



Volume 2 Number 21

Engineering Report (Geoff Etridge)

Miles Student: The wing re-build was going well.

Scout Helicopter: The nose area re-build has been completed and the cockpit area is being worked on. The doors are being locked because people were allowing children to get inside. Some damage had been found on the rotor blades

Fairy Gyrodyne: The new main undercarriage stands have been manufactured and are now in place.



Primary Glider: The wings are now being rigged for the support wires to be measured, ready to fit.

Bleriot Replica: The wing structures are now complete prior to the fabric being fitted. The next step will be to look at the manufacture of the fuselage.

Mini-Link: John Morgan, a new recruit, has taken over the re-wiring of the lighting and is about to start on the rest of the circuitry.

Tiger Moth Model: This has been donated and is being put back in the air with an advert for the Museum on it.

Magister: A hole has been "re-discovered" (it occurred many years ago) in the port side tailplane which will have to be repaired.

Shop & Social (Margaret Etridge)

There is a slow drop in the amount of cakes being sold but this is to be expected at this time in the season.

The Inn on the Park, Woodford Park, Woodley, has been booked for a Skittles Evening on Friday, 21st October. The cost will be £15 per head and refreshments will be provided. Any profits will be given to the Museum. **Please sign up as soon as possible....**

The Christmas Dinner at Lands End in January will be booked and, again, those who wish to attend should contact Margaret asap – numbers might be restricted!

July Meeting (John Wood)

When the Air Transport Auxiliary was founded at the outbreak of World War 2, it was decided that the organization's headquarters should be at White Waltham.

Now, only a few miles away, the Maidenhead Heritage Trust has opened an ATA Exhibition and Study Centre, said to be the only one of its kind in the world.

Outlining the history and achievements of the ATA, Richard Poad, Chairman of the Heritage Centre, said that in the early days of the War, the "establishment" was not all that supportive when it was suggested that women pilots should join the men. Objections were varied. In some quarters it was thought that aviation was an unsuitable profession for women.



C.G. Grey, Editor of *Aeroplane* for example, put himself on record by proclaiming that women wanted to do jobs that they were "quite incapable of doing". Predictably, he also suggested that their place was in the home. Despite the objections, women soon joined the ATA. Their commanding officer was Pauline Gower, a commercial pilot with a great number of flying hours to her credit who had already been a commissioner in the Civil Air Guard, an organisation created in 1938 to teach civilians to fly.

Recruits included record-setting Amy Johnson - who was killed on ferrying duties in early 1941 - and Lettice Curtis who later was one of the few women pilots cleared to fly four-engined aircraft.

The men, some of whom had been recruited as the war began, were commanded by Gerard D'Erlanger a former director of BOAC. He had first proposed the idea that led to formation of the ATA. Many of his recruits had learned to fly during peace time but were now considered unfit for service in the RAF because of their age or physical limitations, which might include the loss of a limb or an eye. It was jokingly suggested that the initials ATA stood for "Ancient and Tattered Airmen".

Those who joined included some well-known individuals such as John Cobb the World land-speed record-breaker, aviator Jim Mollison – perhaps better known as Amy Johnson's husband - and Freddie Laker who was based at White Waltham as a flight engineer and, after the war, became famous as the founder of a low-cost airline.

The ATA had been created to take over the job of ferrying aircraft so that RAF pilots could be released for other duties. Pilots were based at 14 ferry pools throughout the country from where they ferried machines between

manufacturers, squadrons and maintenance units. These included not only new aircraft but also machines returned for servicing and for the installation of armament, radios and so forth.

Richard mentioned the example of Spitfires and Seafires. Although some 22 thousand machines were built, the number of ferry flights for the type totalled about 57 thousand.

Many of the Spitfires and other fighters were delivered by women who had cut their teeth on light civil aircraft but had demonstrated their adaptability by quickly converting to fast and powerful machines.

At the start of a working day, pilots were usually delivered to their first pick-up point by a Fairchild Argus or Avro Anson taxi aircraft. Having made their first delivery, a second machine, probably of a different type, would await them for delivery to the second destination where the process would be repeated. In some cases, pilots could make as many as six drops – occasionally more - before returning to base.

Pilots were matched with their machine, according to their category clearances. There were six classes ranging between light single-engined machines then via twin and four engined types to flyingboats.

A type-by-type collection of pilot's notes was available, each type being dealt with on a separate card. These would assist those about to fly an unfamiliar machine.

About half way through the war, the supply of experienced pilots was dwindling and the ATA started training recruits from scratch. Foreign experienced pilots had also swelled the numbers. They came from more than twenty countries with the United States as the biggest contributor.

After D-Day, as well as delivering aircraft, the ATA flew medical supplies, spare parts and other items to the continent, the flights recalling the early days of the war when the organisation had ferried aircraft to and from France shortly before that country fell to the Germans. When the war ended, the 1,245 ATA pilots of whom 168 were women had delivered 309,000 aircraft. Pilot losses totalled 173, the main causes being bad weather, mechanical failure or accidents.

