

Chiltern Airwords



Messerschmitt Bf 109G-2/Trop, 'Black 6', flown by Flt Lt Charlie Brown in 1994. Credit John Dibbs

The Chiltern Aviation Society Magazine
November - December 2020

CHAIRWORDS

As I write this, we are still in the grip of Covid and therefore sadly we are still unable to meet. This is very disappointing but I'm so pleased that we are able to keep in touch through Chiltern Airwords. As always, our grateful thanks go to all those who contribute items for the magazine, which remains our lifeline. As we have had so few meetings this year, the Committee has agreed that, as our funds are in a healthy state due to David Cotton's good housekeeping, we may waive membership fees for 2021 for Chiltern Aviation Society Members. You will be pleased to hear that our president, Philip Birtles, is well and keeping active. He sends his best wishes and confirms he is ready to deliver his talk as soon as Covid restrictions are lifted. Phil has written several books during lockdown and is planning a further book on the HP Halifax for 2021, so watch this space. I am liaising with the Church Council concerning the future reopening of the Church Hall for Groups and the situation is reviewed monthly. Thankfully we have not had to pay the room hire fees since the start of Covid. Obviously, there won't be a meeting in November, due to the National Lockdown from 5th November and no Christmas Members Evening either. With that in mind let me wish you all, rather prematurely, a Happy Christmas and New Year. Hopefully, 2021 won't be as bad as this year, and we can soon get back to some semblance of normality with regular meeting and a host of interesting talks. Sadly, one or two of our members are not well, notably John Clarke and Ted Smith, and we offer them our best wishes. Also, as I write this, I have just been informed of the passing of a former CAS Member, Sven Fossgard. I have written to his widow to express our condolences on behalf of the membership.



Finally, a joke or two (not all my own work!) to make you smile during Lockdown soon to be known as the *Nightmare before Christmas!*

Pilot to ground engineer; "Have you fixed the port aileron yet?"

Ground Engineer; "Yes it should be Okay but I wouldn't bank on it!"

When I worked at BEA, some of the 'high-up' Captains in the company were very rude. I told them I did not like their altitude!

I went to the Coach & Horses for one last drink before Lockdown. I ordered a Bacardi & Coke. The barmaid said is Pepsi okay so I said yes, so she served me a Pepsi & Coke.

During my career, I met and married Miss Right; the trouble was I didn't know that her first name was 'Always'.

Left, the new Covid-19 Tier levels explained, especially for members of a certain generation. Oh Matron!

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THE CHILTERN AVIATION SOCIETY (CAS); Founded in 1968. Associate member of Air Britain Historians Ltd. President; Philip Birtles. Patron; David F. Ogilvy OBE FRAeS. CAS is a not for profit Society relying on donations and membership fees. Membership is £15 PA. Non-Members also welcome for a small contribution of £2 per event.

MEETINGS & TALKS: Fourth Wednesday of the month (third in December) 8pm to 10 pm at *Ruislip Methodist Church Hall, Ickenham Road, Ruislip, Middx, HA4 7BX.* **SADLY, ALL CANCELLED UNTIL FURTHER NOTICE**



The 16th July 1943 was going to be a longish day for BOAC Radio Officer Dennis Revell. However, as his log book reveals, he was used to long flights; the Dakota services from Whitchurch down to Gibraltar via Lisbon were arduous. One nonstop flight back from Gibraltar on Dakota G-AGHK took nine hours 40 minutes; departing at 18 30GMT they landed at Whitchurch at 04 10GMT the following morning. For security reasons they flew at night, dog-legging far out over the Western Approaches to avoid the attention of the marauding Focke-Wulf Condors which patrolled the Bay of Biscay.

Now still based at Whitchurch, Bristol, BOAC's wartime base, Dennis was rostered to operate a de Havilland DH91 Albatross (Frobisher class) service with G-AFDK *Fortuna* from Hendon to Shannon, preceded by a positioning flight from Whitchurch. After so many hours on Dakotas the four-engine Albatross would be different and Dennis would probably have been unfamiliar with the operating crews. In command was Captain G P Moss with Flight Engineer Caseley to assist him on the flight deck. There were also two stewardesses on board, very formally referred to as Miss Gilmore and Miss Wigmore; one presumes that they had Christian names.

With the aircraft's windows blacked out as part of the wartime restrictions it must have been a somewhat claustrophobic atmosphere for them to operate in. At 08 50GMT *Fortuna* lifted off the grass at Whitchurch heading for Hendon to pick up the passengers. There were nine in all and they consisted of BOAC Board members and senior staff heading for a meeting in Shannon. Chairman Gerard d'Erlanger headed the group along with Keith Granville and also Pauline Gower who was Head of the Women's Section of the Air Transport Auxiliary (ATA). The aircraft landed at Hendon at 09 40GMT and, after a short break, the passengers embarked and *Fortuna* took off for Shannon at 10 10GMT.

Just over 2½ hours later Captain Moss started his descent into Shannon. Suddenly there was an ominously loud cracking noise from one wing and the aircraft slewed round. The wooden spar had broken causing the flaps to fail asymmetrically almost rolling the aircraft into the ground. At a very low altitude Captain Moss managed to right the aircraft which belly-landed in the mud flats on the River Shannon estuary. There was no fire and, thankfully, no serious injuries. It was a rather sudden ending to a long day for Dennis Revell. The accident highlighted the problems of wooden airframes exposed to the elements, born of necessity during wartime. Checks on the few remaining Albatross aircraft were made and similar problems with the wooden airframes were discovered; they were then all permanently grounded. On reflection, Dennis Revell probably felt more secure back with the Dakota fleet after that episode! (Photo Credit BA Heritage Centre).

MESSERSCHMITT BF109G-2/TROP 'BLACK 6' - BY LAWRENCE HAYWARD



I cannot believe that it's now 30 years ago since 'Black 6' took to the air again since WW2. I clearly remember, as if it was yesterday, going to IWM Duxford for one of their airshows specifically to enjoy the sight and sound of the Bf109G-2. At the time you could check the weather, turn up at Duxford and pay at the gate; happy days! I thought a real Bf109 in flight would not be repeated so I had to see it. Little did I realise the numbers of WW2 aircraft including Bf109s that would soon be returned to airworthy condition in future decades! Perhaps the legacy of 'Black 6' was that it showed the way for future restoration teams, not only regarding Bf109s, but other types that I just could not have imagined in 1970-90s at the height of my airshow attendances. 'Black 6' (shown above left when it was captured via RAFM) is a truly remarkable survivor and

was lovingly restored to flying condition by a dedicated team of volunteers and is a real Bf109 rather than a re-engined Spanish Buchon or a hodge podge of parts. Its complete history has been pieced together (below) by Andrew Simpson for the RAF Museum, listing its movements following its captured in North Africa in late 1942. However, what is not often mentioned is that at the time of its restoration to airworthiness, there was not always a happy relationship between the MOD owners (previously the Air Ministry) and the skilled expertise of the volunteers. At the time of its first post restoration flight in July 1990, 'Black 6' was the only true flying example of a Bf109, and it is a shame that the MOD had, in my humble opinion, rather short-sighted views on the number of years it could be flown. Black 6 was limited to three seasons flying, which it has been suggested was an arbitrary time limit without any real understanding of how long the engine and airframe could have continue to operate safely. In the end it had its flying period extended but still only flew for 96 hours. However, the biggest blunder by far by the MOD was not to dispose of it and recoup its value towards the Government's purse. It is hard to remember what a draw it was at airshows, just like the Avro Vulcan and two Lancasters together has been in more recent years (fingers crossed for the sight of three Lancs in flight in a few years).



If the MOD had said they wanted £2 million or more, I'm certain the public would have subscribed to a 'Keep Black 6 flying fund' that would have been managed by a capable aviation restoration firm such as TFC or ARC at Duxford and 'Black 6' could have been happily maintained by a team headed by Flt Lt Russ Snadden. It must have been disappointing to Russ to have spent nearly 20 years working hard towards getting 'Black 6' airborne again, to see it fly for only 96 hrs.



A sickening sight for the restoration team and the public alike; Black 6 overturns on 12th October 1997 on its last planned flight before transfer to RAF Museum at Duxford's Autumn Air Show. Pilot, Air Chief Marshal Sir John Allison, unhurt.

THE HISTORY OF BLACK 6 ALSO KNOWN AS RN228 / 8478M / G-USTV – BY ANDREW SIMPSON, RAFM

- Sep 42 Built at Leipzig by Erla Maschinenwerk GmbH, probably at its Mockau plant. Construction started as a Bf 109F-3, but converted to Bf109G-2/Trop standard during construction.
- Given Werk Number 10639. Allocated factory radio code PG + QJ.
- 13 Oct 42 Accepted by Luftwaffe.
- 21 Oct 42 Collected by III./JG77 at München-Riem airfield. Flown to Vicenza, North Italy, and then to Jesi.
- 22 Oct 42 To Foggia and thence to Bari in Italy. Radio codes were removed and the identity 'Black 6' applied.
- 27 Oct 42 Bari to Elefsis, Athens. In the evening, ferried to Tobruk East airfield, Cyrenaica (Libya).
- 28 Oct 42 Flown from Tobruk to El Harun.
- 02 Nov 42 Flown from El Harun to Bir El Abd landing ground. From this date the aircraft was probably flown by 21-year-old Russian Front veteran Heinz Lüdemann of 8/JG77; his aircraft 'Black 4' was damaged the previous day.
- 03 Nov 42 Flown from Bir el Abd to Quasaba on the day that the German retreat following the battle of El Alamein was ordered. Flown back to Bir el Abd from Quasaba.
- 04 Nov 42 Lüdemann flew the aircraft from Bir el Abd to Quotifaiya and took off for an operational sortie. Entry in Lüdemann's diary: 'During an attack on an 'English' bomber force (SAAF Bostons escorted by USAAF P-40s) I was slightly injured in my head and body by the fighter escort. However, I managed to get my machine home'
- Aircraft ferried, probably immediately, by an unknown pilot to Gambut Main airfield (LG 139), SE of Tobruk for repair. (Lüdemann was later killed when shot down in aerial combat with the Desert Air Force 10 Mar 1943).
- 11 Nov 42 German records indicate loss of 'Black 6' through 'enemy action' on this date, presumably when Gambut Main was abandoned to the advancing allies
- 13 Nov 42 Discovered abandoned at LG139 Gambut Main by Flt Lt later Wg Cdr) Ken McRae, Engineer Officer of No.3 Squadron Royal Australian Air Force. Had been 'shot up' - damage to tailwheel, tail plane, canopy and one propeller blade. Radio and oxygen equipment unserviceable and some instruments missing.
- Sqn Ldr R H Gibbes, unit Commander, estimated that it had flown 'no more than 10' hours since new. The reflector sight and armament had also been removed, probably by the retreating Germans.
- 14 Nov 42 Using parts from nearby wrecks including adjacent Bf109F w/nr 9678 a new tailplane, tailwheel and canopy were fitted and the hole in the propeller blade plugged. The codes CV-V - the personal code of Sqn Ldr (later Wg Cdr) R H Gibbes - were applied.
- 15 Nov 42 Gibbes flew CV-V to LG150/Gazala Satellite II airfield (LG 150) escorted by Kittyhawks ET899 and AK626. A long taxi run in crosswind following a guiding Jeep, caused brake fires. Gibbes intended that the aircraft be sent to Australia for display, and allegedly slept beneath the aircraft when first 'acquired' to prevent pilfering by others
- 19 Nov 42 Gibbes flew CV-V to Martuba No.4 airfield, escorted this time by Kittyhawks ET899, AK626, ET951 and FL323. His diary records 'the 109 is a hell of a nice kite with terrific performance. On lowest permissible boost and revs it was clocking 220-230 mph'.
- 21 Nov 42 Gibbes' diary record 'In the afternoon took up 109G for an RAF film unit. Only up 10 minutes as battery a bit flat and prop motor wouldn't work'.
- 29 Nov 42 No.209 (Fighter) Group RAF ordered that the aircraft should be officially flight tested as one of the first G model 109s to be captured by the allies.
- 01 Dec 42 Two familiarisation flights, one by Gibbes and the other by Flt Lt R J Watt. Gibbes tried out the cannon. Afterwards the cannon and reflector sight were removed. Excerpt from '3 Squadron at War' records: 'a somewhat mysterious signal was received from HQ Middle East stating that the captured aircraft had to be flown back there' - for evaluation.
- 02 Dec 42 Following AOC instructions Gibbes flew CV-V to Heliopolis (Cairo) via Martuba, El Adam, Mersa Matruh, Amiyra, Cairo and flew past some Dakotas with interesting results. On take-off from Amiyra the canopy flew off, hitting the starboard wing.
- 04 Dec 42 Engineering detachment from No.451 Squadron RAAF based at St Jean (Palestine) started work on the a/c
- 05 Dec 42 Work continued (from diary of Heric Christian, Engine Fitter IIE).
- 06 Dec 42 'Got 109 Going'.
- 07-12 Dec 42 '109 remained at Heliopolis while No.451 Squadron visited El Daba, Mersa.
- 12 Dec 42 No.451 Squadron personnel to Matruh and Quasaba seeking spares.
- 13 Dec 42 'Working on 109 all day and found out a few more things about it'.
- 14 Dec 42 'Worked all day on plane and ran it up to full revs.
- 15 Dec 42 'Up early and got plane ready and Gp Capt (Buxton) flew it to Lydda, Palestine where 'arrival created a great deal of interest'. At Lydda, Black 6 was still minus its canopy lost on take-off. The aircraft wing still scarred today from resulting impact.
- 19-20 Dec 42 'Worked on 109 all day' - diary entry, Heric Christian.

