

INDIVIDUAL HISTORY

BRISTOL BULLDOG MK.IIA G-ABBB/ K2227'
MUSEUM ACCESSION NUMBER 1994/1386/A

Built as a Bulldog Mk.II, c/n 7446 - the 8th aircraft in the third production batch of 20 aircraft. Constructed as a replacement for Bulldog demonstrator G-ABAC which had crashed in June 1930 and intended for use in European displays. As the first Bulldog to incorporate revised wing spars, ailerons and strengthened fuselage structure G-ABBB grossed 3,350lbs weight and led to the RAF Bulldog IIA version of which 262 were built, including G-ABBB. A total of 441 Bulldogs were built at Bristols' Filton factory.

12 Jun 30 Registered new as G-ABBB. Fitted with Gnome-Rhone 9ASB super charged engine - a French version of the Bristol Jupiter VII. Finished in overall silver with Royal Blue fuselage decking. One of six civilian registered Bulldogs constructed being the fourth and final company demonstrator.

28 Nov - Exhibited at the Paris Salon Aero Exhibition. Details and Photo:
14 Dec 30 Flight, 5 Dec 30 - overall silver with no markings.

After this G-ABBB was used by Bristol at Filton as a demonstration and development aircraft - various improvements to the basic type were developed and tested on this airframe including standardising on the Jupiter VIIF engine and ultimately raising the all-up weight to 3,600lbs. In the process G-ABBB was re-designated as a Bulldog IIA. Photo around this time - Biplane to Monoplane (029045) p.162; Great Aviation Collections of Britain (Ellis) p.147.

24 Apr - G-ABBB's only recorded demonstration tour, to Villacoublay,
07 May 31 France.

Sep 35 Re-engined with Bristol Aquila I sleeve-valve engine for 100 hours endurance flight testing and given the SBAC number RII for its test flights. Photos: Air Pictorial Feb 57 p.42; 'Profile' No.6 (006905) and Putnam Bristol book (004056) - overall silver colour scheme.

1936 Aquila test schedule completed - G-ABBB withdrawn from use and stored at Filton.

1938 With factory space at Filton at a premium, due to Blenheim construction, company director Herbert J Thomas instigated the offering of G-ABBB to the Science Museum, South Kensington, who accepted the aircraft. Fabric on one side was removed to show the structure and the aircraft delivered to South Kensington in February 1938.

Early 1939 Placed on public display at South Kensington - see notes in 'Flight' 6 Apr 39 and 'The Aeroplane' 8 Mar 39.

- c.1939-45 Removed from the Museum for safety and stored for the duration at a warehouse in Wapping, East London.
- 28 Jul 51 Displayed partly stripped at Rochester Air Day. See film held by RAFM – X002-6141/4.
- Sep 54 Displayed partially stripped at RAF Biggin Hill Battle of Britain Display (Air Pictorial Nov 54 p.339).
- 06 Aug/30 Sep 55 Loaned to Pinewood Studios by the Science Museum for the making of the Douglas Bader film 'Reach for the Sky' filmed at Kenley and Denham (filming at the latter location being finished by 12 October). Photo: 'After the Battle' 35 - used statically, alongside Hurricane I P2617 now displayed in Hendon's Battle of Britain Hall. The Bulldog wore the identity 'K2496' at this time (actually an Avro Tutor that crashed into the Humber in 1935). Photo during filming – Aeroplane September 2010 p.26.
- c. Jan 1957 Returned to Filton for restoration to flying condition.
- 22 Jan 57 Restoration work commenced, on a low priority basis, in Bristol's experimental department, mainly by apprentices. The control and electrical systems were fully overhauled and new aluminium panels fitted. The airframe generally was found to be in good condition.
- The search for a suitable engine revealed a 1931 Jupiter VIIFP (No.J7508) with an ATC unit at Wilmslow, Cheshire, which was acquired and rebuilt by Bristol Siddeley Engines Ltd using parts from three more Jupiters found in their packing cases in a barn at Tuckington.
- 1960 Rebuild of the airframe completed - rebuilding the engine took longer since many new parts had to be made, again by the apprentices of Bristol Siddeley Engines Ltd. For details of rebuild see chapter 9 'Last in the Pack' in 'Bulldog' by David Luff (021499)
- Jan 61 Engine rebuild completed - test run.
- 08 Jun 61 Final re-assembly of aircraft, with addition of engine and propeller.
- 23 Jun 61 First 1.20 hour post-restoration flight, at Filton - flown initially in overall silver as G-ABBB. Pilot for the first flight was Bristols' chief test pilot, Godfrey Auty. Photos: Flight 29 Jun 61; Air Pictorial Aug 61; Scale Aircraft Modelling Volume 14 No.7, and Putnam Bristol Book (004056); Airfix Magazine Aug 1961 p.103; Royal Air Force Flying Review August 1961 p.3 and Dec 61 p.22-23; Aeroplane Monthly May 1999 p.54; Air Britain Archive Autumn 2004 p.144; Warpaint Series No.66 – Bristol Bulldog p.24.
- Photocopies of the Aircraft and Engine log books, 1961 - 1964 are held by DoRIS.
- 24 Jun 61 First public appearance at Lulsgate aerodrome. Flight time 45 minutes.

