	Operation BOOKLIFT began
1951	
February	Operation PAPER (Li Mi project)
December	Operation TROPIC ("third force" project)
1953	

1May - 16Jul	Operation SQUAW
27Jul	Korean armistice signed
09Nov	Operation REPAT began

Abbreviations

AACL	Asiatic Aeronautical Company Limited
CAA	Civil Aeronautics Administration
CAT	Civil Air Transport
CATC	Central Air Transport Corporation
CATCL	Civil Air Transport Company Limited
CATI	Civil Air Transport, Incorporated
CCAA	Chinese Civil Aeronautics Administration
CIA	Central Intelligence Agency
c/n	constructor's number
CNAC	China National Aviation Corporation
DBP	Dienbienphu
DBR	Damaged Beyond Repair
FEAF	Far East Air Force
FEAMCOM	Far East Air Material Command
F/I	Forced landing
FRUS	Foreign Relations of the United States
FTL	Flying Tiger Line
ICAO	International Civil Aviation Organisation
KMT	Kuomintang
MOC	Ministry of Communications
OPC	Office of Policy Coordination
OSI	Office of Special Investigations
OSS	Office of Strategic Services
PDJ	Plaines des Jars, Laos
PLA	People's Liberation Army
ROC	Republic of China
R/r	Re-registered
SAFE	Straits Air Freight Express
SCAP	Supreme Commander, Allied Forces, Japan
TAA	Trans-Asiatic Airlines
TBD	To Be Determined
TCG	Troop Carrier Wing
TCS	Troop Carrier Squadron
TNA	The National Archives (UK)
UN	United Nations
VIAT	Vietnamese Air Transport
WFU	Withdrawn From Use
W/O	Written Off

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Civil Air Transport fleet list by aircraft type

Note: a draft listing of CAT civil aircraft registrations was sent to the ROC CAA with a request for them to check the data and fill in any gaps, such as cancellation dates, if possible. Many cancellation dates were still missing from their reply. Any further data will be included in future articles about CAT or in Feedback.

Published ROC CAA registration dates change with change of ownership, so generally initial registration dates are not known.

Cessna 195

reg.	model	c/n	date	fate	notes
XT-981					
B-981		195-7297	Apr50	to JA3001 22Aug52	ex XT-886, N8424C
XT-983					
B-983		195-7296	Apr50	to JA3002 21Aug52	ex XT-884, N8422C
XT-985					
B-985		195-7314	Apr50	to JA3005 25Jul52	ex XT-888, N8425C
XT-987					
B-987		195-7313	Apr50	to JA3003 25Jul52	ex XT-889, N8423C

[Archive pp.2010/120, 2011/023; Leeker Japan p.18; SEA79 pp.22, 36]

Curtiss C-46 Commando

reg.	model	c/n	date	fate	notes
XT-30					
B-130	C-46F	22379	R09Jun48	(photo) (leased) w/o 26Nov60 PDJ, Laos	
B-136	C-46F	22465	R09Jun48	(leased) w/o 13Aug61 LS-14, Laos	
B-138	C-46F	22500	R09Jun48	(leased) to Air America, returned to CAA 1972, cancelled 03Oct72	
XT-44	C-46F	22502?	?	(photo) crashed at Yonpo, Korea 8Dec50	
B-146	C-46F	22461	R04Jun48	(leased) to Air America, returned to CAA 1972, cancelled 03Oct72	
B-148	C-46F	22510	R04Jun48	(leased) w/o 17Jul63 near LS-69, Laos	
B-150	C-46F	22526	R04Jun48	(leased) w/o 05Sep63, cancelled 14Sep63	
B-154	C-46F	22370	R04Jun48	(leased) to Air America, returned to CAA 1972, cancelled 03Oct72	
B-156	C-46D	22353	R16Mar61	(leased) [JFL], w/o 17Nov66. Not listed Feb54, see B-844	
XT-840					
B-840	C-46D	22359	?	(L) SAFE, r/r, Cancelled 09Apr57, to N9873F	
XT-842					
B-842	C-46D	22363	?	r/r, Cancelled 09Apr57, to N9874F	
XT-844					
B-844	C-46D	22353	R25Mar50	(L) SAFE, r/r (Jun51), cancelled, to B-908 (q.v.)	
XT-846					
B-846	C-46D	22215	R25Mar50	Crashed at Taegu 10Dec50, repaired, (L) SAFE, r/r (Jun51), to HP-315, VT-DRH (1963), B-924 (q.v.)	
B-848	C-46A	427	R26Apr50	AACL, cancelled 02Nov60, r/r B-910 (.60)(q.v.)	
B-850	C-46F	22451	?	AACL, cancelled 15Oct60, to N74811 (3.61)	
XT-852	C-46	?	?	(photo) crashed into Mount Fuji 09Dec50	
B-854	C-46D	33372	R01May50	AACL, to HP-314, B-922 (q.v.)	
B-856	C-46D	32950	R01May50	(photo) AAAC, r/r B-908 (q.v.)	
XT-858					
B-858	C-46D	22228	R01May50	AAAC, to Air America Inc., to XW-PFL	
XT-860					
B-860	C-46D	22236	R01May50	AAAC, r/r B-912 (q.v.)	
XT-862	C-46	22351?	?	DBR 27Sep50 Iwakuni AB, Japan	
XT-864					
B-864	C-46D	22362	R10May50	(photo) (L) SAFE, r/r (Jun51) CATCL, r/r B-916 (q.v.)	
XT-866					
B-866	C-46D	22366	R10May50	CATCL, to Air Asia, cancelled 03Nov60, to HP-314	
XT-868	C-46D	22218	?	Not listed Feb54	
XT-870					
B-870	C-46D	22232	R10May50	CATCL, to Air Asia, to B-914	
XT-872					
B-872	C-46D	32878	R15Mar56	CAT, AAAC, cancelled 17Mar56, to N9885F	
XT-874					
B-874	C-46D	33132	R15Mar56	CAT, AAAC, cancelled 17Mar56, to N9884F	
XT-876					
B-876	C-46D	33153	R15Mar56	CAT, AAAC, cancelled 17Mar56, to N9883F	
B-878	C-46D?			TBC. Not listed Feb54	
B-902	C-46F	22466	R27Nov50	CAT, cancelled 17Jan52, returned to TAA after lease [JFL]	
B-904	C-46D	33212	R16Apr51	TBD	
B-906	C-46D	33213	R16Apr51	TBD	
B-908	C-46D	32950	R14Sep60	(photo)(CATCL) w/o 20Jun64 near Taichung, Taiwan, cancelled 07Jul64	
B-910	C-46A	427	R01Nov60	(CATCL) leased to Air America, cancelled 16Oct74	
B-912	C-46D	22236	R01Nov60	(CAT) to Air America, cancelled 16Oct74, scrapped at Tainan 13Nov74	
B-914	C-46D	22232	R15May61	(AAAC) to Air America Inc., cancelled 10Apr63, to XW-PBV	
B-916	C-46D	22362	R15May61	(AAAC) w/o 04Feb62 shot down, PDJ, Laos, cancelled 14Feb62	
B-918	C-46D	33451	R07Dec61	(AAAC) to Air America Inc., cancelled 10Apr63, to XW-PBW	
B-920	C-46	22538	R02Oct63	(AAAC) Air Asia, cancelled 11May64, to Air America as N67985	
B-922	C-46D	33372	R20Aug64	Air Asia Co Ltd, to B-926 (q.v.)	
B-924	C-46D	22215	R03Sep64	Air Asia, to Air America, to XW-PEJ	
B-926	C-46D	33372	R03Sep65	CATCL, (L) Air America, to XW-PGD	
B-928	C-46A	26866	R16Aug65	to Air America	