- 28 Dec 42 'Worked on 109 and ME now ready to fly' No.451 Squadron checked or changed the magneto, changed the oil and filters, plugs and the rudder. The oil radiator flap was locked open, as received, because of a u/s thermostat.
- 29 Dec 42 First test flight after reconditioning - pilot Gp Capt G Mungo Buxton,
- checking speed and rate of climb. Photo around this time shows 'Black' marked as CV-V;
- 30 Dec 42 Second test flight to check speeds and climb to 25,000 feet. 'Very good performer'. Don Batyer, No.451 Sq recalled 'He turned the 109 inside out and came back and said that it was better than anything we had at the time'.
- 31 Dec 42 Third test flight involving climb to 32,000 feet. No.451 Squadron then handed the aircraft over to Lydda Communications Flight.
- 17 Jan 43 Fourth test flight for partial climbs to 5,000 and 20,000 feet. Before this flight, the propeller was changed.
- 19 Jan 43 Fifth test flight to check the effect of radiator, flaps etc. on speed. A sixth test flight was cut short when the canopy again flew off.
- 28 Jan 43 Further test flight, probably by Ronald Harker of Rolls-Royce investigating the engines' ability to run when the aircraft was inverted.
- 29 Jan 43 Seventh test flight to check climb performance at full throttle to 35,000 feet. 8th test to check stalling performance.
- Feb 43 Ferried to No.107 MU Kasfereet, near Shandur in Egypt by Wg Cdr Budd for tactical trials.
- 21 Feb 43 Flown by No.107 MU test pilot Flt Lt Richard Martin.
- 24 Feb 43 Flown by John Penny in simulated dogfight against Spitfire VC EP982 flown by Flt Lt Martin.
- Feb 43 Also flown by WO 'Paddy' Donaldson.
- 1943 Packed and despatched from North Africa to UK. Prepared for packing by station salvage section at RAF Kasfereet.
- 01 Nov 43 RAF serial number RN228 allotted at request of RAE.
- 26 Dec 43 Arrived crated at RAF Collyweston, Lincs for No.1426 Enemy Aircraft Flight.
- 27 Dec 43 Unpacked but propeller missing. Aircraft assembled using port wing
- from a second Bf109G, possibly another former JG 77 Bf109G-2/Trop,
- w/nr 10533. John 'Lofty' Westwood, ex-Fitter IIA, No.1426 Flight remembered - *'.....when unpacked and laid out, was very untidy and damaged due to bad handling and crating in an unsuitable crate. The two 109s (the other damaged aircraft arrived the same day) were laid out and damaged and missing parts replaced by parts removed from the second aircraft'*.
- 31 Jan 44 RAF movement and records formal allocation to No.1426 Flight.
- 05 Feb 44 Replacement propeller arrived from Farnborough.
- 08 Feb 44 Propeller fitted and engine given preliminary ground run and found to be serviceable. RAF Camouflage and serial number RN228 applied.
- 19 Feb 44 After delays due to bad weather initial air test performed by Flt Lt 'Lew' Lewendon.
- 24 Feb 44 Comparative trial flight against Hawker Tempest V JN737 of the Air Fighting Development Unit. Flight curtailed by problems with the '109 suffering carbon monoxide in the cockpit affecting the pilot, Lewendon. Flying time 45 minutes, comparing turns, zoom and rate of roll.
- 25/28 Feb 44 Flown by Fg Off D G M (Doug) Gough on picture taking sorties in company with a Hudson. Photos probably taken at this time -Aviation
- 28 Feb 44 Lewendon flew a tactical trial with the 109 against an AFDU Mustang III, FZ107. Later that day Gough flew for Ministry of Aircraft Production photographs. Other comparative trials were flown against Spitfire IXs BS552 (clipped wings) JL359 (normal wings & SU carburettor); FW190 PM679 also involved.
- 29 Feb 44 Lewendon flew a trial flight against an AFDU Spitfire XIV (RB141) and made a further photographic sortie accompanied by a Hudson. On the same day, Gough flew combat trials against a Corsair in RN228 (30 minutes duration confirmed via Gough's logbook).
- 01 Mar 44 Gough flew against a NAFDU Seafire III in the morning (25 minutes) and a Corsair in the afternoon (1 hr)
- 02 Mar 44 Flown for first time by Fg Off Jack Staples. Afterwards Lewendon took off for a trial flight against a Tempest which failed to appear.
- 07 Mar 44 Staples flew a trial against a NAFDU Hellcat.
- 12 Mar 44 Unserviceable because of a faulty ignition harness, which was removed.
- 16 & 21 Mar 44 Air tests by Lewendon.
- 22 Mar 44 Fg Off Lewis-Watts flew RN228 for the first time but bent one prop blade tip on take-off whilst trying to avoid an Airspeed Oxford. Sgt Dowie started to crop the propeller tips in order to even up the blades.
- 23 Mar 44 Repairs complete - air tested. In the afternoon No.1426 Flight began a new tour - its twelfth - with Flt Lt 'Lew' Lewendon flying RN228 accompanied by a Fw190A4, and Bf 110C-5, escorted into Hullavington by two Spitfires from Colerne, then displayed to a large crowd.
- 25 Mar 44 Lewendon flew RN228 to Bovington accompanied by the Fw190, an Oxford and two Spitfires from Colerne.

- 27 Mar 44 Lewendon flew RN228 on a photographic sortie with a Boston; later Lewis-Watts swung the aircraft on take-off, damaging the starboard wing tip - a replacement was collected from Collyweston the following day.
- 30 Mar 44 Tour continued at USAAF base, Chipping Ongar escorted by a P-38 and a P-47, Lewendon flying the a/c
- 31 Mar 44 Gough flew from Chipping Ongar for a demonstration before transiting to Stansted Mountfitchet for a further demonstration. (25 minutes)
- 01 Apr 44 Gough flew from Stansted to Great Dunmow (Essex) to give a further flying demonstration. (25 minutes)
- 04 Apr 44 Following rectification of magneto problems, flew from Great Dunmow to Great Saling. Pilot - Lewendon.
- 07 Apr 44 Flew to Earl's Colne escorted by P-51s - had to force-land at Rivenhall - required a replacement engine.
- 16 Jun 44 Replacement engine, originating from the Middle East, fitted - bullet damage had to be repaired first.
- 22 Jun 44 Air tested by Flt Lt Dick Forbes.
- 05 Jul 44 Photographed from a Boston with Lewendon again flying RN228.
- 09 Aug 44 Left for West Raynham with the Fw190 and Ju88 escorted by three Mosquitos.
- 10 Aug 44 Flew from West Raynham to Little Snoring after mock combat with three Mosquitos. Burst a tyre taxiing
- 11 Aug 44 Three sorties flown by Gough. Left Little Snoring for Massingham for a demo, then returned to Collyweston.
- 09 Sep 44 Forbes flew to Thurleigh in company with Fw190 and Ju88 escorted by Hurricane and Spitfire from Digby and gave a demonstration flight upon arrival.
- 17 Sep 44 Gough flew from Collyweston to Bradwell Bay via Northolt in company with Lewendon flying the Fw190 and escorted by two Spitfires. Ground and air demonstrations given prior to returning to Collyweston. (1hr 25 minutes).
- 18 Sep 44 Flew to Chipping Ongar. Instruction given to USAAF Disarmament School on maintenance and temporary immobilisation of German aircraft. RN228 grounded with ignition trouble.
- 23 Sep 44 Following attention Gough flew the aircraft from Collyweston to Leavesden. (25 minutes)
- 25 Sep 44 Demonstration flight by Forbes. Gough then flew RN228 to Chipping Ongar (30-minute flight).
- 16 Oct 44 Magneto trouble at Chipping Ongar.
- 31 Oct 44 Gough flew from Chipping Ongar to Collyweston (30 minutes).
- 21 Jan 45 No.1426 Flight disbanded.
- 27 Mar 45 Gough flew RN228 to Tangmere (40 mins) Transferred to the Enemy Aircraft Flight, Central Fighter Est.
- 01 Nov 45 Nominally allocated to No.47 MU Sealand.
- Mar 46 However, still at Tangmere - inspected there by Air Historical Branch.
- 17 Apr 46 Finally transferred to No.47 MU Sealand via No.49 MU.
- May 46 Packed for Museum storage; A letter from Maintenance Command dated 20 May 46 on PRO AIR 2/18772 records noted several areas of corrosion and deteriorated surface finish.
- May 47 To RAF Stanmore Park, Middlesex for storage at the German Air Force Equipment Centre as one of seven AHB aircraft transferred there from Sealand that month. (PRO AIR 20/6289 refers).
- 17 Sep 49 Displayed with several other AHB aircraft on Horseguards Parade, London
- Sep 54 Displayed on Horse Guards Parade, Whitehall during Battle of Britain Wk, in inaccurate brown/green/grey scheme with duck-egg green under surfaces. Still carried British oxygen equipment and English lettering on many instruments.
- Late 1955; To No.15 MU Wroughton, Wilts for continued storage with other Air Historical Branch airframes.
- Sep 56 To RAF Hendon for the Battle of Britain Open Day display, and kept in one of the old USAAF blister hangars.
- Mid-1958 To AHB store at RAF Fulbeck, Lincs; possibly to Wattisham later that year.
- Sep 1960 Definitely moved to RAF Wattisham, Suffolk by this date and displayed in one of the hangars.
- April 1962 An attempted restoration to flying condition was begun by volunteer team led by Wattisham instructor Flt Lt J R Hawke. Photo of the time captioned `..... the aircraft is expected to fly in August' (1962). With permission from the Air Ministry the dozen-man team broke the aircraft down into its main components. Since 1960 the gyro master compass had already been taken - other instruments were junked since `the aircraft will be fitted with standard British Instruments for reasons both of safety and convenience' (Arrrrh!)
- Later 1962; The rebuild to airworthy condition was not completed due to the cost and man-hours involved and concern over the lack of flying history that could have included over-stressing, and caused considerable damage to the airframe.
- Sep 62 Following repainting into North European theatre colours as `White 14'
- the aircraft was displayed at RAF Coltishall Battle of Britain Day, then returned to Wattisham.
- Photos of newly repainted in Air Pictorial Nov 62 showing wing root fairings already missing -later replaced by cardboard. Other photos in this condition show it was the same when displayed at Wethersfield in 1964 and RAF Finningley in 1966.
- Sep 65 Displayed at annual Stowmarket Carnival and Trades Fair
- May 67 At RAF Henlow by this date for possible use in the Battle of Britain film.
- Sep 67 Still in Wattisham with `White 14' colour scheme and with E3 canopy ex-Bf 109-E3 4101 now at Hendon. Not in the event used for the film.

- 03 Jun 68 Displayed at RAF Henlow Charity Gala.
- Mar 69 Returned to Wattisham ex-Henlow. Repainted as Yellow 14 of JG53 (Desert Colours
- 1971 At RAF Coltishall
- 20 Sep 72 Flown in two Hercules aircraft from Wattisham to Lyneham for start of restoration-team led by Flt Lt Russ Snadden. Still at this time painted as `Yellow 14'. The RAFM expressed an early interest in the project.
- Dec 74 Photographed in a disassembled and partly stripped state.
- Jul 75 Moved to RAF Northolt. RAFM assistance around this time included provision of instruments and recovering of control surfaces at Cardington. Other components obtained from Finnish Air Force Museum (including radiators and armament items), Swiss Air Force, and collectors on the continent.
- 16 Feb 76 Allotted RAF Maintenance serial 8478M.
- Jul 83 Moved to RAF Benson, Oxfordshire.
- 1987 Engine refitted to airframe, following rebuild by Rolls-Royce of Bristol.
- 15 Jun 89 Displayed at RAF Benson's 50th Anniversary Open Day
- 08 Jul 90 First engine run
- 14 Jul 90 Displayed at RAF Benson's Fete.
- 26 Oct 90 Registered on British civil register as G-USTV.
- 17 Mar 91 32-minute maiden post-restoration flight at Benson, pilot Gp Capt Reg Hallam.
- 02 May 91 Officially rolled out, freshly painted at Benson. Attended by Wg Cdr Bob Gibbs and Ken McRae.
- 12 July 91 Flown to Duxford.
- 14 Jul 91 Photographed ground running at Duxford.
- 31 Jul - Test flying programme to qualify for permit to fly.
- 09 Sep 91 Received CAA permit to fly as the only genuine airworthy German WW2 combat aircraft.
- 15 Sep 91 Public flying display debut at Duxford Air Show, flown by S/Ldr Dave Southwood.
- 28 Aug 93 Temporarily grounded when starter dog split at Duxford, followed later by fuel leakage problems. The split occurred owing to the starter applying too much torque.
- Sep 94 Flew again. Three year flying agreement extended for one year by MOD due to loss of season's flying.
- 1995 Flying agreement extended for a further two years to 1997
- 12 Oct 97 Damaged on last planned flight before transfer to RAF Museum in crash-landing following a display at Duxford's' Autumn Air Show. Pilot, Air Chief Marshal Sir John Allison, unhurt. The aircraft landed wheels down in a field of stubble, ran through into a ploughed area, sank into the soft earth and turned over, buckling the rear fuselage, crushing the fin and rudder and damaging the spinner, propeller, upper fuselage and one wing tip. This was the aircraft's last flight; over 3 1/2 seasons of display it had amassed some 96 flying hours.
- 26 Oct 97 Following recovery from the crash site, wings & tailplane removed and the fuselage recovered using a crane.
- Jan 98 Stored on site at Duxford.
- 3 Nov 97 Moved to workshops at Duxford to await decision on its future.
- Summer 98 Decision announced that the aircraft would be restored to static display condition, the contract being managed by the IWM Duxford and then placed on display at the RAF Museum Hendon following the restoration. The contract was won by the volunteer team which originally restored the aircraft. Work was due to begin early in 1999 with completion expected within two years. The group, led as before by Russ Snadden, set up a company, Messerschmitt Restorations Ltd, to undertake the work. Fuselage restored by Charleston Aviation, Essex and replacement Bf109 fin fitted. The restoration left the aircraft c. 70% original. The damaged rear fuselage skin is now displayed at the Shoreham Aircraft Museum, Kent.
- 24 Sep 98 Civilian registration cancelled.
- 10 Mar 2002 Delivered by road to RAFM Hendon (wings the previous day) and displayed in Bomber Command Hall.
- 15 Mar 02 Formally struck off RAF charge by ES (Air) Allotment d024/02 following its 1998 gifting to the RAF Museum.
- 17 Jun 03 Moved into new Milestones of Flight building at RAFM Hendon.
- 18 Jan 2012 To Bomber Hall, Hendon for further display.



