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PLUS

Piper invests for the future

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Coping with panicky students

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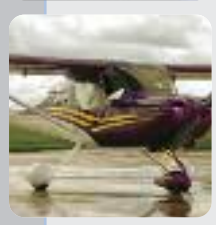
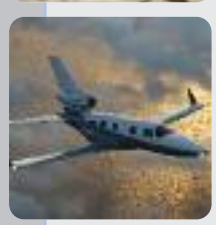
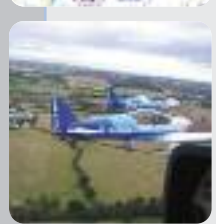
News







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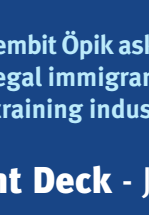

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August 2009

squawk!

Welcome to Squawk, FTN's page for aviation anecdotes and gossip.

Making money out of Ryanair...#1

Not, we grant you, the easiest scenario to imagine but it may just be possible – according to Boeing head of commercial aeroplanes, Scott Carson.

Readers may recall that a month or so ago, the shy and retiring boss of Ryanair, Michael O'Leary, announced a new money-making scheme (completely out-of-character for Ryanair you might think) which involves charging for the use of the on board toilets. Many electrons have been expended in the bloggersphere debating ways around this proposed charge, none of which we feel compelled to repeat here. Nevertheless, we think the best response came from Scott Carson, who apparently called ML to congratulate him on his latest coup. The conversation went well, allegedly, until Carson casually mentioned that the cost of adding the new toilet doors to a 737 would be a mere $3,000,000 per aircraft. Mr O'Leary, it is said, was not amused.

Making money out of Ryanair...#2

Even if you don't have Boeing's leverage in your dealings with Ryanair, there may still be a way for even a mere passenger to get some money back according to travel website 360travelguide.com.

The scheme involves a little planning, and is based on Ryanair's policy of accepting on-board cash in either Euros or Pounds, and giving change in either currency as requested, based on an exchange rate of 1:1 (whereas, according to the Flight Training News corporate finance division, right now the 'real world' rate is nearer £1 = €1.17 or £0.85=€1). The cunning plan works like this:

Step 1. Board a Ryanair flight with a €50 note.

Step 2. Buy a cup of coffee onboard (that's £3/€3 to you guv)

Step 3. Ask for your change in Great British Pounds (£).

You should now receive £47 in your hand. This means you have converted €50 into £47, much better than the rate you'd get at your average airport Travelex. Indeed, the £47 in your hand is worth around €54 (that's a €4 profit for the ATPLs out there) and you've got a free coffee into the deal.We're assured this has been tried out for real and it works, but we can't help but think that once word reaches a certain Mr O'Leary its highly unlikely to continue very much longer. Perhaps they'll adopt the policy of another low cost carrier of our close acquaintance who seem to almost always insist that they'll only sell onboard rations to those with exact change.

Product placement, shaken not stirred

Hands up if you have seen the latest Bond film?
Hands up again if you remember the scenes involving private jets?
Hands up a third time if you can name the company that provided the jets, based just on the product placement in the film?

We're guessing that not many hands went up for the third question, which may be a disappointment for the firm that allegedly spent £600,000 for their moment of cinematic fame.

Still, maybe we're not the target market. In any event, our admiration goes to sister company Airplan Flight Equipment who appear to be no slouches in the product placement department themselves.

Our attention has been drawn to the 'Mrs Moneypenny' column in the Financial Times' Weekend magazine. A recent article relates how Mrs Moneypenny (in real life a former investment banker and author of Mrs Moneypenny: Survival in the City) flew to South Africa and back in 3 days to attend a Rugby match which was also, apparently, a fabulous networking opportunity. At the end of the piece, Mrs Moneypenny relates how her preferred in-flight reading to and from South Africa was;

"Jeremy Pratt's gripping 400-page tome The Private Pilot's Licence Course: Navigation & Meteorology, now in its third edition, fourth reprint. Now that was really good value."

We are assured from the very top that no money changed hands for this endorsement and the mention of the book was a complete surprise to Mr P and all at AFE. All the same, we can't help but admire this marketing coup, whilst still wondering if it isn't in fact part of some sinster plot to take over the world...

Saints and Sinners

We're sure that every Squawk reader, being in general a well educated and erudite person, will know that St Therese of Lisieux was a French Carmelite nun who died of tuberculosis in 1897 at the age of 24.

Described by Pope Pius X as "the greatest saint of modern times", as we're sure you already knew, St Therese is going on tour, or rather an elaborate casket containing the bones of the Roman Catholic saint will be visiting England and Wales for the first time next month and stops will include York Minster as well as cathedrals in Liverpool, Salford, Leeds and Birmingham. Perhaps more unusually the relics will also be visiting London's Wormwood Scrubs. Why? Because of the saint's special affinity with sinners and "those on the edge", according to Canon John Udris, who is planning the tour.

How appropriate, then, that St Therese is also the patron saint of aviators. So much makes sense now...

CAPTION COMPETITION

This month's caption competition photo comes courtesy of the press office at Coventry Airport. The photo was taken to celebrate the grand opening of the airport's new Executive Jet Centre.

Entries to editor@ftnonline.co.uk by 24 August please.

CONGRATULATIONS TO TONY PARSONS WHO WINS LAST MONTH'S CAPTION COMPETITION, WITH HIS CAPTION OF:

"NO, YOU FOOL ! I SAID 'FEATHER THE PROPS'"

Caught between a regulator and a hard fought market place?

At a time when UK Flight Training Organisations (FTOs) are facing the largest downturn in business since 9/11, the UK's civil aviation regulator, the Civil Aviation Authority (CAA), are proposing swingeing regulatory cost increases that could see FTOs voting with their feet and decamping to other European countries.

In a paper published recently by the UK CAA's Safety Regulation Finance Advisory Committee, which FTN has seen, FTOs providing integrated flight training courses could face a 140% increase in their CAA approval costs over the next three years. Currently, those FTOs who provide integrated flight training courses, which take a student from zero flying experience to 'frozen' ATPL in a single course, pay an annual audit fee to the UK CAA of around £12,000. Under the new proposals published by the Finance Advisory Committee these same schools could now be faced with an annual bill of around £28,000.

It is widely believed in the aviation industry that the UK CAA is under financial pressure, not least because the UK Treasury requires the CAA to make a 6% return on capital employed (ROCE) – in other words a 6% profit. The UK CAA is unique in Europe in this respect and as a consequence charges the highest fees for regulatory oversight. Indeed, many National Aviation Authorities (NAAs) across Europe are government funded and as a consequence the regulatory cost burden to industry in these countries is a fraction of that borne by UK FTOs. This could change with a new pan-European aviation authority set to take charge in 2012, when the requirement for UK FTOs to continue to use the UK CAA as their regulator will be removed.

Flight Training Organisations may vote with their feet and decamp to other European countries

Currently, all flight training schools based in the UK are regulated by the UK CAA, but come 2012 the UK CAA and all other European NAAs will switch roles from being regulators in their own right, to administrators of EASA's pan-European regulations. This means that all European NAAs will be required to administer exactly the same regulations across Europe and will no longer be permitted to enhance, reduce, or modify them in any way to suit their own views of how aviation should be regulated.

As a result of this European standardization, the incentive for an FTO to choose to base themselves under the jurisdiction of one NAA in preference to another on the grounds of training syllabi, for example, is effectively removed. The only consideration left will be one of cost.

Regulatory shopping is potentially a major problem for the UK CAA

Regulatory shopping, as it has been termed, is potentially a major problem for the UK CAA. Indeed, at a Flight Crew Licensing conference held at EASA's headquarters in Cologne during 2007, the first question put to EASA by the UK CAA concerned what the European Authority was proposing to do about regulatory shopping? The answer was nothing: "It is not within our remit," stated EASA spokesman Eric Sivel. Clearly this was not what the UK CAA wanted to hear and puts them in the position of being potentially priced out of the regulatory market.

According to industry observers the new pricing proposals couldn't have come at a worse time

Since that time the UK CAA has been gradually increasing its charges to industry in small, incremental amounts. But this latest pricing proposal to come out of the Safety Regulation Finance Committee will add a whole new level to the scale of charges being meted out by the Authority, and according to industry observers it couldn't have come at a worse time.

Continued on page 4

CLEARER HORIZONS

At a time when the media in general seems to be particularly gloomy and doom-laden, 'Clearer Horizons' is our way of directing you to the 'good news' stories in each edition of Flight Training News. The aviation world is well-known for its cyclical nature, and we hope that some of the stories we feature here each month give a pointer to better conditions ahead.

Caught between a regulator and a hard fought market place?

Continued from page 3

Examples of Charges	2009/10 Charge	Increase	Review Year 4 Charge
Example 1			
Integrate ATPL	£11,077	140%	£26,585
With 2nd site	£1,235	50%	£1,852
Total Fees Payable	£12,312	131%	£28,437
Example 2			
Modular CPL (A) with	£1,100	0%	£1,100
Instrument rating and	£1,100	0%	£1,100
Flight Instructor rating and	£600	50%	£825
Multi-engine piston class rating	£469	50%	£703
Total Fees Payable	£3,219	15.8%	£3,728

Since the economic downturn took hold last year and airlines all but stopped recruiting new pilots, the number of individuals starting training towards a commercial licence (in the belief that the industry will recover by the time they graduate) has fallen significantly, with conservative estimates pointing to a 30% plus reduction in course intakes over the last few months. As a consequence, some FTOs are under severe financial pressure and are having to reduce staff numbers and salaries in order to cope with the downturn in business. It is therefore inequitable, according to one industry observer FTN spoke with, that the CAA is apparently making no effort to constrain its own costs. Key to this cost restraint, said our source, would be for the CAA to look at its whole regulatory framework and address the belief long held by industry that much of the regulatory work the CAA does is undertaken as a revenue gaining exercise rather than purely for reasons of safety and quality oversight.

Illustrating this statement, our source told us that one case in point is the CAA's insistence of inspecting FTOs and Type Rating Training Organisations (TRTOs) on an annual basis rather than once every three years, as laid out under current European (JAR) guidelines. Why, he asks, does the CAA insist on inspecting these training organisations annually when the rest of Europe apparently achieves the same level of safety and training standards via inspections held once every three years? His considered opinion was that it is purely for profit.

Another industry source asks: *"Why is that the CAA, whilst endeavouring to make a profit (and therefore theoretically operating in the commercial arena), has failed to adopt modern commercial practices; is failing to address (or even to acknowledge) the needs of its customers and is not even acknowledging the changing market conditions in which it is operating? If FTOs followed the same policy, they would all be bankrupt and, if the CAA continues down its present path, they might yet be, unless they find an alternative means of meeting regulatory requirements."*

Some FTOs offering commercial flight training courses have told FTN that if the CAA's new pricing proposals are implemented, they will circumvent the higher charges through either choosing to employ a different European aviation authority to provide regulatory oversight, or to even move their business into mainland Europe. The first option, of getting an alternative, less expensive NAA to provide regulatory oversight, could be achieved through having a training base, or even just an office, in the country of the NAA the FTO wishes to use, who could then regulate all their bases, including those they choose to retain in the UK. The alternative, to move their business into mainland Europe, would also achieve the same result and could also provide a couple of additional benefits over and above saving money on regulatory oversight costs. The first additional benefit concerns the fact that the UK continues to be one of the few European countries that require students to pay VAT on top of their course fees. With the UK VAT rate set currently at 15% (although planned to increase next year), this represents a potential cost saving to students on integrated flight training courses of up to £12,000. Additionally, the better weather conditions prevalent in many southern European countries means that flight training, especially in the early stages of a course, could be undertaken without interruption.

What is clear, however, is that these options represent a last resort for most UK FTOs and they would ultimately prefer to remain in the UK under regulatory control of the CAA. FTO representatives have told FTN that for all its perceived shortcomings, the UK CAA is still one of the best aviation regulators in the world, and if it wasn't for the excessive charges they impose on industry, these FTOs would not have a problem with the UK CAA continuing to provide regulatory oversight of their businesses. Nevertheless, these businesses are just that – businesses – and unless they can achieve a similar level of regulatory cost burden to those of their competitors, the UK CAA could quickly find itself priced out of the market. And if FTOs start voting with their feet then the law of diminishing returns will start to apply, compounding the CAA's problems.

The law of diminishing returns is well proven, as one UK FTO representative, who wished to remain anonymous, explains:

"In the days of the Yorkshire coalfields it was common for one major pumping installation to pump out a group of mines. Each mine paid their proportion of the cost of the pumps. Eventually it was decided that one of the mines was uneconomic. It was shut down and so the remaining mines had to pay more to the pumping installation to cover the loss due to the mine closure. This increased cost made another mine uneconomic and so it too was closed. Now the remaining mines had to pay even more to cover the cost of the pumping. And, guess what, another therefore became uneconomic and was closed. This process was repeated until the entire coalfield was closed."

Consider also the apocryphal story about the EU Directive on shellfish, which was allegedly two paragraphs long, while the UK version ran to 32 pages, and you have, says the FTO representative, the current CAA situation in a nutshell:

"The CAA cannot make good its losses by swingeing increases in charges – that will merely drive large schools overseas and small ones to closure. It has to accept that it is over-regulating and reduce its activities (and accommodation) accordingly – and rapidly.

"The Department for Transport has made it clear that the promotion of general aviation and flight training in the UK is its responsibility," he continued. "Should the CAA appear to be unwilling to take these steps, it is incumbent on all aviators and flight training organisations to invoke the support of the DfT as a matter of urgency."

The situation doesn't stop with FTOs and TRTOs either, as UK airlines could also choose to base themselves in other European countries where the regulatory cost burden is lower than the UK. If this happens then the CAA could be thrown into turmoil and UK Government will need to step in if the Regulator is to survive. FTN's own parliamentary source, Lembit Öpik MP, has told us that he and his fellow Parliamentary Aviation Group members are aware of the potential risks to the UK aviation industry and will be addressing these concerns to Government. Many within the flight training industry hope they will be listening.

FTN contacted the CAA to ask the Regulator about the new pricing proposals. A CAA spokesperson told us that these proposals have not been put forward to industry yet and are purely a discussion document for the members of the Finance Advisory Committee, and that a full consultation will take place with industry before any decisions are made. Additionally, the CAA state that they strongly refute the allegation that they are failing to control their costs: "The CAA is acutely aware of the current economic situation and how it affects everyone involved in aviation - including the CAA itself. We always seek to contain our costs and comply with the Government's better regulation principles. A recent example would be the relaxation of the ELA maintenance rules," they said.

Can you help the BBGA?

The British Business and General Aviation Association (BBGA), which represents the interests of FTOs, TRTOs and other General Aviation businesses in the UK, is seeking urgent meetings with the CAA and their government bosses to put forward their members' concerns over the new pricing proposals. In order to strengthen their case BBGA have contacted Flight Training News to ask our readership for examples of what they consider to be excessive practices by the CAA, for example unnecessary visits to FTOs and TRTOs, as well as other regulatory work which could be deemed unnecessary and yet continues to add to the Authority's costs. Anyone with examples of unnecessary CAA practices that could be curbed to save the Authority money is invited to forward them to info@bbga.aero.

Will UK FTOs be forced to decamp to other European countries with cheaper regulatory oversight charges?

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NEWS BRIEFING

EASA Flight Crew Licensing response document behind schedule

According to sources within the European Aviation Safety Agency, the Comment Response Document (CRD) on EASA's Notice of Proposed Amendment (NPA) for Flight Crew Licensing is running behind schedule. The CRD is a document that addresses those comments to come from industry concerning the proposed changes to European Flight Crew Licensing.

According to sources, the FCL working group is around 12 months behind schedule and therefore the final response document is not now expected before the end of 2009. Following the publication of the document, those individuals who entered comments on the NPA for Flight Crew Licensing will be given around three weeks in which review the responses to their comments and, if they feel that any comment they have made has been misunderstood then are permitted to raise further comment.

UK CAA Safety Evenings

The UK CAA's Safety Regulation Group has confirmed dates for the next run of CAA Safety Evenings. As always, the events are open to anyone involved with General Aviation and are free to attend (although some locations may charge a nominal fee for refreshments).

David Cockburn, the man behind the safety evenings, says that unless otherwise stated, the evenings all commence at 19.30 and end just after 22.00. The main speaker from the CAA's Flight Operations Inspectorate (GA) – who is generally the aforementioned David Cockburn – is usually accompanied by a guest from another department or an outside organisation. Although the presentations may be slanted towards the host organisation, David says that most of the material is of relevance to all forms of aviation, be you a rotary, microlight or fixed-wing pilot, and as such all GA pilots are strongly advised to attend.

The dates and locations for the next run of Safety Evenings are:

08/10/2009	Little Snoring Airfield, Clubhouse (please check beforehand) 01263 822868
13/10/2009	RAF Halton, Halton Kermode Hall 01296 622697
15/10/2009	Sherburn in Elmet Airfield, Sherburn Aero Club 01977 682674
04/11/2009	Blackbushe Airfield, Bushe Cafe 077 887 13291
09/11/2009	East Midlands Airport (venue to be confirmed) 01332 810444
01/12/2009	Middle Wallop (venue to be confirmed) 01264 772711
02/12/2009	Parranporth Airfield, Flying school clubhouse 01872 552266
03/12/2009	Kemble Airfield (venue to be confirmed) 01285 771025
12/01/2010	Manston Airfield, TG Aviation 01843 823656
14/01/2010	Breighton Airfield (venue to be confirmed) 01757 289065
04/03/2010	Gransden Lodge, Cambridge Gliding Club 07801 398714

BA summer simulator sale

British Airways are having a 50% off summer sale on flight simulator experience flights. If you've ever fancied flying in the 'sharp end' of a Being 737-400, 747-400 or 777-200, then now could be the time to do it. Hour long flights, normally priced at £399 are now available up until the end of September for £200. See www.ebaft.co.uk/fly/fse.htm for further information.

Sir Roy McNulty Retires as UK CAA chairman

The UK Civil Aviation Authority has announced that Sir Roy McNulty is stepping down as chairman of the CAA at the end of his term of office. Dame Deirdre Hutton takes over as Chair from 1 August and Andrew Haines will take up his post as chief executive from 6 August.

Sir Roy said: "It has been a privilege and a pleasure to be chair of the CAA over the past eight years, and to have served as a member of the CAA Board and chairman of NATS for two years prior to that. Inevitably, there have been lots of challenges during that period, but I believe that the CAA has dealt effectively with everything that came in its path, and I was especially pleased that the independent Pilling report on the CAA recognised the view of our stakeholders that the CAA is probably the best aviation regulator in the world.

"I believe the CAA's achievements and reputation are due in large measure to the skills and professionalism of its staff. But these achievements and the CAA's strong reputation stem also from the co-operative relationships which exist between the CAA and its key stakeholders - UK aviation (commercial, military and general aviation), the UK Government and politicians from all parties, and European and other international institutions. I am most grateful to this wide range of stakeholders for the strength of their co-operation during my term of office, and I have no doubt that the CAA's new leadership team will be able to build on that co-operation to help meet the aviation challenges of the future."