[Air-Britain C-46 monographs; Archive pp.2010/120-122; JFL C-46v4, 12Mar2010; Leary pp.220-223; MSB 26Mar2005; ROC CAA 25May2005, 02Jul2007, 12Mar2010, 06Dec2010, 18Oct2012; SEA79 pp.24-25]

Civil Air Transport fleet list by aircraft type [continued]

Notes to C-46 listing:

1. "On December 8 [1950] Captain Paul Du Pree in XT-44 crashed at Yonpo in marginal weather." [Leary p.122]
2. "The following day [09Dec50], a C-46 (XT-852) en route from Tachikawa to Korea ploughed into the side of Mount Fuji at the eight-thousand foot level." [Leary p.122]
3. "On March 1, 1955, ... Asiatic Aeronautical sold three C-46s to Civil Air Transport Company Limited ..." [Leary p.208]
4. "CAT owned nineteen C-46s ... CAT also retained custody of eight C-46s that had been leased from the Chinese Civil Aeronautics Administration in May 1948" [Leary p.117] (XT-30 to XT-56 > B-130 to B-156)
5. "Chennault obtained permission to charter ... twelve flyable C-46s from CAF stocks. The transports arrived in such poor mechanical condition, however, that only three were considered safe enough to be flown to Japan. CAT cancelled the lease agreement at the end of the month when more reliable C-46s came into service." [Leary p.119]
6. B-156 was reissued to NAMC YS-11A-219 c/n 2110.
7. The ROC CAA list B-146 as s/n 44-78638, i.e. c/n 22461; B-910 as c/n "347356", i.e. s/n 43-47356 = c/n 427 (404CK), and B-918 as c/n "1887".

Douglas DC-3 / C-47 Skytrain

reg.	model	c/n	date	fate
XT-801				
B-801	C-47B	20681	R24Feb55	CAT (ex N8421C) AACL; to 9N-AAC, VT-DTQ
XT-811(1), XT-809?				
B-809	C-47A	19932	R24Feb55	(leased, ex VR-HEX) AACL, to Air America Inc., to VIAT 09Jun61
XT-811(2)				
B-811	C-47A	18947	?	(leased from TAA, ex PI-C181) w/o 20Oct54 ditched in Hua Hin area of Gulf of Siam
XT-813				
B-813	C-47B?	26816?	?	(leased from TAA, ex PI-C182?) shot down by communist gunfire 29Nov52 Kirin, China
XT-815?				
B-815	C-47A	19258	R16Jan51	AACL (leased from TAA, ex PI-C183) to Air America Inc., cancelled 28Feb64
XT-817?				
B-817	C-47A	19256	R16Jan51	AACL (leased from TAA), to Air America Inc.
B-821	C-47A	11921	R16Apr51	Ex VR-HDP (Jan51). Not listed Feb54.
B-823	C-47A	13399	?	(leased) to N6634C, CF-MCC
B-827	C-47A	13784	R14Aug54	AACL, to Air America Inc.
B-829	C-47B	34298	R05May58	AACL, to Air America Inc.
B-1409	C-47B	32991		to Foshing (TBC), sold as XW-TAE
HS-TAC	C-47A?	?	1950/51	(L) Oct50-Jan51
HS-TAD	C-47A?	?	1950/51	(L) Oct50-Jan51, May51, chartered from Trans-Asiatic Airways (Siam)
N6634C	C-47A	13399	R18Aug55	Civil Air Transport, Inc., cancelled 12Dec55 to CF-MCC

[Archive pp.2010/122-123; JFL 12Mar2010, 21Sep2010; JMG2; Leary pp.218-219; Leeker C-47, Japan pp.21, 22; ROC CAA 02Jul2007; SEA79 pp.24-25]
Notes:

1. "In early October [1950] Rosbert worked out an arrangement with Monson W Shaver, operations manager of Trans-Asiatic Airways, to charter five C-47s, complete with crews. He made a similar agreement with Max A Springweiler and William A Dudding, owners and operators of International Air Transport to lease their single C-47. Painted in CAT insignia, the six aircraft were flying BOOKLIFT missions by October 10." [Leary p.118]
2. "CAT's operations reached a peak in November (1950) with twenty-two C-46s and two C-47s assigned to BOOKLIFT." [Leary p.120]
3. "In December 1951 ... CAT purchased three C-47s from Trans-Asiatic Airways. Given Chinese registration numbers B-813, B-815, and B-817" [Leary p.138]
4. Five C-47s were chartered from Trans-Asiatic Airlines of the Philippines (possibly PI-C180 to C184); three of these later became B-813, B-815 and B-817. B-813 may be ex PI-C182 c/n 26816. [Leeker C-47] Maybe B-817 was ex HS-TAD? Since B-811 is known to be ex XT-811 (photo), maybe B-815 and B-817 were ex XT-813 and XT-817 respectively and all four TAA C-47s may have been registered on the same day (16Jan51). See JMG DC-3 Vol. 3 p.121.
5. B-809 was leased from International Air Transport Company, Limited on 18Nov50 and renewed for one year from 01Nov51, ex VR-HEX, quoted as C-47A 43-15466, c/n 15437 [Springweiler pp. 391, 396-401]
6. "Snoddy and Schwartz, ..., boarded C-47 B-813 on the evening of November 29 (1952) to make the pickup. ... later Snoddy and Schwartz were dead, shot down by Communist gunfire." [Leary p.140]
7. "... the airline recorded only one major accident in charter operations. This involved a C-47 (B-811) that CAT kept in Bangkok under charter to Sea Supply, ...While returning from a night parachute training exercise on October 20, 1954, pilot Harry Kaffenberger dipped a wingtip into the water during a low-level turn over the Gulf of Siam." [Leary p.199]
8. N6634C c/n 13399 was sold to CATI by W R Brucker of P.O.Box No. 2/91, Manila, Philippines, on 5Jul55, so may have been one of the C-47s leased from TAA.
9. B-819 and B-825 were Catalinas.