In the 1960s, American Airlines approached Lockheed and competitor Douglas (later McDonnell Douglas) with the need for an airliner smaller than the 747, but still capable of carrying a large passenger load to distant locations such as London and Latin America from company hubs in New York and Dallas/Ft Worth. Lockheed had been absent from the civilian airline market since the late 1950s following problems with its L-188 Electra, which had suffered a number of crashes early in its career. Having experienced difficulties with some of its military programs, Lockheed was eager to re-enter the civilian market, and its response was the L-1011 TriStar.

The design featured a twin-aisle interior with a maximum of 400 passengers, a three-engine layout, low noise emissions, improved reliability, and efficient operation. The main visible difference between the TriStar and the DC-10 is in the middle/tail engine. The DC-10's engine was mounted above the fuselage for more power and easier maintenance. The TriStar's engine was integrated into the tail through an S-duct (similar to that of the Boeing 727) for improved quietness and stability. A major difference between the two was Lockheed's selection of the Rolls-Royce RB211 engine for the L-1011. As originally designed, the RB211 turbofan was an advanced three-spool design which was more efficient than competing designs.

American Airlines opted for the Douglas DC-10, although it had shown considerable interest in the L-1011. Without the support of American, the TriStar was launched on orders from TWA (33 ordered and 11 options) and Eastern Air Lines (25 ordered and 25 options) and Air Holdings UK (50 ordered) the latter were for re-sale in the British Commonwealth and were eventually acquired by Air Canada, British Airways and Cathay Pacific. Soon after, orders were forthcoming from Delta, Northeast Airlines (US) and Pacific Southwest Airlines. Although the TriStar's design schedule closely followed that of its competitor, Douglas beat Lockheed to market by a year due to delays in power plant development. The prototype TriStar first flew from Palmdale on TriStar first flight on 16 November 1970 registered N1011. In February 1971, the massive development costs of the RB211 forced Rolls-Royce into receivership. This halted L-1011 final assembly and Lockheed investigated the possibility of a US engine supplier. Several options were considered, but it was ultimately decided that it was too late to change engine suppliers.

Trans World Airlines heralded the TriStar as one of the safest airplanes in the world in the 1980s in response to concerns over the safety record of the DC-10, which was flown by most of its competitors.

DC-10 deliveries totalled 446 compared to 250 TriStars. The difference is partially because of the TriStar's delayed introduction. Also, a heavier, longer-range version of the TriStar was not initially offered. Being under government control, costs at Rolls-Royce were tightly controlled. The company's efforts were primarily directed to the original TriStar engines, which had needed considerable modification between the L-1011's first flight and service entry. The competition, notably General Electric, was quick to develop their CF6 engine for more thrust, meaning that a heavier 'intercontinental' DC-10-30 could be more quickly brought to the market. The flexibility afforded to potential customers by availability of a long-range DC-10 quickly put the L-1011 at a serious disadvantage. Rolls-Royce went on to develop the high-thrust RB211-524 for the L-1011-200 and -500, but this took many years.

Currently there is only one Tristar currently operational and that is N140SC a L-1011-1 (c/n1067) an ex Air Canada machine that is owned by Northrop Grumman as launch platform to for placing satellites into to sub orbit under programme called Stargazer.

At Bruntingthorpe (Leicestershire) there are five ex Royal Air Force Tristars (*see photo below credited to Robert Urquhart*) that arrived in March 2014 and are owned by US based Tristar Air LLC who had intended to operate them as aerial tankers. But, now that the airfield is now closed, and is used for car storage, it seems very unlikely that these airframes will ever fly again. Except where indicated all photos in this article are credited to *John Roach Collection*.



Above Left; An L-1011 Tristar of Delta Airlines and Above Right a Tristar of Pan American Airways



Above Left and Right; L-1011 Tristars of Eastern in two distinct colour schemes, white and silver upper fuselages.



Above Left; A Tristar of British Airways in 1980s and Right; An ex-BA as a Tristar K1 tanker serving with 216 Sqn RAF



Above; Two other users of the Tristar included Caledonian (left) and Cathay Pacific (right)



The Hawker Typhoon Preservation Group (HTPG) was formed in 2016 as a Registered Charity (1167143) to restore a Napier Sabre powered Hawker Typhoon Mk IB, RB396 to flying condition. The objective is to advance the education of the public in this aircraft and form a memorial to the pilots who flew it, those who maintained it and the men and women who worked in the factories to build it. Currently there's only one complete example extant; MN235 in the RAF Museum, which miraculously survived the scrapping of every Typhoon in the RAF inventory postwar. MN235 went to the USA in WW2 for testing against US fighters such as the P-38 and was returned by the Smithsonian in 1968. In exchange, the RAFM sent the Smithsonian a Hurricane IIc, LF686, in 1969.

Above; a painting of RB396 in action by Robert Taylor with prints available via webshop@hawker-typhoon.com

Typhoon RB396 in action in WW2

1st April 1945 dawned quietly for 174 (Mauritius) Squadron RAF at B.100, their base outside Goch, Germany. However, the situation had changed by noon with a report of MET (Mechanised Enemy Transport) on the roads near Hengelo in the Netherlands. The Typhoon squadron launched some of its fighters to respond. Flight Lieutenant Chris House was flying in Hawker Typhoon MkIb RB396 for the first time, designated as Red 4 for this mission. Her usual pilot, Frank Johnson, who'd painted the name of his girlfriend Sheila on RB396's nose, was already a prisoner of war however, having been shot down two days earlier in another Typhoon. Johnson had been in a different 'Tiffy' that day since RB396 was under repair for minor flak damage picked up on a sortie two days prior with Sydney Russell-Smith at the controls. Typhoon RB396 was one of a batch of 255 Typhoons built at Glosters, at Hucclecote (starting with RB192), from September 1944 to January 1945. On 1st April RB396 was just four months old and had already been repaired 18 times. Such was the intensity of combat, even at that late stage of the war, that 10 other Typhoons failed to return from ops against German positions on the very same day!

Red Section soon spotted the enemy truck convoy and made their first attack, each pilot unleashing his Typhoon's eight, 60lb RP-3 rockets. Wheeling around for another pass, F/L House followed up his attack in RB396 with devastating fire from his four wing-mounted 20mm cannons. Despite the carnage unfurled upon the German forces during the rocket attack, they were still able to respond with intense and accurate fire from their light flak guns, striking RB396 as she streaked past at about 500 feet. F/L House had just seconds to react to this predicament, safely getting RB396 away to the north, although he knew the crippled Typhoon wouldn't make it far. Searching frantically for a safe spot to put the aircraft down, he successfully force-landed RB396 in a field just outside of Denekamp, a small Dutch town on the German border. The rest of Red Section was relieved to hear House radio up to affirm his safety. The pilot then quickly unstrapped from his seat, ripped out his oxygen and headset connections, then 'did a runner' – perhaps, as we'd like to think, with a last, wistful look over his shoulder at his forlorn Typhoon, bearing the name of another man's girlfriend.

Chris House, in his words, *'did a runner'*. With the help of a local Dutch family, he returned to 174 Squadron three days later. RB396 was left where she landed: one of the many battlefield wrecks littering North West Europe. Little did F/L House or anyone else ever imagine that 75 years later the remaining parts of the aircraft would be the basis for a project to return it to flying condition! Chris House recalled that memorable April Fool's day in a letter many years later remarking, *"I left the aircraft and ran away from the direction of what I presumed was a German field hospital. I also observed some Germans heading in the direction of the crash. I skirted several fields in which there were one or two men working, and eventually I came to a haystack and decided to burrow into it pulling the hay in behind me."* A local farmer named Herman ter Duis discovered the sheltering Typhoon pilot a little while later, recognizing his RAF uniform. As Herman approached, Chris House greeted him with the offer of a cigarette. The Dutchman took the airman back to the nearby farm that he shared with his brother, with House spending the night in their care. Chris later wrote in a letter, *"I was discovered by a young lad who took me into the farm where several adults were in the kitchen. They made me welcome and whilst there they showed me their hidden radio with which they listened to the BBC news. They were very kind to me."* Chris slept in one of the farmhouse bedrooms with his revolver placed on the bedside cabinet. The following morning the family provided Chris with overalls, a bicycle and a guide. The pair set off in the direction of the Allied advance. Chris remembered, *"We had to cycle past a long column of German armour and eventually later in the day I said goodbye to my guide and bicycle and after using ditches to hide in, I was eventually found by the advanced elements of the Guards Armoured Division and a couple of days later was returned across the Rhine to my Squadron."*

In a very matter of fact way, Chris recorded in his logbook that he had been... "Shot down 5 miles SW of Lingon. Evaded. Returned a couple of days later." His Commanding Officer, on the other hand, recorded the event on 3rd April in 174 Squadron's Operations Record Book (ORB) with a little more emotion noting, "Depression lifted slightly today when House was known to be safe, and on his way back. Poor Chris looked nearly exhausted when he came in but what an adventure."

Sadly, in the aftermath of his escape, Chris House believed false reports that the Gestapo had murdered the family who helped him to escape. This travesty haunted him for the rest of his life, and he passed away in 2007 without ever being able to face a return to the area of his salvation. However, through exhaustive enquiry, HTPG's research team discovered that the family had indeed survived; the Gestapo had not shot them. The team has since been in touch with the Dutch family and their descendants, as well as those of Chris House too. Planning is ongoing to reunite these two history-bound families, in the anniversary year of RB396's final flight and at the exact site where she came down, bringing a degree of closure to the story. Unfortunately, given the current world health situation, with Covid-19 this joyful reunion has been delayed for a while, but it will occur before too long.

One fascinating detail which did emerge from all of the research poured into RB396's final flight is the discovery of a photograph showing the Typhoon lying, semi-dismantled, on the spot where she came down in Holland at the tail end of WW2. While grainy, it is a remarkable image; some of the flak damage still being clearly visible in the fuselage, show right.



Why the Hawker Typhoon?

Whereas the Spitfire and Hurricane are household names in the UK, sadly the Hawker Typhoon is not known to the public at large. After WW2 none were intentionally preserved and so the Typhoon became a rarity forgotten by all but aviation enthusiasts. HTPG want to change that, and show that the Typhoon should be remembered as a major contributor in the air defence of the UK in combatting 'hit and run raiders' in the mid-war years before taking the fight across the Channel and wreaking havoc with German transport and trains, and later entrenched enemy positions, artillery and tanks in Normandy.

Postwar analysis showed that it was the constant attacks on the German Army's fuel supply, that had the most dramatic effect on the fighting in NW Europe, with many armoured vehicles being abandoned and blown up by their crews, because their fuel supply had been destroyed on the way to the front line. This may contradict the belief that rocket armed Allied aircraft destroyed hundreds of Panzers; they did; but not in the manner we imagine. Only 4% of German tank losses were attributed to direct hits from bombs and rockets; the rest were lost indirectly through lack of fuel and spare parts. Nevertheless in war, it matters not, how the enemy is denied the means to wage war and if Typhoons shot up anything in sight from a horse drawn cart, to a fuel truck or train loaded with fuel, the type still deserves to be recognised as being instrumental in giving vital air support to allow the British and Canadian Armies to advance in to Germany in 1945.

Unlike the UK, in France, Belgium and Holland they can't get enough of the Typhoon. The type is celebrated with places and streets named after it and also those pilots who sadly lost their lives on operations. Some of those pilots who died are honoured with beautifully tended graves or memorials at the crash site where they were killed. Once RB396 is flying it will surely be very welcome at any European Airshow.

The Restoration



(Above; The rear fuselage project is now at Airframe Assemblies in the Isle of Wight).

The project is based around the substantially complete, surviving rear fuselage from RB396, and many other original components which one of the non-profit restoration group's volunteers, had gathered over several decades of diligent endeavour. The rear fuselage of RB396 was removed from the crash-landing site just after the war and found its way to the Fort Veldhuis museum in the Netherlands. When the Museum closed the fuselage became part of the project. HTPG has bits from a variety of aircraft with a lot recovered from crash sites. HTPG also owns parts of the nose of Typhoon EJ922, which is stored in Goodwood. The rear fuselage of RB396 and the Napier Sabre engine are the two main items plus undercarriage struts and instruments. They have also constructed an outline of a cockpit. The plan is to move onto the build of an operational cockpit as the next item on the rebuild. HTPG are still searching 'far and wide' for Typhoon parts, in particular wings and tailplane, which if not found in a usable condition, may have to be built from scratch. Sadly, no other Hawker Aircraft wings from the Tempest or Fury will do, as Typhoon wings are specific to the type.

Napier Engine



In 2017 the charity received a boost in the form of an inhibited Napier Sabre engine from Cranfield University. This is considered to be one of the most viable in the world for restoration. Subsequently, the charity acquired premises at Uckfield in East Sussex and a group of volunteers were gathered to deal with the fund raising and technical issues necessary to get RB396 rebuilt and flying. Since then a Supporters' club of over 1,000 members has been formed, funds have been raised and the rebuild of the rear fuselage is nearing completion at Airframe Assemblies in IOW. Once this is complete the next phase will be the rebuild of the cockpit section.