Ian Dugmore appointed director of UK Airprox Board

The outgoing chairman of the Civil Aviation Authority, Sir Roy McNulty, and the Chief of the Air Staff, Air Chief Marshal Sir Glenn Torpy, have appointed Air Commodore Ian Dugmore as Director of the UK Airprox Board (UKAB).

Air Commodore Dugmore, currently director of Aviation Regulation and Safety in the Ministry of Defence, will take up his appointment on 28 August 2009. He replaces Peter Hunt, the current Director of UKAB, who is retiring following a five year run in office.

Air Commodore Dugmore joined the Royal Air Force in 1975 and has 4,000 hours flying experience as a pilot, mainly on Phantom and Tornado aircraft. He has been in his current role since 2007, which includes liaison with UK and other European civil and military aviation authorities and the development and implementation of MoD-wide aviation safety management systems.

Bristol Aviation rewards two schoolchildren for 'good behaviour'

Two pupils from The Link Special School in Bath have taken to the skies this month as reward for their good behaviour.

Ben Anderson, aged 14, and Anton Rogers, also 14, visited Bristol Aviation where they went up for a 45 minute trip in a four-seater Warrior aircraft.

The Link, one of Bath & North East Somerset Council's schools n the UK's southwest, takes Key Stages 1 - 4 students identified as having social, emotional and behavioral difficulties. All students have been permanently excluded or are at risk of permanent exclusion from local schools.

"The school has a behaviour policy based around co-operation and respect," says Vicky Tucker, the school's assistant headteacher. "We believe all behaviour can be taught and that through an ethos of co-operation and respect, strong relationships can be forged. This enables us to support our children and young people in making the right choices and in developing positive behaviours.

"Pupils who demonstrate these are rewarded with things such as store vouchers and trips out. For students who have exceeded all expectations in terms of their improved behaviour and achievements we always offer a special reward. A member of staff recently had a trial flying lesson at Bristol Aviation and thought that a flight would be a once-in-a-life time opportunity and a true reward for these two students. We were delighted when Bristol Aviation agreed to help."

Pilot Pete Gillett said: "We agreed to offer the trip free of charge to the school as we thought it would be great to give these young people the opportunity to go up in a plane and have a go. This was not just an air experience for them, but also a flying lesson."

TBM 850 training

Simulator training provider SimCom has installed a Daher Socata TBM 850 flight training device at its Orlando, Florida training centre. The system features the single-engine turboprop's Garmin G1000 integrated cockpit and new high-resolution visual system, which offers day/dawn/dusk/night or continuous time of day operation. It features more than 15,000 light points per channel with 2.5-arc-minute resolution and uni- and bi-directional light point lobe patterns

Wings Over Westminster

No fly zone

Resident Parliamentary aviator Lembit Öpik asks whether the collateral damage of protecting us from illegal immigrants and terrorists will be the demise of the British flight training industry.

OK folks, listen up. Normally I write about flying about, or watching other people flying about, or politicians who fly - and everything that goes with it. But this time I've got to tell you about some politics which could really spoil things for lots of people who want to learn to fly. You see, some changes may be happening which stand to bankrupt the UK flight training industry.

The Government's determination to repel illegal immigrants has led to methods which could have the direst of consequences for aviators who are learning or taking tests at all levels.

Let's go back a step. The UK Border Agency is in charge of keeping the 'wrong people' out and letting the 'right people' in. It's decided to prevent registered training providers from accepting foreign students unless those providers have appropriate accreditation. All UK flying schools ARE registered training providers, including those involved in commercial licence training, thus the UK Border Agency is implying some foreign nationals claiming to come here to get their commercial pilot's licence might be 'faking it.' So the schools have got to get accredited, or it's goodnight Vienna.

Note that commercial flight training of foreign nationals has NOT been banned in the UK. If they'd done that there'd be such a backlash we could overturn it as the act of vandalism against a high value industry which it is - at a time of recession. No, the approach is more insidious. It's death by red tape.

'Accreditation' of Flight Training Organisations (FTOs) means they must get a 'Tier 4' sponsor licence – meaning they've got to prove they're competent and reliable enough to ensure individual applicants satisfy the entry requirements as legitimate students. Apparently, people have entered the UK pretending to be students after having signed up to bogus English language institutions and the like, which don't exist as educational facilities at all. They've used it as a ticket to get in and stay in. The authorities want to clamp down on that, hence the new rules.

But hang on a cotton pickin' moment! Now I ask you: if you were trying to sneak into Britain from a foreign clime, would you really pretend you were coming here to become a pilot at some bogus flight school? What would it be called? "The Magnificent Very English School of Flight" Or perhaps, "The Super Duper College for Flying Foreigners Who DON'T Want to Live in Britain, Sir, I like your country very much, Long Live the Queen" I don't think so. It's just ridiculous.

It goes without saying the time-consuming and costly business of accreditation is being imposed on flying schools by those with no real consideration for the realities of the situation. Naturally, from the applicant's perspective, all that messing about is simply another barrier which must be overcome if they are to learn to fly in the UK. In effect, it creates an un-level playing field whereby either FTOs jump through so many hoops the Chief Flying Instructor could qualify as a contestant at Crufts, or students end up effectively encouraged to junk the idea of the British commercial pilot training route and go and learn somewhere more relaxed like the Yemen School of Flying.

This risks bankrupting a lot of UK flying schools. They depend on the lucrative income from foreign students. Cut that off and you strangle the business.

There's an irony in all this as well. There is a genuine risk that this actually reduces flight safety. If the nine Democratic Republic of Congo students who've just been turned away from learning in the UK go elsewhere, they won't benefit from the world's highest quality FTO's and some of the best instructors. If this is meant to be making life safer for us, by preventing potential illegal immigrants from coming in as pretend student pilots, then I want to see the Impact Assessment which shows the risk of what happens if most of them learn in planes which make Bleriot's aircraft seem modern. So the irony comes in barring people from learning to fly in the most rigorous training environment in the world in case they're lying about their intentions.

There's more of a risk of being killed due to pilot error because of inadequate training abroad than because your waiter in the local café is a 68 year old illegal immigrant who, incredibly, fooled immigration officials into thinking he wanted to fly Jumbos for American Airlines. So I want to see the evidence. I simply don't believe that claiming you're learning to fly would be the first line of approach for someone attempting to skip the UK border.

Charles Henry, chairman of training giant Cabair, sums it up. In one of his many communications with the UK Borders Agency he asks: "I should also be most grateful if you could advise how all such FTOs might meet their commercial as well as security obligations in some form of either temporary extension or exemption or fast-track accreditation. Current responses from those Accreditation Agencies approached take the hopelessly uncommercial view that as much as six months or longer may be expected before the process can be completed... and this would cause grave consequences for the many highly-skilled employees likely to lose jobs as a result as well as loss of substantial overseas revenues to the UK."

And the Agency's response? "May I reiterate that all other specialist training providers are required to obtain accreditation before being able to bring student visitors to the UK, or before applying for a Tier 4 sponsor licence. We are unable, for reasons outlined previously, to apply any exemptions to the accreditation requirement, but I would suggest that you contact one of UKBA's approved accreditation bodies to see how they can assist in accrediting your schools."

This, despite the obvious fact that the Civil Aviation Authority watches flight training organizations like a hawk. What does the Border Agency fear? That some likely lad in East London will fool the CAA by setting up the 'Albert Square Flying School Emporium' and slip in a few hundred thousand illegal immigrants under the guise of becoming professional pilots?

Since the UK Borders Agency is of the view that there can be NO exceptions to these regulations - and since FTOs are seen as educational establishments, basically we're screwed.

The Civil Aviation Authority, which was given the option to look after this aspect of all FTOs in the country, has decided that's not its job. In a way, they're right, but it's frustrating. It would have been a solution. As it is, it simply isn't sensible to lump flying schools in with universities and training colleges, which just aren't the same.

In the correspondence between Charles Henry and the Agency, which is three times longer than this article, there has been not a centimetre of movement on the matter.

So what can be done? Quite simply, we're going to have to escalate it to higher levels – something Cabair is already intending to do. It's not been a data-based policy change and nobody seems able to point out the real benefits of the new system. 'Mights' and 'maybes' pail into insignificance against the fact that this is killing our flying schools.

I'm raising this matter in Parliament and my fellow aviators Gerald Howard MP and Lord Rotherwick are also on the case. The question which the Border Agency must answer is what they think they'll achieve by enforcing all this nonsense in such an indiscriminate way. We find ourselves in the farcical position where an entire industry finds itself incarcerated by regulation which, to anyone who applies the slightest modicum of common sense, isn't relevant to that sector and won't achieve anything important apart from expanding still further the number of people who have to trade their passion for paperwork – and an administrative fee.

It's time to stop pretending that by further impeding the profitability of Britain's flying schools it will significantly help control illegal immigration. As long as we continue to have a 'one rule fits all' approach, everyone's going to be fully occupied filling in and checking forms. Before long, I fear the authorities will be so obsessed with watching who's taking off at Wycombe Air Park that they'll no longer care who's landing at Heathrow.

Lembit Öpik's back catalogue of 'Wings Over Westminster' available free to read at **www.ftnonline.co.uk**

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SAFETY MATTERS

A PA38 Tomahawk cockpit, with the fuel selector centre

fuel selector being moved by either occupant before or after the accident. The valve body may have been displaced in the impact which in turn displaced the selector lever, leading to the misleading indication.

The aircraft had undergone maintenance work two weeks before the accident, during which a 150-hour scheduled inspection was carried out and the engine was replaced with a newly overhauled unit. The aircraft had completed one engineering flight, in order to conduct the engine 'bedding in' procedure as detailed in Lycoming Service Instruction 1427B, before being returned to normal service. Since the inspection and engine replacement, a total of 9 hours and 55 minutes had been flown prior to the accident flight. There were no reported defects with the engine or airframe during this period.

Following a flight earlier in the day, the aircraft was refuelled with 37 litres of AVGAS 100LL to bring the total onboard to 78 litres at the commencement of this flight. The fuelling facility conducts routine daily sample checks of the fuel quality each morning and a further extra sample was taken immediately after the accident. Both of these samples were normal and no problems were reported by other aircraft that had received fuel from the same facility.

A loadsheet produced after the accident indicated that the aircraft was within weight and balance limits, with a fuel load of 78 litres and a take-off weight of 1,658lb. The Pilot's Operating Handbook (POH), produced by the manufacturer, indicated that at the maximum take-off weight of 1,670lb the stall speed of the aircraft in standard atmospheric conditions would be 53kt. At this weight, and in the conditions reported at the time of the accident, the take-off run would be approximately 250 metres. The manufacturer notes that published data are based on flight tests of a new aircraft in standard configuration and do not allow for physical deterioration, pilot technique or runway surface. High humidity also has a detrimental effect on the performance of normally aspirated piston engines for which no consideration is made in the POH. Nevertheless, continued successful operation of this aircraft type at the accident airfield indicates that it is capable of achieving satisfactory performance for take-off from the runway used by the accident flight.

The accident airfield is bordered to the east by a contiguous built-up area. It has four licensed grass runways, two of which (including the accident runway) are aligned east - west. The aerodrome is susceptible to waterlogging and has several notable humps which are known locally to be sufficient to cause aircraft close to take-off speed to become momentarily airborne. The aerodrome operator has an ongoing program of works that attempt to maintain the manoeuvring areas in satisfactory condition. An accident in which a similar aircraft failed to become airborne safely at this airfield was found to have resulted from an excessive nose-up pitch input and not from inadvertent launch from one of these humps. Aircraft routinely operate from the accident airfield without incident and there is no evidence that the presence of such humps is unduly troublesome.

Civil Aviation Publication (CAP) 168 – 'Licensing of Aerodromes' gives guidance to licence holders on the procedures for the issue and continuation of or variation to an aerodrome licence and indicates the licensing requirements used for assessing a variation or application. The section relating to unpaved surfaces (including grass runways) states, in part:

> "Natural surfaces of unpaved runways should be prepared or treated to remove irregularities which might adversely affect the directional control, braking or riding characteristics of an aeroplane."

and,

> "A simple method of assessing the evenness of a natural surface is to drive over it in a Land Rover or similar vehicle at 30 mph. If the surface is acceptably even, this test should be accomplished without discomfort to the vehicle occupants."

The instructor, who most frequently flew from the operator's base at a nearby airport with a longer, paved runway, had been briefed on procedures for flying at the accident airfield and had been assessed on ability to follow them by the operator's Chief Flying Instructor. The aircraft operator has also issued written orders to its instructors concerning operation at the accident airfield. In particular, it requires that aircraft contain no more than 78 litres of fuel prior to departure in order to restrict maximum take-off weight and reminds pilots to ensure that 'rotate speed and climb speed' are achieved before allowing the aircraft to become airborne.

Based on information published in the POH and the continued successful operation of the type at the accident airfield, it is likely that the aircraft was capable of taking off from the runway in the prevailing conditions. Despite containing undulations, which are known to cause aircraft to become airborne before intended by their pilots, there is no evidence that the surface of the runway has caused similar accidents to this one. When an aircraft becomes airborne at its stall speed there is no performance margin and a change in flight path or control input may result in development of the stall. Aircraft of this type generally have insufficient power to accelerate away from the stall whilst climbing.

Conclusion

The aircraft was in an airworthy condition and operating normally immediately prior to the accident, which occurred when the aircraft failed to achieve the proper take-off speed before becoming airborne and stalled during the attempted forced landing.

From an AAIB report

€60 million 'safety equipment' bill for UK helicopter pilots?

According to the latest raft of regulatory proposals to come out the European Aviation Safety Agency (EASA), helicopter flight training schools and private owners could be forced to equip their helicopters with expensive new safety equipment, which is claimed to be largely unwarranted or disproportionate for the type of flying activity undertaken.

EASA's Notice of Proposed Amendment for Air Operations of Community Operators (NPA 2009-02), published 30 January 2009, details proposals for the operation of EU registered aircraft within European airspace. Included in the proposals are requirements for helicopters to equip with additional safety equipment, which according to the Helicopter Club of Great Britain (HCGB) is "grossly unreasonable and disproportionate."

Included in the proposals are requirements for light, non-complex helicopters to be fitted with a second attitude indicator, pitot tube heaters and an alternative static pressure source, for aircraft operating at night. Additionally, it is proposed that helicopters wishing to cross short stretches of water, such as the Thames Estuary, must be equipped with emergency flotation equipment and emergency locator transmitters. For a standard four seat training helicopter such as the Robinson R44, the estimated cost for compliance of the proposed regulations is in excess of 60,000 Euros. Given that there are more than 1,000 of these types of helicopters currently active in the UK, the bill for compliance in the UK alone is estimated to be in excess of 60 million Euros.

Moreover, for aircraft such as the Robinson R22, a two-set helicopter widely used by training schools across Europe, equipage of flotation devices cannot be done retrospectively, effectively preventing them from undertaking any flights over water. Additionally, Robinson are no longer manufacturing new R22s with these flotation devices.

In response to the NPA, flying schools, helicopter organisations and individual pilots have been entering comments with EASA arguing for the proposals to be reconsidered. The HCGB, which represents the interests of approximately a third of all helicopter owners in the UK and Northern Ireland, state that their primary objection is that EASA have chosen to group private and commercial helicopters under the same bracket, effectively increasing light helicopter regulation to the level required of commercial operators.

In their response to the NPA, HCGB state:"Private, non-commercial helicopter operations should be regulated with a lighter touch than CAT [commercial air transport – Ed] as is the case with the proposals for private fixed wing aircraft. Consequently we consider that some of the EASA proposals are unnecessary, disproportionate, burdensome and costly and have no basis in accident history. There is no safety case for them. Private helicopters have a similar equipment related accident rate to private fixed wing."

From a safety case point of view, the HCGB argues that there is no evidence that flights in light, non-complex helicopters are less safe than fixed-wing aircraft. Indeed, says the HCGB, the UK Civil Aviation Authority's records show that these helicopters have a zero fatality and injury record over water. Why is it therefore, says the HCGB, that light fixed-wing aircraft are permitted to fly over water up to 100nm from land without the carriage of flotation devices, while single engine light helicopters must remain within autorotational distance of land if they don't equip with such devices?

Concerning Emergency Locator Transmitters, which EASA have also proposed helicopters flying over water must be equipped with, the HCGB say they are likewise confused as to why helicopters should have to comply with stricter regulation than their fixed-wing compatriots. "In the ELT case, a private fixed wing aircraft with a C of A issued before 1 July 2008 can have any type of ELT, whereas it is proposed that private helicopters should be fitted with a fixed, automatic ELT, as well as an ELT(S). This is not either reasonable or proportionate."

In conclusion to the proposals, the HCGB has said that: "There is overwhelming opposition amongst the members of the Helicopter Club of Great Britain to these proposals."

"Our typical member is a high achieving and intelligent person well used to evaluating risk," they continue. "Where there is no risk to third parties, they are content to make their own informed choices regarding their own flight safety. They recognise that the proposals in NPA 2009 2b are not based on any safety case, and are not made in response to an existing problem.

"The UK CAA has never seen its role as being to protect the private pilot from himself.

We trust EASA will follow this example."

The consultation period for NPA 2009-02 closed at the end of July. EASA are now working on a comments response document due out later this year. FTN contacted the UK CAA to ask for their opinion of the proposed safety equipment requirement for helicopters operating at night and over water. Unfortunately their response document had not been completed at that time we contacted them although sources indicated that the CAA's responses were largely in concert with those entered by the HCGB.


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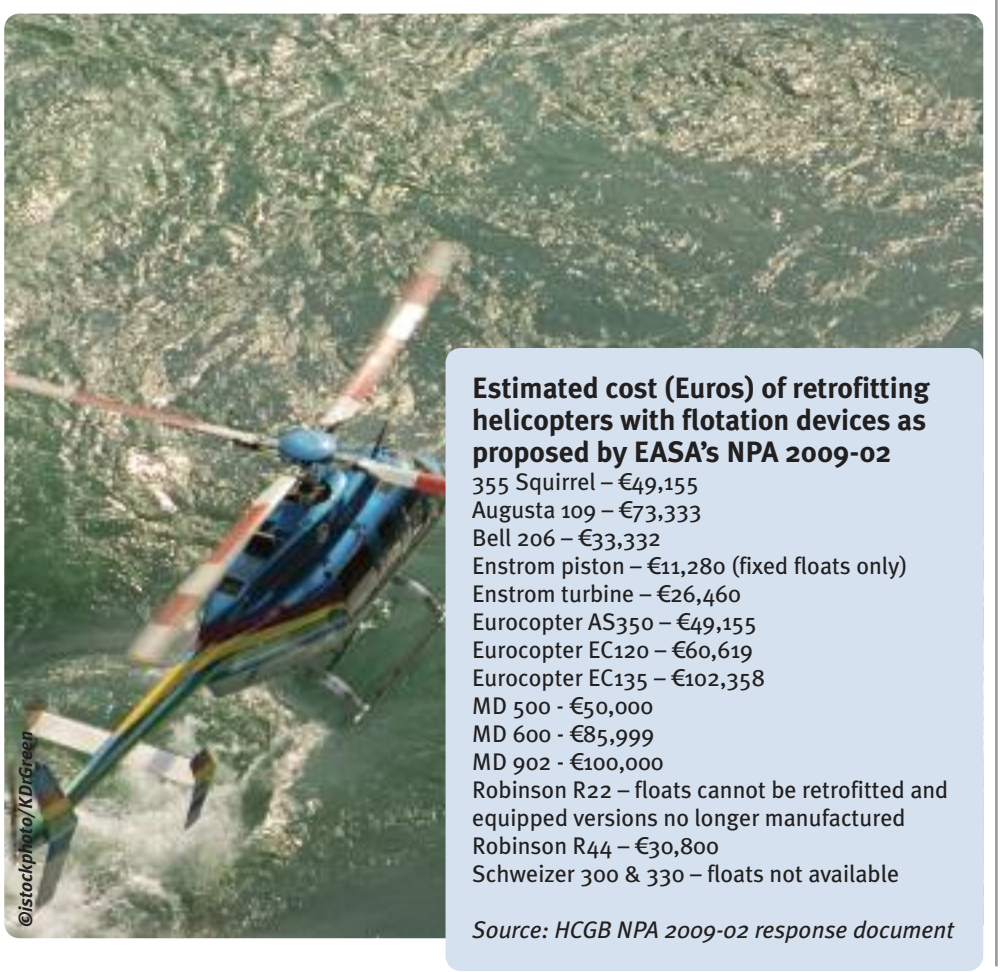
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Estimated cost (Euros) of retrofitting helicopters with flotation devices as proposed by EASA's NPA 2009-02

355 Squirrel – €49,155
Augusta 109 – €73,333
Bell 206 – €33,332
Enstrom piston – €11,280 (fixed floats only)
Enstrom turbine – €26,460
Eurocopter AS350 – €49,155
Eurocopter EC120 – €60,619
Eurocopter EC135 – €102,358
MD 500 - €50,000
MD 600 - €85,999
MD 902 - €100,000
Robinson R22 – floats cannot be retrofitted and equipped versions no longer manufactured
Robinson R44 – €30,800
Schweizer 300 & 330 – floats not available

Source: HCGB NPA 2009-02 response document

FROM THE FLIGHT DECK

Sentimental Tosh!