Douglas DC-4/C-54 Skymaster

reg.	model	c/n	date	fate
B-1002	C-54A	3078	R17Jun52	CAT Inc., AACL (Feb55), cancelled, to VIAT as XV-NUB Aug61
B-1004	C-54G	36072	R24Aug53	CAT Inc., AACL (23Feb55), leased to Air America Inc., to N12191 27Sep65
N2168	C-54G	36028	08Aug56	CAT Inc. (L) Air Vietnam 1957, to Air America 31Mar59, to Air Asia Co Ltd as B-1010 08Jan62

[Leary p.224; Leeker C-54; ROC CAA 18Oct2012; SEA79 p.25]

Notes:

1. "In summer 1952 the Air Force turned over to CAT a C-54 (DC-4)." (B-1002) [Leary p.136]
2. The TAHS DC-4 production list (p.214) gives N86552 c/n 3078 with Civil Air Transport in May 1947 but this is unlikely. (The FAA file for N86552 needs to be checked.)
3. The Minutes of Board of Directors of CAT Inc. dated 26 and 27 May 1952 (preserved at: UTD/CIA/B4F6A) say that on 3 April 1952 that Board had expressed the "desirability to the Corporation of purchasing a four-engine aircraft" and that "the management of the Company has since that date purchased a C-54 aircraft from The Flying Tiger Line, Inc., bearing the Serial No. 3078 and Registration N86552, for the sum of \$ 595,000" – money that was borrowed from the Airdale Corp. [JFL 29Mar2005]
4. The history of c/n 3078 includes: PI-C108 Philippine Airlines, 7Mar49; N86552 Flying Tiger Line Inc., Burbank, CA; Civil Air Transport Inc. (sic), May52; US registration cancelled 19Jun52; B-1002 Civil Air Transport, presumably Jun52; XV-NUB VIAT, Aug61, crashed into mountain North Vietnam, late Feb62 or 1Mar62. [JMD 30Mar2005] Dr Leeker has confirmed that the purchaser was in fact CAT Incorporated; it arrived in Taipei in June 1952 and was re-registered to AACL in February 1955. [JFL 15Oct2012]
5. C-54G N2168 c/n 36028 was registered to Airdale Corporation (date?); sold to CAT Incorporated 8Aug56; then to Air America, Inc. 31Mar59 ('change of name'). [JMD 01Apr2005] Later c/n 36028 became N12190 but there are no papers for N2168 in this FAA file. The FAA said "Appears N2168 was not ever assigned to the aircraft Douglas C54G, serial 36028. Records indicate only N12190 was assigned." [FAA 19Oct2012] The explanation is probably that N2168 was a CIA-owned aircraft for which records are not yet in the public domain.

Additional aircraft types will be considered in later articles about CAT.



Above: C-46F B-130, the first of many of the type to be taken on charge by CAT, is seen here at Kai Tak airport. (Ian D. Johnson collection)

FRUS files

The outbreak of hostilities in Korea: response of the United States and the United Nations to events in Korea, June 24-30, 1950, pp. 125-270;
 The period of the North Korean offensive, July 1-September 15, 1950: British and Indian efforts at mediation; United Nations activities concerning Korea; the problem of the 38th parallel, pp. 271-730;
 The period of the United Nations offensive, September 16-November 28, 1950: the problem of the 38th parallel; United Nations activities concerning Korea; the question of intervention by the People's Republic of China, pp. 731-1236;
 The period from November 28 to December 31, 1950: Chinese Communist intervention in Korea; the Korean question in the United Nations; the Truman-Attlee discussions; retreat of the United Nations forces, pp. 1237-1634;

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 I. January 1-April 30, 1952: narrowing the issues, pp. 1-186;
 II. May 1-July 14, 1952: the South Korean political crisis and third party approaches to end the war, pp. 187-408;
 III. July 16-October 8, 1952: deadlock acknowledged, recess at Panmunjom, pp. 409-557;
 IV. October 17-October 29, 1952: the Korean debate at the seventh session of the UN general assembly, pp. 558-720;
 V. January 3-April 26, 1953: new look at Korea under Eisenhower administration, pp. 721-937;
 VI. April 26-June 8, 1953: progress at Panmunjom and the offer to negotiate a mutual security pact with the Republic of Korea, pp. 938-1151;

Foreign relations of the United States, 1952-1954. Korea (in two parts), Volume XV, Part 1, United States Department of State, U.S. Government Printing Office, 1952-1954, <http://digital.library.wisc.edu/1711.dl/FRUS.FRUS195254v15p1>
 VII. June 8-July 27, 1953: armistice attained, pp. 1152-1445;
 VIII. July 27, 1953-February 18, 1954: post-armistice issues, pp. 1446-1751;
 IX. March 1-December 31, 1954: U.S.-Korean relations in the post-armistice period, pp. 1752-1956;

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TNA files

Please see TNA catalogue for additional files.

Colonial Office files (code CO)

TNA ref.	Title in TNA catalogue	year
537/5392	Implications of the situation in Korea for British foreign policy	1950
537/6072	American intervention in Korea and Formosa: repercussions in Hong Kong	1950
537/6294	Far East defence: the War in Korea; military situation	1950
537/6295	Far East defence: reports on the military situation in Korea	1950
537/6299	Far East defence: effects of Chinese communist intervention in Korea; Anglo-American discussions; Joint Planning Staff papers. (Misplaced while on loan to government department)	1950
537/6300	Far East defence: policy in the event of withdrawal of UN forces from Korea; Joint Planning Staff papers	1950
537/6321	Hong Kong defence: movement of British troops from Hong Kong to Korea	1950
537/6322	Hong Kong defence: movement of British troops from Hong Kong to Korea	1950
etc.		

Foreign Office files (code FO)

TNA ref.	title in TNA catalogue	year
371/92061	General MacArthur's views on Korea and the Far East; reaction to his dismissal. Code F file 1017	1951
371/92077	Joint planning papers on the strategic importance of Formosa and future military situation in Korea. Code F file 1192	1951
371/92756	Anglo-American exchanges concerning the policy of the conduct of the Korean War; discussions about merits of bombing North Korea and retaliatory bombing of China; draft warning statement to be issued to China and North Korea; HMG consultation with old Dominions on policy. Code FK file 1022 (papers 1 to 30)	1951

