The Air League Newsletter

Issue 2: March/April 2012

TAXES AND RUNWAY ISSUES HIT AVIATION LEADERSHIP

Speaking on 2 February at an Air League meeting held in the House of Commons, Keith Williams, Chief Executive Officer of British Airways, addressed an audience of Parliamentarians, Air League members and guests on the subject of "Fit for Growth" – an overview of major issues impacting on the UK civil aviation sector. He highlighted aspects of UK air transport policy that were causing concern as well as looking forward to improvements on the way. A core theme of his presentation was the growing threat to the UK's long-standing leadership within Europe as a global air hub.

He pointed out that the last decade has been one of great turbulence for the air transport industry. Unprecedented challenges included soaring fuel prices, failing airlines, global mergers, ash clouds, increasing environmental pressures and runway capacity constraints. In the UK, since 2006, during a period when the general level of inflation has increased 18%, Air Passenger Duty (air passenger taxes) has risen 160% on short-haul flights and a massive 360% on long haul flights. These represent the highest level of aviation taxes in the world and place a unique burden on UK airline operators, reducing the UK's competitive position.

New aircraft, new competition, new technologies, new markets and environmental developments have led to changing operating patterns and customer demands. Underlying this had been an unrelenting growth in the number of passengers wanting to fly, especially on new global routes. Terminal 5 at Heathrow was now achieving its design aims with faster airport turnrounds and was acting as a highly popular interchange hub. Interestingly, some 43% of check-ins were now completed on-line, reflecting changing customer patterns. The terminal had been a game-changer for BA in terms of improved efficiency and punctuality and modernised work practices had also transformed performance. The airline was embarking on new recruiting programmes for 500 new pilots and 200 engineers and would, from next year, start to introduce new fleets of Boeing 787s and Airbus A380s. New Boeing 777-300ERs were also now entering service and major cabin refurbishment programmes were scheduled to roll across existing fleets.

ABOVE: British Airways Boeing 747s and 777s at Heathrow (Editor's photo)

But Heathrow's role as the leading European hub for global air traffic was now under serious threat as a result of aircraft movements approaching maximum runway capacity, with little scope for new services to meet traffic growth now that proposals for a third runway have been abandoned. All options for dealing with this capacity shortfall must be examined, he said, or £billions worth of UK business opportunities would be turned away. 40% of passengers flying with BA through Heathrow are transit passengers, so suggestions that air traffic can be spread around other regional airports ignores passenger demands for easy interchanging of flights, he said. Continental airports with more runway capacity already offer additional landing and take-off slots to serve new destinations in China and India and trade follows where the most convenient transport links are available. He said that the government had been made aware that there was broad agreement across the aviation sector and UK business community that the hub runway capacity issue needed to be resolved as a matter of urgency as the country could not afford to be left behind or there would be very serious consequences for the economy.

In this issue...

THE PRESIDENT WRITES.....

WHITE PAPER ON TECHNOLOGY, EQUIPMENT, AND SUPPORT FOR UK DEFENCE AND SECURITY

As an outstanding example of expectation management, the recently published White Paper has few peers. We were warned not to expect anything measuring up to the 2005 Defence Industrial Strategy and so it proved. Rather than a policy document on which industry might base future investment plans, the White Paper is more a listing of the criteria by which future projects will be contracted. That said, the MOD's direction of travel in terms of industrial policy since the Coalition Government took power has been no secret, not least because of the consultation process on the associated 2010 Green Paper. The SDSR clearly heralded a reduced front-line force structure of much lower combat power. Thereafter, the roadmap has included the re-balancing of the Equipment Programme to remove the alleged £38 million black hole, the 3-month exercise and the addition to the Equipment Programme of project cash contingencies, all of which are to be reflected in Planning Round 2012.