Part 1 of a two part article

Commercial airline people are not known for their overt sentimentality. In fact they work in such a highly regulated industry that normally cool, factual, professionalism takes precedence over emotional hyperbole. It is refreshing and sometimes surprising therefore when evidence of our colleagues' more gentle side makes an appearance – I believe this is referred to as being 'fluffy'.

In fact the very way in which the word 'fluffy' is used by crew members indicates that it is an alien concept to most airline personnel. The reasons are manyfold, although chief among them must be that the industry is a very hard-edged business environment in which to operate. This is an industry that thrives on TLAs (Three Letter Abbreviations) for just about everything and which has a language all of its own that is littered with jargon and technical expressions. From manufacturing, through commercial, all the way to flight operations, there is a continual reliance upon numbers. Everything has either a part number, a registration number, a stock reference number, a regulatory approval number and even the people are branded with employment numbers. Passenger e-tickets are given booking confirmation numbers, while crew tickets for dead-heading (such a lovely expression) are given locator numbers, which have a similar purpose.

In Flight Operations there are numbers for speed, altitude, direction, weight (mass), while in Engineering it is a numerical feast with digits for every occasion available. In fact it is possible to have a face to face meeting between two airline employees where the spoken words are composed of virtually all numbers or esoteric expressions unfathomable to the outsider. The abbreviation DOB does not stand for Date of Birth anymore, but Death on Board; UnMin is short for Unaccompanied Minor; GPU is Ground Power Unit; ASU is Air Start Unit; LIAC is Late Inbound Aircraft when it comes to logging delays (or Code 93); PAX is short for Passengers; PAP is just one Passenger; CDL is Cabin Defects Log not be confused with CDU which is Computer Display Unit; FMC and FMS are very similar, but not to be confused and in the same vein, IRS's and IRU's are also very close in meaning.

It is possible that exceeding an FTL or an FDM event requires an ASR to be filed which might become an MOR under the company's SMS when the FSO gets involved if they think it should be sent to the CAA. Not all ASRs are managed in this way and that is why there is an SMS there in the first place. (Incidentally don't confuse an ASR with a PSR or CSR - they are totally different things). Talking of FTLs of course brings us to CAP371 and the strictures that it places on crew working patterns in that a crew member could be on SBY, CTBL when called out. It might not be long before they reached their max FDP and went into Discretion which would have subsequent consequences for their Minimum Rest period to follow... Then the engineers are great when they start talking about ADD's and CRS's when it comes to filling in the Techlog. Items such as Tyres become WTL, while engines are BSI'd or have MPAs while the MEL and DDG cover dispatch with unserviceable items which are then repaired at 'A' Checks, 'C' Checks or 'D' Checks. These repairs or replacements are recorded as being carried out IAW, AMM code XYZ-1234 etc. Oh, and when it comes to Old Father Time we really go to town! UTC is fairly straightforward, but then comes ETA's, STD's, STA's, ATA's and ATD's, then we have CTOT's, EAT's, EET's and so it goes on.

Part of the magic of the industry is that although there is such reliance upon technology, you can always see and relate to the human factors in the mix

It is possible that exceeding an FTL or an FDM event requires an ASR to be filed which might become an MOR under the company's SMS when the FSO gets involved if they think it should be sent to the CAA.

In the midst of all this tangled web of communication are the employees, the people who make it all happen. Somehow we manage to get our messages across to each other and at times the whole industry seems to run like clockwork – amazing. In fact there have been countless times when we (as a crew) have been rushing to try and get an aircraft away from the stand on time when it really has looked hopeless even up to just a few minutes before STD (Scheduled Time of Departure). The holds are still open, the cabin crew are still counting heads as the last passengers are boarding while, in the rear galley, there is organised chaos as the last catering is being done. The pushback tractor (which has been called for on the radio several times) is nowhere to be seen and the handling agent is making calls in the terminal for the missing passengers who have not yet found the gate. All of a sudden, the pushback team appear round the end of the pier, as the catering truck pulls away and the rear galley is secured, the hold doors are closed, the last pax appear at the door and are ushered to their seats, the senior stewardess appears in the flightdeck door with a thumbs-up asking "Okay to close-up?" normally while you are halfway through a PA to the cabin and the First Officer is calling for Push and Start on the Ground frequency.

Then the checklists are all completed, and the groundcrew on the headset are saying, "Release the parking brake please Sir, commencing pushback, you are clear to start engines 2 then 1..." You look at the clock and it is exactly on the minute of STD and you wonder, 'how the hell does that happen?' Incredible, but true, we have seen it many times. There are so many factors which can go wrong to prevent the flight departing on time, but so often we manage to get away just on the minute – it really is very strange. Yet that also is part of the magic of the industry, in that although there is such a reliance upon technology you can always see and relate to the human factors in the mix. The politeness and good manners of people working under incredible pressure, the private jokes and funny expressions from crews which have bonded together – often they develop a sub-cultural life of their own. I recall a crew years ago whom I met while downroute and they had all been together for over a week. We worked for the same airline and I knew some of them individually, but I had not been part of their 'gang' on that trip. They had found something incredibly amusing about the expression from the London underground system "Mind the Gap!" and this had become their in-joke. Whenever one of them said it out loud as if announcing it on a tube station platform, all of the rest of the crew would collapse laughing hysterically, this while others of us shook our heads in wonderment! But they were funny to watch.

The second part of 'Sentimental Tosh' will appear in next month's issue of Flight Training News

SAFETY MATTERS

Three pairs of eyes - one missed check

The aircraft was on an instrument rating training flight with a student pilot in the left seat, an instructor in the right seat, and another student observing from the rear. Following a series of instrument approaches and go-arounds, the student flew an asymmetric approach and go-around, followed by a visual circuit to land.

The landing gear was not selected down during the visual circuit, and the flaps were not selected beyond 15° (the operator had not established formal Standard Operating Procedures, but students were taught to select full flap once below asymmetric committal height). The flare resulted in a prolonged 'float', and the aircraft touched down on its underside approximately 800 metres beyond the threshold. The instructor later stated the 'float' was probably a consequence of the absence of drag from the landing gear. The aircraft slid to a halt and the occupants vacated without difficulty; there was no fire.

The instructor attributed the accident to "instructor error", and stated that contributory factors included the student's diligence during the previous approaches, and the fact that it was the last landing of the last flight of the day. The instructor's report also mentioned a discussion of asymmetrical committal height during the circuit, which may have been a distraction. The instructor stated that the landing gear warning horn had not sounded.

The landing gear warning horn in the Beech Duchess sounds intermittently if a throttle is retarded below an engine setting sufficient to sustain height with the landing gear not down, or if the flaps are set beyond 16° and the landing gear is not down, regardless of throttle position. If full flap had been deployed for landing, it is probable that the landing gear warning horn would have sounded to alert the crew to their configuration discrepancy.

From an AAIB report

Aircraft became airborne too early

The instructor was conducting an 'introductory flying lesson' in a PA-38 Tomahawk aircraft with the student, who had no previous experience of flying in light aircraft. While waiting for the aircraft to return from a previous detail the instructor showed the passenger another aircraft of similar type to explain its layout and the function of various cockpit controls. After boarding the accident aircraft the instructor conducted normal pre-start, engine and pre take-off checks and taxied the aircraft to a holding point at the beginning of the grass runway.

Meteorological conditions reported at the time included wind from 140° at 5kt and air temperature of 22°C. The Flight Information Service Officer (FISO) on duty commented that the air was humid, there was no precipitation and the runway surface was dry. The FISO transmitted the surface wind and indicated that take-off was at the pilot's discretion. The take-off run available on the runway was 621 metres.

At an indicated airspeed of 53kt, the aircraft became airborne unintentionally after passing over a hump in the runway.

Initially the take-off was as the instructor expected, with normal acceleration to a point approximately 200 metres after the start of the take-off roll but, shortly afterwards, at an indicated airspeed of 53kt, the aircraft became airborne unintentionally after passing over a hump in the runway. The instructor decided to continue the take-off, expecting the aircraft to accelerate satisfactorily. The instructor attempted to accelerate the aircraft close to the ground and, having some success, raised the nose again. As it approached the aerodrome boundary the aircraft had reached approximately 50 feet and was observed to have a nose-high attitude. At that moment the pilot became concerned that the performance of the aircraft would be inadequate to pass safely over houses at the edge of the aerodrome, or a large viaduct several hundred metres beyond. The instructor therefore decided to carry out a forced landing in open ground between the boundary fence and the houses. However, on passing the end of the runway the aircraft began to lose height and its right wing dropped. The aircraft rolled to the right and impacted the ground nose first.

First responders released the passenger and took her by road to hospital, where she was found to have no significant physical injuries. The aerodrome fire and rescue service (AFRS) released the pilot, who was taken to hospital by air ambulance.

The wreckage was located in a slight hollow in an area of scrubland 108 metres past the upwind end and on the extended centreline of the runway. The ground was soft and slightly boggy. The longitudinal axis of the main part of the aircraft fuselage was aligned on a heading of 210°(M), approximately 120° right of its original direction of travel. The damage to the aircraft indicated that it was in a 'nose low' and 'right wing low' attitude, and yawing to the right. The right wing tip impacted the ground, displacing the right wing. The left main gear was torn from its mounting and found next to the wreckage. The rear fuselage, aft of the cockpit area, was mostly detached and displaced to the left as a result of the right yaw on impact. One propeller blade was undamaged and the other was bent rearwards with some damage to its leading edge, indicating that it was rotating at low power. The nose landing gear was detached and located with the main wreckage

A PA-38 Tomahawk – not the accident aircraft

and its mounting frame, the engine mount and lower cowling were distorted. There was no fire.

Examination of the engine controls and the primary flying controls found them all to be correctly connected and working as expected. The flap lever and the flaps were in the 'first detent' position and the elevator trim was set to a mid position. Both of these were consistent with normal operation. The airspeed indicator was checked and found to be reading accurately and there were no apparent defects with the pitot-static system.

The engine was examined externally. The rocker covers were then removed to check valve gear operation whilst the engine was rotated by hand. The spark plugs were removed to allow a borescope inspection of the pistons, cylinders, valve heads and valve seats. No defects were noted and the condition of the components examined was consistent with normal operation and with the life of the engine.

Fuel samples were taken from both the left and right tanks. Preliminary visual examination found them to be satisfactory and free of contamination. Sixty litres of fuel were recovered from the tanks.

Initial inspection by the Fire Service indicated the fuel selector valve was in the off position, but a later more detailed inspection confirmed the valve was selected to the left position. The fuel selector is a rotary valve that has 'left', 'right' and 'off' positions. To prevent inadvertent selection, a spring-loaded pawl needs to be moved away before 'off' can be selected. The valve is located near the base of the firewall and is connected to the selector lever at the base of the centre instrument panel by an extension rod.

When interviewed afterwards, the passenger, perhaps as a result of the briefing she received from the instructor in a similar type aircraft, demonstrated a good understanding of the function and location of the various cockpit controls. She stated that she did not recall the

The secret diary of a flying school manager, old before his time

My Health vs His Safety part1

When asked what demographics are represented by your average pilot I generally answer that it encompasses those whose egos are inversely proportioned to their flying ability/experience and those who are unable to put on a pair of trousers without the aid of a checklist. A gross exaggeration, obviously, but one that has proven itself time and time again in our little corner of the world.

Some years ago now (actually it's only been a couple of months but feels interminably longer) a new student signed up at our school to train towards the grant of a pilot's licence. Normally we like people like this. They're our bread and butter after all and frankly we can't get enough of them. However, this particular individual quickly became about as welcome round the club as an incontinent skunk with swine flu.

Said individual, who for the sake of anonymity (ours, obviously, not his) we will call Arthur Brain, was hardly the type of individual who engendered comradeship and bonhomie in his fellow man. Quite the reverse in fact. Arthur's day job as assistant chief of the local County Council's Health & Safety Inspectorate had evidently left him with an 'interesting' outlook on life, which, while jaundiced from any normal person's point of view, was at least balanced given it had apparently left him with a chip on both shoulders.

Now, I'm an affable chap as I'm sure my staff will testify and only too happy to accommodate certain idiosyncrasies that manifest themselves in our customers - up to a point that is. This Arthur however was clearly going to test my reserves to the limit.

It was another Monday morning, following on from a busy weekend fly-in event that had finished around 11pm the previous evening. As a result I was running a little behind schedule and so didn't get to the airfield until about quarter past nine, leaving Linus to open up. Actually, I wasn't in any particular hurry as the first booking wasn't until 11am and given the inclement weather I wasn't expecting anyone to turn up at the club for a while. As I parked my car Linus ran up from the clubhouse and accosted me before I'd even had a chance to take the keys out of the ignition.

"Morning Boss," he squeaked.

"Morning Linus, what's up?" I replied, noting that his current state of anxiety was a couple of notches up from normal.

"You know we've got a new student starting today, boss?"

"Yes, what about him?" I asked.

"Well, he's been here since I opened up at 08.30 and has been inspecting the clubhouse for... err... things," replied Linus, displaying his usual gift of presenting a well thought out phrase.

"What 'things' Linus?" I said, as alarm bells started to sound inside my head.

"Err... you know, things! Things that, err... might, err... be considered a hazard to health and safety," he finally managed to blurt out.

"What? You mean he's a Health & Safety inspector? Ye Gods!!"

Following Linus into the clubhouse I could see no sign of the inspector at first. Then, just as I was about to go to my office, a head popped up from behind the Ops counter looking for all the world like it owned the place.

"Good morning," I said between clenched teeth. "Can I ask what you are doing behind the Ops desk, uninvited and unescorted?"

"Do you or any of your colleagues keep rodents as pets?" the man said as he straightened up from his prone position behind the counter.

"What?" I answered, thrown off track for a moment by his unexpected question.

"I said - do you or any of your colleagues keep rodents as pets?"

"Well, not that I know of... it's not the sort of topic that crops up in conversation round here much, to be honest. Why do you ask?"

"I am asking because there is evidence along the edge of the carpet here," he said pointing behind the counter, "that a rodent or rodents have been defecating in this area," he continued, pronouncing the word 'defecating' in such a way that he obviously considered there were eight deadly sins rather than the standard seven.

"If you had answered in the affirmative to my question then we could be looking at a severe penalty for the rodent's keeper. As it appears that you do not have any domesticated rodents on the premises I can only conclude that you have a rodent infestation that needs to be sorted ayee-ess-ayee-pee."

"Sorry, what?

"You have a rodent infestation -"

"Yes, I heard that bit; it was the bit about peeing at the end that got me?"

"I said, ayee-ess-ayee-pee, which I'm sure you'll recollect means 'as soon as possible'," he replied.

"Oh, I see, you said ASAP... yes of course, how cloth-eared of me," I said, while wondering at the same time if this individual was taking the ayee-ess-ayee-pee out of me.

"I must also tell you that this building contravenes a number of other health and safety regulations, and that it is my solemn duty to inform you that unless they are rectified over the next 24 hours then I will have no choice but to close you down until such time as they are put right. Now, shall we go somewhere less public and go through the list?"

Oh good, I thought, and I haven't even had a cup of coffee yet. Beckoning him to follow me I walked into my office and then spent the next 45 minutes wondering what I had done to deserve the attention of this individual.

"...in conclusion, you can see that under article five, subsection 12, paragraph three of the Health & Safety at Work Act 19** I am empowered to take appropriate and decisive action in the event of a potential health and/or safety threat to members of the public," concluded 'Arthur', as I had learnt his name was during the previous discussion.

"Yes, I understand entirely and will set to rectifying all the defects you have alluded to in your comprehensive list," I replied. "Only 24 hours is rather a short time in which to get all this done. Isn't there anyway you could grant us a bit longer?" I pleaded.

"We are not normally allowed to grant such dispensations," he replied. "But, given you have clearly taken my points on board I am willing be a little lenient vis á vis the compliance period."

"On an unrelated matter," he continued, raising an eyebrow and leaning towards me in a conspiratorial manner, "concerning my training with your school, how much did you say the hourly training rate was again?"

Ah! So this was what the he was up to. All that guff about rodent droppings and improper signage was merely a ruse to get me to lower his training fees. I could quite happily have thumped him at this stage, but clearly he had me over a barrel and so some discounting (horrible word) was going to have to be done.

"Well, Arthur, normally the rates are fixed and considering the way the market is at the moment we're barely managing to break even. However, seeing as you have stated you are willing to allow us an extension period in which to put our clubhouse in order, I would be happy to drop your training rate by, say, 5%. OK?"

"I was thinking more along the lines of 20% actually," replied Arthur.

Christ! That's less than cost, I thought.

"I'm sorry, but we simply can't afford to go that far, but I could, at a push, offer you 10%."

"Done!"

Yup, I certainly had been...

To be continued.

Singapore Flying College order Citation Mustangs

Singapore Flying College in Australia have announced an order for five Citation Mustangs to support its advanced training program.

Singapore Flying College is a wholly-owned subsidiary of Singapore Airlines and is responsible for ab initio and advanced pilot training. It has its advanced training facility at the Sunshine Coast Airport in Queensland and currently operates four aircraft, two simulators and a college campus, producing up to 200 graduates each year.

The five new Cessna Citation Mustangs will be delivered over the next three years. The arrival of the first Mustang is scheduled for early 2010, along with two full flight level D Mustang Simulators later in the year.

Brighter Prospects in India

According to a Boeing forecasts, over the next 20 years the Indian market will require 1,000 commercial jets valued at approximately $100 billion, with a consequent increase in demand for pilots.