371/92757	Anglo-American exchanges concerning the policy of the conduct of the Korean War; discussions about merits of bombing North Korea and retaliatory bombing of China; draft warning statement to be issued to China and North Korea; HMG consultation with old Dominions on policy. Code FK file 1022 (papers 31 to 50)	1951
371/92758	Anglo-American exchanges concerning the policy of the conduct of the Korean War; discussions about merits of bombing North Korea and retaliatory bombing of China; draft warning statement to be issued to China and North Korea; HMG consultation with old Dominions on policy. Code FK file 1022 (papers 51 to 69)	1951
371/92759	Anglo-American exchanges concerning the policy of the conduct of the Korean War; discussions about merits of bombing North Korea and retaliatory bombing of China; draft warning statement to be issued to China and North Korea; HMG consultation with old Dominions on policy. Code FK file 1022 (papers 71 to 85)	1951
371/92760	Anglo-American exchanges concerning the policy of the conduct of the Korean War; discussions about merits of bombing North Korea and retaliatory bombing of China; draft warning statement to be issued to China and North Korea; HMG consultation with old Dominions on policy. Code FK file 1022 (papers 86 to end)	1951
371/92761	Chinese intervention in Korea; American attempt to have China branded as aggressor by the UN. Code FK file 1023 (papers 1 to 20)	1951
371/92762	Chinese intervention in Korea; American attempt to have China branded as aggressor by the UN. Code FK file 1023 (papers 21 to end)	1951
371/92807	Speculation about development of air warfare over Korea; report of increased strength of enemy air force; Soviet allegation of American violation of Soviet airspace. Code FK file 1092.	1951
371/92808	Discussions on military strategy in Korea in the event of failure to achieve a cease-fire; question of re-crossing the 38th parallel; information to Old Commonwealth countries about Anglo-American military discussions, including possible bombing of the Yalu dams and hydro-electric plant. Code FK file 1093 (papers 1 to 26)	1951
371/92809	Discussions on military strategy in Korea in the event of failure to achieve a cease-fire; question of re-crossing the 38th parallel; information to Old Commonwealth countries about Anglo-American military discussions, including possible bombing of the Yalu dams and hydro-electric plant. Code FK file 1093 (papers 27 to 54)	1951
71/92810	Discussions on military strategy in Korea in the event of failure to achieve a cease-fire; question of re-crossing the 38th parallel; information to Old Commonwealth countries about Anglo-American military discussions, including possible bombing of the Yalu dams and hydro-electric plant. Code FK file 1093 (papers 57 to 77)	1951
371/92811	Discussions on military strategy in Korea in the event of failure to achieve a cease-fire; question of re-crossing the 38th parallel; information to Old Commonwealth countries about Anglo-American military discussions, including possible bombing of the Yalu dams and hydro-electric plant. Code FK file 1093 (papers 78 to end)	1951
371/99598	The air war in Korea. Code FK file 1091 (papers 1 to 16)	1952
371/99599	The air war in Korea. Code FK file 1091 (papers 17 to 38)	1952
371/99600	The air war in Korea. Code FK file 1091 (papers 39 to 57)	1952
371/99601	The air war in Korea. Code FK file 1091 (papers 58 to 88)	1952
371/99602	The air war in Korea. Code FK file 1091 (papers 89 to end)	1952
371/105510	Armistice negotiations in Korea and consultations with Syngman Rhee: discussion between Air Marshall Barnett, UN Command, and Gen Clark. Code FK file 1071/715G	1953
371/105514	Transportation of Indian troops to Korea: problems with UK assistance; possible Indian requirement for air transportation. Code FK file 1071/814	1953
371/105547	Air operations in Korea; Chinese allegations of violation of their air space; details of aircraft losses on both sides; plans for retaliatory bombing of Manchurian bases. Code FK file 1095	1953
371/115325	Armistice violations in Korea: Communist denunciation of US air charges	1955
etc		

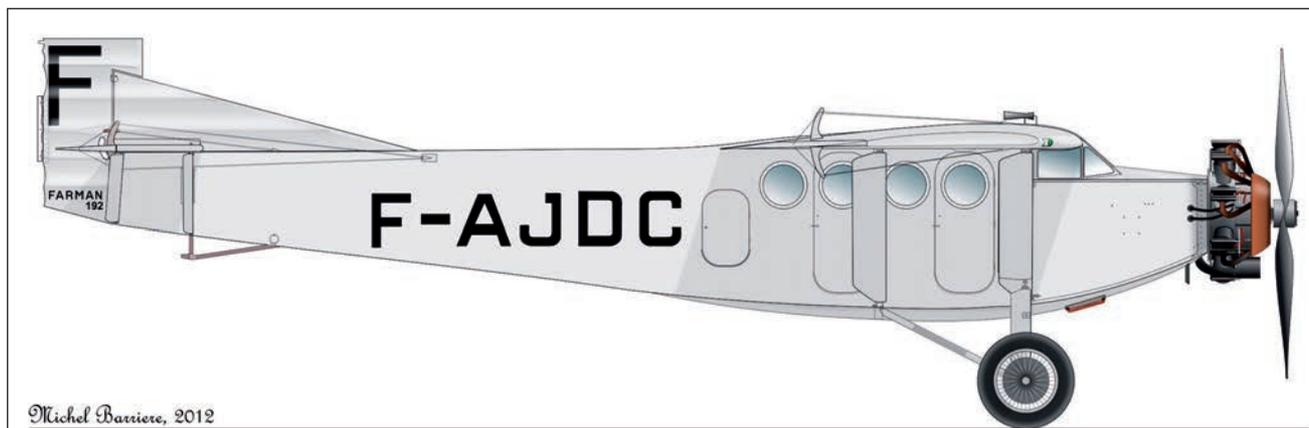
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The FARMAN 190 and its derivatives

Michel Barrière

PART NINE



Farman F.192 (Salmson 9 AB)

- concluded

F.192 no [22?], c/n 7149 **F-AJHN**

Conversion in August 1935 of F.190 no 28 (q.v.).

F.192 no [23?], c/n 7157 **F-AJJJ**

Conversion in [November 1937] of F.190 no 33 (q.v.).

F.192 no 24, c/n 7172 **F-AJNH**

Conversion in October 1936 of F.198 no 1. This is sometimes stated to be F.192 no 7, but this seems to result from a misreading of the registers in which this "7" appears to be the construction number of F.198 no 1 crossed through, and the suggestion of no 24 (barely visible in the copy we consulted) seems valid.

F.192 no [25?], c/n 7157 **F-AJJJ**

Conversion in early 1937 of F.190 no 33 (q.v.).

F.192 no [26?], c/n 7246 **F-AQCN**

This Farman was acquired by CAF which rebuilt it in its workshops in 1937. Under the reference AIR 2-010882, it received Cdl 5376 on 6 September 1937, was registered F-AQCN and based at Nîmes. It was inspected there on 19 October 1938. Probably requisitioned in 1939.

F.192 no [27?], c/n 7247 **F-AQCO**

This Farman is the F.290 F-AKET, also transferred to CAF which rebuilt it in its workshops in 1938 under the control of the Bureau Veritas. Under the reference AIR 2-010883, it received Cdl 5769 on 21 May 1938, was registered F-AQCO and based at Aulnat where it was inspected on 17 August 1938. Probably requisitioned in 1939.

F.192 no [28?], c/n 7132 **F-AJDC**

Right: F-AJHN, seen here in 1936, was a conversion to F.192 standard, having started life as F.190 no 28 (Collection M. Barrière)

Above: Probably the last F.192, F-AJDC of the Aéro-Club de Chartres, delivered in 1939 (Artwork: M. Barrière)

Conversion in March 1939 of F.190 no 17 (q.v.).

Farman F.192/1 (Salmson 9 Aba)

In 1935, a sub-type designated F192/1 was produced with a Salmson 9 Aba engine of 280 hp. Only two examples of this version were produced. It is possible that an aerial photography company, contracted to carry out extended missions in French West Africa, may have been the reason for this version as it was asserted that, in these regions, the 230 hp of the Salmson 9 Ab was inadequate. A second example, produced by Farman for no obvious reason, disappeared during the Spanish Civil War.