The publication "later this year" of some broad detail on the future Equipment Programme should remove some of the remaining uncertainty. But there is certainly little uncertainty in the air sector. The fast-jet front-line is defined around Tornado (for now), Typhoon and JSF. Air Transport and Air Refuelling are covered by C-17, A-400M and the A-330 with the C-130J coming out of service in 2017. Primary and Basic Jet training fleets are slated for renewal under the Military Flying Training Scheme PFI but student throughputs are much lower than predicted and money is now very tight. On UAVs and UCAV, the Anglo-French Treaty was deemed to be the pathway to a bilateral programme but progress is opaque and even the French Minister of Defence is wondering aloud whether this approach makes sense in a Europe gripped by recession.

While the White Paper provides no assistance in predicting the future in the air sector, it does provide a sound conceptual framework for making operational sovereignty decisions. It also acknowledges the need to manage airworthiness but does not state explicitly the significance of on-shore design authorities. In spite of the Air League's best efforts to explain the significance of the military-industrial 'body of knowledge' (admirably demonstrated by the Libya campaign) in fine-tuning and extending air combat capability, the point is diluted beyond recognition.

On the other hand, the Bombardier lesson in the rail sector means that it recognises that procurement decisions frequently have wider national economic interests which are, in future, to be considered by a Ministerial Working Group. There is also a lot of language about advanced manufacturing, skills and sustainable growth yet the same section continues to advance the notion of procurement off the mythical shelf. This fails to recognise that the engine-room of our industry is about applying design, development and production engineering expertise to intellectual property generated through R&D to sell into a limited and highly competitive market. There is explicit recognition that transnational companies have choices over where they invest but it says nothing more. In terms of supply chains, SME issues get a good airing but the paper states that the MOD will not intervene in supply chain relationships.

There are some positive aspects in the export section. There is recognition of the advantages for the UK's international security relationships that are cemented by defence exports and the importance of Government-to-Government arrangements is acknowledged. The need to consider exportability with industry earlier in the acquisition cycle is explicitly stated but there is a side-swipe at poor after-sales service and there remains a lack of explicit recognition of 'Brand UK' in the export competitions for fighting equipment. This was the driving force behind our Air League founders and so it remains today.

Sir Brian Burridge

C-17 number eight for RAF

The MOD arrounced on 8 February that it was to increase the RAF Boeing C-17 fleet to eight to boost the air bridge between the UK and Afghanistan.(Crown Copyright MOD-RAF photo)"

COMMENTARY *by Aeronautica*

What if?

Ever since military air power became a reality - and 2012 marks the Centenary of both the formation of The Royal Flying Corps and The Royal Aircraft Factory - the term "defending the Kingdom" has been taken to mean defending the whole of Great Britain, and beyond to include overseas colonies and territories. In two world wars, the Empire and Commonwealth also contributed enormously to final victory fighting alongside and integrated with squadrons from "the Mother Country". In proportion to their relatively small size, many of these young air forces lost an even higher percentage of aircrew on wartime operations than the RAF. Even though the Republic of Ireland had broken away from Great Britain and was neutral in the Second World War, loyal Ulster remained a vital strategic base for maritime air operations over the Atlantic, hunting U-boats from the Iceland gap to the Western Approaches and providing search and rescue cover for downed aircrew. Similarly, bases throughout Scotland provided training facilities at the limits of enemy bombers based in occupied Europe, and more importantly, major airfields for long-range maritime operations and low-level attacks on targets in Norway. They also supplied vital air cover for Arctic convoys. In the post-war era, Scotland has provided no less essential bases for RAF long range maritime operations, including providing anti-submarine cover and communications links for Royal Navy nuclear submarines, and for protecting NATO air space in the northern sector where Russian bombers have continued to probe RAF capabilities until the present day. Though the UK, still a major sea trading nation, no longer has any maritime air capability, with no firm plans to remedy the situation, the strategic importance of major air bases in Scotland has not diminished.