When the organization was disbanded after the end of the war, Lord Beaverbrook, Minister of Aircraft Production said of its members: "They were fighting in the struggle just as completely as if they had been engaged on the battlefield".

Titled "Grandma flew Spitfires", the Maidenhead Heritage Centre's new facility at 18 Park Street was opened in August. It features a permanent exhibition and will become a major centre for research into the ATA.

Exhibits include pilots' logbooks, uniforms, wartime maps, flying equipment, aircraft models and many photographs and other memorabilia. Visitors will be able to use a Spitfire simulator, perhaps to gain some idea of the daily work of the "grandmas and grandpas" of the ATA.

August Meeting

No report – but I'm sure a convivial evening was enjoyed by all those who trekked out to White Waltham.

September Meeting

(John Wood)

An expert who was honoured for his work in the field of flight test engineering told us about the development and testing of the Fairey Rotodyne helicopter.

David Gibbings joined Fairey Aviation in 1955, working with air-to-air guided missiles. Five years later he moved to the company's Aircraft Division as a Flight Test Engineer on the Rotodyne and the Gannet.

The Rotodyne was the third of the company's compound helicopters, the other two being the Gyrodyne and the Jet Gyrodyne.

The basic principle was that the compound machine would take off as a helicopter and, during the transition to forward flight, the rotor would become more a means of lift than of propulsion. This would be provided – in the case of the Gyrodyne – by the single Alvis Leonides engine mounted on the starboard stub wing.

In June 1948 the Gyrodyne broke the world helicopter speed record but less than a year later crashed near Reading, killing the pilot and his flight observer.

The Jet Gyrodyne followed. This had many features of the Gyrodyne but, the engine powered two propellers – one at the end of each stub wing - for forward flight. The engine also drove two compressors which fed air to the fuel-burning jets at the rotor tips.

The Rotodyne embodied features of its predecessors but it was a much bigger machine with a rotor diameter of 90 feet and accommodation for more than 40 passengers. Power came from two Napier Eland engines, each of 2,800 shaft horsepower with four-blade propellers. These were each mounted about half-way along a substantial oblong-shaped shoulder wing spanning 46 feet.

The engines drove two compressors providing air for the tip-jet system which during take-off drove the rotors at 140 rpm. As forward flight was achieved, the jet-tips were turned off and the rotor, now in auto-rotation, augmented the lift provided by the large wing area. The engines were now used exclusively to power normal flight.

The Rotodyne was the first helicopter David had flown in. He played a major part in the thorough testing of the machine's performance and the behaviour of its components. White Waltham was the scene of much of the testing, with installations offering facilities for numerous investigations.

Rotor blades were spun in a test rig which – as if to demonstrate that it meant business – was protected with a fence made of the netting used in war-time harbours to protect vessels from torpedo attack.

Other tests included studies into the control of resonance,

vibration problems and component fatigue. Facilities were provided for the development of the tip jets.

At Boscombe Down a rig was set up to test power-plants, rotors and compressors and other important parts of the Rotodyne.

Several years of extensive testing was followed by the first flight on 6 November, 1957 at White Waltham.

Between 1957 and 1962, there was what David described as a “maturing process”- refining the Rotodyne for operational use.

During this period Westland absorbed the helicopter business of Bristol, Saunders Roe and Fairey.

The Rotodyne soon appeared in Westland livery. Development work continued on the type and, in 1961, for example, it was sent to RAF Benson for single-engine landing tests.

During 1962 interest previously shown by, among others, BEA and the RAF evaporated and the project was cancelled. With a tally of 434 flights in 155 flying hours, the Rotodyne disappeared from the scene. Part of the fuselage and a few components on show at the Helicopter Museum in Weston Super Mare is all that remains of the aircraft.

In 1964, David moved to Yeovil to work and fly with the whole range of Westland helicopters. He retired in 1993 as Chief Flight Test Engineer.

At one stage a larger version of the Rotodyne, named the Type Z with 57 seats and more powerful engines was proposed but not proceeded with. The aircraft would have been bigger than the Chinook, David said.

He was optimistic about the future of the compound helicopter, pointing out that, in the last forty years, great improvements in technology had produced many developments such as stronger and lighter new materials, improvements in the design of gas generators, and better silencing.

He showed us a montage of projects from several countries including a combat search and rescue machine from the United States.



He singled out the Eurocopter X3, developed in France. Featured in a short film it was shown competing in a tight “race” against a French high speed train.

When he retired, David’s “outstanding achievement” in his field was marked by the Society of Flight Test Engineers who presented him with the “Kelly Johnson” award.

Before joining Fairey Aviation he had served in RAF as an engineering apprentice and subsequently trained as a navigator.

