

9th February 2012

Harrier GR.9A now on display at Cosford

The New Year has got off to a flying start at the Royal Air Force Museum Cosford with the arrival of a Harrier GR.9A serial number ZG477. This revolutionary vertical take-off, multi-role combat aircraft is now on display to visitors within the Museum's Warplanes collection.

The Harrier GR.9A is a single seat, multi-role combat aircraft, capable of operating in extreme environments, at night, low level and from a variety of locations including deployed air bases and aircraft carriers. One of its more unique and well known features is the ability to take-off and land vertically. Fitted with a Rolls-Royce Pegasus engine, the aircraft is over 46ft in length, has a wingspan of 30ft and could reach a top speed of 661mph.

The first Harriers entered RAF service in 1969. This made Royal Air Force the first air force in the world to use this revolutionary aircraft and allowed the Service to access areas normally off limits to other aircraft. Before being withdrawn from RAF service in December 2010, Harriers were used by the RAF in close air support roles and were usually employed in direct support of ground troops. Also used for low or medium-level attacks using precision-guided, freefall or retarded bombs, Harriers were equipped with a variety of weapons including laser and GPS-guided bombs, infra-red missiles, cluster munitions and general-purpose bombs.

The Harrier GR.9A ZG477 now on display at the RAF Museum entered RAF service in August 1990 as a Harrier GR.7. It was initially stationed in Germany with No. 4 Squadron before being based in Turkey following the Kurdish uprising against Iraqi President Saddam Hussein. In 1993 the Harrier force, including ZG477 took over policing the Northern Exclusion Zone in Iraq from Jaguar aircraft. The three Harrier Squadrons (No. 1, 3 and 4) were rotated on a regular basis until 1995.

In 1999 Harrier ZG477 was based in Italy with No. 3 Squadron during Operation Allied Force. The objective was to degrade and damage the military and security structure that Serbian President Milosevic used to depopulate and destroy the Albanian majority in the province of Kosovo. Upgraded to a Harrier GR.9A in 2004, ZG477 was fitted with a more powerful Pegasus engine and a terrain referenced navigation system as part of an Integrated Weapons Programme (IWP).

Between 2008 and 2009 it saw active service in Afghanistan along with seven other Harriers that were continuously available, with Missions flown in pairs, two pairs on day tasks and one pair at night. The main area of operations was over Helmand Valley, supporting UK Army and Royal Marines as well as other coalition troops.

On the 15th December 2010 all Harriers were grounded after a farewell formation flight, following defence budget cuts. In twenty years of RAF service, Harrier ZG477 ended its career with No.1 Squadron after completing 4,191.25 flying hours and 3,969 landings.

Al McLean, RAF Museum Cosford Curator says:

"We are delighted to be selected as one of only two museums to receive this final example of a uniquely innovative aircraft with a distinguished history. It enhances our display of Warplanes."

Other aircraft due to arrive at the Museum later this year include the EAP and the Dornier Do-17. The Museum is open daily from 10am and admission is free of charge. For more information on the Museum, visit www.rafmuseum.org or call 01902 376200.

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Notes to Editors:

- Photos available on request
- Royal Air Force Museum Cosford, Shifnal, Shropshire, TF11 8UP
- Open daily from 10am
- FREE admission
- For further information and all media enquiries please contact Michelle Worthington on 01902 376212 or michelle.worthington@rafmuseum.org
- RAF Museum Cosford images & logo available at: <http://www.rafmuseum.org.uk/cosford/media-enquiries/downloads.cfm>

Aircraft History - BAe HARRIER GR.9A ZG477

Constructed by British Aerospace as one of 34 new-build Harrier GR.7s, with RR Pegasus 105 turbofan engines and using composite materials and BAe and McDonnell Douglas (US)-built components; following final assembly and flight testing delivered from BAe Dunsfold, Surrey between May 1990 and June 1992; serials batch ZG471 – ZG480. Constructor's Number P67.

- 28 Aug 90 Entered RAF service as a new aircraft.
- Sep 90 Harrier GR.7, with its enhanced night attack operations capability, entered RAF front-line service (with No. 4 Squadron).
- 5 Dec 90 Flown by Malcolm White on Gutersloh on air-to-air training combat mission against Phantoms. Landed at RAF Wittering and returned the following day.
- 1990/92 With No 4 Squadron, RAF Gutersloh, Germany; aircraft code CC.
- 1991 All Harrier GR.7s grounded for a period due to teething troubles, mainly in the electrical system.
- 1992/93 With No 3 Squadron, RAF Laarbruch, Germany. Aircraft code AK.
- 1993/94 With No 4 Squadron, Incerlik, Turkey; aircraft code WI.
Following the Kurdish uprising against President Saddam Hussein, in April 1993 the Harrier Force took over the policing of the Northern Exclusion (No-fly) Zone in Iraq from Jaguar aircraft as part of 'Operation Warden'. Based at Incerlik, the three Harrier squadrons (Nos 1, 3, 4) were rotated on a regular basis until 1995 when this commitment ceased for the Harrier Force.
- 1995/98 With No 3 Squadron at Laarbruch, Germany as aircraft code '67'
- 1999 Based on detachment at Gioia Del Colle, Italy, during Operation Allied Force in 1999; Aircraft code '67' on fin. Photo – Harrier (McLelland) p.227. The Force Objective was 'to degrade and damage the military and security structure that Serbian President Milosevic (Yugoslav President) has used to depopulate and destroy the Albanian majority in the province of Kosovo'.