With the impending closure of RAF Kinloss, formerly one of NATO's most important MR bases, and RAF Leuchars, the main northern base for RAF fighter squadrons, there will soon be just RAF Lossiemouth left, north of Hadrian's Wall. Until the scrapping of the RAF's Nimrods, MR was one of the UK's most important air power contributions to NATO, with a powerful global capability, but now the Coastal Command legacy is in the hands of other nations. So while UK military air bases in Scotland have shrunk substantially, the question of what will happen to UK defence if Scotland follows Ireland into neutrality has so far gone unanswered. The Scottish Nationalist Party has not elaborated on its defence intentions other than stating that all British nuclear bases and weapons must be removed, Scotland would not join NATO and "Scottish units" would be disengaged from their present UK structures. This has been described by Phillip Hammond MP, the UK Defence Secretary, as "totally ridiculous", but the Westminster government has otherwise maintained an uncharacteristic silence on this most vital issue in the wider Scottish debate. The reality is that the costs of providing and supporting new national forces would be completely prohibitive for an independent Scotland with such a small population and it would

ABOVE: Could the UK's F-35s, representing half the RAF's future front line, be based in an independent, neutral, Scotland? (Lockheed Martin photo)

be more likely to have only token forces as in Ireland or Luxemburg today. Over the years more citizens of the Irish Republic have chosen to serve in the British Army than in the Irish Army but this pattern would be unlikely in Scotland in a post SDSR era following such swingeing manning requirement shrinkage within the UK Forces.

What must be questioned however, is the current wisdom of expanding RAF Lossiemouth as the future base for the F-35 fleet, alongside Typhoon squadrons. Building new facilities to create one massive RAF air base in Scotland will cost a fortune, but will seem a poor investment if operational freedom might be restricted by a host nation that only has local employment and income generation as a motive for cooperation. So why not build the new super-base south of the border at an existing RAF base and create more jobs and wealth creation in England? Over the last couple of decades, many MOD administrative offices and support facilities have been transferred to Scotland to support local job creation, and for no other reason. It would be totally illogical to retain these in a neighbouring country that was no longer part of NATO or the UK or did not have a shared defence vision. It seems the political posturing over the future of Scotland will continue for the next few years at least, and the breakaway may never happen, but to ignore the potentially grave strategic consequences for the whole of the UK if it does would be highly irresponsible. It is the clear duty of the British government to investigate these factors and to spell out the strategic, employment and financial consequences in full, and in public, so voters on both sides of the border have complete clarity on the issue.

COMBAT - ISR TOWARDS

The rapid development of advanced new Intelligence, Surveillance and Reconnaissance (ISR) systems, together with added combat capability for Remotely Piloted Aircraft (RPAs) is transforming the roadmap for the future delivery of air power. This is rolling out far faster than anyone could have foreseen, even a few years ago, and results from the combination of breakthrough technologies, combat experience in Afghanistan and a widespread belief that affordability is the key to ensuring next generation defence programmes survive increasing budget scrutiny. No longer can sheer numbers of high performance combat aircraft be relied upon to guarantee air superiority, let alone air dominance, so the decisive factor is now situational awareness and the ability to react to it quickly.

The global defence balance is shifting in a way that has not been seen since the late 1940s, as Europe and the USA face up to massive defence funding challenges, while Russia embarks on a significant defence renewal programme, and China increases its defence spending at a 10% year-on-year rate, with advanced indigenous aircraft and missiles building on the experience gained from copying and reverse-engineering Western, and especially Russian, platforms and technologies. The J-10 fighter, designed with help from Israel, features fly-by-wire controls and an advanced radar, and although powered by a single turbofan engine, is very similar to a Eurofighter Typhoon. Already a follow-on fifth-generation design, known as the J-20, is playing catch-up with the US F-22 and although it is probably at least six years away from service, it is clearly a stealthy design with a large internal weapons bay, suggesting a long-range attack as well as an air superiority role. In Russia, the T-50/PAKFA, being developed with India, is another F-22 rival, and takes combat performance beyond the formidable Su-30MK multi-role fighter. A new generation of Chinese carrier and land- based naval fighters, and long-range hypersonic anti-ship missiles, threaten the maritime dominance of the US Navy's large aircraft carrier fleet. All these developments indicate that the USA's military Superpower status is likely to be challenged as never before over the next two decades, leading to some very radical re-thinking being necessary along the way. Armed RPAs are inevitably going to have an increasing role in future operations as the cost of conventionally piloted air operations becomes more prohibitive. The US Navy is ahead of the USAF in this area and the Royal Navy has also noted the potential of future armed, stealthy, carrier-based RPAs. But to fully exploit new combat capabilities, the ISR overwatch capabilities must be strengthened and enhanced to retain an operational winning edge.