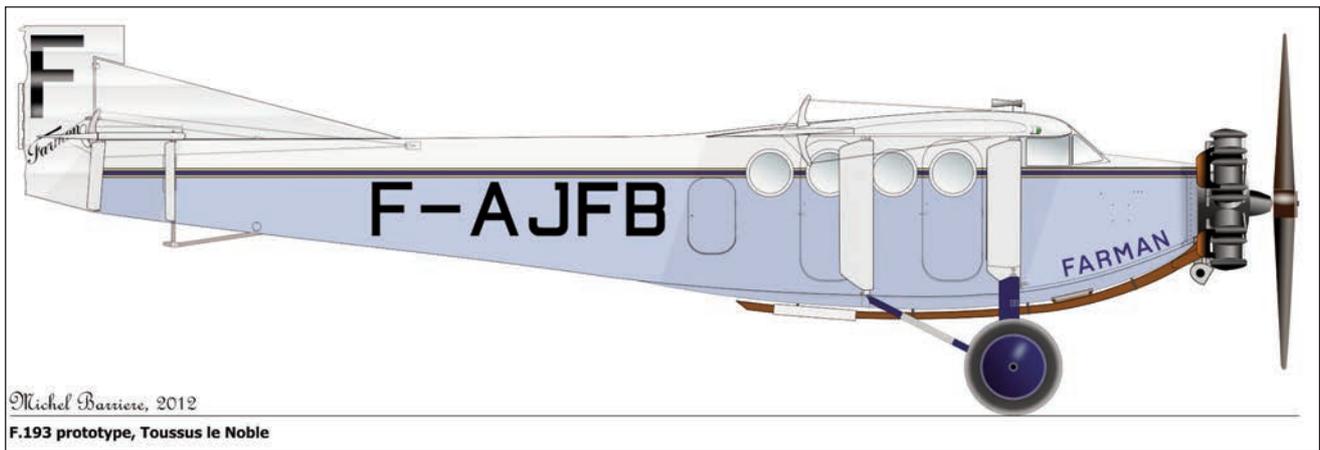
F.192/1 no [1], c/n 7328 **F-AMTO**

Conversion of F.192 no 20, registered in April 1935 to Entreprises Photo-Aériennes Moreau.

F.192/1 no 2, c/n 7467 **F-ANNV**

Le F.192/1 no 2 was registered on 18 March 1935 to Société des Avions H&M Farman with the Cdl 4039 and registration F-ANNV. This was no doubt an aircraft produced for tests and demonstrations to the same specification as no 1 above. On 14 Septembre 1936, it was registered in the name of Rémy Clément, prior to delivery to the Spanish Republic. It disappeared during the Civil War.





Farman F.193 (Farman 9 Ea or 9 Ebr)

In March 1929, the magazine "Les Ailes" announced that the Farman company had produced a new nine-cylinder radial aircraft engine to join its family of American motors. Its key characteristics were :

Bore:	115 mm
Stroke:	120 mm
Displacement:	11.2 litres
Compression ratio:	5.8
Maximum power:	280 hp at 2,700 rpm
Reduction:	1:2
Dry weight:	230.5 kg
Maximum diameter:	1.06 m
Length:	1.169 m

It would become the Farman Fa 9 Ea. The F.193 resulted from the fitting of this engine to the airframe of the F.190.

In 1932 a more powerful version made its appearance, the Fa 9 Ebr of 280 hp, equipped with a gearbox. More comfortable and quieter, this engine equipped subsequent F.193s, and the added power led Farman to add a strut linking the engine cowling to the engine-mount to increase the rigidity of the airframe.

If we were to strictly follow the model number sequence, we would not at this point consider the other versions of the F.193 produced by Farman, the F.390 to F.393, but it makes no sense to deal with them separately. Setting aside their primary role of producing commercial transports, Farman delivered through these designs luxury air tourism, clearly influenced by contemporary developments in the motor car. From 1932, when the prototype of the F.390 appeared, the F.193 (from No 4 onwards), the F.390 and the F.391 all employed the same basic airframe, luxuriously equipped. They were powered respectively by Farman engines of 250/280, 150 or 190 hp, and equipped with a gearbox and a four-bladed propeller. The F.392 and F.393, conceived later, were improved versions of the F.390 and F.391 with rounded

***Above:** The prototype F.193 in its original configuration as it appeared in 1929. (Artwork: Michel Barrière)*

wings and finer glass.

F.193 NO 1, C/N 7141 F-AJFB

F.193 no 1 was for a long time the personal touring aircraft of the Farman family as well as one of the prototypes for the whole series. Its career began in mid-1929 with a Farman 9 Ea engine of 250 hp equipped with a two-bladed propeller, constructed from the airframe of F.190 no 21 according to the BV, but more convincingly no 22 according to Farman (no 21 was F.190 F-AJEN).

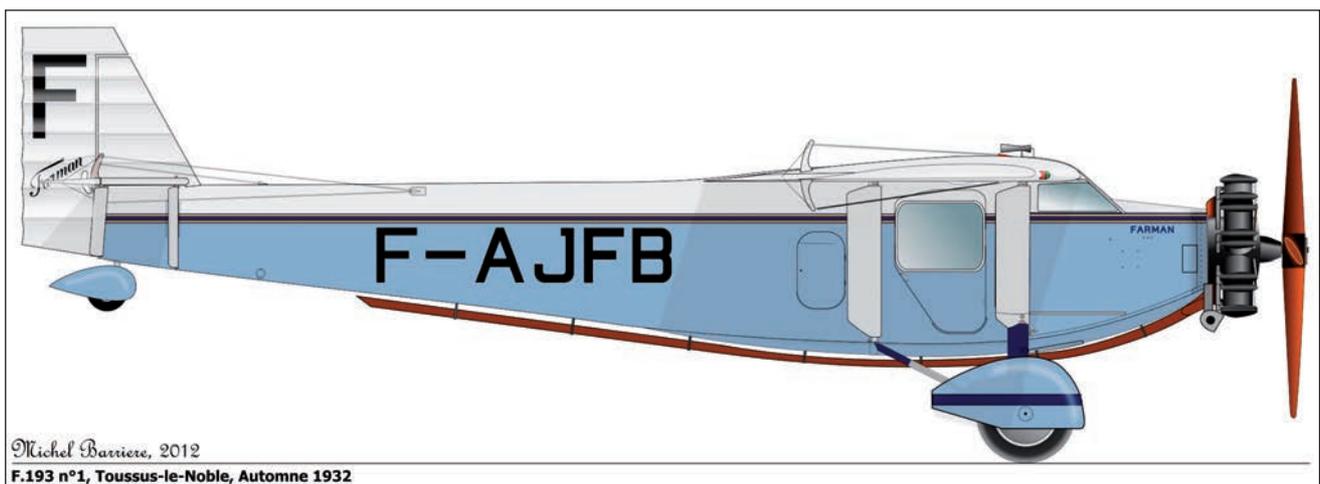
The aircraft was one of the stars of the Farman stand at the Salon Aéronautique de Paris for 1930 where it represented the F.190 in its blue and silver livery. Gray-blue curtains covered the entire interior, including the cockpit, and a matching carpet completed the décor.