- Jul 61 Repainted as `K2227', a Bulldog of B Flight, No.56 (Fighter) Squadron North Weald 1933, regularly flown by Leslie Stephen Holman – later Wing Commander, A.F.C - (a Bulldog IIA built in Jan 32, c/n 7682, which was fitted with a non-standard polygonal cowling ring until becoming 978M in Jul 1937). Flew on the 6 & 18 July for a total of 2.25 hours. Engine ground run weekly when not flown.
Colour photo in this scheme; Air-Britain Aeromilitaria Autumn 2008 front cover.
- 12 Sep 61 Presented to the Shuttleworth Trust for preservation in flying condition. Handover ceremony at Filton - Flight 21 Sep 1961 p.479. Flown for 5 minutes. Photo over Filton Works Jul 61 as repainted - Aircraft Illustrated Apr 70 p.145.
- 16 Sep 61 Flown from Filton to RAF Coltishall. Flight time 1.35 hours. 5-minute flight at air display at Coltishall the same day.
- 17 Sep 61 Following a half-hour air-to-air photography session/Battle of Britain flypast with No. 56 Squadron, flown by Godfrey Auty from Coltishall to RAF Henlow for winter storage - flight time 1.40 hours. See Letter and Photo in 115-knot 'formation' with Hurricane II, and rapidly passing-by Hunter T.7 and Lightning – Aeroplane June 2010 p.97.
- 06 Jun 62 Flown to from Henlow to Old Warden after winter storage. Flight time 20 minutes. Included appearance at RAF North Weald RAFA Display.
- 11 Jun 62 Engine damaged when the aircraft nosed over on landing after completing its display at North Weald Air Display, breaking the propeller and damaging the wings and tail structure but repaired a few months later. See 1963 G-ABBB repair file, DoRIS ref AC72/3. Photos: Flight International 21 Jun 62 p.960; Action Stations Vol.8 p.187; Aeroplane Monthly May 1999 p.54; The Halton Magazine Vol. XXV No.3 Autumn 1962; Aeroplane July 2010 p. 121. Flown by Bristol Aircraft chief test pilot Godfrey Auty, who was unhurt. The aircraft was returned to Filton by road for checking and repairs which were done between 18 Jun 62 and 31 Jul 63.
- 07 Aug 63 Test flown at Filton after repair. Flight time 40 minutes.
- 09 Aug 63 25 Minute flight to check for post-rebuild adjustments.
- 15 Aug 63 Wing tip damaged when ground looped at RAF Tern Hill; later repaired. Flight time 10 minutes.
- 13 Sep 63 25 minute flight to check for adjustments after repair.
- 14 Sep 63 Flown from Filton to RAF Ternhill, Salop for Battle of Britain Air Display, then from Ternhill to Baginton, Warwicks. via RAF Gaydon for total of 2.10 hours.
- 15 Sep 63 Flown from Baginton to RAF Henlow for winter storage. Flight time 30 minutes. Engine run occasionally during storage.
- 4 Dec 63 20 minute Air test at RAF Henlow following further wing repairs.