ABOVE: The Dassault-led Neuron is in head-on competi the Anglo-French cooperation treaty supp

For the UK the rapidly evolving Combat ISR developments offer a new opportunity. The Nimrod R1s have gone and the almost-new Sentinel R1s are due to follow, despite their outstanding ISR contribution over Libya and Afghanistan, but there is evidence in the UK and Europe that governments have taken on board the need to support the development of advanced Combat-ISR industrial as well as operational capability, rather than just buying into US programmes. A new MOD £40 million study contract shared between BAE Systems and DSTL is to look further at long-term Future Combat Air Systems. However there is much in present UK defence policy on Combat ISR that seems

ABOVE: UK forces now use a wide variety of ISR platforms. The RN Sea King Mk 7, designed for aircraft carrier-based AEW is now performing a vital over-land ISR task over Afghanistan. (Crown Copyright RN photo)

ABOVE: The RAF's E-3 Sentry fleet has been reduced in number in recent years, but is now assuming an even greater role following the end of Nimrod operations. (Crown Copyright RAF photo)

2020 AND BEYOND

tion with the UK's Taranis UCAV demonstrator, despite orting joint future UCAVs. (editor's photo)

highly disconnected. Britain's go-it-alone £140 million R&D Taranis technology demonstrator Unmanned Combat Air System involving BAE Systems, QinetiQ and Rolls Royce is due to fly later this year, as is the Dassault-led Neuron, also involving SAAB, Alenia Aermacchi, EADS CASA, Hellenic Aerospace and Ruag. These two stealthy jet-powered UCAVs are almost identical in configuration and size, though Neuron will feature a fully functioning weapons bay, while Taranis will rely on computer-generated weapons separation simulation. While the UK and France are developing directly competing platforms in this sector they are signed up at government level to develop jointly new RPAs to meet national requirements. The former BAE Systems Mantis has morphed into Telemos, as a joint project with Dassault and might meet the UK's Scavenger programme for a Reaper replacement later this decade. In the meantime the USAF is looking at a similar US requirement, MQ-X, which the UK will have to examine under its default buy-off-the-shelf procurement strategy, though this would clash with Anglo-French announcements to date.

Britain's much valued long endurance SIGINT and COMINT capabilities (Signals and Communications Intelligence gathering) were disbanded with the Nimrod R1s, with some retained RAF crews despatched to USAF Rivet Joint units pending the conversion of three 50-year-old KC-135s into UK RC-135 Rivet Joint platforms. Some interim "Spook" platforms (bought under UOR rules) are serving in theatre using King Air and Defender turboprop aircraft, but the Sentinels have become the RAF's prime ISR assets, and the envy of many other air forces. If they are prematurely retired in 2015 this will hardly represent best value for taxpayers' money as the five-strong fleet is doing the job it was designed for and is working extremely well. New developments in artificial intelligence are helping to solve, at least in part, the severe practical challenges that are resulting from having more and more airborne ISR monitoring systems collecting vast quantities of data over the battlefield. The USAF reports that Combat ISR activity has grown by more than 3000% in the last decade and this is swamping the operators and their computerised systems that have to filter it and analyse the data to make it intelligible and of practical use to commanders. Operating RPAs may dispense with a pilot, but the number of ground station operators is growing. Off-loading much of the analysis onto intelligent systems that can recognize patterns and unusual movements is one way forward but data over-load is perhaps the biggest future hurdle to overcome, especially if highly skilled specialists continue to be laid-off and crewed ISR air assets cut.

