

NEWSLETTER NUMBER 25 - AUTUMN 2009

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EDITORIAL

This edition of the Newsletter contains some valuable personal memoirs from Hawker people as well as accounts of talks and news of 'Hawker' types. I hope you enjoy the mixture. You will also see the programme for 2010 and we hope that it will encourage those of you who have forgotten to pay their **£5 subscription!** Your names are in **bold** on the membership list on the back page. Please send your £5 to Secretary Barry Pegram at 12 Becket Wood, Newdigate, Surrey, RH5 5AQ.

Many of you will remember Alec Atkin, sometime BAe's Managing Director Military and Chairman of our Kingston-Brough Division, who sadly died this summer.

Please keep your reminiscences coming, they are what makes this Newsletter unique.

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PROGRAMME FOR 2009

Wednesday 14th October "Making them Right - an Engineer at Hawkers 1936 - 1976". **David Hassard.**
Wednesday 11th November "The BAE Systems Heritage Programme". **John L Parker.**
Wednesday 9th December **Christmas Lunch 12.30 at the Hawker Centre**

PROGRAMME FOR 2010

Wednesday 13th January Quiz and social with **Les Palmer**
Wednesday 10th February Aviation Art - **Colin Wilson**
Wednesday 10th March The Harrier Conversion Unit - **AV-M Peter Dodworth**
Wednesday 14th April Annual General Meeting and video
Wednesday 12th May The Pegasus Engine - **Andrew Dow**
Wednesday 9th June Summer Barbecue
Wednesday 14th July Experiences of New Technologies - **Mick Mansell**
Wednesday 11th August Social with video.
September Annual outing tbd
Wednesday 13th October The Royal Aero Club Trust - **Dick Poole**
Wednesday 17th November Talk tbd
Wednesday 15th December Christmas Lunch

Project Manager **John Parker** now has responsibility for BAES heritage activities. **David Hassard** is Charles Plantin's son-in-law whose talk will cover the work at Kingston of this outstanding engineer. **Colin Wilson** was Production Director at Kingston and is a Member of the Guild of Aviation Artists. **AV-M Peter Dodworth** was one of the original HCU members. **Andrew Dow** has written the definitive history of the Pegasus (see Book Reviews in NL.25). **Mick Mansell** will be remembered in Systems Engineering at Kingston but became Technology Director at Warton. **Dick Poole** was Chief Flight Test Engineer at Dunsfold and now works for the Royal Aero Club Trust.

Tickets for the Christmas Lunch at £16, the same as last year, can be bought from Ken Batstone at the October or November meetings or you can 'phone him on 01932 229938 then send him a cheque. The menu is: cream of tomato soup or prawn cocktail; roast turkey, poached salmon or vegetarian ; Christmas pudding or raspberry Pavlova; tea or coffee and mince pies.

Unless stated otherwise, meetings are at the Hawker Centre, Kingston - the old Sports & Social Club - and start at 2.00 pm. Lunch and drinks are available beforehand, tea afterwards, and there is a large, free car park.

CORRECTION

John Farley points out two errors in the account in NL24 of Mike Pryce's talk, Testing V/STOL Projects...

The VAAC safety pilot is in the front seat, not the rear, and the left hand inceptor is not a throttle but an aircraft speed selector - not quite the same thing these days as the engine speed may well be constant with the nozzle angle being changed if that is what the computer thinks is the best option. Apols (Ed).

SUMMER BARBECUE

This year the weather on 10 June wasn't quite good enough to eat outside but nevertheless a Members enjoyed a nice meal indoors at the Hawker Centre. Attendance was not as good as usual. **Do you want to have another next year?**

HARRIER NEWS

BAES has been awarded a £574 million Harrier Platform Availability Contract (HPAC) under which BAES takes over responsibility for the maintenance of the UK Harrier fleet until the aircraft go out of service, currently expected to be in 2018. The maintenance work will be carried out jointly with RAF and RN personnel at RAF Cottesmore. The contract also covers the provision of spares and technical advice. Existing contracts in operation at Cottesmore, such as the Joint Upgrade and Maintenance Programme (JUMP), are incorporated in HPAC. To date, every achievement milestone has been met by BAES.

A National Audit Office report on fast jet support states that existing BAES contracts with the Ministry of Defence have already reduced the cost of Harrier maintenance by £109 million, have helped cut the cost per flying hour by 44%, and made an additional eleven aircraft available to the front line.

After five years, more than 22,000 flying hours and 8,500 sorties, the Harriers have returned to Cottesmore from Afghanistan. Operation Herrick was completed when the Harriers of No.1(F) Squadron returned to their home base, the first aircraft, GR9 ZD322, landing on 1 July. Joint Force Harrier (JFH), represented by No. 3(F) Squadron deployed to Kandahar in Helmand Province in August 2004 to relieve the USMC AV-8Bs based there. The most significant role of JFH was close air support where more than 2,000 missions were flown. Working with tactical air controllers the Harriers supported the troops, fighting the Taliban, with CRV7 rockets, Paveway precision guided bombs, and 1,000lb free-fall bombs. Other roles included surveillance, reconnaissance, 'show of force' and anti-drug operations. In one strike against the Taliban drug trade the world's biggest drugs haul was accomplished with 260 tons of hashish and 2.5 tons of opium destroyed; value £200 million.