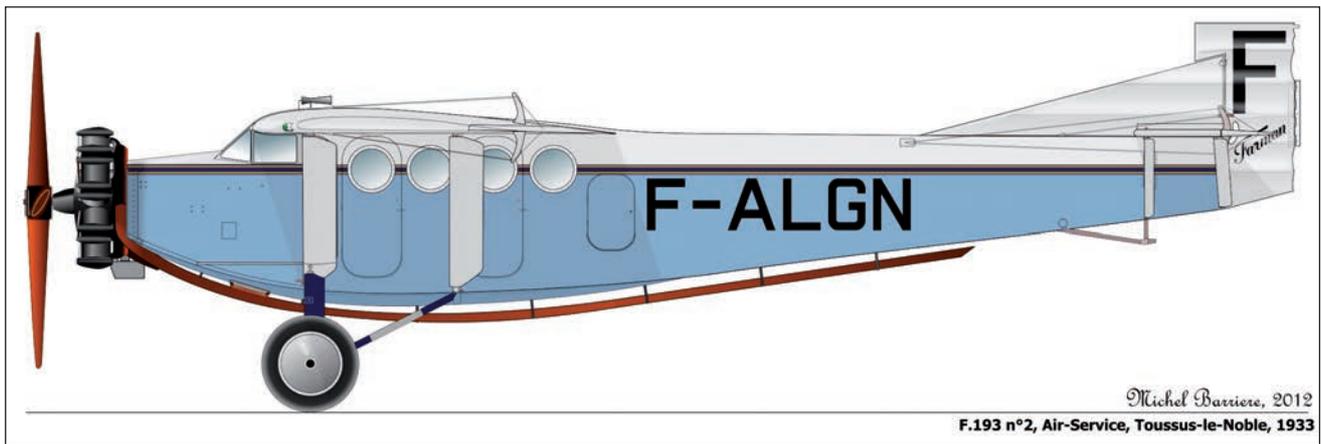
F.193 no 1 served as prototype and demonstrator for the development of Farman's strategy of positioning the F.190 as a Grand Touring aircraft. At the same time, it was one of the aircraft used by the Farman family for flights which were invariably also promotional.

It was soon refitted with a moteur Farman 9 EBr 280 hp motor equipped with a 1:2 gearbox and a four-bladed propeller. A strong strut was added between the engine cowling and the engine-mount to stiffen the structure.

In the autumn of 1932 it was modified again. It was then listed as F.390 no 1 by the BV, and its photographs illustrate the specification submitted by Farman. In these images, the aircraft still seems to be fitted with a 9-cylinder Farman engine, and not the 7-cylinder type tested on F.193

***Below:** The first F.193 following its conversion to F.390 standard in 1932. Note the larger cabin windows for this Grand Touring variant. (Artwork: Michel Barrière)*





F.193 n°2, Air-Service, Toussus-le-Noble, 1933



Above: F.193 no 2 of Air-Service in Farman house colours. (Artwork: Michel Barrière)

Left: The prototype of the F.193 with a Farman 9 EA engine, a two-blade propellor and no gearbox, at Toussus-le-Noble, 1929 (Collection Michel Barrière)

no 2 (see later). It probably served as the prototype for Farman's new tourism layout: large square windows, faired wheels, four seats one of which revolved, a new all-moving rudder and tail-wheel.

F.193 no 1 was registered on 17 July 1934 as an F.193/1 with Cdl 3847 in the name of Maurice Farman.

F.193/1 NO 1, C/N 7141 F-AJFB

Luxuriously equipped, with the F.392 wing and a 265-litre fuel tank, the F.193/1 was convertible into an ambulance aircraft. It served as the personal transport of Maurice Farman, but it was also regularly used by Andrée and Marcel Farman for trips within France and to neighbouring countries. In 1935, the aircraft was regularly employed by Andrée Farman for her travels. In the Concours d'élégance of touring aircraft held at Buc, it took first place. In August, Andrée Farman participated in a tour of Italy in this aircraft, piloted by Burtin. They returned in September after a route encompassing Toussus, Lyon, Cannes, Pisa, Rome, Naples, Venice, Milan, Cannes, Lyon, and Toussus.

The aircraft was inspected at Toussus-le Noble on 7 October 1938 with 1153 flying hours. It was probably requisitioned ; no subsequent fate is known.

F.193 NO 2, C/N 7274 F-ALGN

F.193 no 2 was produced during the early months of 1931. In the spring, its career began in a motoring environment: it was displayed in the permanent exhibition of the Saint-Didier Aviation Department at the garage Saint-Didier in Rue des Sablons in Paris. In the exhibition hall it was equipped with a Farman 9 Ea, without gearbox, and a two-blade propellor. It carried the classic two-tone blue Farman colours.

Its sa volure et sa mâtûre were mostly removed to enable the aircraft to fit into the limited space available. Its distinctive feature,

Right: Postcard showing F.193 no 2 displayed at the St-Didier garage in Paris in 1930. The aircraft is recognisable by the doors in the port side of the cabin. (Collection Michel Barrière)

easy to spot and which it retained throughout its career, was that the doors were on the port side of the fuselage.

F.193 no 2 was registered to Air Service on 9 November 1931 with CdN 2066 / Cdl 3006 and registration F-ALGN. It was then however employed in

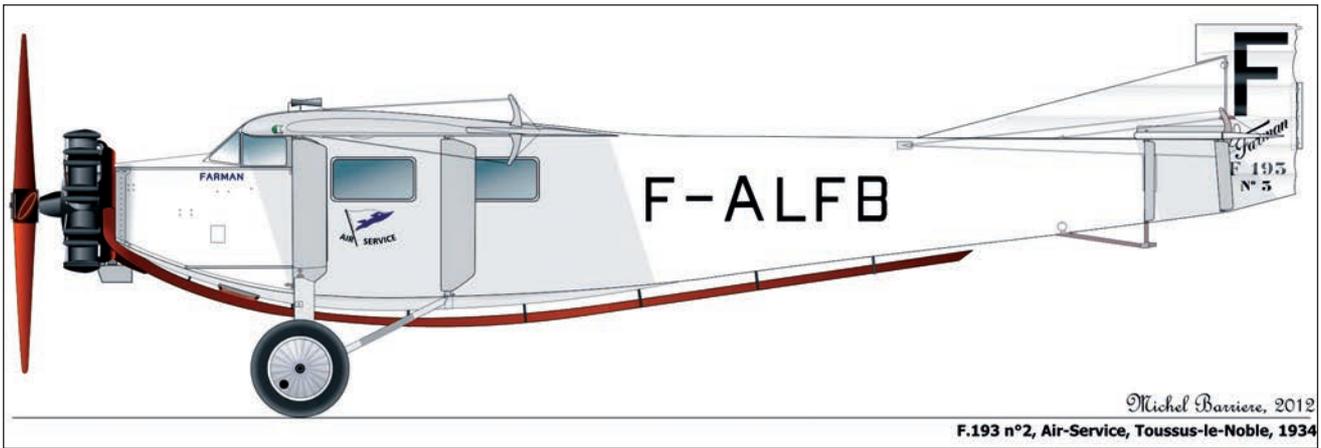
testing the Farman 7 Ears 150 hp motor with a gearbox and a non-disengageable compressor which maintained ground atmospheric pressure at an altitude of 1,200 metres (3,950 feet). Official approval tests lasted until the end of February 1932. For the tests of this engine, which would be fitted to the F.390 which was first displayed at the Salon in December 1932, F-ALGN carried the title 'F.390 no 1' on the fin, even though the first production F.390 would be F-AMEQ, the real F.390 no 1.

After serving as an engine test-bed, F.193 no 2 was used by Air Service as a publicity machine, undertaking various trips and trial flights. In 1933, it was refitted with a Farman Fa 9 Ebr engine, with a 1:2 gearbox and a four-blade propellor. Little is known about its subsequent career. It was cancelled from the register for unknown reasons on 21 January 1937.