ABOVE: The Hawker Beechcraft King Air 350 has become the default manned ISR platform of choice with US air arms and the RAF over Afghanistan. (Editor's photo)

ABOVE: The Selex Galileo Falco Evo is an example of the new generation of European ISR UAVs that are transforming situational awareness over the battlefield. (Editor's photo)

In a speech at Policy Exchange, on 4 January, Universities and Science Minister David Willetts MP argued that our greatest national assets - our universities, our science facilities and researchers - are the best single hope for making our way in the high-tech world of the future, creating jobs and opportunities and boosting high tech economic growth.

"Our research community is the most productive in the world. In the words of the recent Elsevier report, "The UK is the clear leader among all eight comparator countries (Canada, China, France, Germany, Italy, Japan, UK, US) on citations per unit spend on Gross Expenditure on Research & Development." With 3% of the world's researchers, we generate 6% of the world's academic articles, 11% of citations, and 14% of the most cited papers, second only to the US. Quite simply we have more articles per researcher, more citations per researcher and more usage per article than researchers in US, China, Japan and Germany. We can be proud of this achievement. We must continue to sustain our research base in tough times. If you look at the decisions the Coalition has already made you can see how committed we are to science and research. In fact I can confirm the Government's aim is quite simple if very ambitious: it is that we should be the best place in the world to do science.

"It does of course also mean proper funding for science and research. I realise that there are always pressures for more and we cannot afford to do everything we would like to do. Nevertheless, as countries around the world face budget pressures, our ring- fenced cash-protected science and research funding budget is a good settlement in tough times. The breakdown of current spending is between four main areas roughly as follows. £1.6 billion goes direct to universities in recognition of research excellence. £150 million goes through Higher Education Innovation Funding to reward universities that have knowledge exchange with the wider world, especially contributing to economic growth. £100 million goes direct to the Learned Societies (the Royal Society, the Royal Academy of Engineering and the British Academy) to fund leading researchers and also make small grants for particularly worthwhile research projects.

"The Research Councils and the UK Space Agency between them spend the remaining £2.75 billion. The Research Councils divide this into two main categories - responsive funding and directed funding competitions. They estimate that about two thirds of their funding is in responsive mode and a third in directed mode. Research Councils devote a lot of time and effort to identifying significant ground-breaking areas of research that they should support. They scan the horizon to try to ensure we have a coherent and broad research base in this country. They work with business and Government to identify these priorities. But there comes a point when the Research Councils have to think about impact and priorities. Impact doesn't just mean commerce. Professor Theo Farrell, an ESRC/AHRC Fellow, undertook an assessment of the British Army's performance in Operation Moshtarak, a 2010 offensive to clear the Taliban from central Helmand Province in southern Afghanistan. The resulting classified report was briefed to Army chiefs, and has informed doctrine development and pre-deployment training.

"We did our own exercise and published the results last year in a report, "Technology and Innovation Futures: UK Growth Opportunities for the 2020s". It was very British, inductive not deductive, listing the main areas of technological and scientific research over the next decade, drawing on consultations with the academic community.

(The full speech is available on-line from: **www.bis.gov.uk**)