Some Herrick highlights: August 2004 - No.3(F) Squadron deploys for the first time; December 2004 - No.1(F) Squadron deploys for the first time; April 2005 - No.IV(AC) Squadron deploys for the first time; June 2006 - 24 hour operations commence; September 2006 - No.800 Naval Air Squadron deploys for the first time; January 2007 - first GR9s deploy; October 2007 - Naval Strike Wing deploys for the first time; December 2008 - first all-GR9 force in Kandahar; July 2009 - JFH returns to RAF Cottesmore.

HAWK NEWS

Six Hawk TMk2s are at RAF Valley for training the Qualified Flying Instructors who will work up within No.19 Squadron, part of No.4 Flying Training School. The new Hawks will be a vital part of the reorganised UK Military Flying Training System under a public-private-partnership (PPP). By this process the RAF buys the training service from a provider without owning the training assets and equipment. This shifts expenditure away from large capital investments to smaller, periodic payments throughout the term of the contract.

The £600 million contract was won by a Lockheed Martin/VT (Vosper Thorneycroft, that was) working with the RAF and the MoD - the Ascent Flight Services Consortium which is to provide all UK military pilot training. Ascent is also to provide at Valley a new hangar complex with maintenance, crew briefing and classroom facilities containing new simulators and synthetic training aids. BAES is supplying mission planning and debriefing units, known as 'data bricks', and is responsible for support services delivering aircraft on a daily basis in a condition suitable for carrying out the training mission effectively.

The uses to which the Royal Navy's fourteen TMk1 and TMk1A Hawks are put are less well known than those in the RAF. Twelve are flown by the Fleet Requirements Air Directional Unit (FRADU) at Royal Naval Air Station (RNAS) Culdrose and the remaining two are with the Naval Flying Standards Flight - Fixed Wing (NFSF) at RNAS Yeovilton. FRADU is managed and run by civilian manned Serco Defence and Aerospace using Hawks leased from the RAF. The main task for the FRADU Hawks is to provide training to the fleet in the form of simulated attacks against ships as either missiles or strike aircraft. A missile simulation is flown in conjunction with Dassault Falcon 20s of Cobham Aviation. Hawks are flown in close formation with the Falcon until they are 'launched' when they accelerate away flying the profile of the subject missile. Hawks also cover a biannual multi-national maritime collective training exercise from RAF Kinloss and a warfare officer course off Gibraltar. FRADU Hawks also provide fighter evasion training for all RN helicopter crews, airborne fighter controller training for Sea King observers and also for students at the Royal Navy School of Fighter Control (RNSFC) at RNAS Yeovilton. The NFSF Hawks are used for fast jet continuation training, familiarisation and conversion of rotary wing aircrew to fast jets. Successful candidates progress to RAF Valley for advanced flying training. NFSF Hawks also work with the RNSFC and assist the FRADU in warship training. Close air support training assistance is provided to the Army, the Royal Marines, the Special Air Services (SAS) and the Special Boat Service (SBS).

Did you know that the current leader of the Red Arrows is Wing Commander Jas Hawker and that the first woman pilot to join the Reds is Flt Lt Kirsty Moore?

F-35 LIGHTNING II NEWS

The first F-35 structural test airframe specimen (AG-1) has arrived in the UK and is under test at BAES's Structural and Dynamic Test Facility at Brough. The test programme will last for fifteen months.

The Pratt & Whitney F135 short takeoff/vertical landing (STOVL) variant propulsion system exceeded thrust performance expectations in recently completed tests using the 'hover pit', providing more vertical thrust than required by the F-35B STOVL aircraft. F-35B flight testing was resumed on 14 Sept with Graham Tomlinson at the controls.

SEA FURY NEWS

An ex Iraqi Fury, rebuilt by Sanders Aeronautics with a Wright R-3350 engine, made its first post-restoration flight in Ione, California, on 2 June. Owned by Christophe Jacquard it will be based at La Ferte-Alais near Paris.

Former Royal Navy Historic Flight Sea Fury T20, WG655, also rebuilt by Sanders, visiting from California appeared at the Duxford Flying Legends display in July.

DEMON NEWS

Hawker Demon G-BTVE/K8203 flew on 23 June after an eighteen year rebuild by Skysport Engineering, Bedfordshire. The remains were bought from Guy Black who acquired them from the RAF Museum. Prior to that the Demon had been with the Aldershot ATC and at RAF Netheravon as a training aid. This Boulton Paul built aircraft served with 64 Squadron at RAF Church Fenton, whose livery it wears today. It is owned by Demon Displays who flew it on its debut at Old Warden on 2 August.

HARRIER FORTIETH ANNIVERSARY

Duncan Simpson was invited to RAF Wittering to celebrate forty years of Harrier service with the Royal Air Force...

On 20 May 1969 five Harriers were made ready at Dunsfold for delivery to Royal Air Force Wittering. The Harrier conversion team (HCT) had completed their flying at Dunsfold and was ready to deliver the first aircraft. In the event only four made the flight, the fifth, failing to produce electric power, remained overnight at Dunsfold.

A new British aircraft, and indeed a new concept of operations, arrived in the RAF after just seven years of design, manufacture and development by Hawker Siddeley at Kingston and Dunsfold. Six development batch (DB) aircraft had been built for flight testing and nine Kestrels had taken part in the Tripartite operational trials; and the United States Marine Corps had bought the Harrier.