Time of initial attack: 2:00 PM EST, 24 March 1999.
Suspension of bombing: 10:00 AM EST, 10 June 1999.
Bombing campaign halted: 10:50 AM EST, 20 June 1999.

- 2000 Became part of newly established Joint Force Harrier, based at RAF Cottesmore, Leicestershire. Then with No 1 Squadron.
- 2001-2003 Based with No. 3 Squadron at RAF Cottesmore. Aircraft code 67.

One of 40 new and converted aircraft modified from GR.7 to GR.7A standard with updated RR Pegasus MK.107 engine from 2003.
- Jan 2004 To DRA/BAe Systems Warton for conversion (Harrier Maintenance Programme 3).

Upgraded to GR.9A standard. The Harrier GR.9A was the mid-life avionics and weapons update of the GR.7A, some 30 Mk 9As being fitted with the more powerful Pegasus Mk 107 , and also a terrain referenced navigation system as part of an Integrated Weapons Programme (IWP).
- Jun 2005 To MoD/AFD/QinetiQ at Boscombe Down, Wilts for trials work.
- Dec 2007 Allotted to the Naval Strike Wing, serving with them until February 2008. The Naval Strike Wing was an amalgamation of the two Fleet Air Arm Squadrons, Nos. 800 and 801. (which became 800 Naval Air Squadron on 1 April 2010)
- Mar-Jun 2008 Undergoing upgrade work (TERMA modification) at Harrier Maintenance Facility (HMF).
- Jul 2008 To No 4 Squadron, RAF Cottesmore, on detachment to Afghanistan.
- 2008/9 Ten months operational service in Afghanistan as part of Operation 'Herrick' from July 2008; squadron code still '67'. Armed for operations with Paveway IV 500lb laser/GPS guided bombs and CRV-7 rocket pods, as well as Digital Joint reconnaissance pods and Sniper Advance Targeting pods. Eight Harriers were continuously available in theatre, with missions flown in pairs, two pairs on day taskings and one pair at night, with other aircraft on alert during the day.

The main area of operations was over the Helmand Valley, some 90nm/15-20 minutes flying time from Kandahar, supporting UK Army and Royal Marines as well as other coalition troops. Other areas covered included the Khyber Pass and Pakistan/Iran/Turkmenistan/Uzbekistan border regions.
- Jul 09 Joint Force Harrier returned home from its Afghan base at Kandahar.

ZG477 had returned home to join No 1 (F) Squadron in June 2009, flying for two months until grounded for servicing.
- Aug 2009 Into Stand Alone Minor (SAM) servicing.
- 31 Mar 10 Last Harrier GR.7s retired, with IV (AC) Squadron disbanded at Cottesmore the same day, leaving only Harrier GR.9 and '9As in service until final retirement. No 20 (R) Squadron at Wittering became IV (R) Squadron to keep the IV nameplate.
- Nov 10 Re-allocated to No 1 Squadron following SAM servicing at Cottesmore in preparation for final day of Harrier flying; Given special commemorative livery; red and white tail with No 1 (F) Squadron badge and lettered '1969-2010' on both sides. As the 'Boss Bird', ZG477 was flown by OC No 1 (F) Squadron, Wg Cdr Dave Haines.
- 19 Nov 10 ZG477 was the first of four Cottesmore-based Harriers ('Jedi Flight') embarked towards the end of carrier HMS Ark Royal's final cruise in preparation for farewell departure, as the last Harriers to land on the ship. ZG477 was 'Jedi 1'. Photos – Air Forces Monthly February 2011 pp.42-49. On board for carrier's final visit to Tyneside.

- 24 Nov 10 One of the four aircraft involved in final Harrier departure from a Royal Navy carrier, from the about-to-be decommissioned aircraft carrier HMS Ark Royal. Departure point was in the North sea east of Newcastle; ZG477 made the final launch at 09.10hrs, pilot Lt Cdr James 'Blackers' Blackmore.
- 14 Dec 10 Practice flight by ZG477 and 15 other aircraft ready for the following day.
- 15 Dec10 Official 'Farewell to the Harrier' day; End of Joint Force Harrier and of No. 1 (F) Squadron, and of flying at RAF Cottesmore. Final flight of ZG477; Again as 'Jedi 01' flown in poor weather conditions by Wg Cdr Dave Haines, OC No 1 (F) Squadron, part of the 16-aircraft formation flight and flypast ('Kestrel Formation') from RAF Cottesmore around Lincolnshire and former Harrier bases; grounded following farewell formation flight; all RAF Harriers grounded that day due to defence cuts announced as part of the Strategic Defence Review on 19 October 2010 that included the axing of Joint Force Harrier and UK fleet flagship, HMS Ark Royal. Photos – Air Forces Monthly March 2011 pp.52-58.
- Airframe Hours 4191.25; total landings 3969.
- 2010/11 Stored serviceable at RAF Cottesmore and regularly ground-run.
- 2011 Donated to RAF Museum.

TEXT; ANDREW SIMPSON

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