F-35 Progress

The first two Lockheed Martin production model F-35B short takeoff/vertical landing (STOVL) aircraft were delivered to the U.S. Marine Corps in January. The two jets are now assigned to the 2nd Marine Aircraft Wing's Marine Fighter/Attack Training Squadron 501 residing with the host 33d Fighter Wing at Eglin AFB, Fla. The F-35 System Development and Demonstration 2011 flight test programme resulted in the completion of more test flights and test points than in any year. The plan called for the accumulation of 872 flights and 6,622 test points by Dec. 31. For the year, the SDD program flew 972 flights and tallied 7,823 test points. The F-35A Conventional Takeoff and Landing (CTOL) variant flew 474 flights and accomplished 3,600 test points. The F-35B Short Takeoff/Vertical Landing (STOVL) variant accomplished 333 flights and 2,636 test points. The F-35C Carrier Variant (CV), (which has been chosen by the UK government instead of the STOVL F-35B which was to be the Sea Harrier/Harrier replacement) flew 165 flights and tallied 1,587 test points. Along with this, the STOVL executed 268 vertical landings. The cumulative 2011 milestones were achieved through a combination of planned test flights and test points along with test flights and test points added throughout the year. The overall F-35 SDD flight test program plan calls for the verification of 59,585 test points through developmental test flights by Dec. 31, 2016. Through 2011, the flight test team has accomplished 12,728 test points or 21.4 percent of overall testing requirements. Major flight test achievements in 2011 include the mission systems test aircraft performed Block 1A and Block 1B software testing including demonstrating Communication Navigation and Identification (CNI) range and accuracy and integrated Electro-Optical Targeting System testing that included Tactical FLIR (Forward Looking Infra-Red) and combat laser firing. The software also displayed imagery from the Distributed Aperture System on the Helmet Mounted Display. Further testing accomplished radar search and target tracking, Synthetic Aperture Radar Mapping, Electronic Warfare testing, and multi-sensor fusion of four sensors. In addition, baseline Radar Cross Section signature testing was accomplished on three mission system aircraft. On Nov. 18, CF-3, an F-35C test aircraft, conducted the first F-35 launch from the Navy's new Electromagnetic Aircraft Launch System (EMALS). Testing the F-35C on EMALS marked the beginning of the process to integrate the carrier variant with the future carrier fleet aircraft launching system. AF-1 achieved the F-35's maximum design limit speed of Mach 1.6 for the first time on Oct. 25.

Minister opens £multi-million facility to develop efficient, lightweight aero-engine technology

On 12 January, Mark Prisk MP, Minister of State for Business and Enterprise opened a facility that will develop new composite aero engine components. It has been developed by CTAL, a joint venture between Rolls-Royce and GKN Aerospace, to pilot pioneering manufacturing processes for aero-engine fan blades and fan-cases made of composite materials. Lighter, but as strong as traditional metal components, composite blades and cases could improve aero-engine performance and reduce their environmental impact by reducing the overall weight of the engine.

CTAL's £14.8m facility will employ 70 highly skilled engineers on the Isle of Wight and has been supported with £7.4m in funding from the UK Government. Business Minister Mark Prisk said, "The UK has the world's largest aerospace industry outside the USA with a 17 per cent share of the global market, which is worth approximately £23bn per year to our nation's economy. I am pleased to officially open this state-of-the-art facility and to see for myself the work of GKN Aerospace and Rolls-Royce in developing sustainable aviation technologies that will have benefits for marine, health, construction and energy sectors. It is ventures like this that are helping to place Britain as a world leader in the growth area of low carbon solutions, while affirming our commitment to providing the technological needs of the future."

Marcus Bryson, CEO and President, GKN Aerospace and GKN Land Systems explains, "The processes we develop here will be at the heart of the drive to improve the performance of tomorrow's aircraft engines. This facility will help us ensure we and our supply chain sustain the level of technological progress necessary to meet major global aero-engine opportunities in the future. The UK's aerospace industry is the home of many pioneering aerospace technologies and is one of the country's leading exporters. Events such as this are a clear reminder of the positive impact we have, and must continue to have, on the UK economy. This is also a clear demonstration of our commitment to the UK government's growth agenda for the manufacturing sector."

Colin Smith, Rolls-Royce Director of Engineering, said, "Rolls-Royce maintains a long term commitment to research and development, with a particular focus on reducing the emissions from our products. This state-of-the-art facility gives us an opportunity to develop world-leading composite technology and manufacturing techniques. These high technology lightweight components have the potential to significantly improve the competitiveness of our engines and hence reduce the fuel consumption and emissions of future aircraft. " The development of lightweight, composite components is becoming increasingly important as the aerospace industry strives to reduce fuel consumption and emissions.