The charity is volunteer based and more volunteers, sponsors and support from the general public are required to get RB396 back to flight. Fund raising is always an issue, HTPG are having a drive for regular donations at the moment. They have raising their first £750,000 but need £5 Million in total, so any help or donations from you would be gratefully received. If you or any of your members would like to help, they may do so by volunteering, donating or Joining the Supporters Club. You may also help by purchasing RB396 branded goods via our new web page www.hawker-typhoon.com

Notes

There is also a Canadians Group that is building a Typhoon but it's believed they plan to use either a restored Napier Sabre Engine or a Merlin engine. See them at <https://www.facebook.com/hawkertyphoonjp843/>

The Jet Age Museum, near Gloucester Airport has built and put on display a replica Typhoon cockpit, in honour of the Hucclecote Factory, (about 10 miles away), where Typhoons were built by Glosters. The Sabre engines came from Napier's factory in West London or their shadow factory in Liverpool. See this link; <http://jetagemuseum.org.uk>

AIRBORNE HANG UPS – BY LAWRENCE HAYWARD



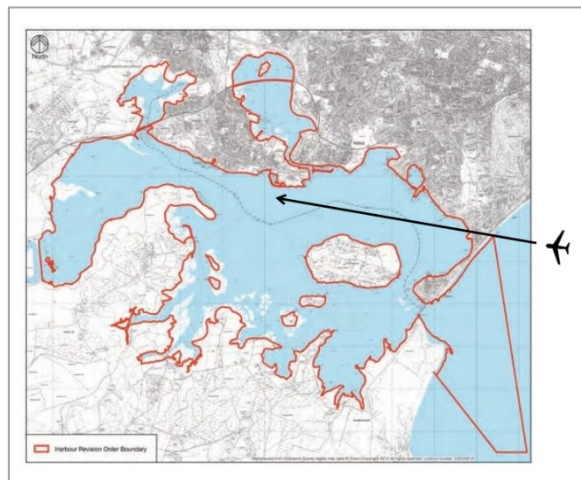
In the spring of 1944, my late father (then LAC Frank Hayward and Ex-Halton Brat) was serving with 575 Sqn equipped with C-47 Dakotas at RAF Broadwell, as an engine fitter. In preparation for D-Day his job was to build up a stock of Pratt & Whitney R-1830 Twin Wasp engines that were shipped over in crates from the USA. Little did he expect to be carrying out some experimental work for the Parachute Regiment!

Photo Left; KG647 served with No. 575 Squadron RAF and No.1680 (Transport) Flight, before joining BOAC with the civilian registration G-AIAZ.

Prior to D-Day there wasn't much engine repair work for my father to contend with as the Twin Wasps were very reliable. Consequently, once my Dad had completed his work on the crated engines, ready for D-Day, he had time to 'scrounge' places on many training flights. Often these would be in Horsa gliders towed off by the Sqn Dakotas. In the Horsa he would stand in the doorway behind the two pilots and cling on for dear life as the Horsa made the steepest descent he had ever experienced before pulling up for a perfect landing on the LZ in Salisbury Plain. On another occasion on an air test the pilot noticed the white flash my Dad's hat, which designated a person accepted for pilot training. The pilot therefore said come and fly the Dakota from the empty co-pilots seat, which he did for about an hour. This was his first experience of being a pilot and little did he realise that after a career in the RAF of over 43 years, his last flight as pilot before retirement would be in the RAE Dakota (now with BBMF) for a trip to Berlin to commemorate his and the RAF's involvement in the Airlift!

Another of his activities in the days prior to D-Day, was to go on flights in Squadron Dakotas that were to drop Paratroopers. For such flights, he had to draw a parachute himself and line up with all the real Paras, and be inspected by an NCO who passed down the line tugging at straps and tightening webbing. Obviously once aboard he made it quite clear to the Dispatchers that he had no intention of jumping, unless the wings fell off!

On 18th March 1944, nine Dakotas from 575 Sqn were despatched to drop Paratroopers at Netheravon, during *Operation Charity*. Sadly, during this exercise one Paratrooper became caught up behind a Dakotas after he jumped out, as his static line refused to part company from his parachute pack. To make matters worse the parachute came out of the pack but instead of deploying properly and pulling the man free, it wound round and round in the slip stream behind him in typical Roman candle fashion. The Paratrooper was moving around in the slip stream under the tail, which led some observers on the ground to believe he was caught up on the tail wheel. No amount of pulling on the static line from inside the aircraft by the Dispatches could get this man to the door, so the decision was made to fly to Poole harbour, alert the Royal Navy and with flaps down to fly really slow and low and have the static line cut. Poole harbour also had a seaplane base at Hamworthy with seaplane tenders and so I understand the idea was to drop the Paratrooper in deeper water somewhere near there as the southern part of the harbour near Studland is mud flats and quite shallow.



To achieve a safe release the Dakota flew in from the east over Sandbanks (see map above) to make a low and slow approach. However, to avoid a stall this meant that the Para had to be released at 80 to 90 mph and despite everyone's best efforts the Paratrooper was dead when recovered from the water (or died shortly afterwards). Later I learned that the Para was in fact Lt John Alexander Daniel Williams of the 83rd Field Regt Royal Artillery. He was 24 years old and came from Durrow, Eire. Sadly, I never asked my Dad, who died in 2014, whether he was on the aircraft during the incident. He certainly knew a lot about it and was tasked with a few other airmen on the Squadron to experiment with a way of recovering such Paratrooper 'hang ups' in flight. To achieve this, they had a full-size dummy made, which was of the correct weight for a typical soldier (and not to be confused with those Para dummies dropped into Normandy on D-Day). Test flights were carried out with the dummy wearing a parachute pack which was then thrown out of a Dakota on a fixed static line.

At first it was thought that just a long barge pole might do the trick in that the Dispatchers could hook on to the man's webbing but the slip stream was too great and so another method was thought up. This involved fitting a clamp to the static line and placing it as far down it as the crew could reach. On the clamp was a shackle which attached to a steel cable which in turn was connected to a winch attached to the bulkhead behind the cockpit. This clamp could be put in place and tightened quickly. I don't think the winch was electric but rather a hand winch but nevertheless it had the desired effect and with the clamp in place it was possible for the Dispatchers with poles to assist in hauling them aboard.

Dad transferred from 575 Sqn at Broadwell to 48 Sqn at Down Ampney in April 1944 so these trials occurred during March or early April 1944. Despite the success I have never heard of this mechanism or method ever being used. Perhaps it was considered so rare that if it happened on operations men might just be cut 'free' and of course the introduction of reserve chutes also helped, assuming the Para could jettison his existing parachute, if it was caught by its static line.

The first recorded 'Hang Up' in British airborne forces history occurred on 17th July 1941 at RAF Abbotsinch. Former Grenadier Guardsman, Frankie Garlick of 11 SAS suffered first hang up jumping from a Whitley bomber during training. Unable to be pulled in by the crew, the pilot elected to land tail up and drag him down the runway! He survived with cuts and bruises! 11 SAS Battalion was formed from No 2 Commando on 21 November 1940, but on 15 September 1941 the unit name changed to the 1st Parachute Battalion. In an outstanding and hair-raising act of bravery, Sgt Instructor Alfred Cook shimmied down the static line to an unfortunate trainee, Private Trevor, in August 1943 in North Africa while the aircraft was flying at about 800 feet. No mean feat considering that part of the line would have been jammed hard against the fuselage with the rest of it (and Trevor) bucking like a bronco in the wind currents. Although Sgt Cook was not successful in releasing Private Trevor and had to jump clear, the aircrew managed somehow to pull Private Trevor back in to safety. Subsequently Alfred Cook was awarded GM.

Witness; A letter home to his father, by Sapper Frank Wolfe, 591 (Antrim) Para Sqn RE describing the airborne hang up incident. The letter writer suggests Lt John Williams incorrectly wore his webbing and that he survived but both are false. Sadly, Sapper Frank Wolfe, was captured on 6th June 1944 and made a POW but nevertheless came to be murdered with some of his comrades by the Germans the same day.

Dear Dad,
 I'm writing this on Sunday as I don't suppose I'll be able to phone up for a few days - we're going on a scheme until the end of the week.
 We had a bit of excitement here yesterday - I saw a crowd of blokes staring up at the sky and on looking up I saw a poor devil hanging by his webbing from the plane - apparently he'd fitted his chute wrongly and had been jerked to a position fifteen feet below the plane. We all watched the plane

crew - they must have puzzled a lot as it would no doubt be impossible for them to pull him in, at the finish they solved the problem by taking him out over Poole Harbour and cutting him loose. He won't be much good now I don't suppose - although he is alive.
 I hope you had a good day at the dogs on Saturday - I'm fearing the worst and assume you did go? - after last weeks bother I wouldn't have ever visited them again but I'm afraid you do seem to have them well in your blood and it's too much to hope that you've packed them up.



Photo Above Left; Douglas Dakota Mark IIIs (FZ695 I9-A is nearest) of No. 575 Squadron RAF, preparing for a streamed take off at Broadwell, Oxfordshire. Above Right; Dakotas of 512 Sqn and 575 Sqn landed in France June 1944 (IWM)

“HONOLULU, SPEEDBIRD 592” BY FRED BARNES

Fred Barnes recalls the long air journey home from Christchurch, New Zealand to London (Heathrow) after a family holiday in November 1973.

My wife and I had taken our first long-haul holiday to Australia and New Zealand during October and November 1973 and had a memorable time but then we faced the long 13,500-mile journey home. We had chosen to take the trans-Pacific route from Christchurch to London which in those days involved many sectors as the aircraft in that era did not have the range to operate the now current ultra-long-haul flights.



Photo above; BOAC Super VC-10, G-ASGA in which we flew on our trip. (Credit BA Heritage Centre)

Christchurch to Nandi, Fiji

On Thursday 15th November 1973 we arrived at Christchurch Airport to check-in for New Zealand National Airways (NAC) flight NZ408 STD 1005 to Auckland. Whilst waiting for departure I noted NAC Viscounts ZK-BRE (*See photo on next page*) and ZK-BWO on the ramp. We then boarded our flight that was operated by Boeing 737-219, registration ZK-NAJ c/n 20344, named 'Piere', in the NAC livery of white top and fin with red cheat line and 'Godwit' logo in white in a red circle on the forward fuselage and tail with 'National Airways' titles on the upper fuselage and NAC on the tail fin in blue (*See photo on next page*). The lower fuselage, wings and engines retained their natural metallic finish. Departure was on time and the aircraft was soon taxiing for take-off and was airborne on the 1hr 10 min flight to Auckland. It had been a rainy morning in Christchurch and once airborne there was cloud obscuring the view of the scenery of both the South Island and the North Island of New Zealand for most of the flight. NAC offered a light snack during the flight and the seating was comfortable.



On arrival in Auckland we collected our baggage and then went to the International Area of the terminal at Mangere Airport and had lunch before going to check-in for Air New Zealand flight TE546 STD 1600 to Nandi, Fiji. The helpful Air New Zealand staff at check-in stated that there were 'plenty of seats' and we received our boarding cards and went through to the departure gate. The aircraft for TE546 was DC-8/52 ZK-NZG c/n 45301 (see photo below left) which was painted in the attractive Air New Zealand turquoise and blue livery with the Maori 'Koru' logo design in white on the tail fin. A UTA DC-8/62 F-BOLH was parked on an adjacent stand and other noticeable movements included NAC F-27s ZK-NAA, NAB and BKD and SAFE-Air Bristol 170 Mk 31 ZK-CWF. TE546 departed on time and after taxiing to the runway the DC-8/52 was soon airborne and climbing over the coastline of NZ heading out over the vast turquoise waters of the Pacific Ocean en route to Nandi.



As the DC-8 was cruising along at FL390 I reflected that during the previous three weeks the aviation highlights of the trip had been the great fortune in Australia to see the two Ansett Short Sandringham flying boats at Rose Bay, Sydney, operating scheduled services to Lord Howe Island and two Qantas DC-4s at Sydney, Kingsford Smith Airport still in service operating twice weekly scheduled services to Norfolk Island and then on to Auckland, on behalf of Air New Zealand. During the time in New Zealand I had flown in a Mount Cook Airlines Grumman G.44A Widgeon ZK-BGQ c/n 1391 from Mechanics Bay, Auckland to Surfdale, Waiheke Island and return and flown in a Mount Cook Airlines Cessna A185E ZK-COH c/n 185-1009 ski-plane

from The Hermitage, Mount Cook and do two 'touch and go' landings on the Tasman Glacier, sadly a full stop landing was not possible due to a strong tailwind on the glacier. Visits were also made to airports in Auckland, Wellington, Queenstown, and Christchurch plus a few others. Sadly, I never did get to the MOTAT Museum in Auckland to see the TEAL Short Solent Mk IV Flying Boat ZK-AMO (See photo below). But my wife and I did visit many of the major tourist attractions. The seats on the DC-8 were very comfortable and then the cabin crew started the meal service as TE546 continued towards Nandi. There was a splendid view of the light and cloud formations over the Pacific Ocean and then it was time for some sleep. When I woke up the sun was setting and the golden light came in through the cabin windows.



Darkness had fallen by the time DC-8, ZK-NZG landed at Nandi, Fiji about 1900 local time in the evening after a 2 hours 56 minutes flight from Auckland.



Above Left; Mount Cook Airlines Grumman G.44A Widgeon ZK-BGQ c/n 139. Above Right; Air Pacific HS748 DQ-FBK

Nandi, Fiji

After the arrival in Nandi we collected our baggage and then waited in the small and basic terminal building. During a walk around I could see the shape of an aircraft in the darkness on the international section of the ramp and when I came closer, I could see in the light from the terminal building that it was a Polynesian Airlines HS748 registered 5W-FAN (*see photo on bottom of previous page; credit Avro Heritage Society*) that had arrived from Apia, Western Samoa. During the evening I wandered along to the domestic part of the terminal and saw two Air Pacific HS748s DQ-FAL and DQ-FBK (*Above photo credit Rolf Larsson*) which were operating the local flights to Suva the main town on the other side of the island of Viti Levu. There was no opportunity to photograph the three HS748s. Facilities in the terminal were primitive with seating on wooden benches, overhead fans and mercifully open doors to provide a flow of air in the heat and humidity. There was a small café and a few small shops so it was going to be a long hot wait for the connecting flight to London. BOAC flight BA592 was scheduled to depart at 0110 on Friday 16th November and we had to wait until the local staff opened the check-in desks later in the evening. The terminal building then started to become busy and noisy as passengers were arriving for the departure of the Pan American Airways Boeing 747-121 flight PA812 which transited Nandi between 2250 and 2335 en route to Honolulu, Los Angeles and New York /JFK. After PA812 departed there were still a few people in the building and we heard the noise of the Boeing 747 as it took off for Honolulu. The next sound in the darkness was the noise of the thrust reversers of the Rolls-Royce Conway engines when the BOAC Super VC-10, ATC Callsign 'Speedbird 592', landed on time at 0005 from Sydney, Australia.

