

24<sup>th</sup> January 2014

## Kestrel goes on display at Cosford

The New Year has got off to a flying start at the Royal Air Force Museum Cosford with the addition of the Hawker-Siddeley Kestrel FGA.1 going on public display. This jet aircraft was built to evaluate the jump jet concept during the 1960s and visitors are now able to view it within the Museum's Test Flight collection.

The Kestrel, serial number XS695, is one of only nine built by Hawker-Siddeley and its main role was to evaluate vertical take-off in near service conditions. Fitted with a single Bristol Siddeley Pegasus engine and single seat cockpit, the success of the Kestrel came little more than a year before its successor, the Harrier, made its first flight. The Harrier served successfully with the Royal Air Force until 2011.

During the 1950s, Hawker had been privately developing a vertical take-off aircraft under the code of P.1127. The success of this private venture, and the subsequent service interest, led to an announcement in 1962 that a 'Tripartite Evaluation Squadron' (TES), also known as the Kestrel Squadron would be formed. The Kestrel was a developed version of the P.1127 and nine of the type were ordered for use by the TES during its operations in 1965. The TES was based at RAF West Raynham and included pilots and ground crew from the UK, USA and West Germany. They used nearby abandoned airfields for testing the aircraft on semi-prepared runways and on grass to test its capabilities on unprepared sites.

The Kestrel made its maiden flight in February 1965 at Dunsfold. By November that same year XS695 had flown 153 times totalling 70.44 airframe hours of which 51.04 were on trials work including 141 sorties with the TES. During 1966 the aircraft was assessed for its handling characteristics, used for training and even appeared at the Hanover and Farnborough Air Shows. In 1972 it was allocated to the Royal Navy Engineering College at Manadon, Devon and later used for apprentice training and to simulate aircraft handling and flight deck procedures.

After being transported by road to the RAF Museum Cosford in November 2001, the Kestrel remained in storage until late Autumn 2012 when it was moved into the Museum's award winning Michael Beetham Conservation Centre. After undergoing a full restoration and repaint in its tripartite colours which include tri national roundels and fin flashes, the aircraft has now been placed on display for Museum visitors to enjoy.

**Nick Sturgess, Alex Henshaw Curator at RAF Museum Cosford said:**

*"We are delighted to finally have the Kestrel out on public display after its time in storage and its extensive restoration. This aircraft is the only surviving example in the UK and represents an important stage in aircraft development. It was used by three nations to evaluate the jump jet concept and wore a unique colour scheme which can now be seen for the first time since 1965. The results from the Kestrel Squadron would be a huge influence in the development of the Harrier. It now sits alongside the Hunting H126 which was also used to experiment with short take off ideas at the same time."*

The Museum is open daily from 10am and admission is free of charge. For more information on the Museum, visit [www.rafmuseum.org](http://www.rafmuseum.org) or call 01902 376200. Keep up to date with the latest news and event information by following us on Facebook – Royal Air Force Museum Cosford or on Twitter @RAFMUSEUM.

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#### Notes to Editors:

- Follow us on Facebook – Royal Air Force Museum Cosford
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- Royal Air Force Museum Cosford, Shifnal, Shropshire, TF11 8UP
- Open daily from 10am
- Admission to the Royal Air Force Museum is free of charge.
- RAF Museum Cosford images & logo available at:  
<http://www.rafmuseum.org.uk/research/media-vault.aspx>
- For further information and all media enquiries please contact Michelle Morgans on 01902 376212 or email [michelle.morgans@rafmuseum.org](mailto:michelle.morgans@rafmuseum.org)
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#### Aircraft History – Hawker Siddeley Kestrel FGA.1 XS695

One of nine Kestrel FGA.I Kestrel development aircraft (XS688 - XS696) built by Hawker Siddeley at Dunsfold 1964-5 for service evaluation of the jump jet concept.