The fortieth anniversary of the formation of the Harrier Operational Conversion Unit (OCU) was celebrated on 23 July this year. The remaining members of the HCT - Air Marshal Peter Dodworth, Air Commodore Richard Profit (and the writer!) - sat down to lunch at Stamford hosted by Group Captain Ken McCann, Joint Force Harrier (JFH) Commander supported by Air Chief Marshal Sir John Day, Military Advisor to BAE Systems who paid the bill. The guests included Sir Peter Squire, ex Chief of the Air Staff and Commander of No.1 Squadron in the Falklands, Sir Christopher Moran, Commander in Chief Air Command, serving officers from the OCU at Wittering and the JFH at Cottesmore, together with other Officers who had served with the Harrier force over the past forty years.

On the evening of 23 July a gala celebration dinner was held in a hangar at Wittering attended by some five hundred Royal Air Force and Royal Navy Harrier personnel, again from the past forty years. A strong tribute was paid to the Harrier GR9 by Group Captain McCann saying that the Joint Force had just returned from five years in Afghanistan in support of the NATO led International Security Assistance Force, amassing over 8,500 sorties and more than 22,000 flying hours mainly in support of ground troops in the southern province of Helmand. More than 2,000 close air support missions were flown. The Group Captain stated that in his professional opinion the Harrier GR9 was the best close air support fighter available anywhere.

Celebrations continued on 24 July with a Harrier Force Families' Day and evening hangar party at RAF Cottesmore.

THE KESTREL EVALUATION SQUADRON - AND A FEW OTHER THINGS

Sir Donald Spiers is well known in Hawker circles for his involvement with the Kestrels, as the Ministry of Defence (Procurement Executive) [MoD(PE)] Hawk Project Director and as Controller Aircraft, responsible for the procurement of all aerospace materiel for the UK armed forces; and issuer of the famous CA Release. After reading Mechanical Sciences at Cambridge he served an apprenticeship with the de Havilland Engine Company and became a gas turbine development engineer in the Halford Laboratory. Joining the Air Ministry in 1961 his operational research interests included the Kestrel Evaluation Squadron (KES). With the MoD(PE) he was, amongst other things, also Project Director for Jaguar, Tornado and Eurofighter. On leaving the MoD Sir Donald (he was Knighted in 1993) held a number aerospace industry directorships and served as President of the Royal Aeronautical Society and of the Popular Flying Association.

In 1960, said Sir Donald, the Air Ministry had three principle arms: strategic nuclear deterrence with the 'V' force, air defence with Lightnings and ground attack/reconnaissance with Hunters. The Douglas AGM-65 Skybolt air-launched nuclear missile was in prospect for the 'V' bombers but in 1963 the US government cancelled it in favour of the submarine launched Polaris. Harold MacMillan then agreed with John Kennedy that Polaris would be bought for UK submarines, which meant the end of the RAF's nuclear deterrence role. So the importance of ground attack and reconnaissance increased for the UK's overseas commitments, especially in Cold War Germany, but also in Aden and Indonesia. The Air Ministry became concerned about the vulnerability of the overseas bases - Gutersloh was close to the East German border, for example - so they turned to Hawkers and Bristol Engines with their great engineers, Camm and Hooker. Ralph Hooper's Hawker funded vertical and short take-off (V/STOL) P.1127 was adopted and two prototypes and four development aircraft were built. In 1963 nine developed P.1127s were ordered for an international evaluation squadron to be formed in 1965. These were the Kestrel FGAMk1s operated by the UK(RAF)/US (Army, Navy and Air Force)/FRG(Luftwaffe) manned Tripartite Evaluation Squadron (TES) whose objective was to examine the operational use of V/STOL aircraft. The TES main base (MB) was at RAF West Raynham whence the Kestrels operated to RAF Bircham Newton, the Stanford Army training area, the disused North Pickenham RAF station, and a field called Rabey's Wood.

Sir Donald showed splendid archive film of the KES operating in many environments. From grass, STOs were satisfactory but VTOs were not practicable because of ground erosion and debris ingestion. However, the rolling vertical take-off (RVTO) with some forward movement solved the problem. VTOs were confined to pads of metal planking or sprayed plastic. Vertical landings (VL) also required a forward rolling technique (RVL) or the use of pads. It was possible to operate a number of aircraft from one site and to carry out multiple STOs from the same strip. Operating away from the MB was found not to be difficult and between-flights servicing to be practicable. Operationally the VTO radius of action (65 miles) was too small but that from the STO (160 miles) satisfactory. Pads stood out from the air so had to be camouflaged and STO strips became visible in time as the grass turned brown. The KES flew 930 sorties and some 600 hours. After the KES was disbanded the Germans took no further interest, their Kestrels joining those allocated to the USA which, named XV-6As, carried out tri-service trials and eventually were allocated to NASA for research flying. In the event it was none of the participating US air arms that bought the RAF's Harrier, but the United States Marine Corps. (AV-8A). Sixty Harriers were ordered for the RAF in 1966 and entered service in April 1969. This led to the Sea Harriers and to today's GR9s serving in Afghanistan.

Sir Donald was involved in RAF trials in Aden and Malaya to examine the vulnerability of dispersed aircraft, and showed some interesting film records, which indicated that from the air at low level one had to be within 1,000 ft to see them. He also showed film of the victorious Harrier effort in the 1969 Trans-Atlantic air race code named Operation Nylon; New York - LONDON.