India's economy has averaged 7% annual growth over the past 10 years and the country's economic growth remains among the strongest in the world. The record growth in air travel, which expanded rapidly the past eight years due to liberalisation and favourable economic conditions, is now tracking at 2007 levels. A Boeing spokesman went on to say that air travel in India, tied closely to the country's economic growth, will rebound.

Recent market forces and recession in many parts of the world have led to a contraction of India's commercial aviation sector, with consolidation of airlines and an overall reduction of capacity. Nonetheless, Boeing says that India's projected GDP growth over the next 20 years will average 6.5% annually, driving a resurgence of demand and capacity growth for the country's airlines.

Garmin G600 introduced on Piper Seneca, Seminole, Warrior and Archer

Piper Aircraft has announced that it will add the Garmin G600 glass avionics suite to its primary twin-engine and single-engine trainers and the newly revamped Piper Archer that will come to market next year.

The G600 will be offered as optional equipment on the Seneca V, Seminole and PA28 Warrior. The G600 and STEC-55X autopilot will be standard equipment on the reintroduced Piper Archer

"The G600 adds impressive features to our model line, particularly the way it interfaces with the STEC autopilot," said Piper President John D. Becker.

The G600 incorporates two individual displays – a PFD and MFD – in a customised package that combines primary flight data, including attitude and air data, with navigation, weather, terrain and traffic data displayed on dual LCD displays. The G600 is designed to integrate with Garmin's panel mount WAAS GPS products and replaces traditional mechanical gyroscopic flight instruments with Garmin's solid state Attitude and Heading Reference System (AHRS). Autopilot functions that interface with the G600 are altitude hold, altitude pre-select and pitch rate command.

The Piper Seminole will soon be available with Garmin G600 'glass cockpit'

Southend Support

A website has been set-up to support the expansion plans of Southend airport, home to around six fixed-wing and helicopter training schools. The site includes an airport fact sheet, links, a gallery and forum and blogs. The website can be found at: http://planes2009.ning.com/

Patriot Aviation buys Heliflight (UK)

Helicopter and fixed wing aviation business Patriot Aviation has acquired Heliflight (UK) Ltd, the Gloucester and Wolverhampton based helicopter flying training and charter business.

Sir Peter Rigby

Patriot Aviation's owner, Sir Peter Rigby, says his intention is to retain the two brands but to consolidate aircraft sales of Cessna fixed wing aircraft, Schweizer and other helicopter brands under the Patriot banner, whilst opening sales offices at Gloucester and Wolverhampton.

Helicopter engineering will also be consolidated with a new base to be opened at Gloucester, whilst flying training and charter will be consolidated under the Heliflight brand, said Sir Peter. Heliflight will also extend its operations from Gloucester and Wolverhampton to Cranfield.

Commenting on the deal, Sir Peter said: "Undoubtedly, Patriot and Heliflight have seen sound trading in recent months with many UK aircraft owners realising the value of their aircraft in the euro zone, with the help of our sales operation. Moving forward, Patriot's engineering capability in particular has the opportunity to grow into new regions, whilst demand remains strong for Heliflight's flying training and helicopter charter work."

An enthusiastic fixed wing and helicopter pilot, Sir Peter says he has always had a strong interest in aviation and a wish to carry over his business principles and customer service ethic to an aviation business.

Heliflight (UK) Ltd was established in 1996 at Halfpenny Green Airport near Wolverhampton, later expanding to a second base at Gloucestershire Airport. There are 11 flying instructors at the two airports and a comprehensive range of helicopters that are used for both hire and training helicopter pilots. Heliflight has 15 helicopters in total, ranging from the Robinson R22 to the Executive Augusta A109.

Patriot says that Heliflight will continue to be managed by professional pilot Jon Lane, who has run the business since its inception.

Oxford Aviation Academy wins new training contract

Oxford Aviation Academy (OAA) and British Airways have signed a five-year training agreement for the provision of pilot training and simulator time for the airline's new fleet of Embraer 170 and 190SR aircraft.

Embraer's 170 E-Jet

According to BA, the first of the new Embraer aircraft is getting ready to roll off the production line in Brazil and is on schedule to be delivered to British Airways' wholly owned subsidiary BA CityFlyer in September, ready to go into operation later this year.

Firm orders have been placed for six Embraer 170 and five Embraer 190SR efficiency jets, known as E-jets, with options for three more, in an investment worth US$376 million, based on current list prices. They will replace the current fleet of nine Avro RJ100 and two RJ85 aircraft operated by BA CityFlyer.

Entitlement Training for the initial group of BA CityFlyer pilots began during July at OAA's Gatwick Training Centre on behalf of Embraer.

OAA is an authorised Embraer 170/190 Entitlement Training provider and holds JAR TRTO approval for the aircraft type. OAA says that they have invested in a full training suite, comprising a dual fit Embraer 170/190 Level D full flight simulator, which has been specially configured to meet the airline's requirements to undertake steep approaches at London City Airport, and a new ground school facility which includes computer based training (CBT) stations, flight management systems (FMS) trainers and an integrated procedures trainer.

Commenting on the agreement, Brian Simpson, OAA Group CEO commented: "We are delighted that we have signed this agreement, having worked with both BA CityFlyer and Embraer over the last year to support the introduction of the new E-Jets fleet. This has been an exciting project and OAA looks forward to providing the best possible support in the years ahead."

Peter Simpson, managing director of BA CityFlyer said: "Excellent training standards are an integral part of our operation and it is very important to find the right partner. We are delighted with what OAA has to offer for the training of pilots for our exciting new aircraft fleet."

UK CAA publish 'final' decision on Mode S

The UK Civil Aviation Authority (CAA) has published its final decision on proposals for a second phase of expansion in the use of Mode S transponders in UK airspace.

Following consultation on a variety of proposals, the CAA say it has decided to focus on the busiest and most complex areas of airspace for the expansion of Mode S transponders.

The CAA intends to introduce:

- Regulation to require all aircraft (except gliders) flying within Class A to C controlled airspace to carry and operate a Mode S transponder with effect from 1 October 2009.
- An extension of the Mode S transponder carriage regulations to include gliders with effect from 6 April 2012.
- Amendments to the transponder carriage regulations applicable to Self-Launching Motor Gliders (SLMG) to bring these into line with the regulations for all other gliders.
- There will still be the option for air traffic control to allow non-transponder equipped flights into the airspace, providing safety and efficiency levels can be assured.

Mark Swan, CAA Director of Airspace Policy, said: "This second phase of transponder regulations builds on the introduction of Mode S as the means of compliance for mandatory transponder carriage which came into effect in March 2008. These changes further increase the use of technical interoperability to enhance safety. By adopting a measured approach, the increased use of transponders will enhance the culture of a collaborative approach to safety of flight by all users, without being unduly restrictive.

"Although gliders will now be included in the transponder carriage rules from 2012, we will be encouraging agreements between gliding organisations and air traffic control to permit gliders without transponders to access controlled airspace where conditions permit. Even though there is a general requirement for transponder carriage above FL100 in the UK, there will be no requirement for transponder carriage on gliders when operating in current active designated gliding areas. We will work with gliding organisations to consider additional areas from FL100 upwards by 2012."

The CAA say that they acknowledge the problems of fitting transponders to Self Launching Motor Gliders (SLMG) and will amend the regulations to treat them as other gliders for the purposes of the transponder carriage.

The CAA will also amend the Airspace Change Process (ACP) to allow air traffic control service providers to apply for the introduction of compulsory transponder carriage in other specific volumes of airspace.

Under existing transition arrangements associated with the previous expansion of Mode S transponder carriage in UK airspace, operators of aircraft wishing to operate in mandatory transponder carriage airspace that are equipped with Mode A/C transponders have until 31 March 2012 to complete the necessary upgrades to Mode S.

Mark Swan said: "Throughout the consultations on Mode S we have had extensive feedback from the General Aviation community. We have taken these views on board and I believe our final decision balances the wider needs of the aviation community with the overriding requirement for safety of flight."

The full CAA decision and further background material is available on the CAA website at www.caa.co.uk/modes.

A fact sheet on Mode S is also available via the CAA's website.

DATA & STATISTICS...

Pilot Demand to Support Fleet Growth & Pilot Retirements (2006-2026)

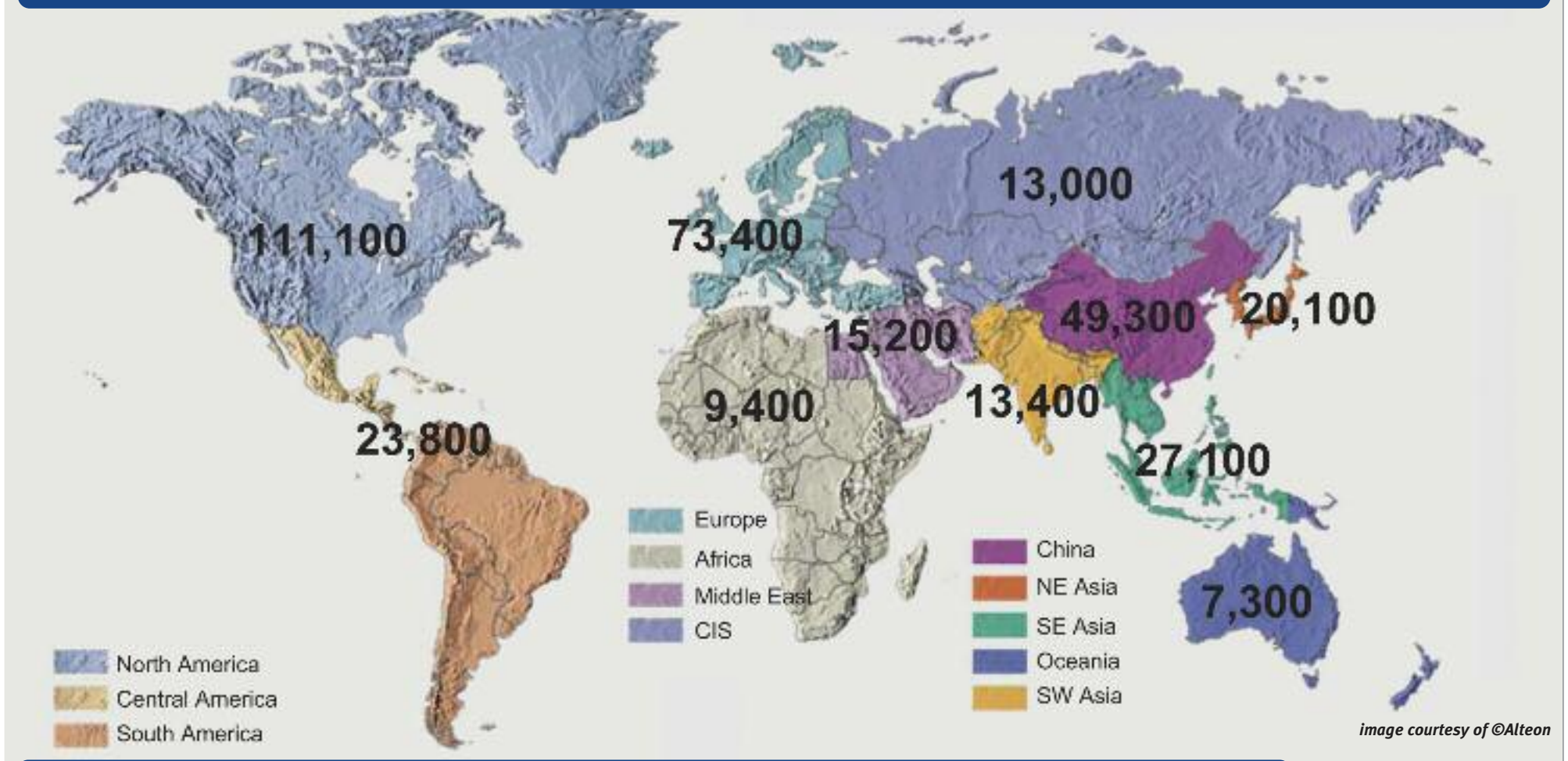


image courtesy of ©Alteon

Numbers represent the total pilots needed to support fleet growth & pilot retirements between 2006-2026

INDUSTRY WATCH

Scheduled services of Association of European Airlines member airlines:

May 2009

Type of Traffic	Passengers Boarded (ooos)	Annual Change
European	21,866.9	-9.1%
International short/medium haul	15,467.0	-6.9%
Longhaul	5,273.6	-9.3%
Type of Traffic	**Freight Tonne-Kms**	**Annual Change**
European	61.7	-16.0%
International short/medium haul	166.5	+1.2%
Longhaul	2,364.1	-20.9%

General Aviation new aircraft deliveries worldwide *January-December 2008*

Category	2008	2007	Change
Piston	2,119	2,675	-20.8%
Turboprop	535	439	+16.6%
Business Jet	1315	1138	+15.6%

(source, General Aviation Manufacturers Association)

British Airways passenger statistics

June 2009

	June 2009	June 2008	Change
Passengers	2,930,000	3,082,000	-4.9%
Load Factor	79.6%	81.4%	-1.8%

easyJet passenger statistics

May 2009

	May 2009	May 2008	Change
Passengers	3,948,416	3,877,960	+1.8%
Load Factor	83.5%	83.2%	+0.3%

Ryanair passenger statistics

May 2009

	May 2009	May 2008	Change
Passengers	5,510,000	5,060,000	+9%
Load Factor	81%	80%	+1%

BAA airport passenger statistics

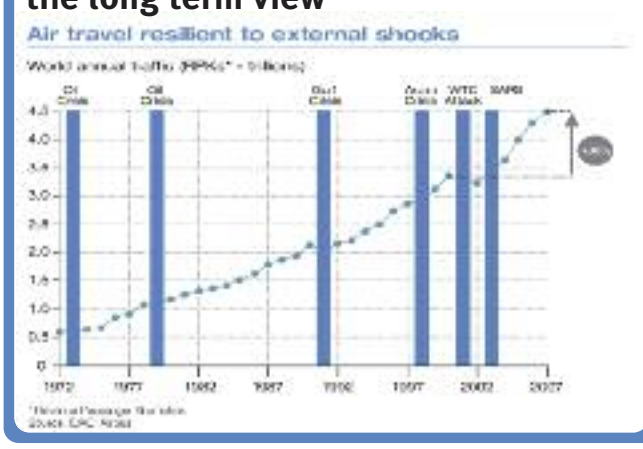
June 2009

Airport	Passengers July 2008 to June 2009	Change
Heathrow	65,670.8	-3.0%
Gatwick	32,574.8	-8.2%
Stansted	20,787.6	-10.5%
Southampton	1,829.9	-8.9%
Glasgow	7,657.9	-10.3%
Edinburgh	8,910.0	-2.5%
Aberdeen	3,131.4	-8.1%

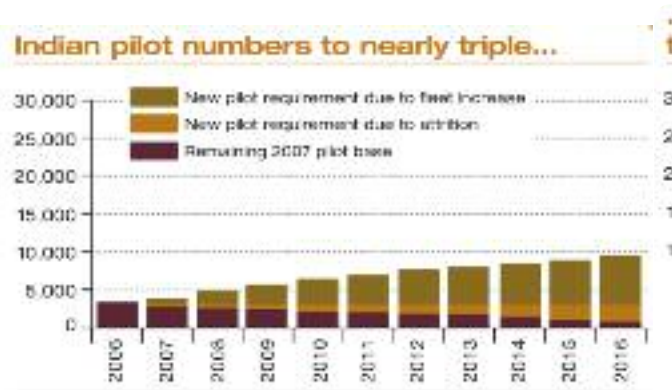
UK National Air Traffic Services traffic data

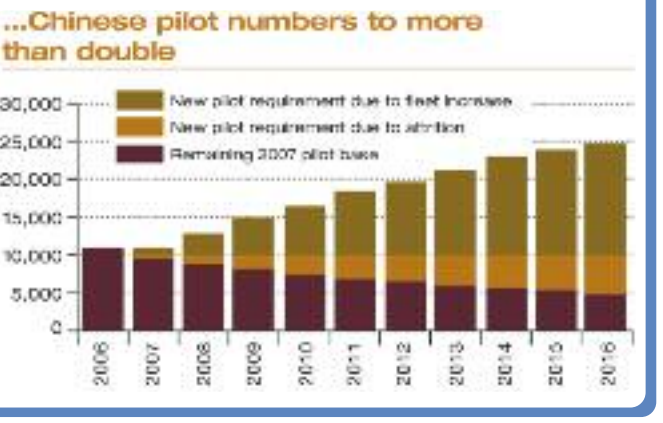
Type of Flight	May 2009	May 2008	Change
UK Flights	196,806	221,885	-11.3%
Transatlantic Arrivals/Departures	10,963	12,883	-14.9%
Other Arrivals/Departures	121,290	135,568	-10.5%
Domestic	37,609	43,082	-12.7%

Airbus Passenger Traffic Data – the long term view

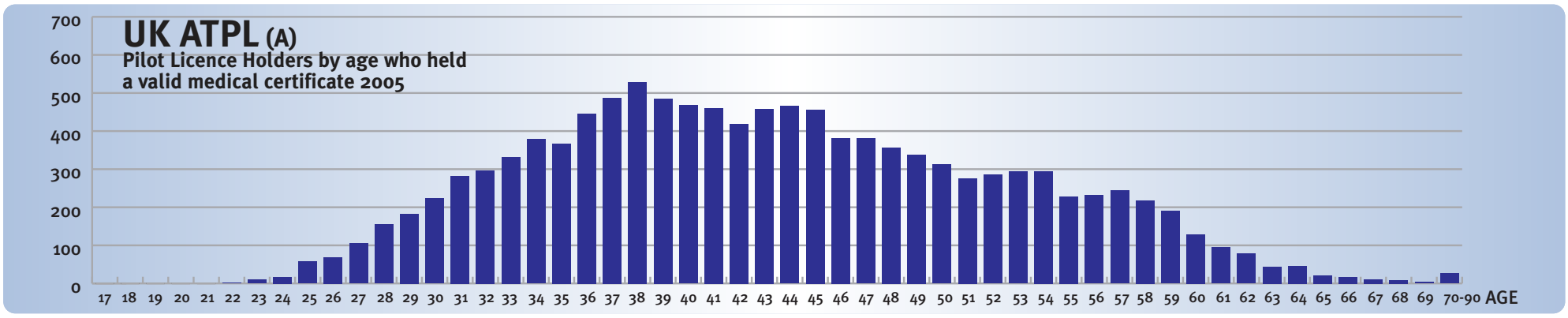


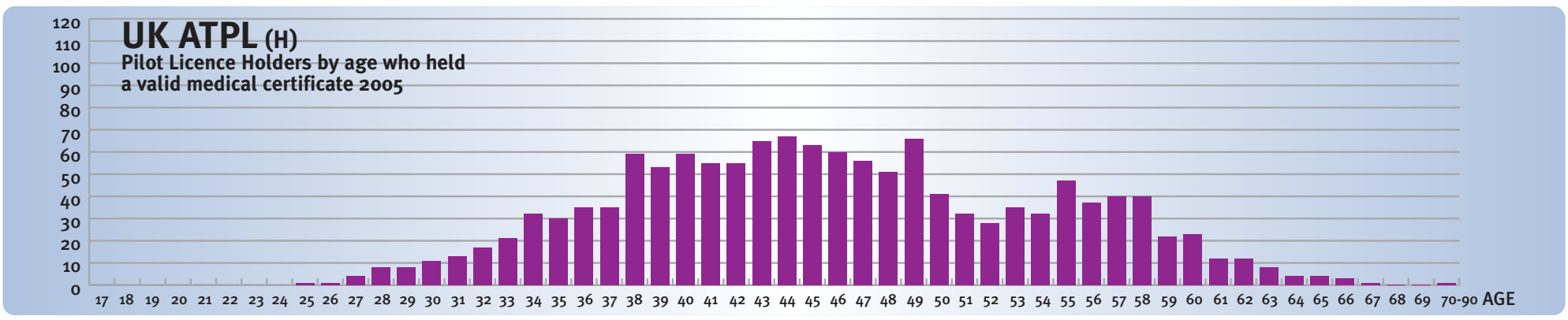
Airbus Pilot Demand Forecast – emerging markets