Photo at Henlow, 1964; Flypast June 1999 p.45.

14 Jun 64 15 Minute flight - air test and flypast at Old Warden 'At Home' open day and return to Henlow.

Flown at the first public demonstration of Shuttleworth Collection aircraft at Old Warden, Bedfordshire by deputy chief test pilot at Filton, 'Willie' Williamson who flew over from RAF Henlow in the Bulldog, making loops and low passes. Photo: Air Pictorial August 1964.

15 Jun 64 Flight time 1 1/2 hours direct from Henlow to Filton.

19 Jun 64 Flown at Filton for a RAFA Air Display. Total flight time 20 minutes.

20 Jun 64 10 minute flight - test flight and aerobatics.

9 Sep 64 35 Minute flight from Henlow to Royal Aircraft Establishment Farnborough. Total flying hours since rebuild then 15.40.

11/12 Sep 64 10-minute flypasts at Farnborough SBAC show. Photos; RAFM PC73/59/147-148

13 Sep 64 (Sunday) Crashed at the SBAC Farnborough show and usually described as written off. After several slow loops at low altitude the engine cut out at the top of a loop - possibly due to magneto failure - the pilot had little chance of recovery and the aircraft crashed through the crowd barrier from the outside, the pilot, Ian Williamson, escaping with cuts and bruises. Photos: Scale Aircraft Modelling Vol.14 No.7 (April 1992) and 'Profile' No.6 (006905); Control Column Vol.20 No.1 p.5; Aeroplane Monthly May 1999 p.56-57; Flypast June 1999 p.45; Aeroplane March 2010 p.76. Photos at Farnborough prior to the crash; Aeromilitaria Spring 1999 back page (colour); Aeroplane Monthly May 1999 pp.2-3 (colour); Flypast June 1999 p.45; Air Britain archive Autumn 2004 p.144.

Last flight - flying time 10 minutes. Total time since rebuild - 16 hours 10 minutes.

Some time after the inevitable crash investigation had been completed Mr Ray Lee, the Keeper of the RAF Museum, apparently salvaged some parts of the aircraft from the scrap dump behind the Accident Investigation Branch hangar at RAE Farnborough. There is no record of what he removed but it is assumed that he recovered the following:

- a. Main undercarriage axle with part of one oleo leg attached.
- b. Oil cooler intake.
- c. Section of cockpit decking including section of windscreen.
- d. Section of fuselage decking.
- e. Length of control rod and coupling.
- f. Section of tubular framework complete with pressed stringers.
- g. Section of fabric complete with footstep.
- h. Sections of press ribbing (3).
- i. Small (three feet) sections of each of the lower inner mainplanes (1 of each).

(To be combined into rebuilt lower starboard wing)

- j. Section of framework tubing.
- k. One length of rib.
- l. Four lengths of flight wires.
- m. Two sections of fabric.
- n. One section of fabric c/w wing rib.
- o. One fairing.
- p. One strut.
- q. One interplane strut.
- r. Mainspar section.
- s. Leading edge section.
- t. Interplane strut end fittings.
- u. Upper starboard main spar section.
- v. Section of lower outer mainplane (starboard).
- W. Carburettor.

From these 28 pieces of wreckage, four pieces were prepared for exhibition in 1972, catalogued as RAFM/72/A.1514 A-D (Interplane strut, mainspar section, leading edge section and interplane strut end fittings) and placed on public display. It is therefore assumed that Mr Lee had removed all the items in the preceding eight years, but we have no recorded date. It is known that the items were stored at RAF Henlow and moved with the Museum's other artefacts to RAF Cardington over the period 1987-1989.