Moving on to the Hawk Sir Donald said that, as the P.1182, it defeated the BAC P59 to satisfy AST397 for the RAF's new advanced trainer. The fixed price contract would be worth £100 million to HSA once a twelve point contractual dispute with MoD(PE) was settled. The negotiation between Kingston's Colin (now Sir Colin) Chandler and Sir Donald was stalled when Sir Donald proposed, "You take six and I'll take six." Agreed they sealed the deal over lunch. The Hawk was another Kingston success story - in May 2009 there were 646 in active service with seventeen nations.

In closing Sir Donald reminded us that the Hurricane won the Battle of Britain, showed a film of ladies working on Camel manufacture and George Bulman with 'The Last of the Many'.

Appropriately, the man responsible for devising and developing the P.1127, Ralph Hooper, gave the vote of thanks.

AMERICA - A VIEW FROM WASHINGTON DC

This was the title of the talk given by Dick Wise OBE to the Association on 8 July and it will surely prove to be a highlight of the season. After graduating from Wimbledon Technical College with an HND in electrical and electronic engineering Dick joined Hawker Aircraft Ltd in 1961 as a craftsman apprentice, completing his training as an avionics engineer. He joined the new Avionic Systems office at Dunsfold and participated in the ground and flight testing of the Harrier avionic systems including flight observing in the Hunter TMk8M Sea Harrier systems development aircraft. He moved to Project Management at Kingston and became Harrier Project Director in 1988 and Business Development Director for BAe in 1992. In 1994 he moved to Washington DC as Executive Vice President North America and returning to the UK in 1999 he was appointed Sales & Marketing Support Director and then Business Development Director for Airborne Weapon Systems. In 2001 he returned to DC as Vice President Program Development, retiring in 2005. It was his experiences in the USA that formed the basis of his talk.

Dick explained what life was like inside the 'Beltway', the ring road round Washington DC equivalent to our M25, which forms a moat between DC and the rest of the USA. Within reside the political, international and business communities, the first either being in power, out of power or awaiting power. The city is divided into 'haves' in the East and 'have-nots' in the west. It was once the 'murder capital' of the USA with some 500 per year in 2005 although the rate has now fallen to under 200 per year! The defence community, including the BAe office, is to be found in the high-rise district round the 'Pentagon', familiarly known as 'the building'.

Dick was called back to his office on 11 September 2001 ('9/11') which had to be evacuated as it was contaminated with smoke from the burning Pentagon, the target for a successful terrorist attack by hijacked airliner. There was great confusion with roads closed, traffic queues, abandoned cars with people using their laptops on the roadside, and mobile networks down. The radio stations broadcast misleading and false information continuously and police and other 'agents' roamed the streets, weapons drawn. In the blue skies above, Dick watched an F-16 circling. The Pentagon burned for several days and there were 189 dead including a BAe employee (two others were killed elsewhere).

There was a change in the American psyche; the people were less confident and had a craving to avenge the deed. Operation 'Noble Eagle' for the air defence of North America put National Guard F-16s on 24 hour CAPs (combat air patrols) seven days a week. They were refuelled by NATO tankers from Europe (the first time that foreign forces had been used operationally in the US). Surface-to-air missile systems were deployed by the Washington Monument and troops were stationed at airports. The Secretary of Defense, Donald Rumsfeld, ordered that the Pentagon be restored externally in twelve months; it was done in ten.

The airliner attacks were followed by anthrax spore distribution through the post to US senators amongst others, but it was postal workers who were the majority of the seventeen sick and five dead. Decontamination of the Capitol took months but the postal system took two years and cost \$130m. The source of the anthrax was traced to a Government establishment; was this domestic terrorism? Another worry for the American people. What next, a dirty bomb? Then there were random sniper attacks, fifteen in three weeks with ten deaths. DC was paralyzed with fear, there were road blocks, plazas were deserted and gas stations put up tarpaulin blinds to shield customers from view. A white van was believed to hold the culprits but it turned out to be a blue Chevrolet with gun ports cut in its boot - not terrorists but men on a shooting spree from the West Coast.

The US Government has three branches, noted Dick: the Executive (the Presidential team or White House), the Legislature (Congress; the House of Representatives and the Senate), and the Judiciary (the Supreme Court). It is a system of checks and balances. Congressmen are elected for two years so are interested in the near term and spend a third of their time fund raising for re-election whereas Senators have a six year term. The Supreme Court Justices are appointed by the President. The political calendar starts in January with the President's State of the Union speech setting out his agenda. In February the President sends budget proposals to Congress for approval by the House and Senate committees who mark-up the bills which are then voted on. In September a conference reconciles the House and Senate bills which go back to the President for signature and passage into law.

In the defence field there are many 'stake-holders' including: the White House, the Secretary of Defense, Congress, the Armed Services, State Governments, the defence industry, think tanks, the Press, Armed Services Associations, trade associations, and single topic interest groups. They all retain lobbying firms or lobbyists, people who know people with influence, of which there are 15,000 in DC. Lobbyists need access to Congress and Members need funds for election campaigns so... lobbyists pay for access by donations. (The top ten Senators spend some \$250m on election campaigning). The object of the lobbyists is to get funds 'earmarked' to named recipients for particular projects. The system is close to bribery and there is a continuous cry to remove the influence of lobbyists but this can't be done because of the costs of election. The total expenditure on lobbyists in 2008 was \$3.4bn. Of course BAe employed lobbyists of a very high calibre with contacts at the highest levels.