21 May 62 Ordered by Ministry of Aviation to contract KC/2Q/016/CB.9 (b)

29 Mar 63 Development contract FGA.236D&P issued.

2 Jul 63 Serial numbers XS688 to XS696 allotted.

17 Feb 65 First flight at Dunsfold.

30 Mar 65 To the Anglo-American-German Tri-partite Kestrel Evaluation Squadron (a unit within the Central Fighter Establishment activated for training 15 Oct 64) at RAF West Raynham, Norfolk, having made nine flights totalling 5 hours 54 minutes. The Squadron, which began operational flying 1 April 1965, formulated a number of techniques relating to the operational application of V/STOL tactical aircraft including instrument and night flying, with much emphasis on off-airfield operations. Nearby disused airfields at Bircham Newton and North Pickenham were used to represent semi - prepared sites. The Army Practical Training Area at Stamford was used for operations on unprepared strips. Photos of XS695 during these trials - Harrier (Mason) p.56; Air Clues Nov 65; RAF Flying Review Dec 65 p.225; The British Fighter Since 1912 (026123) p.407; P.1127/Kestrel/Harrier (Warpaint 74) p.14; Harrier (McLelland) p.71.

Carried Evaluation No.5 on the nose.

On one occasion the aircraft slipped off the experimental engine running pan whilst manoeuvring on the pad using a Landrover as a tug.

10 May 65 By this date the aircraft had made 37 flights totalling 19.40 hours.

24 Nov 65 Final TES sortie by XS695; air test, pilot Sqn Ldr Fred Trowern, RAF.

30 Nov 65 Successful completion of Tripartite trials after some 600 hours flown in 938 missions (with only one accident – Kestrel XS696 being lost after take off on

1 April 1965). XS695 had itself by now flown 153 times totalling 70.44 airframe hours, of which 51.04 were on trials work, including and 141 sorties with Hawkers and the TES. The Tripartite Squadron was formally disbanded on 28 Feb 1966, and the Kestrels returned to Hawker Siddeley at Dunsfold for inspection and overhaul. The Tripartite Evaluation Squadron officially disbanded in January 1966.

- 11 Jan 66      Loaned to Ministry of Aviation until 30 Sep 67 (Loan extended) for assessment of measurements of Kestrel handling characteristics.
- 16 Feb 66      To Royal Aircraft Establishment Bedford for P.1127 and general VTOL research including trials with the Blind Landing Experimental Unit (BLEU).
- 30 Mar 66      To Aeroplane and Armaments Experimental Establishment at Boscombe Down for conversion and evaluation training.
- 21 Apr 66      To Hawker Siddeley airfield at Dunsfold prior to appearance at Hanover airshow.
- 25 Apr 66      Demonstrated at Hanover airshow, West Germany, returning to Dunsfold. Colour photo at Hanover, 30 April 1966 – British Harriers (Herbote) p.8.
- 12 May 66      Returned to A& AEE at Boscombe Down for further conversion and continuation training. Photo as of early 1967 – The Cold War Years (Tim Mason) p.244
- Sep 66      Shown at the SBAC display, Farnborough, Hants, with SNEB rocket pods under the wings. Colour photo en route - Aircraft Illustrated Oct 98 p.76. Colour photo displayed on ground – British Harriers (Herbote) p.8. Photos in flight with rocket pods – P.227/Kestrel/Harrier (Warpaint 74) p.10/15.  
    Colour profile at this time – P.1127/Kestrel/Harrier (Warpaint 74) p.3.
- 1 Mar 67      Damaged Cat 4R at Boscombe Down – an outrigger sheared on landing short of the runway, the aircraft turning over and trapping pilot Flt Lt Derek Parry, who was unharmed.
- 15 Dec 67      Sold to Ministry of Technology.
- 22 Jan 68      Written off for use as an environmental test rig at A&AEE Boscombe Down for solar radiation trials.
- 22 Jan 69      Struck off charge.
- 28 Jun 71      No longer required and allocation for firefighting practice requested. Airframe still at A&AEE Boscombe Down at this date.
- Aug 71      Airframe sent to A&AEE scrap dump at Boscombe Down. It was generally complete, but corroded and missing outriggers and wing tips.
- 28 Apr 72      Allocation to Royal Naval Engineering College, Manadon requested.
- c. Mar 73      By road to Royal Aircraft Establishment, Farnborough, Hants being intended for use in vulnerability /fire suppression trials; these were suspended following enquiries from the RAFM. in April 1973.
- Stored dismantled in the open at Farnborough by Jan 1974.
- May 74      To Royal Navy Engineering College, Manadon, (Plymouth), Devon on loan minus engine. Rebuilt for RAFM as apprentice training exercise using wings from sister Kestrel XS696 from Hawker Siddeley Aircraft at Brough and allocated Navy instructional number A2619. The wings from XS695 went to P1127 XP984/A2658 at Manadon. (and latterly Dunsfold, and now Brooklands, later returning to the RAFM in 2009). XS696 had crashed on take-off, Cat.5 1 April 1965, barely a week after its delivery to the Evaluation Squadron and was written off with only 7 ½ hours flying accomplished.