F.193 NO 3, C/N 7267 F-ALFB

The origins of F.193 no 3 are unknown. Its production number suggests that it was constructed in the first quarter of 1931 and photographs show that it had an F.199 fuselage. The all-white paint scheme of this aircraft support the idea that it was on of the four machines trialled in





July 1931 at Villacoublay. If it was built as an F.199 (no 3?) its exact configuration is not known because its fuselage does not seem to have had a stretcher access door on the port side, which suggests that it differed from the Uruguayan F.197 or from F.190 no 53. As this version was not pursued, it was converted into F.193 no 3 in June 1932 in the workshop at Toussus and certified by the BV. On 12 July 1932 it received CdN 2029 / Cdl 3205 and was registered to Société Air Service, with whom it had an uneventful career.

On 25 September 1936, F.193 no 3 was registered in the name of Robert Peitz (rue des Fossés, Tourman-en-Brie). It was probably exported immediately to Republican Spain, but the export was not registered until 29 November 1936. Its ultimate fate is unknown; however, three Farmans were recovered in 1939 from the airfields of La Torrecica and Los Llanos, near Albacete. One of them was described as an F.193 equipped as a hospital plane and this could be F.193 no 3. Contrary to what some sources claim, this cannot be 30x112, photographs of which leave little doubt that it is an F.291/1 returned from France in March 1939.

F.193 NO 4, C/N 7369

F-AMPD

On 27 July 1933, the F.193 destined for Suzanne Deutsch de la Meurthe, patron of aviation like her father, et president of the Aéro-Club de France, was transported from the factory at Billancourt to Toussus-le-Noble. Rapidly reassembled in the workshops, it was delivered at the beginning of August. On 21 August, F.193 no 4 obtained CdN 3300. It was registered on 22 September 1933 with Cdl 3563 in the name of Suzanne Deutsch de la Meurthe who named it "Icare IV".

With its red and white livery, this luxuriously-equipped machine in fact

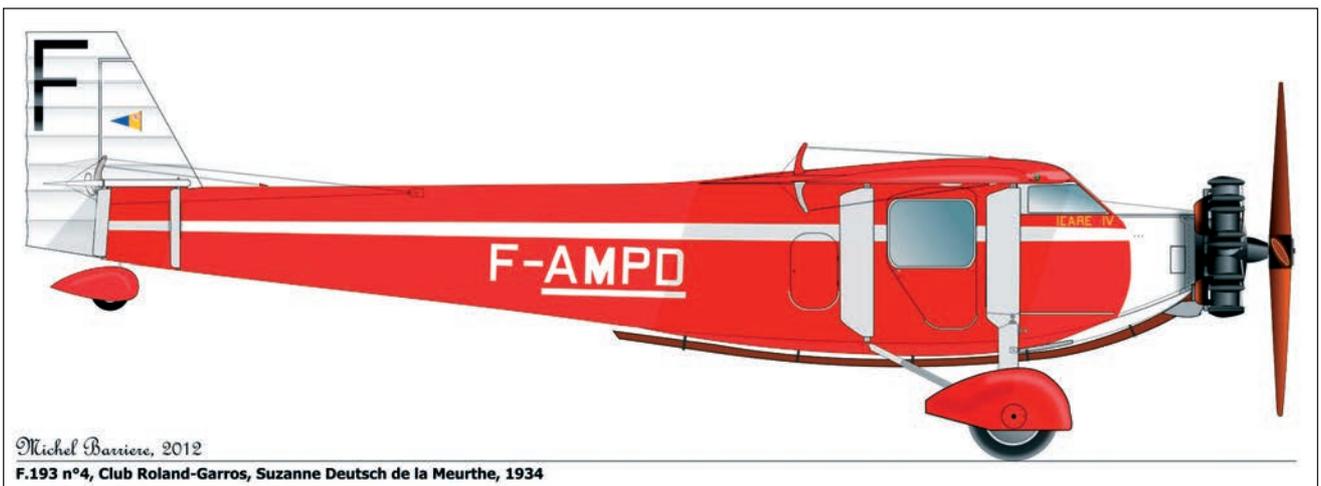
Right: Suzanne Deutsch de la Meurthe and General Denain stand in front of her personal F.193, with the name 'Icare IV' prominent on the forward fuselage (Collection Michel Barrière)

Below: a profile view of the same aircraft showing its striking colour-scheme (Artwork: Michel Barrière)

Above: F.193 no 3 depicted in the quiet phase of its career with Air-Service before it went to Spain, like many other Farmans, to serve in the Civil War (Artwork: Michel Barrière)

represented the definitive version définitive of the Grand Touring aircraft which the F.193 was, equipped with a 250 hp engine. The forward floor was enlarged and a Pullman seat with a reclining backrest was installed in the forward starboard position; it rotated to allow its occupant to converse with the other passengers on the rear bench seat.

Its delivery allowed Ferdinand Lasne to take up his new position as personal pilot for Miss Deutsch de la Meurthe. From its entry into service, its flights within France were frequent: Tours and Auxerre, Deauville, then Berne in August 1933, as well as Reims and Cannes for the "Bienvenue Aérienne" meeting, organised by the Club Roland Garros (and inspired by the one arranged by the Royal Aero Club at Hendon the previous year), to reciprocate the warmth of the welcome offered to the French pilots by foreign ones during private visits and meetings. In October, came a trip to Bruxelles for a reception arranged by the Club Roland Garros for King Albert I.





Michel Barrière, 2012

F.193 n°4, "Les Ailes de l'Intransigeant", 1933-1937

Above: F.193 no 5 in the colours of the newspaper L'Intransigeant. It later wore colours to advertise its sponsors (see below). (Artwork: Michel Barrière)

Right: A poor-quality photograph shows the name of the paper in large letters under the fuselage (Collection Michel Barrière)

From 11 to 18 December, Miss Deutsch de la Meurthe, piloted by Lasne, visited Cairo for the Conference of the Fédération Aéronautique Internationale (FAI). The aircraft was entered for the Egypt Rally in which it took part, piloted by Lasne. These trips continued from 1934 to 1936, in France and abroad. The inspection which took place in the second quarter of 1936 shows a total of 378 hours. On 29 November 1937, Suzanne Deutsch de la Meurthe died. The Club Roland Garros inherited the aircraft, although the transfer was not registered until March 1939.

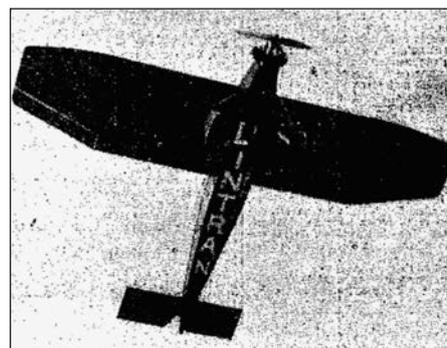
The aircraft was requisitioned in 1939. Bao Dai, Emperor of Annam (Indochina) wished to have an aircraft at his disposal for his personal needs, so the État-Major de l'Armée de l'Air suggested giving him the still luxurious F.193 no 4. The Direction du Matériel Aérien Militaire was ordered to prepare the aircraft, which was painted in the imperial colours of red and yellow on the wings and rudder, but negotiations foundered and the aircraft remained in France. Its ultimate fate is unknown.