In 1994 Dick's BAe office had 14 employees (12 US and 2 UK nationals) at Roslyn on the banks of the Potomac River. (The BAe Systems office in DC is now on four floors and employs 100 people, all but one being US nationals, representing all the US business units which employ 30,000.) The US culture is different to the British, and varies from State to State, as is the language. It is vital to understand this. Dick set up 'war rooms' for each project so all his staff were fully briefed, not only technically and commercially, but also culturally. For instance, when pitching to supply the Holston Army Ammunition Plant in Tennessee, good ol' boy country, it was no suits - strictly casual. Congressmen have three priorities: jobs, jobs and jobs, so when BAe offered to close a small Royal Ordnance plant in England and transfer the work to RO USA they got the contracts - for five year's explosives supply (since renewed) and 25 year's management).

Early in 1990 the USN started the Joint Advanced Strike Technologies (JAST) programme to develop innovative 'building blocks' for the next generation of weapon systems. US industry was cool; they wanted contracts for new aircraft. With British Embassy support BAe gained access to the JAST briefings and submitted bids. They failed but established the company as a recognised industrial partner. The Department of Defense tried to eject BAe but were thwarted by the Harrier legacy, the UK Government and consultant lobbyists. Congress directed that the ongoing US-UK Government ASTOVL programme be integrated with JAST for a Joint Strike Fighter (JSF) programme to replace the F-16, F-18, A-10 and AV-8B. BAe joined up with McDonnell-Douglas (MDC) to compete against Boeing and Lockheed-Martin (L-M). One of BAe's jobs was to represent Boeing in marketing role-playing exercises. BAe commented to MDC that to survive Boeing would have to rebalance its business by obtaining more military work, if necessary by buying a competitor. MDC dismissed this finding. However, on failing to secure a place in the next JSF round they were acquired by... Boeing! Now BAe was courted by Boeing and L-M and their JSF partners Northrop-Grumman (N-G), and chose the latter. In October 2001 L-M won the \$200bn contest. Next came the campaign to keep it. L-M were worried that JSF was competing for funds with their own F-22, and Boeing offered the competing F-18, F-15 and UAVs (unmanned air vehicles) as alternatives. Boeing even discussed a possible Harrier III with Dick. So, UK expertise, originating at Kingston was recognised as a critical factor in the success of the L-M JSF.

Dick also told us about the USN Multi-Mission Maritime Aircraft Programme to replace the P-3 Orion. Post 9/11 the US became conscious of the maritime threat. The task boiled down to selling a Comet to the USN! The competitors were: the L-M developed P-3, BAe's Nimrod, the Airbus A319, Boeing's 737 and N-G with a UAV and P-3 combination. The USN selected the Nimrod vs. the 737. Why the Nimrod? The USN was short of money and the Nimrod programme was already partly paid for; buried engines gave stealth characteristics superior to the 737; the large clear underwing area gave plenty of space for antenna arrays and UAV carriage; the large bomb bay would hide sensitive stores when abroad; and the large capacity airframe gave growth potential. BAe now needed a US prime contractor for access to the next stage so approached L-M, Boeing and N-G. L-M wanted their P-3 to survive, Boeing would offer the Nimrod and their 737 and N-G didn't want to compete against their largest customer, Boeing. BAe deliberated for some time then withdrew; and Boeing won.

An interesting sidelight was when Dick was asked to find a Harrier for the Canadian Aviation Museum at Ottawa. He selected an AV-8A from the Davis-Monthan desert storage facility and had it shipped to Canada which did no harm to BAe's bid to sell Hawks there.

Dick attended the delivery ceremony for the last Harrier, an AV-8B for Spain. He said it felt like a memorial service for an old and close friend. From a concept in the late '50s production had continued until 2003 and it was the UK's entry ticket to JSF, the biggest defence contract ever.

Martin Pennel, in giving the vote of thanks, congratulated Dick on this fascinating and comprehensive talk.

HAWKERS IN THE '50s

Peter Hickman continues recounting his memories of life as an Engineering Apprentice at Langley...

PART 2, INCIDENTS, FILMING , RACING , and ENGINES

INCIDENTS

The first incident during my stay concerned Bill Bedford who had just joined Hawkers. Bill was flying a Sea Fury when the engine failed. Being the brilliant glider pilot that he was, he quickly selected a field for a wheels-up landing, but unfortunately, just as he was clearing the hedge he was confronted by a family enjoying a picnic. Skilfully avoiding them he ended up in a field of cabbages. The aircraft was brought back to Langley by road and sat in the hangar for weeks. The smell of rotting cabbages will be with me forever.

The next incident concerned the first Dutch-Built Sea Fury which had been flown into Langley for a Hawker inspection. It was finished in a very high gloss paint scheme. The aircraft having been thoroughly inspected our pilots were keen to carry out a flight test; Frank Bullen got the job. On a high speed run the upper section of the engine cowling parted company with the aircraft. Espying a liquid leaking out Frank put out a 'Mayday' call and quickly landed away at an RAF station. The leak, fortunately, was hydraulic and not fuel. There was nearly a tragic accident after the aircraft had been repaired and it was being ground run. An RAF airman, marshalling a noisy Meteor, nearly walked backwards into the Sea fury propeller. Dangerous things, propellers.