We had been advised by other staff who had previously travelled on BA592 that if you were checked in to New York then there was hotel accommodation and a meal provided in Los Angeles but you had to take a change of clothes in the hand luggage as the suitcases stayed on the aircraft at Los Angeles/LAX. Much to our surprise and good luck my wife and I were eventually checked-in through to London and received our boarding cards. We then queued to go through the normal procedures before entering the departure area and the 'duty-free' shop. Outside on the ramp in the lighting of the terminal building was the majestic sight of Super VC-10 G-ASGA c/n 851. When the flight was boarded, we took our seats near to the rear of the aircraft and were beginning to feel tired as it had been a very long day. When the aircraft was ready for departure the four engines were started in sequence and after a long taxi in the dark G-ASGA was turned on to the runway ready for departure. The four engines were set for take-off power, the brakes were released and the Super VC-10 accelerated along the runway and climbed into the darkness of the Pacific night sky and turned on track for Honolulu.

Nandi, Fiji – Honolulu

When the aircraft reached the cruising level the cabin crew quickly served a light snack and drinks prior to dimming the cabin lights so that the passengers could get some sleep. The seats were comfortable and the cabin noise was low and my wife and I were soon asleep. During the night 'Speedbird 592' crossed both the Equator and the International Date Line and travelling eastbound a day was gained so Friday 16th became Thursday 15th again. I was awakened by a 'loud bang' but the aircraft continued on and then the Flight Engineer moved slowly through the cabin and went to the rear of the aircraft and I decided that it was time for a toilet break. On the Super VC-10 the rear toilets were situated beyond the galley area and as I was returning to my seat noticed the Flight Engineer talking to a member of the cabin crew. When he finished talking, I engaged him in conversation and explained that I worked at Heathrow in BEA Flight Planning and asked about

the 'loud bang'. He smiled and said that it was a 'power surge at altitude' from one of the Rolls-Royce Conway engines and that it was not unusual and nothing to worry about. The rays of the morning sunlight entered the cabin and then the lights were turned back on and soon there was the sound of the cabin service starting and the aroma of a hot breakfast. There was a magnificent view of the cloud formations and sparkling turquoise ocean in the morning sunshine from the cabin window. The engine tone changed and G-ASGA started the descent into Honolulu and soon the spectacular coastline of the Hawaiian Island of Oahu came into view. 'Speedbird 592' landed at the Honolulu International Airport after the 5 hour 55 minutes overnight flight from Nandi and then taxied to the terminal and it was now Thursday 15th November in Hawaii.

Honolulu

In Honolulu the military aircraft of the U.S. Air Force at Hickam Air Base share the runways with civil air traffic which makes the airport very interesting for aircraft enthusiasts. After arriving at the International Terminal gate 'Transit Passengers' were permitted to leave the aircraft and wait in the departure lounge and stretch their legs. Whilst my wife went to look at the many shops, I found a good location to photograph the Super VC-10 and watch other aircraft movements. G-ASGA was painted in the BOAC dark blue livery with the gold 'Speedbird' logo on the blue fin and BOAC in gold on a dark blue stripe on the engine nacelles with a white top and grey undersides and wings. 'British airways' titles were applied on the upper forward fuselage which was part of an interim livery used after 1st September 1973 when preparations were being made for the forthcoming merger between BOAC and BEA and aircraft retained their existing liveries but the titles were changed. On 1st April 1974 BOAC and BEA were merged to form British Airways as part of UK government policy to turn the new company into a profitable airline. Other aircraft seen on the International Terminal included Boeing 747-100s of United Airlines, Northwest Orient and Air Siam, an Air New Zealand DC-10/30 and a Korean Airlines DC-8/63. BOAC ground handling in Honolulu was contracted to Qantas. Then it was time to board the aircraft and return to our seats for the next sector to Los Angeles departing at 1030 local time.

Honolulu – Los Angeles

After engine start up the aircraft taxied towards the departure runway, lined up and with take-off power set accelerated along the runway, became airborne and was climbing out over Pearl Harbour. The flight then turned out over the Pacific Ocean and continued climbing eastbound in the morning sunshine on track towards the US mainland. Later the Hawaiian Islands of Molokai and Maui could be seen in the distance as the Super VC-10 reached the cruising level and soon there was only the vast expanse of the Pacific Ocean below. Meal service was started by the cabin crew which comprised a comprehensive 'brunch' style breakfast and soon it was time to catch up on some sleep. When I awoke the sun was setting and 'afternoon tea' was being served which was a real treat and then darkness fell. The change in power setting announced the start of the descent and soon the lights along the shore of the California coast could be seen and then as the aircraft descended further the lights of the massive urban area around Los Angeles could be seen below. The Super VC-10 made a smooth landing at the Los Angeles International Airport, more commonly known as LAX, after the 4 hours 52 minutes flight from Honolulu. After a long taxi in the dark the aircraft arrived at the International Terminal building and then came to a halt in the taxiway and the engines were shut down. The aircraft was then towed on to the gate due to a local safety ordnance.

LAX

In Los Angeles the BA592 service was scheduled for an extended turn round which permitted the next sector to arrive in New York at 0805 in the morning rather than during the night. 'Transit Passengers' were taken to an airport hotel where a room and a meal were provided and there was an opportunity to freshen up prior to the departure from LAX at 0001 local time. The 'Transit Passengers' were taken from the terminal direct to the hotel by bus and were accompanied for the journey by a local BOAC staff member. On departure the bus collected the 'Transit Passengers' at an appointed time and took them from the hotel direct to the airside part of the terminal where the accompanying BOAC staff member showed them into the departure lounge. The transit cards were then exchanged for boarding cards for the next sector to New York and not surprisingly the same seats were allocated to individual passengers. When the departure was announced my wife and I joined the queue and boarded the aircraft and returned to our seats.

Los Angeles – New York JFK

Departure was on time and the Super VC-10 was pushed back on to the taxiway and then came to a halt and the push back tug was disconnected. The engines were started and then there was another long taxi in the dark to the departure runway where there was a short delay before the aircraft was lined up for take-off.

When ready take-off power was set and G-ASGA accelerated along the runway, became airborne and was soon over the dark waters of the Pacific Ocean. The departure route was then a climbing turn and then an easterly track back over the California coastline ensuring a safe altitude over the mountains prior to the transcontinental flight across the USA to New York. When the aircraft was at cruising height the cabin crew served drinks and a light snack before dimming the cabin lights for the night sector. It was time to get some more sleep and it was now Friday 16th November again. Later the cabin lights came on and the meal service was starting and it was another comprehensive breakfast. Dawn came and then the Super VC-10 started its descent into the cloud of a wet New York and landed at John F. Kennedy International Airport JFK after a 4 hours and 30 minutes flight from LAX. The aircraft was taxied to the BOAC Terminal and parked on the gate next to a company Boeing 747-136 painted in the BOAC dark blue and gold livery.

JFK

An announcement was made on board that all passengers must take all of their hand luggage off the aircraft as there was to be an aircraft change at JFK so we complied with the request and received a 'transit pass' on leaving the Super VC-10. 'Transit Passengers' were then advised to go to the desk in the lounge to collect new boarding passes for the flight to London as BA592 was now going to be operated by a Boeing 747 aircraft. That was a nice surprise and we received our new boarding cards and confirmed that our baggage would be transferred. I later discovered that the Super VC-10 originally scheduled to operate BA490/491 to Bermuda and return was unserviceable and that G-ASGA would be the replacement aircraft. BA591 LHR – JFK the previous day had been operated by the Boeing 747 and the incoming BA592 Super VC-10 aircraft had been turned at JFK to take BA591 on to Melbourne. The new operational plan meant that the Boeing 747-136 G-AWNF, c/n 19766, and crew at JFK would be utilised to take the BA592 passengers to London otherwise BA490/491 would have been cancelled. There was no westbound BA591 scheduled on Fridays. Two Air Canada DC-9/32 and an Air Jamaica DC-8/62 and DC-9/32 were also parked at the BOAC Terminal and I saw several of US carrier aircraft taxiing by.

New York JFK - London LHR

When the departure was announced we boarded the Boeing 747 for the final sector to London and took our seats and soon noticed that many seats were empty. G-AWNF departed JFK on time at 1000 and was soon making the long taxi to the departure runway and without a delay was lined up for take-off. There was a different sound as the four Pratt and Whitney engines were set to take-off power and the giant Boeing 747 gathered speed along the runway, became airborne and started making a climbing turn over Jamaica Bay. The aircraft was soon in the cloud and turned to head along the US Eastern Seaboard and Canadian Airspace to the North Atlantic Ocean. Later the aircraft came out above the cloud into the sunlight and the meal service started which was another comprehensive breakfast. There was plenty of room with such a low passenger load and there was a good chance to sleep. Darkness fell somewhere over the North Atlantic Ocean as 'Speedbird 592' cruised at altitude and the last meal service was afternoon tea. As the Boeing 747 started its descent into Heathrow there was the realisation that the long holiday was over and soon the lights of our home city of London were below and the aircraft was on final approach to land. G-AWNF landed at Heathrow after the 6 hours and 27 minutes flight from JFK and our long journey was nearly over and my wife and I were very tired but glad to be home. After leaving the aircraft we went into the Terminal Three arrival building went through immigration, collected our baggage and went through to the arrivals hall where we were met by our families. It was about 2200 local time on Friday 16th November. Then it was the short drive home to Heston and a nice cup of tea. Later, I calculated that on the trip we had flown approximately 13,454 miles, or 11,682 nm or 21,652 km, with a total flying time, 25 hours 50 minutes, on 6 Flight Sectors, in four different aircraft types operated by three different airlines! (*Photo Credits Fred Barnes except where indicated in the text*)



Above; Some of the other types I saw. Left; Qantas DC-4 VH-EDA and Right; Cessna 185 ZK-COH

THE MOUNTAINS OF MOURNE ARE CLOSE; A BEA TRIP RECALLED BY KEITH HAYWARD



In 1957 during my period with BEA, I was approached at home by a neighbour with a special request. The family was from Northern Ireland and recently the husband had been taken seriously ill. With a young daughter at home, it was proposed that she would stay with her grandparents in Belfast for a period of time. Knowing that I was a BEA staff member I was asked by her parents to escort the young girl to Belfast using my staff travel. With the chance of a flight I readily agreed and on 24 July I checked us both in at the old Britannic building in Terminal 2 at Heathrow ready to board Vickers Viscount 802 G-AOHO *Samuel Wallis* for our flight over the Irish Sea.

The pilot was Captain I F ‘Smokey’ Hayes, one of BEA’s veterans. He had flown with Scottish Airways in the early days on DH Rapides. Slightly stooped in stature he was one of the airline’s most dependable pilots, particularly on the UK routes which he knew so well. Sadly, he died from a stroke in Australia whilst on a world cruise in 1999. Vickers Viscount V802 G-AOHO *Samuel Wallis*, was delivered to BEA 4 May 1957, but withdrawn March 1976; stored at Jersey then scrapped

Back to July 1957 and after take-off my young charge (unfortunately I cannot recall her name after the passage of time) took it all in her stride. After 1½ hours flying time we started our approach into Nutts Corner (the original Belfast airport), and five minutes later we were down. I duly handed my charge over to her grandparents and then checked in for the return flight on the same aircraft. With a tailwind we touched down at Heathrow after an uneventful flight of one hour 20 minutes - enough time to appreciate what a wonderfully smooth and comparatively quiet aircraft the Viscount was. The V802 model was particularly active on BEA’s domestic routes including the Channel Islands where its high capacity of 71 Economy passengers was well appreciated on this high-density route.

On 17 September I was asked to repeat the procedure in reverse and return the girl to her parents, i.e., my neighbours. This time I positioned to Belfast on Viscount 802 G-AOHW *Sir Francis Younghusband* flown by Captain Stuart Black, another experienced ex-Scottish Division pilot. (Viscount G-AOHW *Sir Francis Younghusband*, was delivered to BEA on 7 September 1957 and withdrawn in November 1975, then scrapped at Birmingham in October 1985 and used for fire practice). As we crossed the Irish Sea some turbulence became apparent. With no flight deck security regulations in force at that time the cockpit door had been left ajar after one of the stewardesses had passed through the crew meals to the two pilots. All too soon we were approaching the Irish coast and descending into some very thick, dark clouds. My memories are of numerous procedural turns, followed by power adjustments and with the ‘fasten seatbelts’ signs soon appearing. With the flight deck door swinging ajar the sight of a hand stretching up to operate one of the numerous switches on the cockpit ceiling and then rapidly reaching down to another switch on the right-hand side as the First Officer carried out his tasks highlighted the pilots’ workload at this stage of the flight, and the teamwork required. I was certainly conscious of the invisible Mountains of Mourne just south of Belfast City! After what seemed an eternity, we broke cloud at quite a low attitude and, following a very steep approach – necessary to avoid the mountains – we swept over the runway threshold at Nutts Corner and we were safely down. With a sector time of one hour 50 minutes the ‘westerlies’ had been quite strong. With time to spare I was invited to lunch by John McLeish, one of the BEA Duty Officers – true Irish hospitality – before being reunited with my young charge, ready to escort her home to her parents. This time the aircraft was G-AOHU *Sir George Strong* and was flown by Captain Dennis Nichols. Unusually for airline pilots, Dennis had been a Hurricane pilot in the Battle of Britain with 56 Squadron. He was shot down during this period and had to bail out. Unfortunately, his parachute failed to open fully and he hit the ground hard, breaking his back. After nearly a year in hospital he showed great courage by getting back in the air, flying Beaufighters at night. He was seconded to BOAC in 1945 but was grounded for a while with back trouble. On recovery he came to BEA in 1946 initially as a First Officer. He retired in 1976 and died in 2001 at the age of 80. Vickers Viscount V802 G-AOHU was delivered to BEA 11 July 1957; crashed at Heathrow 7 January 1960 landing in fog (nosewheel collapsed causing a fire; the aircraft was a write-off but no injuries to crew or passengers).