The new facility supports the final stages of work through the UK government-funded Environmental Lightweight Fan (ELF) collaborative research programme. The goal of this programme, which commenced in 2007, has been to develop, prove and bring to market readiness advanced, high-rate production processes for new carbon fibre engine fan blades. These blades will improve aircraft performance and reduce engine emissions. This final phase is focused on optimising volume manufacturing processes and is complemented by the addition of lightweight fan systems work under the 'SILOET' (Strategic Investment in LOw-carbon Engine Technology) collaborative research programme, also UK government-funded. This programme aims to accelerate the development and introduction of low carbon aircraft engine technology with a consequent effect on engine fuel economy and emissions. The results are expected to deliver a 2 per cent improvement in engine fuel economy and enable delivery of ACARE goals. The programme started in 2009 and is expected to finish in 2013.

2,400th Hercules delivered

Lockheed Martin has delivered the 2,400th C-130 Hercules, which has been in continuous production for a longer period than any other military aircraft. Last year 33 C-130J Hercules were delivered in six configurations to six operators, including the USAF, US Marine Corps, Canada, Qatar and India.

RIGHT: Last year India became a new C-130J operator. (LM photo)

2011- record year for Big Two civil plane makers

European aerospace giant EADS has announced that for 2011 it has broken all previous production records and completed 534 Airbus family aircraft, beating rival Boeing, who delivered a total of 477 aircraft. Airbus took new order totals for the year to 1,419 aircraft, against the Boeing total of 805. The Airbus market share in 2011 was 64%, with the lead seller being the A320 narrow body family with 1,354 net sales. However, Boeing achieved a greater sales lead in wide body orders, with 255 sales against 104 Airbus widebodies. The Boeing 777 remained the best selling large capacity jet with 200 sales against 85 A330s. Airbus now has a total orders backlog of 4,437 aircraft, and Boeing has 3,771. Net sales of the giant A380 were relatively slow, at 19, while Boeing won 7 new orders for the 747-8, but saw 8 cancelled. The A380s' wing crack problems may help boost sales of the rival 747-8 in 2012, while the 777-300ER remains the widebody market leader.

THE AIR LEAGUE FOUNDERS' MEDAL AWARDED TO SIR JOHN ROSE

At the recent Air League in Parliament meeting (See Page 1) the President, Sir Brian Burridge, presented the Air League Founders' Medal to Sir John Rose latterly CEO of Rolls Royce. These silver gilt founder medals are awarded rarely and only for the most meritorious achievements in the whole field of aviation. Previous recipients include: Barnes Wallis; eminent test pilots such as Brian Trubshaw, John Cunningham and Bill Bedford; moon-landers Neil Armstrong, Buzz Aldrin and Michael Collins;BA VC10 captain James Futcher and his crew following the 1974 hijack of his aircraft en route from Bombay; and industrialists such as Sir Michael Cobham, Sir Arthur Marshall and Sir Ralph Robbins of Rolls Royce.

The latest Air League Founders Medal was awarded to Sir John Rose in recognition of his considerable leadership within the Aviation Industry and in particular within Rolls Royce, which he joined in 1984 and in which he spent the next 27 years. Fifteen of those years were spent as the CEO. Under his stewardship in that period he presided over an eight-fold increase in the order book, a tripling of the revenues: profits were up five-fold and the share price by a similar degree.

Sir Brian said, "Those numbers speak to a highly diverse business: in shipping 30,000 vessels have Rolls Royce equipment. Energy customers are located in 120 countries and, in the things that interest us, by the beginning of last year, there was 382 million pounds of Rolls Royce thrust installed in civil aircraft of 500 airlines as well as business jet customers. One hundred and sixty military operators use Rolls Royce Engines, not least those who are fortunate to operate Eurofighter Typhoon with its EJ 200. Clearly, this is an important and vibrant market representing, in civil aviation alone, a potential for 137,000 new engines over the next 20 years in 63,000 commercial aircraft representing some £400 billion of business.