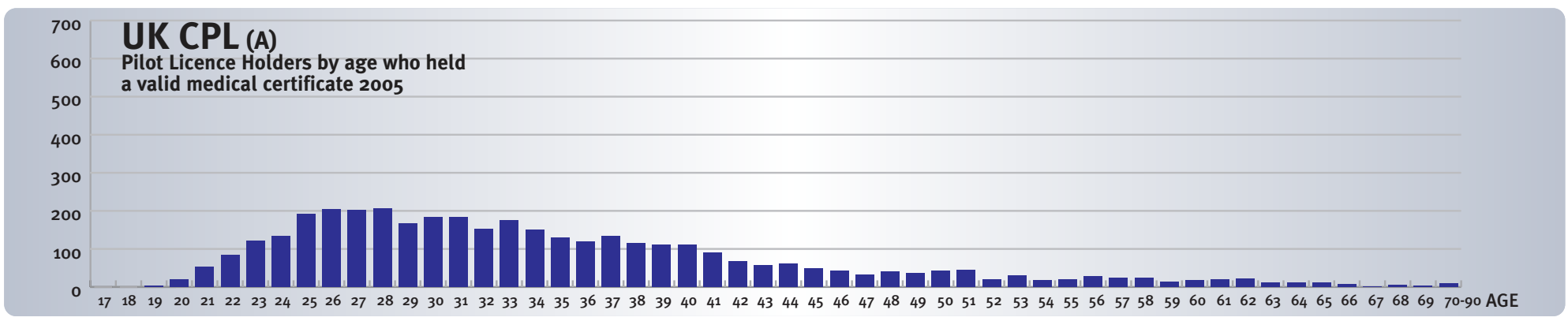


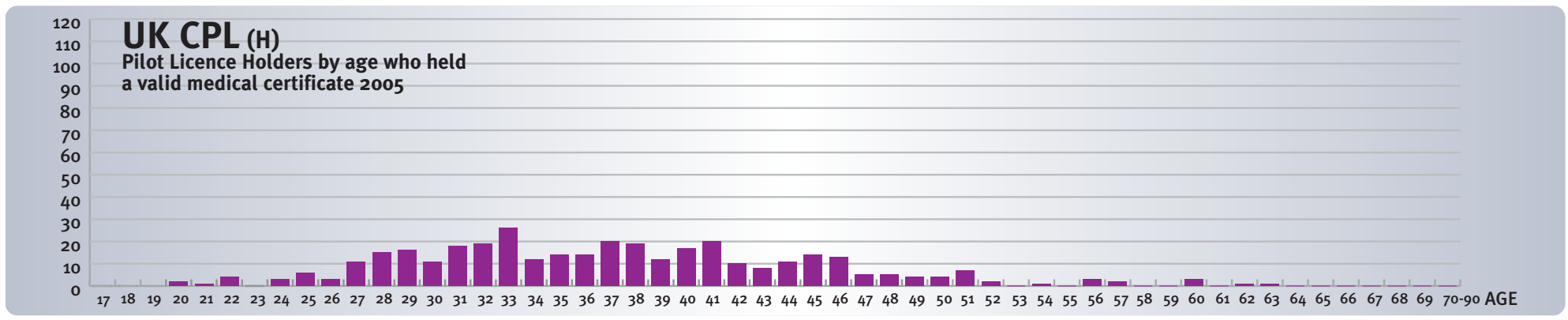


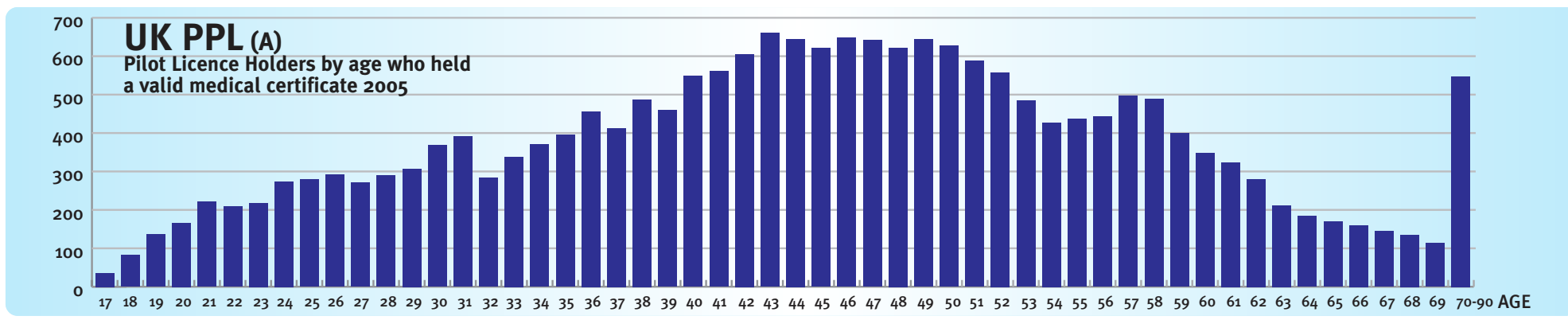
DATA & STATISTICS...

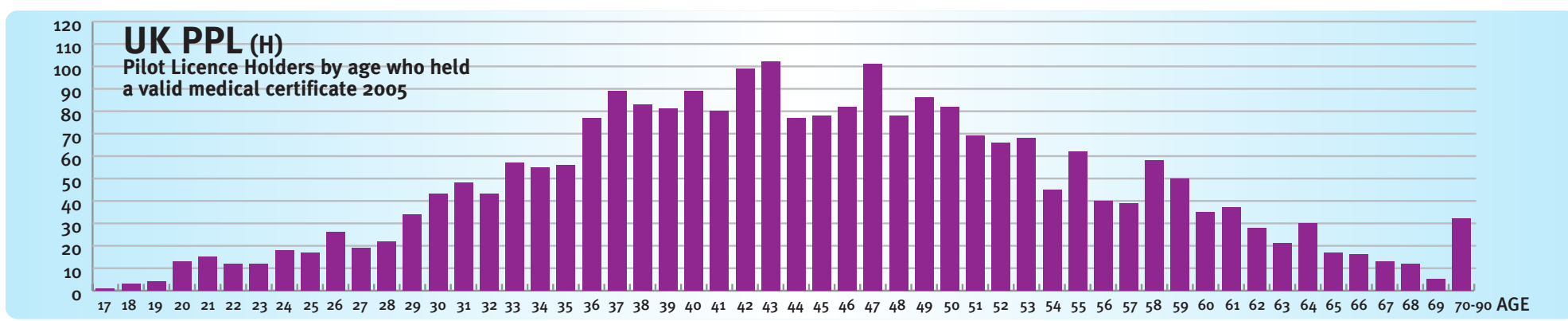












are you up to date?

Aeronautical Information Circulars (AICs)

Aeroplane Bounced Landings – Avoidance and Recovery Techniques (Pink 143) 71/2008

Air Traffic Services Outside Controlled Airspace (Pink 155) 3/2009

Joint Aviation Requirements - Flight Crew Licensing 2 (Helicopter): Cessation of JAR-FCL CPL(H) and ATPL(H) Theoretical Knowledge Interim Arrangements (White 149) 51/2008

Joint Aviation Requirements - Flight Crew Licensing 1 (Aeroplanes): Revision of Requirements for National Private Pilot's Licence (NPPL) - The Air Navigation (Amendment) (NO. 2) Order 2007 (White 148) 30/2008

Military Low Flying training in the United Kingdom (Yellow 032/2009)

Monitoring Codes Around the London Terminal Control Area - the Use of Discrete SSR Codes for Aircraft Operating Outside Controlled Airspace and Monitoring the Relevant Frequency (Yellow 275) 92/2008

UK CAA Process ICAO Standards and Joint Aviation Requirements in Respect of Language Proficiency (White 156) 89/2008

Use of Instrument Landing System (ILS) Facilities in the UK (Pink 134) 12/2008

CAA Chart Editions

Chart Edition	Current Edition	New Available
1:500,000 series		
Southern England & Wales	35 (12 Mar 09)	
Northern England & Wales	32 (4 June 09)	
Scotland	26 (2 July 09)	
1:250,000 series		
North Scotland West	5(28 Aug 08)	TBC
North Scotland East	5 (3 Jul 08)	TBC
Northern Ireland	6 (4 Jun 09)	
The Borders	6 (10 Apr 08)	TBC
Central England & Wales	8 (9 Apr 09)	
England East	8 (5 Jun 08)	TBC
West & South Wales	**9 (30 Jul 09)**	
England South	13 (12 Feb 09)	
London Heli Routes	13 (20 Nov 08)	

CAA Publications

Publication	Current Edition/ Version
CAP 168 Licencing of Aerodromes	Ed 8 (Dec 2008)
CAP 393 Air Navigation Order Third edition incorporating amendments up to 3/2008	(12 Sept 2008)
CAP 413 Radiotelephony	Ed18 (12 Mar 2009)
CAP 413 Supplement °V quick reference guide to UK phraseology for commercial air transport pilots	May 2007
CAP 601 Multi Engine Piston Aeroplane Class Rating Syllabus	Issue 2 (18 Dec 03)
CAP 637 Visual Aids Handbook	Issue 2 (May 07)
LASORS	2008 (Feb 08)
GASIL 2009/06	**(22 July 2009)**
Flight Safety Magazine	Summer 2009

AFE Publications

UK VFR Flight Guide 2009	(White cover, Dec 08)
UK Aeronautical Information Guide 2008	(Photo cover, May 08)
UK En-Route Guide 2005	(Blue cover, 25 Nov 04)

Government backs down on compulsory ID for airport workers

©istockphoto/tioloco

The UK Home Secretary Alan Johnson has cancelled plans for the compulsory equipage of National ID cards by airport workers at Manchester and London City airports.

Following strong opposition from the British Airline Pilots Association (BALPA), which had been combating the ID card scheme on behalf of its members, who make up 84% of commercial pilots in the UK, Mr Johnson agreed that they should not have been sold as the "panacea for tackling terrorism."

Earlier this year, FTN reported that the then Home Secretary Jacqui Smith had revealed that an agreement had been reached with Manchester and London City airports for the issue of identity cards to airport workers, starting this autumn. At the time Ms Smith said: "Identity cards are already a reality and thanks to Manchester Airport's agreement to work with us, the city is leading the way in their roll-out. As the cards become more widely available the whole country will see the benefits for citizens, businesses and the country by giving a convenient and secure proof of identity that locks people to one identity."

But following lobbying from BALPA the Government has been forced to back down on its proposals. "People who worked airside were resenting the fact there was compulsion involved," said Mr Johnson. "Now we can have a much more constructive discussion about the issue if we remove that one element of compulsion." He added that ID cards were "an important tool for tackling terrorism", but were not "the whole toolbox".

In response to the announcement by Mr Johnson, BALPA general secretary, Jim McAuslan, said: "This is a sensible change of approach and one which we welcome. BALPA has always had aviation security high on its agenda and has a number of ideas on how we can improve airport security which we will be pursuing with the Secretary of State for Transport. But we have never seen the national ID card as an improvement to security and we are glad that the new Home Secretary has listened to BALPA."

The designation order would have required pilots to have a National ID card before they could apply for the restricted zone (RZ) pass that enables them to get to their aircraft. The consequence of this would have been that individual pilots would have been forced to have a National ID card or automatically lose their job. This disadvantaged pilots who would be compelled to apply for an ID card while it would have been voluntary for all other citizens. Jim McAuslan added "BALPA will be stressing to its members the new voluntary nature of the scheme. We will also be monitoring airport operators to ensure they stick to the new rules and don't bring in compulsion by the back door."

UK Home Secretary Alan Johnson has cancelled plans for the compulsory equipage of National ID cards by airport workers

Instructor Notes

Helen Krasner

Coping with panicky students

Instructors tend to joke amongst themselves that they don't teach people to fly; they let people who can't fly try to kill them! But, on the whole, this isn't true. Most students are sensible individuals who are reasonably aware of the potential dangers of flying. The majority do pretty much what their instructor tells them. If anything, they are too cautious; I have many times had trial lesson students who have asked me to take control because our helicopter diverted slightly from straight and level flight. People can get very nervous in the early stages of their training, thinking the aircraft is about to fall out of the sky just because they don't have absolutely perfect control of it. And even with those students who are more confident but who don't yet really know what they're doing – well, you have dual controls and you can always take over, can't you?

©istockphoto/icholakov

The only students who really cause problems are those who panic. This doesn't happen very often, but it can. When really alarmed, people can react in strange and unexpected ways. They may even 'freeze' on the controls - the very idea of which causes most instructors to break into a sweat. I first heard of something of this nature happening when I was an hour building PPL(H). Sally, one of the weekend instructors, came in after a trial lesson looking rather pale. "That chap tried to kill me", she said rather shakily. I remarked rather too light heartedly that they all did that, didn't they? "No", said Sally, "They don't really. But this one did!"

Apparently he had told her he was scared of heights, but that he thought he would be alright in a helicopter. She too had assumed he would, since many pilots are nervous about being in high places, but fine when flying. However, soon after take-off he had started to panic and begun to grab at the controls. Sally's assurances that they would go straight back to the airfield had not made any difference and finally she had only managed to penetrate through his fear by shouting at him extremely loudly. "I yelled at him to sit on his hands, which luckily he did. Then I told him he wasn't to move or touch anything and I brought us straight back".

Sally was clearly quite shaken by the whole experience, which is not surprising. A Robinson R22 helicopter is an unstable platform at the best of times. It certainly isn't a good place for an instructor to be having a physical battle with a student. As a result of Sally's story, I was aware of the possibility of this sort of thing happening even before I became an instructor myself. In fact, I'd had a similar experience to Sally's as a PPL(A). Flying a Cessna C152, I had taken a friend for a flight and invited her to 'have a go' on the controls. She had seemed fairly sensible at first, but when the aircraft pitched slightly nose down, she panicked and yanked back on the control column. And suddenly there I was, attempting to take over and prevent a stall above snow-covered mountains, at the same time as trying to tell my friend that there wasn't a problem; she hadn't done anything wrong, and there was absolutely nothing to worry about. It was quite a long time before I let any of my passengers take control again.

However, instructors don't have that choice and we know that there is always the possibility of a student doing something very stupid. When I started my first instructing job my supervising QHI pointed this out to me quite forcefully. He told me that I wasn't to let trial lesson students use the yaw pedals in the hover. "They're too likely to freeze on them," he said "and you're too small to be able to get them off if that happens".

I was lucky for a while, however. My early instructing experiences were good... or at least nothing happened which was all that scary. Then one day something occurred which reminded me of Sally's experience. Like her, I had a trial lesson student who was frightened of heights. And again, like Sally's chap, mine assured me he would be alright, which he was, until we reached about 300 feet. He then confessed to me that he didn't like it at all and wanted to go back. He was actually quite calm, but clearly terrified. With memories of Sally's experience going through my mind, I told him to breathe deeply and assured him that we'd be back on the ground within a couple of minutes. I did wonder if I should ask him to sit on his hands as Sally had done, but he didn't seem to be panicking in that particular sort of way; in fact, he was frozen to the seat in fear. We were back on terra firma as quickly as I could manage it, and I then had to spend quite a while reassuring the man that he was quite normal and not a complete wimp.

My next panicky student was far more worrying. It was several years after the first, so I had regained my confidence and wasn't expecting anything to go wrong. Again, it was a trial lesson student – a large, friendly lady, who was greatly looking forward to her first flight in a helicopter. She told me she was a bit nervous, but many people are apprehensive before their first flight, so I didn't think anything of it. I took us up to around 800 feet, told her what to do, invited her to follow me through, then gave her control. After a few seconds she panicked. "I don't like it, you fly it", she cried, letting go of the cyclic and flinging both arms around me. Now, it's not nice at any time having someone nearly twice your size grabbing hold of you in sheer terror, but in a helicopter, at 800 feet... well, let's just say I found it hard to keep calm and not go to pieces myself. I somehow managed to disentangle one arm and grab the cyclic. If I hadn't, I wouldn't be here to tell the tale! And I put on what I still consider to have been an amazing act, telling my new student that everything was fine and just to keep calm and breathe deeply, even though I felt like yelling out in panic myself.

Since then I have been far more careful, particularly with trial lesson students. After all, the instructor doesn't know most of these people from Adam and he or she has no idea how they will react on a first flight. So I now take things very, very slowly. I have developed a method of conducting trial lessons that makes allowances for the possibility of people becoming scared and minimise the likelihood of them panicking in the air. First, I talk to the person before the flight and if they say they are nervous or frightened of heights, I take it very seriously. After starting up the helicopter, I hover-taxi slowly for quite a distance, even if we don't actually need to. This gives new students a chance to get accustomed to being in a helicopter and it allows me time to develop a feel for how tense they are. I then transition away slowly, again giving them time to get used to things. At around 500 feet, I always ask the student if they are OK? Usually they are thoroughly enjoying it, but it gives them the opportunity to tell me if they are still frightened or even ask if we can go back to the airfield.

If everything is OK, I start preparing for them to take control. I explain everything carefully and let them follow me through. I have one additional step, ever since my experience with the lady who grabbed hold of me - I say we'll have a go at flying the helicopter together. That way I can be in control, but let them find out gradually if they can do it. In reality it is not very different from having them take control but being ready to grab the cyclic myself, it feels different for the student and this is all-important for someone who is very nervous. And again, I can gradually assess how they are and how much of a feel for helicopter flying they have.

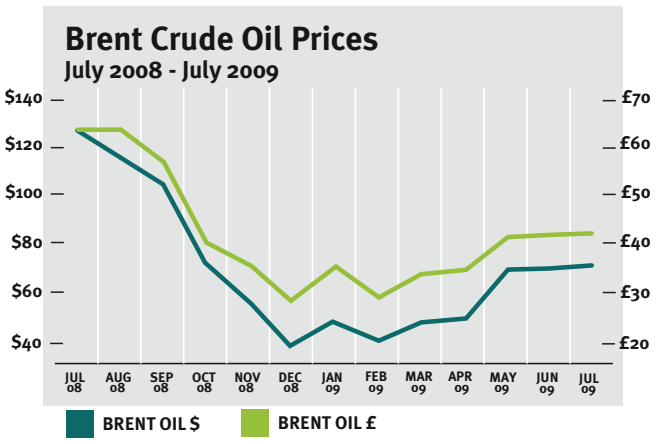
If all goes well I then let them take control, but whatever happens I take over again after about a minute. For many trial lesson students that is quite a long time anyway, especially in an unstable little R22. Even those who can manage more are likely to be tired and needing a break - some are concentrating so hard that they have even stopped breathing. At any rate, I tell them to relax and assure them I'll give the helicopter back to them in a moment if they want me to. But I always ask before handing control over again, as for some people one try is enough for that first lesson. Of course the keen ones want to do more and that is fine.