The most exciting incident that I witnessed concerned Neville Duke. He was flying the P.1052 (VX272), Hawkers' first swept aircraft, out of Farnborough after its restoration from a previous crash landing, when he suffered an undercarriage problem. The port leg wouldn't lower so he decided to land on Langley's grass. We heard that he was coming so many people stood outside to watch. After a lovely smooth touchdown Neville held the aircraft on the starboard wheel and the nose wheel until, as the speed dropped off, the port wing lowered itself onto the grass and the P.1052 took a circular route across the airfield. Our ambulance and fire engine were in hot pursuit but there was no problem, Neville climbing out perfectly safe. A group of fitters lifted the port wing and the hydraulic hand pump under the fuselage was used to lower the recalcitrant port leg. The sole damage was a bent flap and grass burns to the wingtip. After a week of repairs the aircraft was flown back to Hawkers' test group at Farnborough. I believe that this was the only occasion that a jet aircraft landed and took-off from Langley although the Hunter prototype (WB188) had overflowed the site soon after its first flight to show everyone what this new aircraft looked like.

FILMING

The major film involving Langley was "Angels One Five". Before that, however, "Sound Barrier" used a long shot of the hangar frontage showing Sea Furies lined up by the open doors as well as some crowd scenes. Another film was made for children but we never saw the finished article. In the story the Tomtit had landed in a field so the pilot could seek help. Two children dressed as a Red Indian chief and his squaw were left looking after the aircraft while the pilot was away. Of course the children climbed into the Tomtit and inadvertently started the engine so the aircraft set off across the field. The real pilot was Frank Murphy and he looked very grand from the back with his flowing bonnet!

"Angels One Five" required Hurricanes and the Portugese Air Force kindly loaned six to the film company. These aircraft duly arrived at Langley led by a Mosquito (RR299) from Hatfield. Unfortunately the Hurricanes carried on past the airfield dutifully following the Mosquito. Subsequently they returned and landed. I was at the end of the reception party and duly raised my arms to guide in an aircraft. To my horror all six started to taxi towards me so I had to shout to my colleagues to raise their arms before we had a major pile-up. The aircraft were immaculate, just as though they were fresh off our production line. However, the overwhelming smell of scent in the cockpits was very off-putting and we had to leave the canopies open to try to clear the smell. Even the chocolate that we found reeked of scent and was inedible.

The Company Hurricane also took part in the filming, flown by Bill Bedford, and he would return to us exhausted by all the spiral diving he had carried out for the cameras; many repeat shots! Our day-to-day work was also affected, especially when the film company sound recorders were in action. Microphones were laid out close to the take-off path in order to record engine noises during take-offs and landings. We were thus prevented from flying Sea Furies for half-day periods; very frustrating for our pilots. One Portugese Hurricane remained at Langley during this period and I managed to photograph the excellent nose artwork; all frowned upon by the management!

AIR RACES

In 1951 the Festival of Britain air races were to be held at Hatfield and our Hurricane, (PZ865, 'The Last of the Many') in its royal blue and gold colours, was entered by HRH Princess Margaret. Peter Townsend was to fly the machine and on the Friday before the races I had the job of preparing it. After washing it down, paying particular attention to the wings and tailplane, I then had to wax polish everything to give the highest gloss finish possible. The day was very hot and the work exhausting.

Margaret brought Peter down from London, dropping him off at the start of Sutton Lane. I was instructed to go up the tower to collect his clothes, case, umbrella and bowler hat once he had changed into flying gear, and put everything in the Rapide which was going to Hatfield. Climbing upstairs I was amazed to see Neville Duke with bowler on and swinging the umbrella, emulating 'Burlington Bertie'. I explained what I was there for so he loaded me up, bowler on my head, case and clothes in my arms and umbrella hooked onto one elbow. As I turned to leave, Mr Clarke the manager of Langley, stood at the door with a puzzled look on his face. I explained, thanked him for holding the door and set off down the stairs. Charlie Ayers and some fitters were waiting down below, saw what they thought was Peter Townsend and stood by to help. When they realised they had got the wrong Peter you can well imagine what was said.

With typical English summer weather the Saturday was low cloud and heavy drizzle so the air racing couldn't go ahead. All that effort for nothing!

ENGINE INSTALLATION AND FITTERS

I joined Ernie on Sea Fury engine installation work which involved bolting the Centaurus to the bulkhead and then connecting all the cables and pipework for the electrics, fuel and hydraulics as well as the 36 sparking plugs. We then took the aircraft outside for engine testing. No cowlings were fitted at this stage and we had to stand-by with fire extinguishers for the first start-up. Working with Bob, the Bristol Engines man, in the cockpit some careful adjustments had to be made to the mixture and slow and fast running. This required Ernie to pull on balloon cord externally to get the right settings via hand signals from Bob.

On one of the aircraft we had a fright. On the first firing flames and burning inhibitor oil were the norm with gentle rpm to set the engine up. On this occasion Ernie and I were concerned at the sound of very rough running so we signalled Bob to switch off. On being told of the problem Bob said he couldn't hear anything unusual so he would fire up again and try to listen whilst looking over the windscreen. To us the noise was now much worse and we imagined the propeller was about to come off and wondered which way it would go! As it was now late afternoon it was decided to put the aircraft away for the night and try again the next day. When I arrived next morning the engine was being removed. Apparently the reduction gear had seized and the engine could not be turned over.

Next I moved to the production Sea Fury wing centre section area. Eric was the fitter I was paired up with and our work was skinning the wing undersurface around the wheel bay. Eric was originally a cabinet maker from High Wycombe and had been drafted into Langley during the war to work on Hurricanes. He was a first class fitter and we got on very well. Our work was of such a high standard that the Inspectors requested that we should remain as the only fitters on this work as production was running down. The other pair of fitters was moved onto Hunter fuselage riveting rectification. At that time the fuselages were manufactured at Squires Gate, Blackpool, and stored at Langley prior to being moved on to Dunsfold. The standard of riveting was very poor so when the inspectors had finished their survey and marked the faults, the fuselages looked as though a graffiti artist had been let loose; whole rows of rivets could be encircled with red Chinagraph. I am pleased to say that the situation improved greatly as production continued.