Our return journey to Heathrow was comfortable as the weather front had passed through. With a flight time of one hour 20 minutes, my responsibility ended and I handed my charge over to her welcoming parents. Another long day, but an interesting one. A month later, on 23 October, Viscount G-AOJA *Sir Samuel White Baker* crashed on landing at Nutts Corner after an attempted overshoot sadly killing five crew and two staff passengers on board – a sobering thought indeed.

JAPAN'S FIRST POST-WAR PASSENGER PLANE TRANSPORTED TO TOKYO THEME PARK



inspection plane. "I think putting it back together is more difficult. I want many people to see this example of Japan's high technical capabilities," said Tadao Sakai, who heads a Tokyo company responsible for the rebirth of the plane. Before being stored in a hangar at the Tokyo airport by the National Museum of Nature and Science for about two decades, the YS11 was used by the transport ministry as a flight inspection plane.

(Photo Right; Another YS-11, this time JA8611 (c/n 1001/2001) the first prototype YS-11A which is preserved at Narita Museum of Aeronautical Sciences, and seen here in May 2014. Photo by John Roach)

The NAMC YS-11 was a turboprop airliner designed and built by the Nihon Aircraft Manufacturing Corporation (NAMC), a Japanese consortium. It was the only post-war airliner to be wholly designed and manufactured in Japan until the development of the Mitsubishi SpaceJet during the 2010s, roughly 50 years later. Development of the YS-11 can be largely attributed to Japan's Ministry of International Trade and Industry (MITI), which had encouraged Japanese aircraft companies to collaborate on the development of a short-haul airliner as early as 1954. In 1959, NAMC was formed to design and produce an aircraft to satisfy MITI's requirements, dubbed the YS-11. On 30 August 1962, the first prototype performed its maiden flight. Deliveries commenced on 30 March 1965 and commercial operations began the following month. The majority of orders for the type were issued from various Japanese airlines. While sales to such customers were swift in the YS-11's initial years of availability, this limited market soon became saturated, leading to a slump in demand. One of the problems was the ready supply of competitor airframes such as the Hawker Siddeley 748 which first flew in 1960 and continued in production until 1988. In fact, the similarity in appearance is very striking and it's a wonder that Hawker Siddeley did not query this. However, as HS had a known reputation and wider worldwide sales reach, I guess they were not very concerned! In Japan efforts to acquire more sales meant that the YS-11 was used by the Japanese Self Defence Forces, and the Japan Maritime Self-Defense Force used the type from 1973 until the last flight on 1st June 2014



Photo Right; Hawker Siddeley sold the HS 748 to the South Korean Air Force, pictured, and this photo shows the similarity in appearance! The top of the fin is 'squarer' on an HS 748 than a YS-11.

Other than home grown orders NAMC was keen to obtain orders for the aircraft from international customers, and therefore carried out the development of the improved YS-11A variant, production of the type ceased during 1974. Ultimately, while the YS-11 had demonstrated Japan's ability to produce an airliner, NAMC had accumulated considerable debts and the type is largely considered to be a commercial failure. Large numbers of the type continued to be in service until 2006, at which point tighter Japanese aircraft regulations imposed by the Ministry of Land, Infrastructure, Transport and Tourism necessitated either the withdrawal or refitting of all YS-11s. By 2018, only a single example remained in commercial service. *Article by courtesy of Airlinerwatch.com and Wikipedia*

MERLIN ENGINED PHOTO-RECONNAISSANCE SPITFIRES - BY LAWRENCE HAYWARD



Before the Second World War, the RAF relied on Bristol Blenheims to carry out photo-reconnaissance as a secondary task as long-range photographic reconnaissance was not considered important. Short range photo-reconnaissance was left to the Army Cooperation Command flying Westland Lysanders and Hawker Hector bi-planes. Neither aircraft had the speed or altitude performance to avoid enemy fighters and their light armament meant that fighting their way to a target to take photographs was a forlorn hope. Both aircraft types had many losses when faced with Bf109 fighters and AA fire.

(Photo Left: Spitfire PR. IV AA797 served in IPRU)

Shortly before the Second World War started Flg. Off. Maurice Longbottom submitted a paper to the Air Ministry, in which he proposed that the RAF equip itself with small, unarmed aircraft, stripped of unnecessary weight and equipped with cameras and extra fuel, to rely on high speed, a fast climb and high altitude to avoid enemy defences. He was thinking primarily about the Spitfire as the ideal aircraft. Although his idea was received with interest, it was shelved because there were not enough Spitfires to divert from Fighter Command.

When early operations proved the vulnerability of the Blenheims and Lysanders, in October 1939 the Australian Sidney Cotton, Acting Wing Commander of the newly formed and highly secret "Heston Flight", met with ACM Hugh Dowding, AOC of Fighter Command and persuaded him to release two Spitfires to his unit. Cotton had already proved Longbottom's theory to be right by using a modified Lockheed 12A on clandestine photo-reconnaissance missions over Germany. Therefore, two Spitfires were "Cottonised" by removing the radio, stripping out the armament and adding downward-facing F24 cameras with 5 in (13 cm) lenses to replace the inner-wing guns. All panel lines and the gun-ports were filled in with plaster of Paris and a special light "Camoutint Green" was applied to the aircraft and polished. Thus modified, the Spitfire was capable of reaching over 390 miles per hour (630 km/h). Consequently between 1939 and 1945, more than 500 specially modified ultra-lightweight long-range Spitfires were built mainly in Reading and Aldermaston, in Berkshire for use by the RAF's Photographic Reconnaissance Units (PRU).

While the fighter versions of the Spitfire stayed in Britain, the first PR missions were flown from bases in France by Cotton's unit which was renamed "No. 2 Camouflage Unit". The first RAF high-speed, high-altitude photo-reconnaissance mission of the war took place on 18 November 1939 when Flt. Lt. "Shorty" Longbottom took off from Seclin and attempted to photograph Aachen from 33,000 ft (10,000 m). After the initial successes of these aircraft, more Mk I Spitfires were converted in different ways for different reconnaissance missions. Having identified the need for a fast, long-range Photo Reconnaissance machine, initial conversions were of ex-fighter command Spitfire Mk1s, and these were designated PR.1A through to PR.1G depending on configuration. The Spitfire PR.1D was the 4th incarnation of the PR development and was largely considered the most impressive of the early PR Spitfires, so much so that it was the mainstay of single-engine PR operations from the middle of 1941 through to the middle of 1943 with the introduction of the PRXI. The production Mk1Ds were designated PR. IV and were nicknamed the "Bowsers" because of their impressive fuel carrying capacity. On top of the standard 85-gallon fuselage fuel tanks, the PR. IV carried an additional 66 gallons per side in leading edge fuel tanks, extending the range from 575 miles of a standard Mk1 to nearly 2,000 miles.

On 17 January 1940, 2 Camouflage Unit was renamed the "Photographic Development Unit" (PDU), while another PR Unit, 212 Squadron was formed in France. Five months later, on 17 June 1940, Sidney Cotton was sacked from the RAF, for accepting money to fly a French businessman to the UK, while he was evacuating British agents from Paris. The following year, he was awarded an OBE in recognition of his contribution to the development of photographic reconnaissance. The PDU was expanded, eventually becoming 1 Photographic Reconnaissance Unit (1 PRU) in November 1940, operating from RAF Benson as part of RAF Coastal Command.

On 21st April 1940, Fw. Hans John of 4/JG 51, succeeded in shooting down Spitfire PR IA N3071 of 212 sqn, 36 km SE of Stuttgart/Grossbettlingen. F/O Cecil Milne bailed out and was made a POW. On 3rd June 1940, Hauptmann Werner Mölders of III. /JG53 claimed a lone Spitfire shot down near Paris: it is more than likely that this was a Spitfire of 212 Squadron. On 13 June 1940, Flg. Off. George Patterson Christie, a Canadian pilot of the PDU, attacked a Fiat BR.20 bomber off the coast of Monaco and by repeatedly diving at it, forced it to land in the sea. Patterson was awarded the DFC for this feat. He was also reprimanded by Cotton for playing at being a fighter pilot when his primary duty was to bring back photographs.

On 22 February 1941, at the request of Dr R. V. Jones, a Spitfire PR Mk 1G, flown by Flg. Off. W. K. Manifould, took the first clear photographs of a Freya radar. In retaliation for an incident six days earlier, when a Sgt Parrot failed to bring back photos due to heavy flak, Manifould also strafed the AA posts and radar station, rendering the latter useless.

On 5th December 1941, again at the request of Dr Jones, a PRU Spitfire flown by Flt. Lt Tony Hill was able to photograph a Würzburg radar from 200 feet (61 m) at Bruneval on the French coast. This led directly to the Bruneval raid in which Würzburg components and radar operators were captured from the Germans.

Flying PR missions was not an easy occupation. Spitfire pilots often flew missions lasting seven hours or more; the cramped cockpit was uncomfortable, although the introduction of heating and, later in the war, pressurization, relieved some of the discomfort. Early PR Spitfires lacked radios and, in later versions which did have radio, the pilot was expected to maintain radio silence throughout the flight. Pilots of high-flying PR Spits would keep constant watch on the rear-view mirror to make sure that a contrail would not betray its presence, and he also had to keep an eye out for enemy fighters trying to intercept. Without the help of another crew member a PR Spitfire pilot had to be a good navigator, usually relying on dead reckoning. Once over the target to be photographed, a precise course and altitude was set and maintained. Even a small deviation from straight and level flight could mean that the cameras would miss a small target by hundreds of yards. Several different paint schemes were used by the early PR Spitfires until an overall "PRU Blue" was adopted for the majority of PR aircraft from late 1941. On average, each PRU Spitfire on a high-altitude mission had a life expectancy of just 14 weeks. Some were shot down over the North Sea in the first three years of the war and have therefore never been located. Others, flying at great height (up to 42,600 feet) were shot down over NW Europe, but because they crashed from a substantial altitude, they were almost always entirely destroyed on impact. From 1940 to 1942 about 16 PR pilots were shot down and made POW all the rest were KIA or MIA.

Low-altitude ("dicing") missions, such as the one on the Bruneval Würzburg and Freya radar position, were usually flown under low cloud, with the pilot constantly on the lookout for enemy fighters and flak positions. These missions were much more dangerous than the high-altitude missions. At high speed and low altitude there was little time to aim the oblique camera: a tiny black + on the side of the canopy was lined up with a small black stripe painted on the aileron and, as the aircraft flew by the target, the pilot had to estimate when to start taking photographs. The only way to successfully take pictures and survive was to take the defences by surprise. Failing that the pilot was supposed to give up and fly home, and he was not allowed to fly over the same target again that day, or the next. One danger of using the low-level oblique camera was that it put the PR Spitfire back in the range of German fighters. One response was to produce an armed PR Spitfire. The PR Mk VII carried the standard eight machine guns of the Mk Ia, combined with the extra fuselage fuel tank of the PR versions. It carried one obliquely mounted F.24 camera with a 14 in focal length, which could face to the left or right, and two vertically mounted F.24 cameras, one 5 inch and one 14 inch. 45 PR Mk VII's were produced by converting Mk V's.

Spitfires engaged in low-altitude "dicing" missions were often painted in either overall white or in a very pale "Camoutint Pink", which was an ideal colour against cloud cover. Low-altitude oblique missions also required great skill in timing the photographs. The camera, which was behind the pilot seat, would be pointed sideways on aircraft flying oblique missions. The object would disappear under the wing as the aircraft was flying by it, and during those moments of lack of eye contact, the photo had to be taken. The pilot had to guess when it would reappear behind the wing and fire the shutter accordingly.



PRU Spitfires also kept a constant watch on the German capital ships in based in Brest harbour throughout 1941 to February 1942, as well as maintaining operations over Norway. One such Spitfire PR Mk IV, was AA810 (*shown left with its pilot*) which took off from Wick in the north-eastern extremity of the mainland of Scotland, at 8.07 am on 5th March 1942. Piloted by Scotsman, Alastair "Sandy" Gunn, it then flew 580 miles across the North Sea to Faettenfjord near Trondheim on the Norwegian coast. Gunn's mission was to photograph the famous German battleship, the Tirpitz which was sheltering in that fjord. Accurate intelligence on Tirpitz's movements was crucial to Britain's efforts to bolster the Soviet Union's ability to fight Nazi Germany. Gunn's secret operation was the 113th such mission to try to monitor the German battleship. Sadly, it was the first PR Spitfire to be successfully intercepted by the Luftwaffe over Northern Norway and the pilot captured.

Because the round trip from Britain to Norway was around 1,200 miles, the Nazis believed that these British spy planes were incapable of clocking up that mileage without landing to refuel. They therefore wrongly convinced themselves that the British had established a secret airfield somewhere in German-occupied Norway, or even in neutral Sweden. Spitfire AA810 was shot down by two Messerschmitt Bf109 fighters. This was a major prize; *the Germans being of the opinion that shooting down one of the British reconnaissance aircraft down would not only disrupt British military espionage but might yield information as to where this secret airfield was located.* Gunn, who had facial and other burns, had succeeded in bailing out. Local Norwegian civilians found him and discussed the possibility of him escaping to Sweden. But he did not know how to ski and it would have been a 110-mile long trek across very difficult terrain.

Gunn therefore decided against the idea – and made the fateful decision to surrender to the Germans. Sadly, he was involved in the Great Escape from Stalag Luft III and murdered by the Germans. 76 years later the remains of his Spitfire were discovered in a Norwegian bog and now forms the basis for the **AA810 Project** to rebuild the aircraft to flying condition. When the aircraft was recovered in July 2018, some 70% of the aircraft remained intact either at the wreck site, making this one of the most substantial recoveries in recent decades.