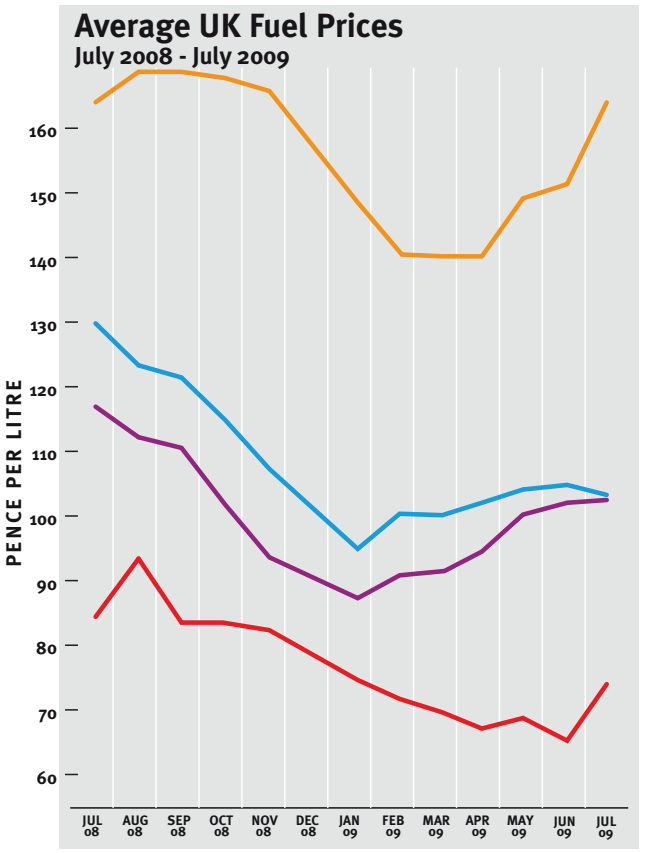
I continue the lesson in this slow, gentle manner, gradually extending the amount of time the student has control. I also chat a bit and keep everything light hearted. Some people would say I talk too much, but again, I'm trying to prevent any build-up of tension with possibly catastrophic results. It seems to work and in half an hour I've sometimes got things to the point that a new student can bring us back into the circuit and even turn us on to final. But I don't let them do that unless they can manage it without any hint of tension and therefore no chance of panic.

This method seems to work. At any rate, I've had no recent scares. It is certainly something useful for me and I hope others will maybe try it and find it helpful too. It doesn't have to be just instructors who do things this way. Many pilots let their passengers 'have a go' and it is always worth bearing in mind the slight possibility of someone panicking when they do this. Taking things very slowly in this way minimises the risk of something going wrong. I highly recommend it!

Helen Krasner's back catalogue of 'Instructor Notes' available free to read at **www.ftnonline.co.uk**

DATA & STATISTICS...





Average fuel prices
JULY 2009

(Source: Flight Training News survey)

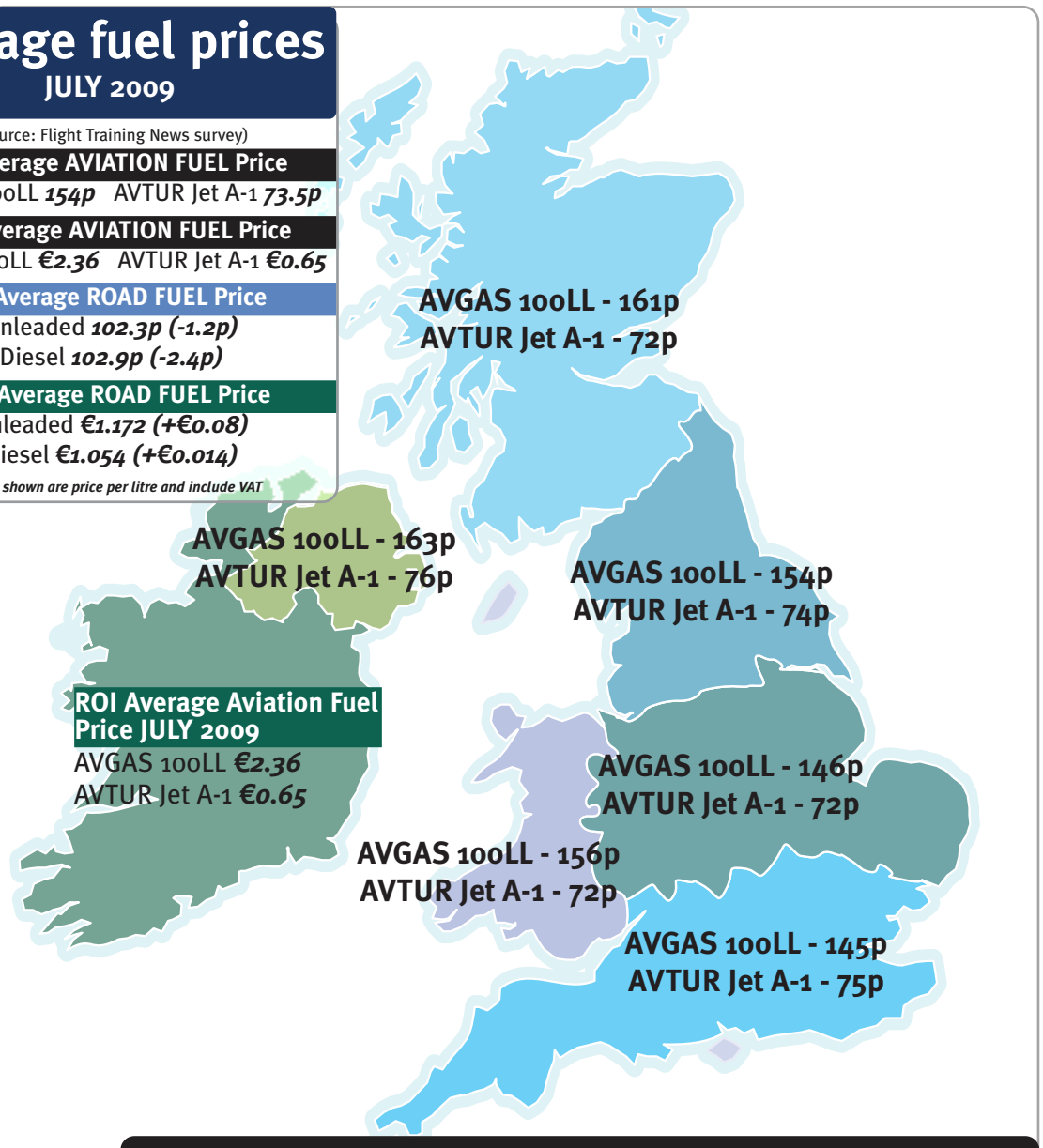
UK Average AVIATION FUEL Price
AVGAS 100LL ***154p*** AVTUR Jet A-1 ***73.5p***

ROI Average AVIATION FUEL Price
AVGAS 100LL ***€2.36*** AVTUR Jet A-1 ***€0.65***

UK Average ROAD FUEL Price
Unleaded ***102.3p (-1.2p)***
Diesel ***102.9p (-2.4p)***

ROI Average ROAD FUEL Price
Unleaded ***€1.172 (+€0.08)***
Diesel ***€1.054 (+€0.014)***

Prices shown are price per litre and include VAT



Forthcoming UK and ROI JAR Theoretical Knowledge exams

JAR ATPL (A) & (H) ***Exam Centres:*** *Gatwick, Oxford, Shuttleworth College & Glasgow*

Exam Month	Closing date for applications	Subjects	Exam Dates
SEPTEMBER	24/08/09	Principles of Flight, Airframes, Mass and Balance, Performance	Mon 7 Sept
		Instrumentation, Operational Procedures, Flight Planning	Tue 8 Sept
		General Navigation, Radio Navigation, Meteorology	Wed 9 Sept
		Air Law, Human Performance, VFR Communications, IFR Communications	Thur 10 Sept
OCTOBER	21/09/09	Principles of Flight, Airframes, Mass and Balance, Performance	Mon 5 October
		Instrumentation, Operational Procedures, Flight Planning	Tue 6 October
		General Navigation, Radio Navigation, Meteorology	Wed 7 October
		Air Law, Human Performance, VFR Communications, IFR Communications	Thur 8 October

JAR CPL (A) ***Exam Centres:*** *Gatwick only*

Exam Month	Closing date for applications	Subjects	Exam Dates
SEPTEMBER	28/08/09	Principles of Flight, Aircraft General, Performance and Planning	Mon 14 Sept
		Navigation, Meteorology, Operational Procedures, Air Law, Human Performance, VFR Communications	Tue 15 Sept
NOVEMBER	26/10/09	Principles of Flight, Aircraft General, Performance and Planning	Mon 9 Nov
		Navigation, Meteorology, Operational Procedures, Air Law, Human Performance, VFR Communications	Tue 10 Nov

JAR CPL (H) ***Exam Centres:*** *Gatwick only*

Exam Month	Closing date for applications	Subjects	Exam Dates
SEPTEMBER	02/09/09	Principles of Flight, Aircraft General, Performance and Planning	Wed 16 Sept
		Navigation, Meteorology, Operational Procedures, Air Law, Human Performance, VFR Communications	Thur 17 Sept
NOVEMBER	28/10/09	Principles of Flight, Aircraft General, Performance and Planning	Wed 11 Nov
		Navigation, Meteorology, Operational Procedures, Air Law, Human Performance, VFR Communications	Thur 12 Nov

Republic of Ireland Theoretical Knowledge exams

All held at: *The Gresham Hotel, 23 Upper O' Connell Street, Dublin 1*

Exam Month	Closing date for applications	Subjects	Exam Dates
SEPTEMBER	01/09/09	CPL/ATPL/IR	21-24 Sept
SEPTEMBER	04/09/09	PPL	25 Sept

Downing Street Petitions and Campaigns

(Source, Downing Street website)

Campaign	Deadline	Current Signatures	Sign up
Award official student status to British trainee professional pilots	2 Sept 2009	1,224	http://petitions.number10.gov.uk/Student-Pilots
Protect the RNLI from paying licence fees for using Maritime radio frequencies	8 Oct 2009	30,868	http://petitions.number10.gov.uk/RNLI-RF-licences/ *"Ofcom wants to bring 'market forces' into the maritime and aviation communications. The RNLI will have to pay £250,000 a year, and 'smaller search and rescue charities fear they may have to close'. This proposal must be rejected wholeheartedly."*
Say No To Aviation Fuel Tax (a stealth tax too far)	2 July 2009	942	http://petitions.number10.gov.uk/aviationtax/
Test ID cards on MPs instead of pilots and students.	5 March 2010	15	http://petitions.number10.gov.uk/IDCards4MPs/
Freeze student pilot loans until the economy recovers	3 January 2010	22	http://petitions.number10.gov.uk/pilotloans
Introduce a law banning groups like Plane Stupid protesting within one mile of airports	9 January 2010	24	http://petitions.number10.gov.uk/BanPlaneStupid/

UK CAA Open Consultations

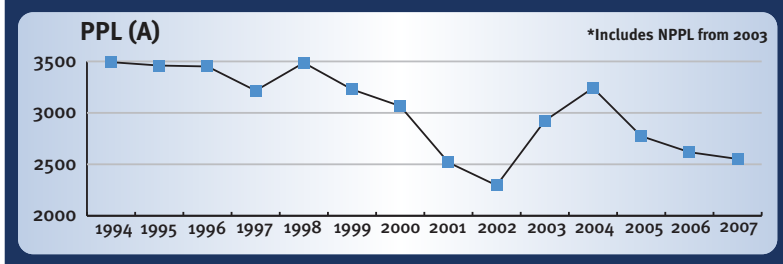
Consultation	Deadline	Details	Link
Letter of Intent to make it illegal to shine lasers or high-powered lights at aircraft	n/a	Letter of Intent to amend the ANO 2005 to make it illegal to shine lasers or high-powered lights at aircraft	http://www.caa.co.uk/default.aspx?catid=1350&pagetype=90&pageid=9938
Letter of Intent - Proposal to Amend the Air Navigation Order 2005 Articles 10 and 11.	n/a	Permit CAA to Authorise an Organisation to Issue a Certificate or Approval under EASA Part 21 or BCAR Section A, Chapter A8-21	http://www.caa.co.uk/default.aspx?catid=1906&pagetype=90&pageid=10691
Letter of Intent to Amend the Meaning of "Microlight Aeroplane" as set out in Article 155 of the Air Navigation Order 2005	n/a	This Letter of Intent has been published to redefine the definition of a microlight aircraft	http://www.caa.co.uk/default.aspx?catid=1904&pagetype=90&pageid=10661
Letter of Intent - Provisional suspension of EASA certificates of airworthiness	n/a	Proposal to make provision for the CAA to suspend provisionally the certificates of airworthiness of UK-registered examples of an aircraft type that is regulated by the European Aviation Safety Agency (EASA)	http://www.caa.co.uk/default.aspx?catid=1868&pagetype=90
Letter of Intent - To amend the Air Navigation Order 2005 to allow an Aircraft with an EASA Certificate of Airworthiness to be used for State Purposes	n/a	There is a need from time to time for an aircraft with an EASA Certificate of Airworthiness to be utilised on a short-term basis for State purposes. A General Exemption currently caters for this situation. It is proposed that the provision and conditions contained within the General Exemption be formalised by means of an amendment of the Air Navigation Order 2005.	http://www.caa.co.uk/default.aspx?catid=1892&pagetype=90

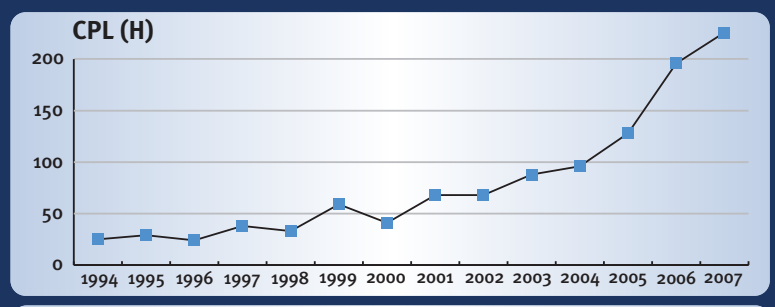
EASA Open Consultations

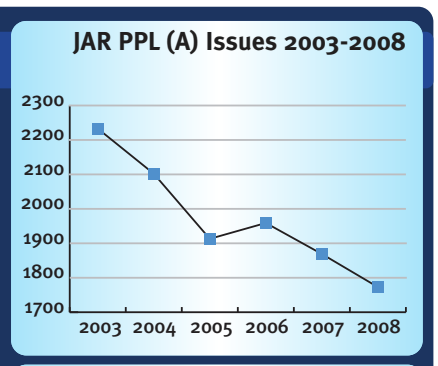
Consultation	Deadline	Details	Link
NPA 2009-07	16 October 2009	Security related design standards	http://www.easa.eu.int/ws_prod/r/doc/NPA/NPA%202009-07.pdf
NPA 2009-06	13 October 2009	Composites	http://www.easa.eu.int/ws_prod/r/doc/NPA/NPA%202009-06.pdf
NPA 2009-05	13 August 2009	Appendix 1 - Aircraft type ratings for Part-66 aircraft maintenance licence	http://www.easa.eu.int/ws_prod/r/r_npa.php

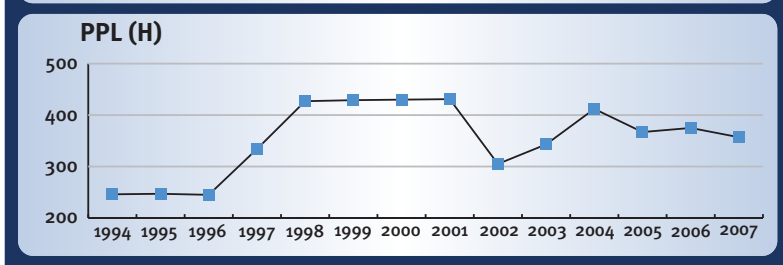
DATA & STATISTICS...