It is understood that the Shuttleworth Collection collected from RAE Farnborough other parts of the crashed aircraft, including: the engine and firewall, until recently the only Bulldog components held by Shuttleworth; the rudder, broken in two, which Shuttleworth sold to Mr Edward (Ted) Dean of Pickering, North Yorkshire in 1983; the tailplanes and elevators, apparently gifted to the RAF Museum in 1986 by Shuttleworth, together with the upper wing centre section, upper port mainplane and aileron and parts of the upper starboard wing. Again all were stored initially at Henlow and then later Cardington.

For photo of the rudder in Shuttleworth's store in December 1982 see FlyPast, March 1983, p 14. In 1981 the Shuttleworth Collection also held the fin and extreme rear three feet of fuselage section (see the periodical 'After the Battle' 35), however, this seems to have passed to the Brenzett Aeronautical Museum Trust, who donated it to the RAFM in 1993. (A suitable item to be provided by the RAFM in exchange). RAFM accession number 1993/0633/A. Photo FlyPast Jan 94 p.50.

When Richard Simpson of the RAFM visited the Shuttleworth Collection in 1987 he was given one mainwheel minus the tyre, by the Shuttleworth Collection's Chris Morris - accessioned as RAFM 1987/0474/A. (Also held by the RAFM and also donated by Shuttleworth is the other mainwheel, 1987/0475/A, complete with tyre). A rear fuselage panel - 1987/0476/A - was donated at the same time also by the Shuttleworth Collection. Museum accession records show these items as donated although there does not appear to be any exchange of correspondence to support the donation record.

In 1992 the RAFM decided it should catalogue all the items of Bulldog G-ABBB that it was holding, the purpose being to determine what it held and whether a static restoration was possible. A thorough but low priority search was undertaken. By 1993 it was clear that together with some other Bulldog pieces in the collection a restoration was possible, so in 1994 various companies were invited to tender. Eventually in 1994 all the unaccessioned items had been catalogued under the accession number 1994/1386/A. (This unusual procedure was because it was intended to incorporate all the pieces into the one aircraft.)

All of the items were passed to the successful contractor, SkySport, for restoration and incorporation into the restored Bulldog under contract on behalf of the RAFM. The intention was that since the restored aircraft has a very large percentage of G-ABBB parts it should carry the identity of G-ABBB/K2227' for display at Hendon. Photo of components laid out at Cardington prior to despatch to SkySport - Air World International Aug 95 p.48.

Although the Museum has assembled a lot of G-ABBB and acquired other Bulldog parts a vital 6-foot length of centre fuselage remained to be found. Together with SkySport the RAFM continued to put out feelers to find the missing piece (or a piece from other Bulldogs). This search continued until the progress of the project necessitated the construction of a replica section c.1997.

Original components of G-ABBB continued to surface, though well dispersed; the tailwheel strut was gifted to the restoration project by the Cotswold Aviation Group. Tangmere Aviation Museum have donated the original exhaust collector ring acquired from an aero jumble.

A complete pair of lower mainplanes, possibly ex-instructional use, Ex RAF Bicester and overhauled at RAF Milton in 1935, were acquired from Viv Bellamy in exchange for a Kestrel engine -RAFM accession nos. 1982/A/1956-7. The port lower wing from Bellamy was used in the eventual restoration.

SkySport acquired a suitable set of cockpit and navigation lights and other small parts including switches, instruments, propeller, Sutton harness, downward I.D light and control column grip from various sources. Undercarriage legs have been donated by Sqn Ldr Howell Davies, owner of Hawker Demon G-BTVE (The rear fuselage of which came from the RAFM); the original throttle quadrant and fuselage member were donated by David Elphick of Biggleswade, ex Old Warden. Other parts came from the remains of five Bulldogs in a Shropshire scrapyards unearthed by Tim Moore, including two foot rests, rudder bar assembly, undercarriage oleos, gun label, strut fairings and two fittings, shock unit, battery tray, two under fuselage panels and lower centre section. The original engine with mounts was obtained from the Shuttleworth Collection and restored by the Rolls Royce Heritage Trust's Bristol Branch at Filton.