Dates for your Diary

October

- 9 Popham: End of Season Fly-in
- 16 Duxford: Autumn Air Show
- 19 Brooklands: Peter Davison & Dr Charles Tamplin – The R101 Airship Disaster 81 years on *
- 21 MBA Skittles Evening

November

- 1 MBA Lecture: Tony Vetta - ML Aviation
- 9 Brooklands: Graham Tomlinson – Test flying the Joint Strike Fighter *
- 12 Old Warden – An audience with the Battle of Britain Memorial Flight
- 17 Brooklands: Typhoon Entente Cordiale Trust – The Typhoon yesterday and today
- 17 The Anvil, Basingstoke : RAF in Concert
- 19 Duxford: The First World War uncovered
- 27 Middle Wallop – Aircraft Enthusiasts Fair & Model show

December

- 6 MBA Lecture: Colin Couston - Flying and Crashing in Papua New Guinea

January, 2012

- 1 MBA Newsletter
- 3 MBA Lecture: Jean Fostekew- Famous and Forgotten
- tba Christmas Dinner

February

- 7 MBA Lecture: John Downey - The Vickers Vimy

* Talks are arranged by/for The Royal Aeronautical Society Weybridge Branch

Correspondence

One bit of memory re Miles Aircraft.

My late brother, who was a wartime RAF pilot, near the end of his RAF career was working as an air traffic controller at an RAF radar station in Northumberland during the cold war

They had an unidentified slow moving faint target approaching across the North Sea, which the radar eventually decided was a flock of birds, This eventually turned out to be a Gemini from Norway flying into a strong headwind.

So if the Russians wanted to invade all they had to do was acquire slow wooden aircraft.

Ken Wells ex F G Miles Ltd Shoreham, and F G Miles Engineering

Volunteers to staff the museum

It's nice to be able to start by welcoming John Wiffen and Marie Foster, the latest volunteers.

However there are still vacancies on the list of people to staff the museum on (Winter) Sundays and (Summer) Saturdays and Sundays – and help on Wednesdays would

be appreciated too! The more volunteers there are the easier it becomes, both to work out a rota and for the volunteers on the days when they are "on duty".

News

Ken Fostekew had to postpone the presentation to the Lotus Car Club due to the accident that has left him hobbling with a badly damaged ankle.

The Austin Car Club visited the Museum and four group visits of cubs and scouts have been booked and two talks had already been booked for next year.

Jean's Blasts from the Past No. 2

The Aeroplane March 4* 1936

Cinematography at Reading

READING FLYING CLUB's cinema supper dance was one of the best parties we have struck for a long time. The only flaw in the evening was the absence of Mr. Charles Powis and Mr. F.G.Miles, the former minus an aching tooth and the latter plus an aching diaphragm. Both were quite well on Sunday, but they missed their own party.

The cinematography was done by professionals with full-sized lights and cameras - and it was one of the funniest things that has ever happened. Those of us who knew nothing of the cinema business now know why a film that runs for an hour and a half takes six months to produce. A Staff Officer from the War Office who had a gift for organisation would probably produce the film in six weeks, but it might take him six years.

Mrs Powis as Alice through the Looking Glass would have delighted Sir John Tenniel. Mrs Miles as herself, left her ill husband for a while. Mrs Barnes as Queen of Heart looked too amiable for the part. Mrs. Battye made a handsome lion-tamer in leopard-skin. Miss Langston as a Gipsy Girl was admirable. Miss Irving's Carmen had a proper Castilian dignity. Miss Minnie Mouse well deserved her prize and Mrs. Bennett as Becky Sharp or someone Waterlooian had a great success. The men's dresses (sic) as Outposts of the Empire, Cowboys, Mexican Assassins, Mr. Wells's 2036 and All That, Knaves Kings, and so forth were well above the average.

The films are to be shown at the Palace Theatre, High Wycombe after the usual evening show on Friday March 13th. The results should be devastating.

On the same page in *The Aeroplane*, a slightly more serious item: Reading Aero Club, Woodley. Week to 22nd February, Extension to Service hangar finished and first-class service offered to owners.

Gift Aid Scheme

As many of you know if you pay income tax and/or Capital Gains Tax and fill out a Gift Aid Form the Museum can claim an additional 28% of your donations and/or subscriptions.

You are only required to fill out a Gift Aid Form once for us - but it is *imperative* that if your Gift Aid circumstances change you let us know as soon as possible.

Editorial

(Keith Freeman)

After several years hard work (with little or no thanks) Brian Lloyd has asked for his name "to be removed from the last page". A job I've done and consequently moved up from Production to Editor (though I'll still be doing the typing, running off, collating when there are more than four sides and folding).

I'll be happy to hear any suggestions for improving the Newsletter - though not if said improvements would increase the cost!

Contacts

Chairman & Curator Ken Fostekew -
ken@clarkscomputers.co.uk

Treasurer: Alan Foskett

Engineering: Geoff Etridge -
geoff.etrudge@live.co.uk

Newsletter Editor: Keith Freeman -
musberksav@gmail.com 0119 9666142

Museum Manning: Jean & Ken Fostekew -
ken@clarkscomputers.co.uk

Membership: Keith Freeman -
museumberksav@gmail.com

Tail End Charlie

Some years ago at an airline ticket counter the clerk had to confirm a passenger's reservation that showed his name as "Cole, Pheven."

"I'd like to be certain our information is correct," he said to the passenger. "What is your first name?"

"It's Stephen," the passenger replied. "I hope the agent got it right. I told him it's spelled with a ph."

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