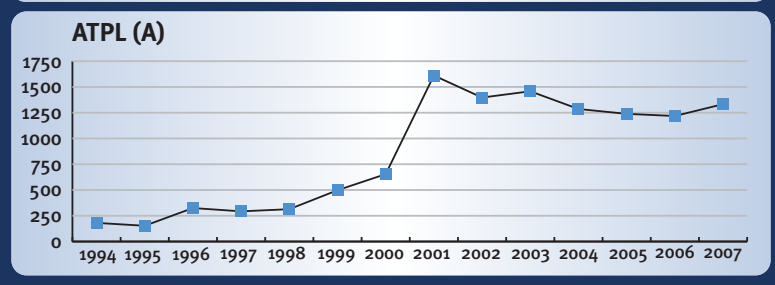
UK Initial Licence Issues

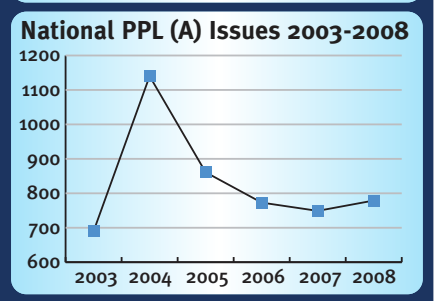


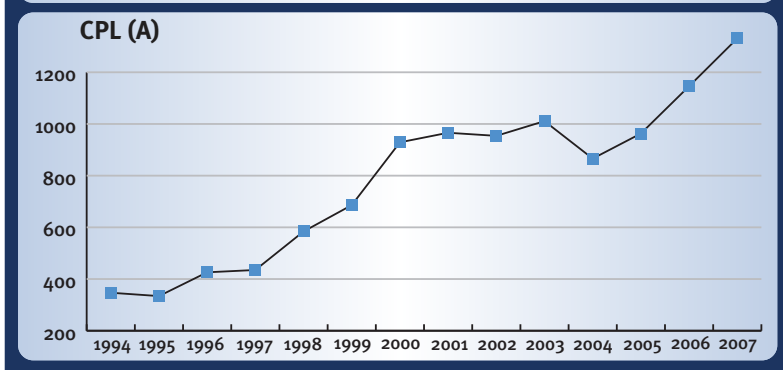


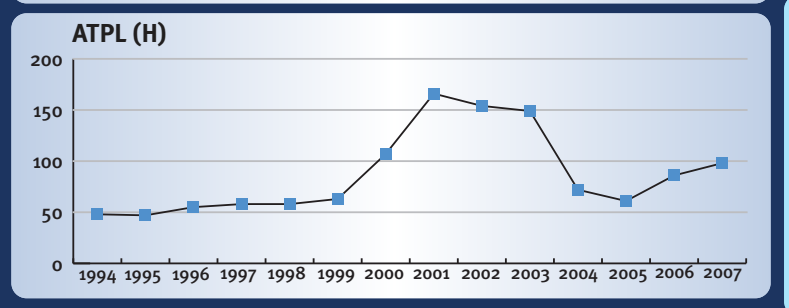


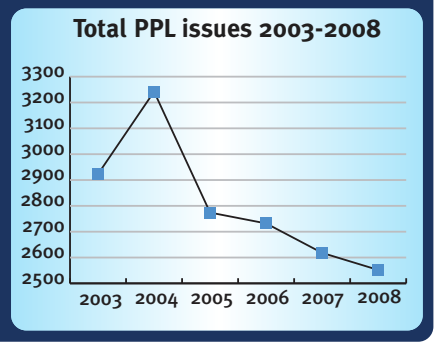




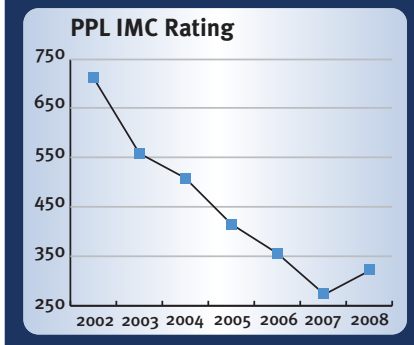


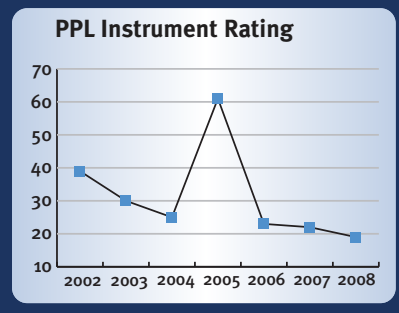


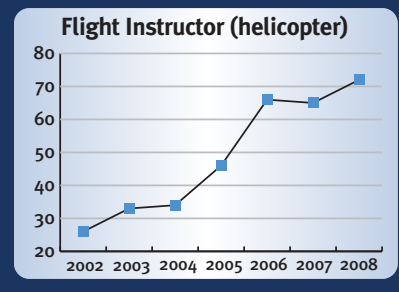


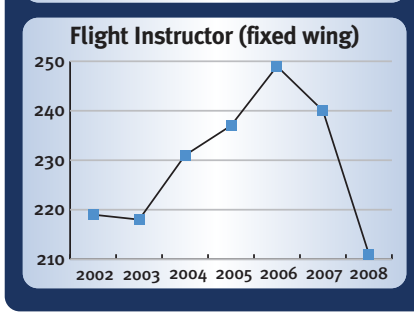


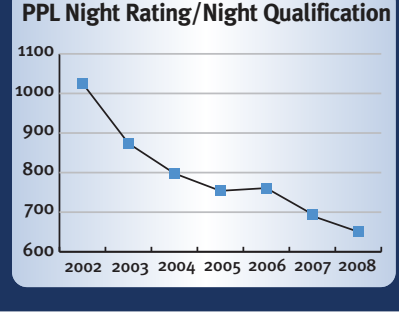
Ratings - six year trend











2008	figure	year-on-year change
PPL (A) (includes JAP-PPL and NPPL)	2552	-2.5%
PPL (H)	357	-5.0%
CPL (A)	1331	+16%
ATPL (A)	1333	+9.5%
ATPL (H)	98	+14%

Number of licenced airfields in the UK

142

(Source: 2007 UK AIP)

Professional Flying Training Organisations UK and ROI

107

*excluding organisations that are solely TRTOs.
(Source: Flight Training News)

Microlight Schools UK and ROI

107

(Source: Flight Training News)

Helicopter Schools UK and Ireland

102

(Source: Flight Training News)

Current Licence Processing Turnaround

As at the 28 July, the UK CAA were processing licence applications received:

• Professional Flight Crew	26 June 2009
• Private Flight Crew	26 June 2009
• Instructors	25 June 2009
• NPPL Flight Crew	26 June 2009

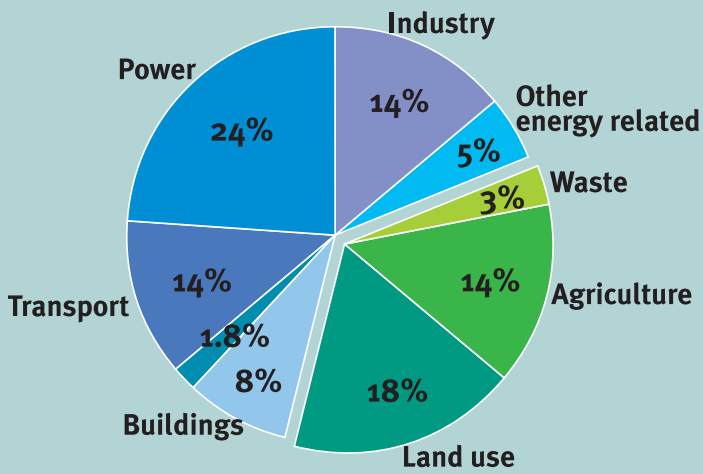
(Source: CAA)

How green is aviation?

All forms of transport combined account for **14%** of global greenhouse gas (GHG) emissions.

Domestic and international air transport account for **14% of transport-related** global greenhouse gas (GHG) emissions.

- Water transport is responsible for **1.5%** of global greenhouse gas (GHG) emissions.
- Air transport is responsible for **2%** of global greenhouse gas (GHG) emissions.
- Road transport is responsible for **11%** of global greenhouse gas (GHG) emissions.
- Business and General Aviation uses less than **1%** of the fuel of the airlines and accounts for only **0.016%** of all CO_2 emissions. (Source: BBGA)



For further environmental data, see **www.enviro.aero**

(Source: the Stern Review Report)

Statistic of the month

The cumulative income generated by the UK CAA Safety Regulation Group for the 12 months leading up 31 March 2009 was £59,351,000

EUROPEAN GENERAL AVIATION

90,000	pilots engaged in private powered flying
40,000	microlight pilots
90,000	glider pilots
115,000	hang glider and paraglider pilots
5,300	balloon and airship pilots
20,000	General Aviation aircraft
22,000	gliders

(Source: European Community paper on General Aviation)

Cessna forecasts clear skies ahead...

In a recent interview in the run up to this year's AirVenture in Oshkosh ,USA, Cessna Aircraft boss Jack Pelton has said that it feels like the business jet market is starting to stabilize.

"At some point we' ll be able to call the bottom," said Mr Pelton in reference to the drop in the aircraft manufacturing market. "The negatives, like [order] cancellations are slowing down; we're starting to see orders start to rise again."

It won't be immediate, warned Mr Pelton, with aircraft deliveries expected to hit their low next year, but it could be quickly followed by a steady climb. *"The slope of that rise will be dependent on what the economy does,"* he said.

In the meantime, Cessna has cut around half of its workforce since last November due to cancellations of aircraft orders but, despite rumours to the contrary, Cessna's parent company Textron remains committed to its aircraft manufacturing business.

Scott Donnelly, president and chief operating of Textron said, "I think I can be clear that no one is interested in any way, shape or form in divesting Cessna out of Textron. It's a central asset of what Textron is."

Another piece of good news announced by Cessna at the AirVenture show, the aircraft manufacturer announced that its 162 SkyCatcher Light Sport Aircraft programme has been given the green light by the ASTM International standards for Light Sport Aircraft, with deliveries of the new aircraft now expected to begin before year's end.

"This is significant not only for Cessna, but for the aviation community as a whole," said Jack Pelton. "Once these airplanes enter service, they will act as a catalyst for increased pilot starts. They will significantly change the economics of ownership and operation for flight schools, aircraft renters and aircraft owners, and will benefit the entire GA community."

The two-seat, single-engine piston, high-wing 162 SkyCatcher has proven a difficult model to bring to market, with two of its prototypes crashing during flight testing, but the aircraft is nonetheless eagerly awaited with in excess of 1,000 aircraft ordered since it was first launched at Oshkosh 2007. Powered by a Continental O-200D 100-hp air-cooled, carbureted engine and a fixed-pitch propeller, the aircraft will cruise at speeds up to 118 knots and will have a maximum range of 470 nautical miles. The aircraft also features a Garmin G300 avionics system, with information presented in a single, split-screen primary flight display (PFD) and multi-function display (MFD), or as two full-screen displays with an optional second screen.

In several areas, Cessna say that they have conducted additional tests on the SkyCatcher not required by the ASTM International standards, such as an extensive Ground Vibration Test (GVT) and instrumented, in-flight flutter testing. Planned testing, also not required by ASTM, includes an airframe fatigue test to ensure a durable product for the training environment.

After conducting a global search for a production partner Cessna say they have chosen Shenyang Aircraft Company in Shenyang, China, to fabricate the fuselage and integrate the US-made engine and avionics.

Meantime, in association with King Schools, Cessna has developed a new Web-based training system for sport and private pilot certificates that will be available through the Cessna Pilot Centre network of flight schools.

...as Piper invests in future expansion

Also reporting good news at the AirVenture show at Oshkosh, Piper Aircraft have announced that despite the current economic downturn, strategic investment by its new owners has enabled the company to move forward on many fronts, from expansion into new and emerging markets to accelerated development of its PiperJet programme.

"The Imprimis acquisition was a major milestone for us – one that is a boon for the company and its future," said Piper CEO Kevin J. Gould. "Over the years, Piper has had many owners, but few saw the strategic value of this iconic company. Now, with Imprimis and its strategic sense of what Piper can be and how it can grow, we have owners the likes of which we haven't seen since the days when Bill Piper owned the Company."

Prior to its acquisition by Imprimis, Piper was another aircraft manufacturer which had been forced to scale back on the scope and timing of its research and development programs. Now however, the company says that it is back on track with full development of the PiperJet and other product initiatives underway.

Among the first actions Piper has taken in implementing its new strategic direction has been recruitment of new engineering resources to propel its product initiatives, beginning with the PiperJet.

"Development of the PiperJet, as well as other new products and innovations, is crucial to Piper's long-term growth strategy," Piper President John D. Becker said, "and Imprimis has earmarked funds to ensure that we move forward on these vital programs."

Becker said that over the next nine months, Piper will hire 50 engineers as it ramps up the PiperJet development program to ensure optimal timing for first deliveries of the company's first pure, jet-powered, turbofan design in its 72-year history.

"We are in the process of hiring engineers at all levels – from senior to entry-level professionals – and across all engineering disciplines, including structures, systems, flight test, and manufacturing," said Becker. "The downturn understandably causes us to review optimal timing for the first deliveries of the PiperJet. With our new ownership, the acceleration of the Piper Jet program and the economic situation, we are evaluating the most opportune time to introduce the Piper Jet into the market."

Piper announced that it was expanding into the jet market in October 2006, when it unveiled plans to build the PiperJet, that incorporates single-engine turbofan power for optimum cost efficiency and a strong, all-metal body. Since then, the PiperJet has achieved several major milestones, including first-flight in July 2008, maximum certification altitude of 35,000 feet in April 2009 and opening the full speed envelope in the last month.

To date, Piper has approximately 204 contracted orders for the PiperJet, which is more than the company had for its successful Piper Meridian – its current flagship aircraft.

In addition to its PiperJet programme, Piper executives also announced that the company is currently seeking proposals for the international expansion of dealer bases throughout Asia, Pacific/Oceania, the Middle East, Europe, Africa, Central America and Caribbean regions.

In acquiring Piper, Imprimis cited international expansion as a top priority, particularly in Asia, where general aviation sales are set to rise beyond their current global share of 5%. Piper say that they see "significant opportunities" in the region for their two-, four- and six-seat aircraft over the next five years as a the result of shifting demographics and increasing demand for pilot training from training schools and flying clubs.

The PiperJet programme has been recovered by the aircraft manufacturer's new owners

CAA approves new Stansted Airport TMZs

The UK Civil Aviation Authority (CAA) has approved the establishment of Transponder Mandatory Zones (TMZs) in the vicinity of Stansted Airport following lobbying from UK air traffic service provider NATS.

The TMZs will come into effect from 24 September 2009 and will extend from surface level to the base of controlled airspace (1,500 feet) beneath the Stansted Control Areas.

In January 2009 NATS consulted with the aviation community and local authorities on its proposal to establish a TMZ in accordance with the CAA's Airspace Change Process. NATS' say that the proposal was designed to enhance safety in the region and provide a more informed ATC environment allowing controllers to see the altitudes of aircraft, which is hoped to help reduce the impact of airspace infringements. The Class G airspace classification will remain unchanged.

"Airspace infringements continue to be one of the most significant safety risks in UK airspace. The CAA has therefore approved NATS' proposal to implement the TMZs around one of the worst affected areas of airspace at Stansted with the aim of helping to reduce infringements."

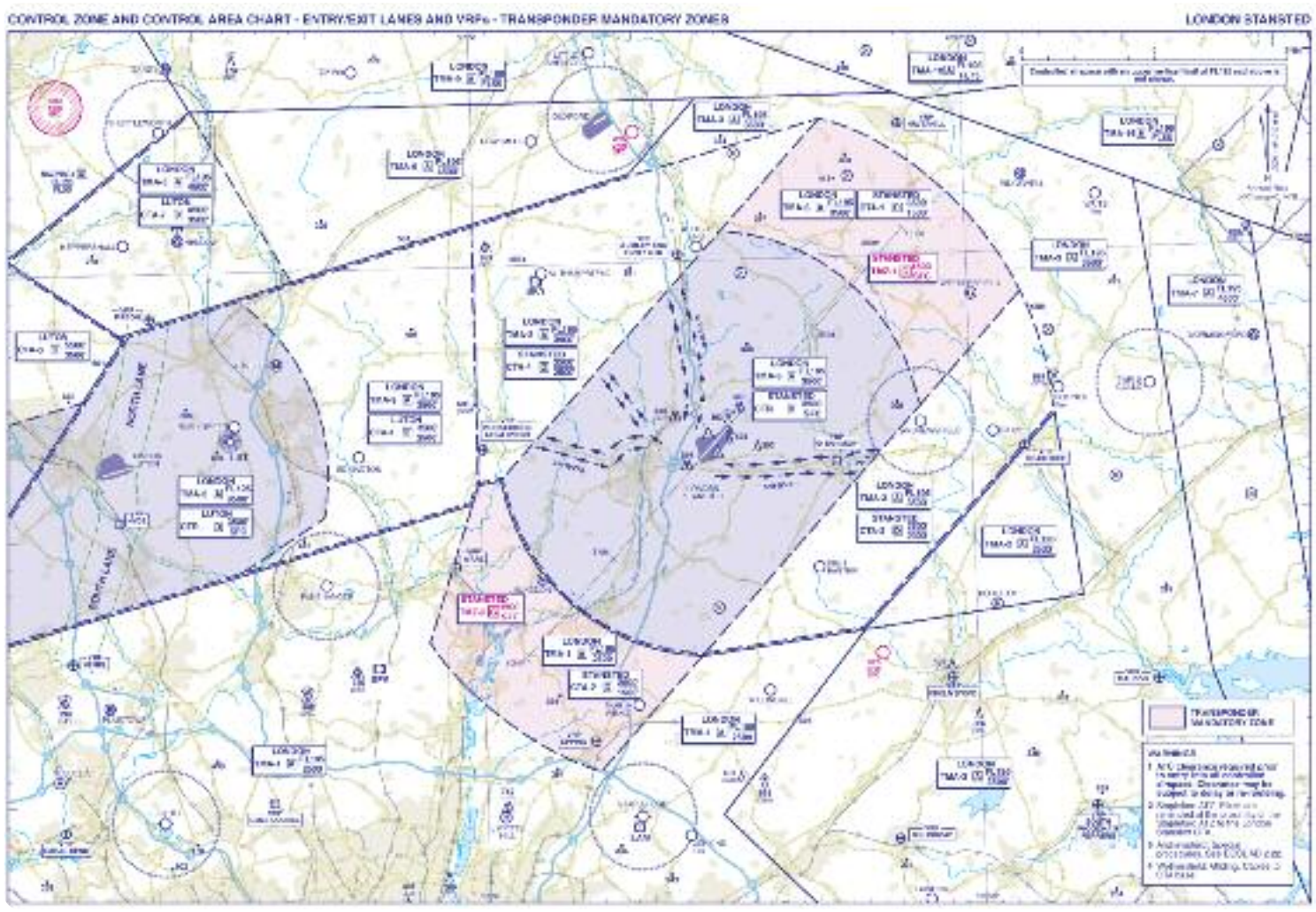
The CAA says that this proposal includes arrangements under which the requirements of local airspace users will be accommodated. In addition, access is permitted to any aircraft which is operating a fully functioning pressure altitude reporting transponder or to those aircraft which the aircraft commander has obtained permission from the air traffic control unit at Stansted Airport, Farnborough Radar, or Essex Radar, as may be appropriate, to enter the restricted airspace.

Phil Roberts, Assistant Director at the CAA's Directorate of Airspace Policy, said: ***"Airspace infringements continue to be one of the most significant safety risks in UK airspace. The CAA has therefore approved NATS' proposal to implement the TMZs around one of the worst affected areas of airspace at Stansted with the aim of helping to reduce infringements."***

Stansted's TMZs are implemented by means of The Air Navigation (Restriction of Flying) (London Stansted Airport) (No. 2) Regulations 2009 (S.I. 2009/2020). The SI is available at: http://www.opsi.gov.uk/si/si-2009-index

The CAA has advised that the 1:250 000 Sheet 6 England East aeronautical chart, due to be updated on 24 September 2009, will reflect the change. However, the 1:250 000 England South and 1:500 000 Southern England aeronautical charts will not reflect these changes until the scheduled update planned for 8 April 2010 and 11 March 2010 respectively.