The time allowed for our work was seven working days but we could easily cut this to six. Eric obviously made a good bonus and he very kindly paid me a sum each week. Engineering apprentices were not allowed to earn bonus so his generosity was much appreciated. In all my time he was the only person I worked with that treated me that way. **(To be continued)**

BOOK REVIEWS

'Pegasus - the Heart of the Harrier' by Andrew Dow has just been published by Pen & Sword (ISBN: 978 1 84884 042 3) at £35. The author, who was Commercial Manager Pegasus from 1975, has done a magnificent job of research and writing to produce what must be the definitive work on the origins, development and service use of the unique Pegasus. This 543 page book starts with Wibault and his work on developing the vectored thrust concept and finishes with the Pegasus 11-61, covering all marks of Pegasus on the way, as well as the BS100 and other projected Pegasus variants of which we have heard little before. Besides the P.1127, Kestrel and Harrier applications, the Dornier 31 programme is also well covered. Unusually, both technical, commercial and political aspects are examined, greatly adding to the value of the work. The book is well illustrated with many newly published photographs. Appendices cover: a table of all the Pegasus engines built and in which type they were flown, a list of surviving early Pegasus engines, data on early project studies, performance data for service versions of the Pegasus, a list of Pegasus Chief Engineers and Chief Designers, a list of Falklands War engines, a table of BS100 variants and a lengthy bibliography. A thorough index completes the volume. Highly recommended. The author, known as George, will be speaking to the Association next year. We have a treat in store.

'Hunter One - the Jet Heritage Story' by Mike Phipp and our own Eric Hayward is published by Camberley (ISBN: 978 1 84868 244 23). Mike Phipp is historian of Bournemouth Airport and Eric was Chief Engineer of Jet Heritage for much of its existence and they tell the story of the pioneering days of military jet aircraft restoration to flight in England. The story starts with Spencer Flack in 1978 when, from Hawker Siddeley at Dunsfold, he bought and restored a Danish Hunter with the help of Bob Cole and Eric Hayward. This, the first restored jet 'war bird' in England was finished all red and registered G-HUNT. The book then covers the trials and tribulations of Spencer's Hunter One organisation and its successor, Jet Heritage, the aircraft restored and the larger-than-life characters who spent huge amounts of money on their passion for flying them. This excellently produced 160 page soft-back book is profusely illustrated with dozens of monochrome photographs from the private collections of the people involved. There is also a 32 page colour section and an appendix giving full details of the fleets. Retailing at £19.99 Members can buy one direct from Eric Hayward at £16 inclusive of post and packing. Call him on 01202 875626 or write to Fairways, Ferndown, Dorset, BH22 8BB.

MEMBERSHIP NEWS

We welcome new members Dennis Beckett, Tony Dalby, Miles Huckle, Richard Micklefield, Mike Newell, Sir Donald Spiers and Kuo Wong.