01 Feb 97 Partly assembled at Hatch. At this stage some 50% of the original machine had come to light since Skysport's first appeal for surviving parts, although the fuselage mid section and cockpit items were still missing. Photos assembled - Aeroplane Monthly Jun 1997 p.6 and May 1999 p.57. See also Flypast Jul 97 p.15. A large degree of originality was retained - the upper port wing is 90% original, the upper starboard wing 60% original, despite the damage in the original crash. The lower starboard wing is 40-50% original using parts from both original lower wings. Also original to the airframe are 2 inter struts, two cabane struts, several bracing wires, brakes, both elevators and stabilisers, rudder, fin (now rebuilt to original Mk IIA standard) and axle.

4-6 Jul 97 Displayed as so far assembled at PFA Rally, Cranfield, and Beds. Photos - Aircraft Illustrated Sep. 1997 p.92; Flypast October 1997 p.14.

Dec 97 Scratchbuilt rear fuselage complete - photos Aeroplane Monthly Mar 98 p.4.; Aircraft illustrated March 1998 ; Flypast Jun 98 p.11; Aeroplane Monthly Aug 98 p.10; Aeroplane Monthly Oct 98 p.5. Restored centre section in markings of No.56 squadron as carried at the time of the crash.

8/13 Sep 98 Restored airframe, minus engine, displayed at SBAC Farnborough show, 34 years after the crash there. Photos - Flypast Nov.98 p.22; Aeroplane Monthly

Nov 98 p.9; The Flying M Yearbook 1998 p.28.

- 10 Mar 99 Completed airframe rolled out at Hatch. Photos - Flypast April 1999 p.6; Aircraft Illustrated May 99 p.85; Aeroplane Monthly May 99 p.50-51; Air Pictorial May 1999 p.298.
- 24 Mar 99 Completed airframe delivered to RAFM Hendon for display. Photos on display; Flypast June 1999 pp.42-43; Wrecks and Relics 17th Edition (colour); Flypast February 2007 p.18; Warpaint Series No 66 – Bristol Bulldog pp.22-23; Aeroplane March 2010 p.93; Scale Aircraft Modelling July 2014 p.36; RADAR Issue 4, winter 2014 p.27.
- 31 Mar 99 Formal launch ceremony at RAFM.
- 16 Feb 2010 To Airbus UK, Filton (Bristol), Gloucs for one week for special display (launched 19 February) related to naming of a new Airbus A319-111 aircraft, G-EZFT, as Sir George White in honour of the Bristol, Aeroplane Co's founder, following dismantling and Transport by Skysport Engineering, returning 23 February for reassembly. Photos at Filton – Aircraft April 2010 p.13; Aeroplane May 2010 p.6.

Other Surviving Bulldogs

Mk.IVA BU-59 Built 1934. Finnish Air Force Collection, Hallinpotti Ilmailumuseo, Halli (complete). Made last Finnish Bulldog flight 22 February 1944, and preserved since mid-1945.

At least in 1974, Mr E R Burnett-Read of South Australia owned some parts of survivors of eight RAAF Bulldogs delivered in 1930 and three were disposed of as instructional airframes in the early 1950s. (RAAF Bulldogs A12-1, 3, and 6 were allocated for ground training 15 April 1940) The remains included a fuselage and lower main planes; these parts are now believed to be with the RAAF Museum at Point Cook.

The remains of A12-8, including a lower wing, recovered from a Bush site, were donated by Mark Pilkington to the RAAF Museum at Point Cook c.2004-5. The same person recovered parts of A12-7 in the 1990s.

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