Below and foot of page: F-AMQS wearing the livery of sponsors Pikina and Ouest Eclair for the Tour de France of 1937 (Michel Barrière)



Michel Barrière, 2012

F.193 n°5, "Picon-Pikina", Robert Sénéchal, Tour cycliste de l'Ouest, 1937



F.193 NO 5, C/N 7373

F-AMQS

Registered in the name of the newspaper L'Intransigeant on 26 August 1933 with Cdl 3508 under the reference AIR 2-3339, F.193 no 5 was usually piloted by the paper's aviation columnist, Roger Peyronnet du Torres. The aircraft, in a blue and yellow livery, carried on its fuselages, "painted in letters of gold", the name of the paper.

In 1933, Peyronnet du Torres undertook some training in the Toussus area. Then, in December, accompanied by Assolant, he took the aircraft to take part in the 'Croisière Noire' ('Black Voyage') in Africa. Departing from Toussus on 7 December, the two airmen passed through Perpignan on the 8th, arriving at Oran on the 9th via Barcelona and Alicante, then Colomb-Béchar and Adrar on the 10th, Bidon 5 and Tabankort on the 11th, and arrived on the 12th at Gao. The next day, they left with the Potez 25 which they accompanied as far as Adrar with stops at Bidon 5 and Reggan. On the 15th, parting from the other aircraft of the Croisière Noire which continued to El-Goléa and Algiers, the Farman landed at Oran.

In June 1934, the aircraft took part in the meeting of the Aéro-Club de l'Eure, at Évreux, sponsored by l'Intransigeant. From 1934 to 1937, the Farman continued its travels, mostly in France or Europe, covering great sporting events such as the Le Mans 24-hour race of 1934.

On 10 August 1936, l'Intransigeant decided to send Antoine de Saint-Exupéry to report from Barcelona "on the 25th day of the civil war." This resulted in a series of articles published on 12, 13, 14, 16 and 19 August entitled "Espagne ensanglantée" ("Spain Bleeding"). Saint-Exupéry flew alone in the paper's Farman 193 F-AMQS which it had placed at his disposal.



Above: F.193 no 6 as flown by Albert Bucciali on his clandestine mission to Libya to ascertain the intentions of the Italian government towards the Suez Canal. (Artwork: Michel Barrière)

In July 1937, the aircraft was registered in the name of Robert Sénéchal, a former racing driver who, after a serious accident, had retired from racing and set up an aerial photography and publicity company in 1931. Sénéchal covered the Tour de France 1937 in F-AMQS decorated in the colours of "Picon-Pikina" and of l'Ouest Éclair. In August 1938, the Farman was inspected at Vélizy (9 August), replaced for the Tour de France by Sénéchal's Potez 58. In August 1939, it again accompanied the Tour de France, this time in the colours of the insurance company "l'Urbaine et la Seine". In 1939, the aircraft was probably requisitioned, its subsequent fate unknown.

F.193 NO 6, C/N 7421 F-AMXL

F.193 no 6 was registered on 3 March 1934 to the Société des Avions HMD Farman with the CdN / Cdl 3689. We have no information on the first part of its career, which must have been discreet; the second half was more notable

In March 1936, F.193 no 6 was registered in the name of Albert Bucciali, a former pilot of the Cigognes. Albert Bucciali was not the owner of the aircraft, which was issued to him by the French State which had bought it for 58.000 Francs. Bucciali was tasked by the government to evaluate Italy's intentions with regard to the Suez Canal and to bring the Négus back to French soil. The F.193 was then equipped with Farman Ebr engine no 18019 of 245hpv with gearbox and a Chauvière four-blade propellor, as well as an 80-litre supplementary fuel tank in the cabin.

On 10 March 1936, Bucciali took off on a "tourist" visit to Libya via Rome and Tunisia. Following an engine failure, the aircraft force-landed at Mechili in Libya on 29 April, its propellor and landing gear damaged. The arrival of spares and the repair of the F.193 allowed Bucciali to reach Derna on 19 May. He took up residence in a luxurious hotel with his family, frequently visiting Cairo. At the end of October 1936, the French government recalled him to France. On 2 November,

Bucciali departed; he arrived at Rome on the 7th via Benghazi, Palermo and Naples and handed the aircraft over to an Italian friend. After passing through Switzerland, he arrived in Paris on 27 November to obtain an extension to his Customs permit, but the Ministère de l'Air demanded the return of the Farman. Returned to France in unknown circumstances, F.193 no 6 was located by the DGAC on 24 August 1937 at Lognes. Thereafter the aircraft, as property of the French State, no longer appears in the registers, and its ultimate fate is unknown.

In 1937, an F.193 or F.390/391 served in Spain on the nationalist side bearing the registration 30-5. It could have been F.193 no 6. However, its nationalist registration with Grupo 30 suggests an arrival in the first quarter of 1937, which is incompatible with its confirmed presence at Lognes in August 1937. Furthermore, it is difficult to imagine a scenario which would have seen its transfer from the French State to the nationalist forces in the autumn of 1937. The identification of 30-5 with F.391 n°3, an aircraft belonging to a private owner with known monarchist sympathies, seems infinitely more plausible.

F.193 NO 7, C/N 7351 F-AMFU

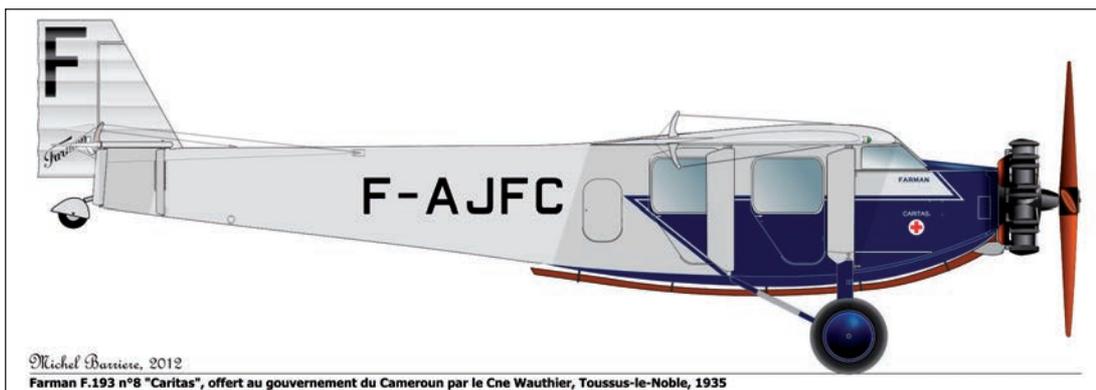
Result of the conversion in May 1934 of F.390 no 4 (q.v.).

F.193 NO 8, C/N 7142 F-AJFC

Result of the conversion of F190 no 23 (q.v.)

F.193 N° 9, C/N ?

The newspaper "L'Aéro" for 7 August 1936 reports the arrival at CEMA (Villacoublay) of "Farman 193 n°9, with Farman 9 Ebr engine, mono-plane, 3-seat tourer. Aircraft destined for tests with the T.S.F." This is the only mention of this aircraft which, at this late date, is more likely to be an aircraft of the F.390 to 393 series reconverted with a 220 hp engine.



Left: The history of F.193 no 8 was recounted in the Winter Issue of 2011. It is shown here following its conversion from F.192 to F.193 standard prior to operating as a medical aircraft in Cameroun as a gift from the philanthropist René Wauthier. (Artwork: Michel Barrière)