MEMBERSHIP LIST SEPTEMBER 2009

A: Mike Adams, Ken Alexander, Peter Alexander, John Allen, Martin Alton, Peter Amos, Terry Ansty, Alma Apted, Steve Apted, John Arthur, Alan Auld, Bryan Austin, Mike Azzopardi. **B:** Brenda Bainbridge, Arthur Balchin, Colin Balchin, Ambrose Barber, Paul Barber, Ray Barber, Derek Barden, Peter Barker, Geoff Barratt, Graham Bass, Ken Batstone, Dennis Baxter, Dennis Becket, Colin Bedford, Anne Beer, George Black, Guy Black, John Blackmore, Keith Bolland, Paul Boon, Betty Bore, Pat Bott, Steve Bott, Bob Bounden, Alan Boyd, Pat Boyden, Phil Boyden, Roy Braybrook, Clive Brewer, Laurie Bridges, Doug Britton, Arthur Brocklehurst, Capt. Eric Brown, Peter Brown, Ron Bryan, Christopher Budgen, Maurice Budgen, Roy Budgen, Reg Burrell, Robin Burton. **C:** Richard Cannon, Maurice Carlile, Chris Carter, Bob Catterson, Ken Causer, Jeremy Cawthorne, John Chacksfield, Colin Chandler, Keith Chapman, Keith Chard, Gerry Clapp, JF Clarke, John Cockerill, Hank Cole, Percy Collino, Brian Coombes, Paul Cope, Patricia Cosgrove, Ron Cosgrove, George Cotterell, Nick Cox, Mike Craddock, Shirley Craig, John Crampton, Richard Cripps, Tony Cripps, Russ Culley, Richard Curtis. **D:** Tony Dalby, Clive Dalley, Andy Dalton, John Danse, Afandi Darlington, John Davie, Jo Davies, Ken Davies, Trevor Davies, Charles Davis, Michael Davis, Diana Dean, Ralph Denning, Norman Devielli, Mike Diprose, Richard Dobbs, Mike Dodd, Colin Dodds, Lambert Dopping-Heppenstal, Jack Dowson, Brian Drew, Peter Drye, Dick Duffell, Jean Duffell, Gwen Duke, Chris Dunhill, Mike Dyke. **E:** John Eacott, John Eckstein, Andy Edwards, Dave Edwards, Barry Elliot, Tony Elliott, Eric Ellis, Celia Evans, Norman Evans, Roy Evans. **F:** Russ Fairchild, Paul Fairweather, Ian Falconer, Mike Fantham, Chris Farara, John Farley, John Farrow, Max Fendt, Donna Ferguson, Stan Field, Geoff Fieldus, Mike Finlay, Wilf Firth, Anne Fletcher, Richard Fletcher, Colin Flint, Dave Fowler, Mike Frain, Steve Franklin, Harry Fraser-Mitchell, Geoff French, Mike French, Heinz Frick. **G:** Roy Gaff, Mike Gane, John Gardner, Patricia Gardonio, Peter Gates, Sandie Gear, Tim Gedge, Mark Gerrard, Tony Gibbs, John Gilbert, John Glasscock, Pat Goodheart, Eric Goose, John Gough, Andy Green, Barry Grimsey. **H:** Douglas Halloway, Liz Hargreaves, Simon Hargreaves, Bryan Harman, Guy Harris, Thelma Harris, Brian Harvie, David Hassard, David Hastie, Norman Hayler, Eric Hayward, Bob Head, Sheila Hemsley, Jock Heron, Keith Hertenberg, Frederick Hewitt, Merlin Hibbs, Richard Hickey, Peter Hickman, Vince Higbee, Reg Hippolite, Keith Hobbs, Chris Hodson, Gordon Hodson, Derek Holden, Richard Hooke, Ralph Hooper, Linda Hopkins, Paul Hopkins, Mike Hoskins, Gerry Howard, Dawn Howes, Terry Howes, Simon Howison, Miles Huckle, Gordon Hudson, Gavin Hukin. **I:** Pete I'Anson, Len Illston, Maive Impey, David Ince, Brian Indge. **J:** Keith Jackman, John Janes, Gordon Jefferson, Harry Johnson, John Johnson, Brian Jones, Ian Jordan, Robin Jowit, Alf Justin. **K:** Andrew Keech, Brian Kent, Dennis Ketcher, Bill King, Dave King, Charles Kirk. **L:** Barry Laight, Mike Laker, Charles Lamb, Richard Lane, George Latham, Paul Latham, Pam Lawrence, Andrew Lawson, Stanley Lawson, Ron Leader, Geoff Lee, Gordon Lewis, Mark Lewis, Vernon Lidstone, Gary Lillistone, Andrew Lloyd, Dawn Lloyd, Gary Lockley, David Lockspeiser, Norman Long, Basil Lockwood-Goose, Gordon Lorrimer, David Lovell, Lynda Lucas. **M:** Albert Magee, Al Mahoon, Mick Mansell, John Marsh, Ann Martin/Disspain/Turk, Dennis Mason, Brian Maton, Don McGovern, June McKeon, Ronald Mears, Mike Mendoza, Alan Merriman, Richard Micklefield, Jim Middleton, Buffy Milford, Robert Millar, Jack Mills, George Mitchell, Brian Monk, Pat Moon, Leslie Moore, Pauline Moore, Nicholas Morland, Pete Munday, Carole Murphy, Gloria Murphy (H), Martin Murray. **N:** Mike Newell, Anthea Newman, Jennifer Nicholas. **O:** Roger O'Brien-Hill, John O'Sullivan, Robin Owen. **P:** Les Palmer, Glynne Parker, John I Parker, John L Parker, John Partridge, Bernard Patrick, John Pearce, Barry Pegram, Martin Pennell, Bill Phillips, Ted Pincombe, Dick Poole, Don Pratt, Dave Priddy, Mike Pryce. **Q:** John Quinn. **R:** Clive Radley, Raharto, Frank Rainsborough, Colin Raisey, Paul Rash, Diane Raymond, Vanessa Rayner, David Rees, Peggy Remmington, Francis Rhodes, Geoff Richards, Bill Richardson, Kelvin Richardson, Chris Roberts, Graham Roe, Chris Russell, Peter Ryans. **S:** Ian Sandell, Bernie Scott, Alex Seaman, Ray Searle, Maurice Shakespeare, Mike Sharland, Arthur Sharpe, Bill Sherwood, Douglas Shorey, Peter Sibbald, Duncan Simpson, Derek Sims, Gerry Sims, Charles Smith, George Smith, Harold Smith, John Smith, Karl Smith, Pete Smith, Selwyn Smith, Roy Sparrow, Don Spiers, Peter Spragg, Vivian Stanbury, June Stephens, John Strange, Carroll Stroud, Christine Strudwick, Tony Strudwick, Douglas Stubbs, Bill Swinchatt. **T:** David Taylor, Stuart Taylor, Brian Tei, Reginald Thompson, Geoff Tomlinson, Graham Tomlinson, Rod Tribick, Peter Trow, Ron Trowell, Bert Turner, Michael Turvey. **U:** John Underhill. **W:** Terry Walker, David Ward, Harry Webb, Patrick Webb, Graham Weller, Rob Welsh, AP West, Bryan West, Judith Westrop, Jenny Wheatley, Phil Wheatley, Jan White, Mick White, Roy Whitehead, Peter Whitney, Annette Williams, Don Williams, John S Williams, Ron Williams, Sally Williams, Colin Wilson, George Wilson, Hilda Wilson, Paul Wilson, Dick Wise, Helen Woan, Kuo Wong, George Woods, Len Woodward, Alan Woolley.