"Under John's extended period of leadership, Rolls Royce is well-configured to compete not only because of engineering excellence but also because of two other factors. First, annual investment of £1 billion/year in R&D, which embraces 28 university technical centres, has led to world-beating British technology such as the single-crystal blade. Secondly, investment in skills, especially in apprenticeships. Here I would just highlight the new apprenticeship academy in Derby which allocates 200 places to the supply chain, many of which are SMEs.

"Sir John is a past President of the European Association of Aerospace Industries, past President of the Society of British Aerospace Companies and, until recently, was on the Council of the Prince's Trust as its Chairman. Throughout his working life at Rolls Royce, Sir John has been a champion of encouraging young people with their careers in aviation and this has particularly included staunch support for The Air League. In recognition of this, and much more, The Air League Founders Medal is awarded to Sir John Rose."

MEMBERS' NEWS

Jennifer Dodman, 2011 British Women's Pilot's Association Flying Bursary, I was extremely pleased to be awarded the BWPA Flying Bursary for 2011, which was a much appreciated contribution towards my on-going aerobatics training with Skyboard Aerobatics at Bagby Airfield. I am undertaking specialist training in Occupational Medicine and have a very keen interest in Aviation Medicine. I hope that my future career will incorporate this as my training progresses. I was keen to learn aerobatics as I thought it would be valuable to experience the rigours of an aerobatic pilot in terms of the physical stress of G on the body and my training to date has certainly provided this. However, I have also found a new passion for aerobatics, which has been inspired by Tom Cassells.

Tom's talent and experience is abundant and his passion for aerobatics is infectious! I intend to continue my training with him and hope to compete in the future.

I wish to extend my gratitude and many thanks to the British Women's Pilot's Association for the award and to the Air League. In particular I would like to thank Caroline Gough-Cooper for her kindness and advice and Tom Cassells for his patience and encouragement.

Samuel Gervais, 2011 The Coachmakers Livery (Victor Gauntlett) Flying Scholarship. I am writing to thank The Air league for awarding me The Coachmakers Livery (Victor Gauntlett) Flying Scholarship. I trained at Wycombe Air Centre over the course of the summer and I successfully went solo within the 12 hours awarded to me. I also completed various other exercises and solo circuits.

I would like to thank my instructors at Wycombe Air Centre, especially Peter Lewis who sent me Solo and for helping me maximise my scholarship. Everyone at Wycombe Air Centre was very professional and welcoming and I enjoyed every second of the Scholarship.

Within the near future I hope to commence training towards my ATPL and a Career as a Commercial Pilot and feel that the Flying Scholarship has brought me a step closer to my ambition.

Once again I would like to thank The Air league very much for awarding me the Scholarship.

New Members

***Full Members*:** Michael Smith

***Student Members*:** Oliver Adams, Sara Ashdown; Robert Anthony, Andrew Ballantyne, Henry Bedford, Ryan Berry, Scott Bickerton, Glen Bridge; Mark Brougham-Ramsden, Robert Brownbill, Roger Cottee, William Davey, Gareth Duffy, Karlee Dunn-Jackson, Kirsten Gallagher,Alexander Harley, Natasha Harrington, Robin Jarvis, Kyle Jones, Robert Lewis, Reece McCallum, Daniel McCormack, Robert Marshall-Lee; Khotso Marumo, Naveen Mathew, Thomas Meadows, George Metcalfe, Jonathan Oglesby; Mark Parsonage, Monesar Pherwani Nawaaz Ramjanee, Jonathan Usborne, Aaron Webb, James Williams, Alex Young

Diary Reminders

14 March 2012: Youth in Aviation, House of Lords

For up-to-date information on all our activities please visit our website at **www.airleague.co.uk** where you can register for changes to be sent to you by email as they are announced.

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