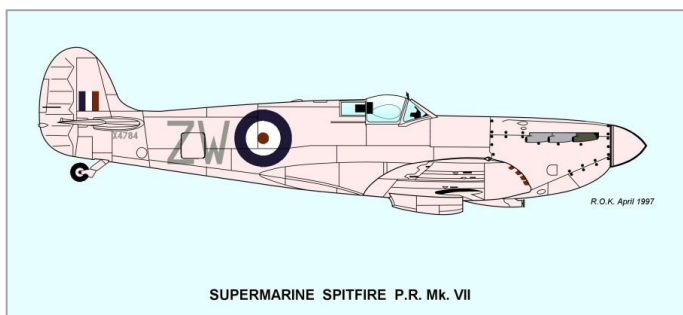
The first Spitfire to be posted to the Mediterranean theatre was one operated by 1 PRU which arrived on Malta on 22 September 1941. This aircraft was then grounded for three weeks while awaiting replacements for its badly worn tyres. PR Spitfires continued to operate from Malta in ones and twos, usually being re-allocated while en route to North Africa. Other overseas deployments of Spitfires had seen three Mk IVs being sent to Vaenga (renamed Severomorsk in 1951), in North Russia, to keep an eye on German warships during the operation to get Convoy PQ 18 through to Russia. While there, they carried Soviet markings. These aircraft were later formally handed on to the Soviet Air Force.

Pending development of a dedicated Merlin 61 and Merlin 70 powered PR Spitfire (the Mk XI) at least three Mk IXs (BS338, BS339 and BS473) were taken off the production line and modified to carry two vertical cameras in the rear fuselage. The first of these was delivered to 541 Sqn at RAF Benson on 30 November 1942. Subsequently, another 15 Mk IXs were converted to PR Mk IXs at the Vickers-Armstrong Worthy Down facility. As well as incorporating camera equipment, a wrap-around PR type windscreen was fitted and a larger oil tank was installed under the nose. All armament was removed and a PRU Blue finish applied. These aircraft lacked the "wet wing" tanks, meaning that the PR Mk IX relied on drop tanks for extra range. The most famous PR Mk IX missions involved carrying out reconnaissance missions in preparation for Operation Chastise, the 617 "Dambusters" Squadron attacks on the Ruhr dams. A PR Mk IX photographed the dams the day before the operation and photographed the Moehne Dam after the operation.

Strangely the PR Mk X followed the PR Mk XI into production and was based on the Mk VII airframe with PR Mk XI wings and camera installation. It had the pressurised Mk VII cockpit, with the Lobelle sliding canopy and retained the fighter style windscreen with the bullet-proof glass panel. The long thin air intake to the cockpit pressurisation system was fitted under the exhaust stacks on the starboard cowling. The performance was similar to that of the PR XI although the pressurised cockpit meant that this version could stay at altitudes of over 40,000 ft for much longer without the exhausting physiological effects experienced by the pilots in unpressurised cockpits. Sixteen Mk Xs saw limited service in 541 Squadron and 542 Sqn for high altitude reconnaissance in 1944. Experience with this version led to the development and production of the pressurised version of the Griffon engined PR Mk XIX. Production of the PR Mk XI was delayed because the Mk VII and VIII series was also delayed. As a result, it was decided to base the Merlin 60 powered PR aircraft on the Mk IX airframe, but production was threatened because of RAF PR doctrine in early 1943. Because the Spitfire PR XI was delayed, the Air Ministry proposed that all PR units use the DH Mosquito. After further analysis the Air Staff agreed that Mosquitoes could perform 90% of PR missions so the Spitfire production for only 10% of PR units was mooted. AVM John Slessor, C in C, Coastal Command pointed out that the Spitfire was smaller than the Mosquito, used half the number of Merlin engines and was faster, more manoeuvrable and quieter and, therefore production should be increased, not reduced. As a result, the Air Staff decided that PR Mk XI production should be accelerated! The first Mk XIs were built in November 1942 and production ran concurrently with the PR Mk XIX from April until December 1944, when they were phased out in favour of the Griffon engined Mk XIX. In total 471 Mk XI were built by Supermarine.



Above then clockwise; PR Blue Spitfire PR Mk I G, next a PR Mk IV, a pink PR Mk VII of 140 Sqn & lastly a PR Mk XI





Vintageaviationecho.com/spitfire-prxi-pl983

Wartime Survivor

Spitfire PRXI PL983 (G-PRXI) is currently the earliest mark of Merlin engined Photo-Reconnaissance Spitfire in existence and in flying condition. This PR Mk XI was powered by a Merlin 70 (which like the Merlin 61) lengthened the fuselage by 7 inches and gave the nose a different profile from earlier marks. It wears the wartime photo reconnaissance blue livery of its time serving in Europe with 4 Squadron, before it later passed to 2 Squadron in 1945 and post war occupied Germany. The aircraft was subsequently placed on contract loan to Vickers-Armstrong who supplied it to the American Air Attaché as a personal transport. Famously raced by wartime Air Transport Auxiliary pilot, Lettice Curtis, (who older members may remember gave a talk to CAS on her career in aviation and the ATA) and it later passed to the Shuttleworth Collection at Old Warden in 1950, who placed it on external static display. A restoration to flying condition was started by a volunteer team, but the Shuttleworth Collection sold the unfinished aeroplane at auction in April 1983.

Purchased by wartime French pilot Roland Frassiniet, it became the first Spitfire to be restored by Trent Aero_Engineering and made its first flight in July 1984 at East Midlands Airport. Sold to collector, Doug Arnold, it featured in the TV series 'Piece of Cake' but saw little air display use. Following Arnold's death in November 1992, PL983 was placed in dismantled storage until being re-assembled at North Weald prior to sale to Justin Fleming in 1999. Operated by Martin Sargeant, it was overhauled and re-flown, but sadly met with an accident at Rouen in France during June 2001. Following the conclusion of the accident investigation board, the severely damaged Spitfire was purchased by the Aircraft Restoration Company and moved to Duxford in 2003.

PL983 became the in-house project of Historic Flying and work began on the restoration in 2006. As an in-house project the restoration often had to take a back seat whilst they concentrated on customers work. The fuselage was sent to Airframe Assemblies on the Isle of Wight with the wings being constructed by HFL and the exact Rolls Royce Merlin 70 which powered PL983 during the war obtained and overhauled. The Merlin 70 has a different supercharger gearing compared to the Merlin 60 series engines to improve the aircraft's performance at the higher altitudes that the PR Mk XI's were designed for. A reconnaissance wrap around clear view windscreen has been fitted to replace the armoured version fitted to the fighter variants. Following the pioneering fitment of a mock cameral instillation on the Rolls Royce Spitfire PS983, HFL have incorporated the same lens assembly fitment into the side camera hatch on PL983.

During the restoration PL983 picked up the nickname 'Eleven' amongst the team which over time was affectionately shortened to 'L'. 'L' because it's the first letter of Lettice and because it's pronounced 'el', the first syllable of Eleven. Since then the nickname has stuck and you will rarely hear anyone involved refer to PL983 in any other way.

L first flew again on the 18th May 2018 in the capable hands of ARC chief test pilot John Romain who's first words upon shutting down the engine post flight were '*Wow she's fast!*'. Since the first flight L has become an integral part of the fleet and flies frequently throughout the display season. Sadly, PL983 was damaged on 22/08/19 during landing at Midden-Zeeland airport, in The Netherlands. The Spitfire was on her way to the Wings of Freedom show at Ede, The Netherlands. The port undercarriage collapsed on landing. The pilot was unhurt in the incident. Back at Duxford repairs were completed by early May 2020. John Romain took up PL983 for an air test on 07/05/20. By this time the UK was in the grips of Covid-19 pandemic, and in appreciation for the tireless efforts made all those in the NHS, PL983 was adorned with a full-span "Thank U NHS" under the wings. A 'Thank-you NHS' mission was flown over Cambridgeshire on 28/05/20. Once the UK has returned to normality, if you are near IWM Duxford, always keep your eyes peeled for a dash of PR blue dancing amongst the clouds, as a tribute to the men and women who flew PL983.

The History of PL983 – 1945 to 1950

PL983 was part of a mixed batch of Spitfire XI and XIX aircraft built at Reading. First flight from Aldermaston in 10/1944. To 6 MU, RAF Brize Norton on 31/10/44.

To No. 1 Pilots Pool (PR HQ at RAF Benson) on 24/11/44 for delivery to 34 Wing, arriving 05/01/45.

4 Sq at Gilze-Rijen, The Netherlands (22/02/45), but soon handed over to 2 Sq.

Noted with 2 Sq at Hustedt, Germany (06/09/45) and moved with this unit to Celle, Germany on 17/09/45.

To 6 MU RAF Brize Norton on 12/01/46.

To 39 MU RAF Colerne on 15/07/46 for equipment removal; returned to 6 MU on 29/07/46.

33 MU, RAF Lyneham (...) for disposal.

On loan to Vickers Armstrong's at Eastleigh on 22/07/47 for preparation for service with the US Embassy.

On loan to the Civil Air Attaché, US Embassy, London, Mr Livingstone Satterthwaite.

Reg. NC74138 on ...1947

Ferried by Lettice Curtis from Eastleigh to Hendon; Officially handed over to the US Embassy on 27/01/48.

Frequently flown in and out of Hendon by Lettice Curtis; when not required by the Embassy based at Boscombe Down.

Entered by Livingstone Satterthwaite in Air Race of Wiltshire Flying Club from Thruxton on 15/08/48. Flown by Lettice Curtis. PL983 finished first.

Entered into the High-Speed Handicap, part of the Lympe International Air Races, Lympe, Kent on 28/08/48. Flown by Lettice Curtis, PL983 ended fifth. She broke the National 100 km close-circuit speed record at 313.208 mph (505.045 km/h).

Returned to Vickers Armstrong's at the end of 09/50 and donated to the Shuttleworth Collection.



Above; PL983 in flight over Cambridgeshire with John Romain at the controls. Compared to armed versions of the Spitfire, the clean lines of PL983 give it a rather surreal appearance more like an Airfix kit than a real plane! Note the deeper nose shape and longer intake to accommodate the Merlin 70 fitted. Photo credits; www.aircraftrestorationcompany.com

WHERE ARE WE? THE HAZARDS OF WARTIME CROSS-COUNTRY TRAINING – BY KEITH HAYWARD

In January 1944 Bomber Command losses were high and Operational Training Units (OTUs) were struggling to provide sufficient replacement crews. Of necessity training time was limited to a practical number of flying hours, and it was inevitable that the number of accidents during this pressure period would be high. Towards the end of their courses these young crews were sent off on night cross-country exercises in the UK, flying in war-weary Wellingtons equipped with limited navigational aids over mainly unlit areas. These long triangular courses over the UK involved flying over very high ground including the Pennines, the Lake District and the Peak District and lasted from three to four hours. Bearing in mind the very limited experience of these young trainee pilots, navigators and radio operators it is not surprising that they frequently became disorientated if they lost radio contact or unexpectedly flew into thick cloud – a terrifying experience.

I will always remember an old BEA colleague during my early BEA Load Control days at Heathrow Northside in the early 1950s. He was ‘Jock’ Henderson, the son of a Glaswegian policeman, who had been an RAF Bomber Command navigator during the war. As a trainee on Wellingtons he told me that they often became lost on night cross-country flights.

“We were all in our early 20s – pilots, navigators, and radio operators – and on a very steep learning curve. It was surprising that we survived,” he said. In addition, many of the Wellingtons carried technical defects being ex-operational aircraft with high flying hours, and a number of accidents occurred during the navigation exercises. The Wellingtons continued in this role for several years in the early post-war period.

(LH / Editor’s note; My late father was a Wellington pilot and flew the type until 1953. Typical defects included ripped fabric in the fuselage side, ruptured in flight by ice flying off the end of the propellers, which sent an icy blast of wind down the cabin, sending charts flying, or broken seals round the cockpit window allowing freezing water to pour in over the instrument panel and the pilots legs, necessitating the sole pilot having to fly with a thick trench coat or blanket over his lower half to save being frozen to death, on long night time navigation exercises! On one long distance Nav exercise to Malta and back, a pilot of 1 ANS refused to wear oxygen, preferring to fly through the Alps, not over them, with disastrous results as the Wellington and crew simply disappeared. The snow covered wreckage was eventually found c.10 years later).



I clearly recall an incident during my RAF National Service period at the Air Traffic Control Centre at Uxbridge in 1947. Just after midnight we received a telephone call from an RAF station stating that they had lost contact with one of their Wellingtons on a cross-country flight. Following routine procedures, we advised the half a dozen master airfields strategically positioned around the UK to switch on their runway approach lighting to maximum intensity which might attract any crews that were lost. We also advised police forces, mountain rescue units and coastguards positioned around the intended flightpath to be on the lookout. Luckily in this instance the aircraft managed to land safely away from base having suffered radio failure. *(Photo Left; A Wellington B.10 immediately postwar)*

The toll of those that crashed in mountainous areas was quite high and, sadly, the chances of survival were minimal. One wonders how long these young victims would have survived had they completed their training and moved on to Bomber Command with the carnage experienced in 1944 over Germany. The odds were certainly against them.

OTU WELLINGTONS LOST IN HIGH GROUND ACCIDENTS OR MISSING, WINTER 1943/1944

<i>Date</i>	<i>Aircraft</i>	<i>Unit</i>	<i>Circumstances</i>
14 November 1943	HF746	20 OTU	Hit Ben Rinnes mountain in snowstorm; all 5 killed
16 November 1943	Z8799	28 OTU	Control lost in cloud at night exercise; crashed Chorley; 6 killed
20 November 1943	LB185	3 OTU	Flew into mountain in cloud, Transfynod, North Wales; 4 killed
22 November 1943	LB191	3 OTU	Missing on night navigation exercise; 6 killed
23 November 1943	T2840	105 OTU	Flew into high ground, Salop; Pilot Sergeant K Imeson + 1 killed
24 November 1943	Z1313	104 OTU	Flew into mountain at night, Co. Antrim. 2 killed
2 December 1943	LB137	6 OTU	Flew into hill, Mull of Kintyre; 6 killed
31 December 1943	R1520	104 OTU	Flew into hill, Dundrol, Co. Antrim; 3 killed
31 December 1943	X9666	21 OTU	Flew into hill in cloud near Aberdovey; 3 killed
2 January 1944	BK387	82 OTU	Flew into hill in cloud near Keighley; 6 killed (all Canadian)
21 January 1944	BJ652	27 OTU	Flew into high ground at night near Ashbourne; 6 killed
27 January 1944	HF911	105 OTU	Flew into hill on navigation exercise, near Denbigh. Squadron Leader Stewart + 2 killed
13 February 1944	LN658	15 OTU	Missing on night navigation exercise, found ditched 30 miles SW of Pembroke; 5 missing

1970

November -- The Israeli Air Force has lost 20 fighters in combat with Egyptian forces since June thanks to the Egyptian deployment of S-125 Neva/Pechora (NATO reporting name "SA-3 Goa") surface-to-air missiles and MiG-21J (NATO reporting name "Fishbed") fighters.