- 74 Allocated to Royal Air Force Museum.
- 11 Apr 78 To the School of Aircraft Handling at HMS Sea Hawk, Culdrose, Cornwall on loan. By July 1979 the aircraft was painted in a colour scheme similar to the Fleet Air Arm's Sea Harriers as SAH-6 and marked '6' on the tail by July 1983.
- Used to simulate a Sea Harrier for aircraft handling and flight deck procedures on the mock-up carrier deck at the base. Photo prior to repainting - Wrecks and Relics 7<sup>th</sup> edition p.110. Photos as SAH 6; on 16 Feb 87 - Royal Navy Instructional Airframes p.59; Wrecks and Relics 9th Edition p.173.
- 26 Apr 91 Suffered nosewheel collapse and allocated for return to RAF Museum.
- 18 Jun 91 To open store in fire area
- 29Feb 92 Moved to inside store by this date.
- 11May 93 To Lee-on-Solent Naval Air Station, Hants for repair work.
- Jan 94 To RAF Museum RC&RC Cardington, Beds for storage. Photo on arrival at Cardington - Flypast Apr 94 p.7. The only Kestrel preserved in the UK. Photos stored at Cardington - BAe/McDonnell Douglas Harrier (Evans) p.12.
- 29 Jan 2000 By road to RAF Wyton, Cambs for temporary storage due to impending closure of RAF Cardington. Photo of fuselage at Wyton; Flypast Jan 2001 p.26-27.
- Aug 2000 After its initial loan to BAE at Dunsfold in February 1997, the complete wing was temporarily loaned to Brooklands Museum, Weybridge for fitting to their P.1127 XP984, and in the meantime a spare P.1127 wing (minus outriggers and ailerons) was obtained from BAe Dunsfold when that facility closed.
- 19 Nov 2001 By road to RAFM Cosford due to closure of temporary RAFM facility at RAF Wyton.
- Nov 2009 Original wing returned to MBCC at RAFM Cosford from Brooklands by JARTS team for refitting to the aircraft, with the spare P.1127 wing despatched to Brooklands in exchange.
- 2012/13 Undergoing full anti-corrosion treatment, restoration and repaint in MBCC, RAFM Cosford. BS Pegasus 5 engine also located for fitment. Photos – Aeroplane April 2013 p.11; RADAR (RAFM) Autumn 2013 p.16; Flypast February 2014 pp.90 - 94.

Following the Tripartite Squadron trials, six of the surviving eight Kestrels were shipped to the United States for further flying trials; of these, XS688 is at the USAF Museum, Wright-Patterson AFB, Ohio; XS689/64-18262/NASA 521 owned by the Smithsonian Institution's National Air and Space Museum, Washington, currently displayed at Hampton, Virginia (fuselage from XS689, wings from XS694); XS690/64-18264 was at the Museum of Army Aviation, Fort Rucker, Alabama, now Pima at Air and Space Museum; and XS692/NASA 520 at the Virginia Air Power Park, Hampton, and XS694/NASA 520 (incomplete) privately owned in the USA.

**TEXT; ANDREW SIMPSON**

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