November 1 -- Trans World Airlines introduces "Business Class Ambassador Service" featuring "twin-seat" accommodations on transcontinental flights in the United States, marketing the new service as "a whole new way to fly."

November 1 -- Three hijackers commandeered United Airlines Flight 598, a Boeing 727 flying from San Diego to Los Angeles, California, with 71 people on board, and demand to be flown to Cuba. The airliner stops at Tijuana, Mexico, before proceeding to Cuba.

November 9 -- Nine hijackers take control of a Douglas DC-3 airliner flying from Dubai in the Trucial States to Bandar Abbas, Iran, demanding to be flown to Iraq. The airliner stops at Doha, Qatar, before proceeding to Baghdad, Iraq.

November 10 -- A hijacker commandeers a Saudi Arabian Airlines Douglas DC-3 flying from Amman, Jordan, to Riyadh, Saudi Arabia, and forces it to divert to Damascus, Syria.

November 11 -- The British government agrees to fund development of the Rolls-Royce RB211 turbofan, rescuing the project from Rolls-Royce's bankruptcy.

November 12–13 (overnight) -- The 1970 Bhola cyclone strikes East Pakistan, submerging the airports at Chittagong and Cox's Bazar under 3 feet of water for several hours.

November 13 -- A husband and wife carrying 3 litres of petrol and 5 litres of kerosene hijack an Aeroflot Ilyushin Il-14M 20 minutes after take-off from Kaunas for a domestic flight in the Soviet Union to Palanga with 42 people on board. They pour the petrol and kerosene on the floor of the cabin and cockpit and threaten to ignite it if the airliner does not fly them to Gotland, Sweden. The flight crew overpowers them and the airliner lands safely at Palanga.

November 13 -- A hijacker commandeers Eastern Airlines Flight 257, a Douglas DC-9 departing from Raleigh–Durham International Airport in North Carolina with 81 people on board, and demands that it fly him to Cuba. The airliner stops at Jacksonville, Florida, before proceeding to Cuba.

November 14 -- Southern Airways Flight 932, a Douglas DC-9-31 (registration N97S), crashes near Ceredo, West Virginia, killing all 75 on board. Among the dead are 37 members of the Marshall University football team, eight of its coaches, 25 team boosters, and the crew of five.

November 16 -- First flight of the Lockheed L-1011 Tristar registered N1011

November 21 -- In Operation Ivory Coast, the U.S. Air Force and U.S. Army assault the North Vietnamese prison camp at Son Tay, North Vietnam, to free prisoners-of-war thought to be there, supported by 59 U.S. Navy and 57 U.S. Air Force aircraft, 28 of them directly assigned to the immediate assault area. No prisoners are found at the camp, but the attackers kill 42 North Vietnamese guards in exchange for two Americans injured and one HH-3E Jolly Green helicopter deliberately crash-landed in the prison courtyard and left behind. Large air raids are conducted over the night of November 20–21 to divert North Vietnamese attention from the assault, including the largest U.S. Navy night aircraft carrier operation of the Vietnam War; one U.S. Air Force F-105 Thunderchief is shot down during these raids, but its crew ejects safely.

American aircraft begin the first major bombing campaign over North Vietnam since 1968, as 300 aircraft attack the Mu Gia and Ban Gari passes.

November 27 -- Benjamín Mendoza y Amor Flores lunges at Pope Paul VI with a dagger at Manila International Airport outside of Manila in the Philippines shortly after the Pope disembarks from a chartered Douglas DC-8. The Pope suffers minor injuries.

November 27 -- During a flight over South Vietnam from Tan Son Nhut Air Base to Nha Trang Air Base in poor visibility, a United States Air Force C-123K Provider (serial 55-4574) strikes trees on a 5,100-foot ridge at an elevation of 4,600 feet and crashes, killing all 79 people on board. Its wreckage is not found until December 6.

November 27 -- Capitol Airways Flight 3/26, a Douglas DC-8-63-CF (registration N4909C) chartered by the U.S. Air Force's Military Airlift Command, fails to become airborne while attempting to take off from Anchorage International Airport in Anchorage, Alaska, because of a failure of all main landing gear wheels to rotate. It overruns the runway, strikes a wooden barrier, an Instrument Landing System structure, and a 12-foot deep drainage ditch, and catches fire, killing 47 of the 229 people on board.

November 29 -- Carrying troops, a U.S. Air Force C-123K Provider (serial 54-649) descending in thick cloud on approach to Cam Ranh Airport in South Vietnam strikes high ground at an altitude of 2,700 feet and crashes into the jungle, killing 42 of the 44 people on board.

December 1 -- First flight of the Dassault Falcon 10 (registration F-WFAL)

December 7 -- During a flight from Tel Aviv, Israel, to Bucharest, Romania, a TAROM BAC One-Eleven 424EU (registration YR-BCA) attempts to divert to Constanta, Romania. On approach to Mihail Kogălniceanu International Airport outside of Constanta in thickening fog, the airliner flies into the ground 3.1 miles short of the runway, killing 19 of the 27 people on board.

December 10 – A hijacker attempts to take control of a CSA Czech Airlines airliner during a domestic flight in Czechoslovakia from Bratislava to Brno, but is subdued.

December 15 – Soviet aircraft designer Artem Mikoyan dies, aged 65.

December 16 -- U.S. Air Force C-130 Hercules and C-141 Starlifter transports complete an airlift begun November 18 to bring relief supplies and equipment to East Pakistan after the devastating 1970 Bhola cyclone. The aircraft have delivered a total of 140 short tons (127 metric tons) of supplies and equipment, some of them making flights of almost 10,000 miles

December 19 -- Forty minutes after a Soviet Air Force Antonov An-22 (NATO reporting name "Cock") (registration CCCP-09305) takes off from Dacca, East Pakistan, one of its propellers disintegrates at an altitude of 19,685 feet. Its crew initiates an emergency descent and attempts an emergency landing at Panagarh Airport in Panagarh, India, but cannot get the landing gear or flaps down. After flying down the runway for 6,562 feet at an altitude of 3 feet, the An-22 banks right, its right wing strikes the ground, and it crashes, breaks up, and catches fire. All 17 people on board die.

December 19 -- A Douglas DC-9 of Continental Airlines Flight number 144 – with 30 people on board making a flight from Denver, Colorado, to Wichita, Kansas – is flying somewhere between Tulsa, Oklahoma, and Wichita, passenger Calos Denis passes a note to a stewardess indicating that he has a gun and wants to be flown to Cuba. When the captain asks if the passengers can disembark during a refuelling stop at Tulsa, Denis agrees. After the other 26 passengers disembark at Tulsa International Airport, the crew sneaks off the plane while Denis uses the lavatory. Tulsa police then board the airliner, find Denis hiding in the lavatory, and arrest him. He turns out to be unarmed.

December 21– First flight of the Grumman YF-14A, prototype (serial 157980) of the F-14 Tomcat

December 21 – A hijacker commandeers Prinair Flight 157, a de Havilland DH.114 Heron with 21 people on board, during a flight in Puerto Rico from San Juan to Ponce and demands to be flown to Mexico. He is overpowered.

December 30 – The Grumman YF-14A, prototype of the F-14 Tomcat (serial 157980), is destroyed in a crash during its second flight due to hydraulic failure. Its two-man crew ejects and parachutes safely.

December 31 -- After the pilot of a chartered Rousseau Aviation Nord 262E (registration F-BNGB) carrying the Air Liquide football (soccer) team from Algiers, Algeria, to Menorca in Spain's Balearic Islands for a New Year's Day match sends out a distress call about 56.3 miles from Algiers, the aircraft disappears over the Mediterranean Sea with the loss of all 30 people on board.



Photo Above; First flight of the Grumman YF-14A, prototype (serial 157980) of the F-14 Tomcat occurred on 21st Dec 1970; 50 years ago! The Grumman F-14 Tomcat served with the United States Navy until 2006 and is still in service with the Islamic Republic of Iran Air Force (IRIAF) In-depth knowledge of its service with Iran is relatively unknown. This example is preserved aboard USS Yorktown, Savannah, South Carolina.

1980

November 1 – British Airways terminates Concorde services to Bahrain and Singapore.

November 4 – A Venezuelan Air Force Lockheed C-130H Hercules (serial 3556) crashes during its initial climb after take-off from Simón Bolívar International in Caracas, Venezuela, killing all 6 people on the plane and 5 people on the ground.

November 9 – Dan-Air registers the Worlds last commercial flight by a de Havilland Comet C4 (registration G-BDIW). The plane flew enthusiasts on a round-trip flight from London Gatwick Airport. And on 7 February 1981 the aircraft was flown to Dusseldorf to be preserved by the Air Classic Collection and is now on display at Hermeskeil.

November 12 -- Turning onto final approach after a night go-around at Cairo West Air Base in Cairo, Egypt, a United States Air Force Lockheed C-141B Starlifter (serial 67-0030) crashes, killing all 13 people on board.

November 12 -- Delta Air Lines orders 60 Boeing 757s, the largest single order to this time for a single airliner type.

November 19 – Korean Airlines Flight 015, a Boeing 747-2B5B (registration HL7445) carrying 212 people, 295 feet short of the runway at Gimpo International Airport in Seoul, South Korea, and strikes an embankment. Its main landing gear collapses backward and penetrates its cargo compartment, where sparks start a fire while the plane slides down the runway on its nose gear and belly. The fire quickly guts the fuselage, killing 14 people, but the rest of the passengers and crew evacuate and survive. Four of the survivors are seriously injured.

November 21 – Continental Micronesia, a Boeing 727-92C (registration N18479) , skids off the runway and crashes when its right main landing gear separates from the airliner as it lands at Yap International Airport on Yap in the western Caroline Islands. A fire subsequently destroys the plane, but all 73 people on board evacuate, three of them with serious injuries.

November 24 – Flying in heavy rain, a Douglas C-47A-35-DL Skytrain (registration HK-1221G) operated by Colombia's customs service crashes into the mountain Cerro El Boquerón near Murri, Colombia, at an altitude of 9,500 feet killing all 20 people on board.

November 25 – U.S. Navy helicopters join U.S. Air Force and U.S. Army units in providing aid to victims of an earthquake at Avellino, Italy, which had killed 3,000 and left many people homeless two days earlier.

December -- Thanks to purges of officers since the February 1979 Iranian Revolution and the Western embargo on spare parts shipments to Iran, by late 1980 the operational level of the Islamic Republic of Iran Air Force drops below 100 aircraft and its sustained sortie rate to drop to one per day. This will not change through the end of the Iran–Iraq War in 1988. The Iranian Army helicopter force, able to fly 60 to 70 percent of its helicopters, suffers from similar problems.

December 4 – Prime Minister of Portugal Francisco de Sá Carneiro and Portuguese Minister of National Defence Adelino Amaro da Costa die in the crash of a Cessna 421A Golden Eagle (registration YV-314P) in Camarate, Portugal. The other five people on board also die.

December 7 – The Pan American World Airways Boeing 747 China Clipper arrives in Beijing, China, from John F. Kennedy International Airport in New York after a stop in Tokyo, Japan. It marks the first time since 1949 that a commercial flight between the United States and mainland China is completed.

December 19 – New York Air begins airline operations.

December 21 – An explosion occurs in the right rear portion of a TAC Colombia Sud Aviation SE-210 Caravelle VIN (registration HK-1810) on its first scheduled flight after 17 months of maintenance work shortly after take-off from Almirante Padilla Airport in Riohacha, Colombia. It crashes, killing all 70 people on board.

December 22 – Saudia Flight 162, a Lockheed L-1011 TriStar 200 (registration HZ-AHJ) with 292 people on board, suffers an explosive decompression over the Persian Gulf off Qatar, killing two people and injuring seven.

December 24 – The Iraqi Air Force makes its first major air raid against the Iranian oil terminal at Kharg Island.

1990

November 14 – While attempting to land at Zurich Airport in Zurich, Switzerland, Alitalia Flight 404, a McDonnell Douglas DC-9-32 (registration I-ATJA), crashes into the Stadlerberg mountain 5 miles short of the runway due to a faulty instrument landing system. All 46 people on board die.

December -- OceanAir – the future Azores Airlines – is founded. It'll begin operations as a non-scheduled carrier in 1991.

December 3 -- 1990 Wayne County Airport runway collision, a Douglas DC-9-14 (registration N3313L) with 44 people on board, mistakenly taxis onto an active runway at Detroit Metropolitan Wayne County Airport in Romulus, Michigan, in dense fog and is struck by Northwest Airlines Flight 299, a departing Boeing 727-215 (registration N278US) with 154 people on board. Although there are no fatalities or injuries on the Boeing 727, eight people die and 10 suffer injuries on the DC-9.

December 3 -- Continental Airlines files for its second bankruptcy.

December 7 – An Alaska Airlines Boeing 727 takes off from Seattle–Tacoma International Airport in visibility of only 500 ft the lowest for any airliner take off in the United States.

December 19 – Northwest Airlines buys a 25% share in Hawaiian Airlines.

December 21 – American aircraft designer Kelly Johnson dies, aged 80.

December 28 –The Soviet airline Transaero is incorporated. It is the first private airline approved to provide scheduled passenger service in the Soviet Union. It will begin passenger service in November 1991 and scheduled passenger service in January 1993.