NATS has placed a downloadable chart portraying the new airspace on its website: http://www.nats.co.uk/text/252/ stansted_tmz.html



for your diary

August 2009

1 **Cabair First Office Direct Integrated Pilot Seminars**
Cranfield Auditorium
www.cabair.com

1 **2009 Flight Simulator Show**
Sherburn in Elmet Aero Club
www.sherburn-aero-club.org.uk

3 **Multiflight Introductory Aviation Evenings**
Leeds Bradford Intl Airport
www.multiflight.com

3-6 **JAR-FCL Examinations ATPL (A), (H)**
Gatwick, Oxford, Shuttleworth College & Glasgow
www.caa.co.uk

6 **GAPAN Aptitude Testing for Commercial Pilots**
RAF Cranwell (Guild of Air Pilots and Navigators)
020 7404 4032 www.gapan.org

6-16 **European Advanced Aerobatics Championship**
Radom Piastow. Poland
www.aerobatics.org.uk

10-11 **JAR-FCL Examinations IR (A), (H)**
Gatwick
www.caa.co.uk

15 **APP First Officer Pilot Programme Seminar**
Oxford Aviation Academy, Oxford Airport
www.oxfordaviation.net

22-23 **Leicestershire Aero Club Microlights Weekend**
Leicestershire Aero Club
www.leicesterairport.com

20-30 **2009 World Aerobatics Championships**
Silverstone, Northamptonshire
www.wac2009.com

24-25 **Met for Aviators**
Met Office College, Exeter
www.metoffice.gov.uk

September 2009

7 **Multiflight Introductory Aviation Evenings**
Leeds Bradford Intl Airport
www.multiflight.com

7-10 **JAR-FCL Examinations ATPL (A), (H)**
Gatwick, Oxford, Shuttleworth College & Glasgow
www.caa.co.uk

8-10 **Asian Aerospace 2009 International Expo,**
Congress & Asian Business Aviation Show
Asia World-Expo Centre. Hong Kong
www.asianaerospace.com

11-13 **British Aerobatic Association. Saltby**
Open Glider Aerobatic Competition
Saltby, Leicestershire
www.aerobatics.org.uk

12 **Flyer Professional Flight Training Exhibition**
Regency Hotel, Whitehall, Dublin
www.flyer.co.uk/exhibitions

14-15 **JAR-FCL Examinations CPL (A)**
Gatwick www.caa.co.uk

16-17 **JAR-FCL Examinations CPL (H)**
Gatwick
www.caa.co.uk

18-20 **Aircraft Industry Exhibition**
Leos Janacek Airport, Ostrave, Czech Republic
www.bvv.cz/airin

19-20 **National Young Aviators Day**
Various Venues around the U.K
www.lightaircraftassociation.co.uk

22-24 **Helitech 2009**
Duxford Cambridgeshire
www.helitech.co.uk

23-26 **Aviation Expo China**
International Exhibition Centre, Beijing, China
www.cpexhibition.com/aviation

SCHOLARSHIPS & SPONSORSHIPS

Last call for the 2009 Jet Orientation Course Scholarship

The Guild of Air Pilots and Air Navigators (GAPAN), in association with European Pilot Selection & Training (EPST) are offering two Jet Orientation Course scholarships this year, with a closing date for application of 28 August.

The courses are designed specifically to prepare newly qualified professional pilots for employment with an airline. The course is not type specific and pilots who have completed previous EPST Airline Jet Foundation courses have proved themselves to be well regarded by potential employers.

In line with GAPAN's stated objectives, the Guild says that the aim of the course is to provide those people for whom the financial burden of training might otherwise hinder their ambitions.

Applications are invited from candidates who satisfy the following criteria:

- Evidence of independent pre-selection prior to commencement of training
- Must have completed a JAA Commercial Pilot course with license issued after 1 April 2008 and before 1 September 2009
- Average Ground School pass mark of 85% or higher at ATPL level
- Average assessment of 3 (good) or better in Simulator Performance, Progress Test scores and Team Skills
- Instrument Rating and Commercial Skills Test pass in two attempts or better
- Overall course flying assessment at average 3 (good) or better

The selection process will commence in September 2009 and will possibly include interviews in London, conducted by GAPAN in line with their policy of fairness and equality of opportunity.

Applications must be made using GAPAN's application form, available to download at www.gapan.org/career-matters/scholarships/

SCHOLARSHIPS & SPONSORSHIPS QUICK REFERENCE GUIDE

	AIRCRAFT TYPE				FLYING TRAINING TYPE												OTHER		CONTACT DETAILS
	FIXED WING	ROTARY	GLIDER	BALLOON	ATPL	CPL	IR	PPL	GLIDER LICENCE	NPPL	FI(R)	FI(MULTI)	FI(INSTRUMENT)	FI(AEROBATICS)	JOC	AEROBATICS	PRE-SOLO	ENGINEERNG/ OTHER	WOMEN ONLY	
Air Cadets	•		•						•							•	•			www.aircadets.org
Air League Prince Philip Flying Scholarship	•									•										scholarships@airleague.co.uk
Air League Flying Scholarships	•									•							•			scholarships@airleague.co.uk
Air League Flying Bursaries	•	•	•		•	•		•		•	•	•				•				scholarships@airleague.co.uk
Air League Gliding Scholarships			•						•							•	•			scholarships@airleague.co.uk
Air League Balloon PPL Scholarship				•				•												scholarships@airleague.co.uk
Air League Engineering Scholarships																		•		scholarships@airleague.co.uk
Atlantic Airlines Cadet Pilot Sponsorship Scheme	•				•															www.atlanticflighttraining.com
British Aerobatics Foundation Annual Bursary Scheme	•															•				www.aerobatics.org.uk
BWPA Amy Johnson Memorial Trust Scholarship	•	•			•	•					•	•	•	•					•	www.bwpa.co.uk
BWPA PPL Training Bursary	•	•						•											•	www.bwpa.co.uk
Caroline Trust			•						•								•			www.carolinetrust.org.uk
Dennis Kenyon Junior Helicopter Flying Scholarship		•						•												www.dennis-kenyon.com
Flight Training Europe Instructor Sponsorship	•										•	•								www.flighttrainingeurope.com
Flying Scholarships for the Disabled	•							•		•							•			www.toreachforthesky.ork.uk
GAPAN JN Somers ATPL Scholarship 2009	•				•															www.gapan.org
GAPAN PPL Scholarships	•							•												www.gapan.org
GAPAN Flight Instructor (Restricted) (Fixed Wing) Rating Scholarship	•										•									www.gapan.org
GAPAN Flight Instructor (Restricted) (Rotary) Rating Scholarship		•									•									www.gapan.org
GAPAN & EPST Jet Orientation Course Scholarship	•														•					www.gapan.org
GAPAN Flight Instructor Bursary Programme – Instrument Rating Instructor (up to £2,000)	•												•							www.gapan.org
GAPAN Flight Instructor Bursary Programme – Aerobatics Instructor (up to £1,250)	•													•						www.gapan.org
GAPAN Flight Instructor Bursary Programme – Multi-Engine Instructor (up to £3,000)	•											•								www.gapan.org
Glen Stewart Flying Scholarship Trust	•							•												www.flyingscholarships.co.uk
Highland Airways Cadet Pilot Sponsorship	•				•															www.highlandairways.co.uk
de Havilland Educational Trust	•							•		•						•		•		www.dhmothclub.co.uk
Royal Aero Club Trust	•	•	•					•	•	•						•	•			www.royalaeroclubtrust.org
Royal Aeronautical Society Centennial Scholarship Fund																		•		www.raes.org.uk
RAF Association Flying Scholarship	•																•			www.rafa.org.uk/scholarships.asp
Royal Navy Gliding Scholarships			•														•			www.faasquadron.org.uk/glidingawards.html
University Air Squadron	•		•													•	•			www.universityairsquadrons.com

ftnreview

Clearer Horizons, by James Allan

Once the act of controlling and navigating an aircraft has ceased being a challenge in itself, and you've taken all your mates (well, all those who trust you enough to go flying with you) for a bacon butty and a cuppa at the airfield next to yours, what's next?

AFE have form when it comes to books to overcome post-PPL ennui, specifically the excellent (and still available) 'Beyond the PPL' by Nigel Everett. So, at first glance, a second title on the subject might be seen as overkill. It is, however, sadly true that the majority of people who struggle and sweat to achieve a PPL end up giving up flying within a few years of qualifying. There is clearly a need for books like this.

Where 'Clearer Horizons' differs from 'Beyond the PPL' is that James Allan's book is less about developing your skills with further practise or training and more about stretching yourself by exploring the boundaries within your existing PPL. It does, nevertheless, cover advanced training such as IMC or night flying – no book of this type would be complete without – but it is rather more interested in making suggestions about how to make good use of your flying. The books do overlap, but there is plenty in each to justify the cost of either, or indeed both of them. James Allan's style is comfortably authoritative, but approachable and readable. Rather like any good instructor, in fact. His comments about flying in a spot of rain, or on frosty days for example, if taken properly on board, could significantly increase the number of available flying days in the UK.

Clearer Horizons also provides a huge resource of basic ideas on interesting and exciting challenges like aerobatics and formation flying, floatplanes, foreign touring, precision flying and any number of similar ideas. Then there's the section about gadgets, GPS, software and other toys, plus an extensive section about buying (or indeed, building) the ultimate toy - an aircraft of your own. It covers too many subjects to be considered truly authoritative in any of them; this is not a book to teach oneself aerobatics or floatplane flying, for example, and that is not its intention. But if you've got yourself a PPL and find yourself casting around for what to do next, then James Allan's latest book is certainly worth dipping into. Then put it down and go flying. You know you want to.

Clearer Horizons, by James Allan.
Published by Airplan Flight Equipment.
184 pages, softback. ISBN 978-1-906559-08-3, £14.95 from pilot shops, flying schools or bookshops.

The Complete JAR PPL Flying Course, DVD by John Pullen Productions

We have definitely moved on from the days of homespun 'me-and-my-mate-with-a-video-camera-went-flying' school of flying training videos and the John Pullen Productions series is clearly made to a far more respectable set of production values. Nevertheless, given the limited market, it is a truth universally acknowledged that there is not the same production budget for a series of flight training videos as the BBC might allocate to, say, an adaptation of Pride and Prejudice.

So, within those sensible limitations, The Complete JAR PPL Flying Course does quite a decent job. It covers all the standard exercises required by the syllabus, the footage and voiceovers are clear and professionally done, by and large it achieves what it sets out to do, which is to show all the exercises clearly, succinctly, and in sequence. Think of it as a set of videoed instructor demonstrations of the flying exercises and you pretty much have it.

Where I think it may disappoint is in a general lack of imagination. There is one main camera angle, shot from behind the P1 position's right shoulder, plus the odd close-up of the panel or key control inputs and a view through the windscreen when the horizon is referenced. All this is pretty much what a student would observe when sitting through an instructor demonstration of the exercise in the air. There are no external air-to-air shots of what the manoeuvre looks like, what shape it makes in the sky for example, which would have genuinely added a dimension not otherwise available to a PPL student. Added graphics are used sparingly, a bit rudimentary and not always entirely clear.

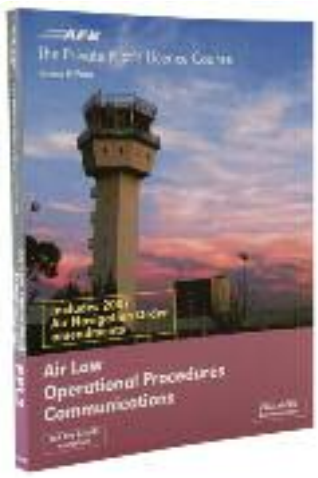
The limited field of view may well be down to the budget – air-to-air photography is expensive – but the end result is that, as each exercise occupies perhaps thirty seconds of video, its value to a student as pre-lesson preparation is rather limited. There is no footage of, for example, a student attempting the same exercise, or the results of a mishandled manoeuvre, which would have added some further relevance and interest (and perhaps answered a few questions such as 'what happens if I mess it up, will we crash...?').

Some of the exercises also seem to have been conducted in turbulence, there is rather more control column action than might be expected for some of the simpler manoeuvres and this could create a somewhat misleading impression for anybody trying to get a grasp of the fundamentals. That said, if you haven't yet started a PPL course and are wondering if it is for you, then this DVD gives a very accurate impression of what a typical flying lesson will involve. I suspect there will be rather fewer sales to actual students than sales to people simply thinking about learning to fly, not because of any inherent lack of relevance but just because £120 for a set of DVDs to test the water is rather easier than the commitment to a PPL course itself.

In that respect, I think John Pullen has it about right. This set gives enough of a flavour, plus plenty of genuinely useful instruction, to be of value before you embark on the Great PPL Adventure and will still be useful as pre-lesson prep, or post-lesson aide-memoire, once you've begun your course.

The Complete JAR PPL Flying Course,
DVD by John Pullen Productions
2-DVD set, total running time 105 minutes.
Around £120 from flying schools and pilot shops.

The Private Pilots Licence Course, volume 2, Air Law, Operational Procedures and Communications (PPL2), by Jeremy M.Pratt.



No apologies here for a repeated review of something of a standard work in the PPL training canon. This is an entirely new edition, brought bang up to date to meet the very real need to keep abreast of ever-changing legislation, rules and procedures.

Other PPL subjects are fairly static, Principles of Flight, for example, is not often subject to a re-writing of the rules of aerodynamics, but it sometimes seems as if the CAA simply can't leave Air Law, and its associated subjects Operational Procedures and Communications, well enough alone. This is frustrating for the student, whose textbook may happily state something which is no longer the case. Indeed the CAA's examinations sometimes ask about matters which have changed, so it is to AFE's credit that they revise and re-publish this book so frequently.

Changes in the new edition include:

- **Wake turbulence categories;**
- **ATSOCAS (buy the book and look it up if you don't know);**
- **Various minor tweaks to NPPL matters, for example the removal of references to the UK (CAA) licence to avoid confusion;**
- **Restricted Areas, Red Arrows exclusions and similar;**
- **Overhead joins;**
- **I could go-on...**

It retains the approachable and lucid style pioneered in the first edition of this series and, by keeping itself up to date, ensures it is as relevant now as it was when first published, almost 15 years ago.

The Private Pilots Licence Course, volume 2, Air Law, Operational Procedures and Communications (PPL2), by Jeremy M.Pratt.

324 pages, softback. ISBN 978-1-874783-13-8.
Price £21.95 from flying schools, pilot shops and all good bookshops.

Formation Flying

by Alan Newton

The Victor formation

Alan Newton is head of training for On-Track Aviation Ltd, a flight training school based at Wellesbourne Mountford Airfield, UK, that provides instructor and examiner training for UK/JAA ratings as well as other advanced training courses such as aerobatics and formation flying. Alan spent 18 years in the Royal Air Force where he saw saw operational tours on the Victor during the Falklands Conflict and the VC10 during the Gulf War. He also spent many years as a flying instructor on the Tucano and Jet Provost teaching both ab-initio and qualified pilots gaining an A2 instructor category. After leaving the Royal Air Force Alan joined Cathay Pacific Airways where he has flown the Boeing 747 classic and now flies the Boeing 747-400. He is an RTF Examiner and Flight Instructor Examiner on both land and seaplanes.

The day started bright and clear and I felt relaxed as I drove to the airfield, looking forward to the formation flight I would be leading towards the end of the day.

We were planning to fly a Diamond Nine formation of light aircraft for the first time. Since we began teaching close formation flying we had always hoped we would one day be able to put up such a large formation. In the past this has been limited by the supply of suitably qualified pilots as opposed to aircraft, but today should see our aim achieved – fingers crossed!

After my usual morning coffee and chat with the operations staff at On-Track Aviation, it became clear this wasn't going to be the day for a Diamond Nine; it would more likely be a Diamond Seven – ugh!

A combination of aircraft un-serviceability and lack of pilots, due mainly to work commitments, had necessitated the downgrading of the formation from a nine ship to a seven ship. This was not what I had hoped for. It also meant that I had to redraw the formation and re-assign the pilots to different positions. Well, as they say, if you can't take a joke then you shouldn't have joined!

The number of formation qualified pilots we have at On-Track Aviation has increased greatly over the years by training a number of enthusiastic PPL holders. The most prolific comment made by pilots who have completed the course with us has been: "What shall we do with this new talent?" Our answer is to encourage them to pair up and go places as a formation. It is fun to arrive at a new airfield and maybe land as a pair. It may even result in a single landing fee! In addition, we ask them to take part in large formation flights organised and lead by instructors of On-Track Aviation, such as the one I had planned for this afternoon.

In the words of Gary Salter, one such PPL who trained with us a few years ago, "I really enjoy the flying. It is very challenging and great fun. I always come down with a big grin on my face".

The close formation flying course is run out of Wellesbourne Mountford Airfield, in Warwickshire. The students who sign up for the close formation courses come from a variety of backgrounds and experience levels. They have included accountants, hoteliers and businessmen and women of all ages, but they all have one thing in common - they want to fly formation and have fun doing it.

The instructors who teach the formation flying course at On-Track Aviation have all come from the military with many years of teaching this discipline in a variety of jets and piston engine aircraft such as the Bulldog, Chipmunk and Jet Provost. Some of these instructors have been in involved in formation aerobatics and formation displays.

It is an art form and a skill that any pilot can learn and it is both fun and sociable. It can also be a useful skill that could be used to help another pilot in trouble.

But is it legal?

Yes. There isn't anything to stop pilots flying in formation with each other. The Air Navigation Order (ANO) spells out the rules under which pilots may do this.

ANO Section 4, General Flight Rules, Avoiding Aerial Collisions

1. Notwithstanding that a flight is being made with air traffic control clearance it shall remain the duty of the commander of an aircraft to take all possible measures to ensure that his aircraft does not collide with any other aircraft.
2. An aircraft shall not be flown in such proximity to other aircraft as to create a danger of collision.
3. Subject to sub-paragraph (7), aircraft shall not fly in formation unless the commanders of the aircraft have agreed to do so.
4. An aircraft which is obliged by this Section to give way to another aircraft shall avoid passing over or under the other aircraft, or crossing ahead of it, unless passing well clear of it.
5. Subject to sub-paragraph (7), an aircraft which has the right-of-way under this rule shall maintain its course and speed.
6. For the purposes of this rule a glider and a flying machine which is towing it shall be considered to be a single aircraft under the command of the commander of the flying machine.
7. Sub-paragraphs (3) and (5) shall not apply to an aircraft flying under and in accordance with the terms of a police air operator's certificate.

The close formation training, based on what military pilots are taught from early on in their flight training, provides pilots with a sound knowledge of ground and flight techniques, meaning that on successful completion of the course the pilot will be capable of flying close formation safely and accurately.

The course can be done on a part or full time basis as the candidate prefers, although we do recommend that the course is undertaken full time as it's easy to 'go off the boil' if there is too big a gap between training flights.

The course consists of five hours ground instruction and five hours 45 minutes of flight training, including a solo flight. These are the minimum training hours requirement and some candidates tend to require a little more flight instruction. (See table overleaf).

The emphasis throughout the course is always on flight safety. Have fun but do it within the confines of your own ability safely.

Back to our Diamond Seven and it's time to gather the briefing material together and formulate a plan of action. All formation flying must be briefed and this briefing must be attended by all participating pilots. On-Track Aviation has a proud safety record when it comes to formation flights and the safe conduct of the flight starts with a thorough pre-flight briefing.

As leader it is my job to check all the necessary items, such as weather, NOTAMS, aircraft, exercise to be flown, emergency drills and so on. All aspects must be briefed and understood by all pilots before getting airborne. To help with this process the leader uses a set of slides (figure 1) which are preformatted with appropriate headings.

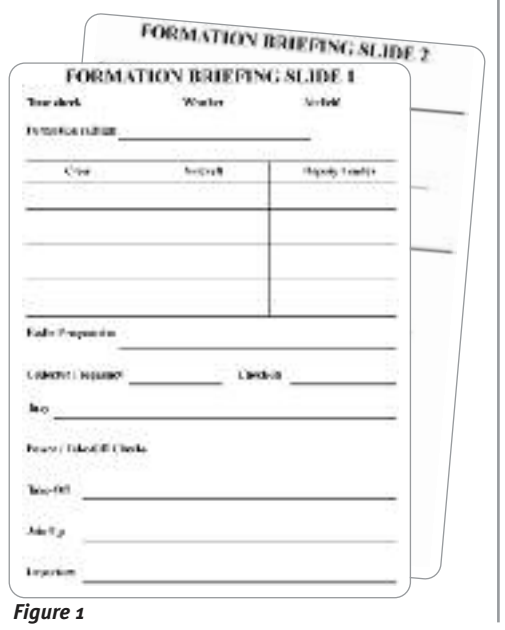


Figure 1

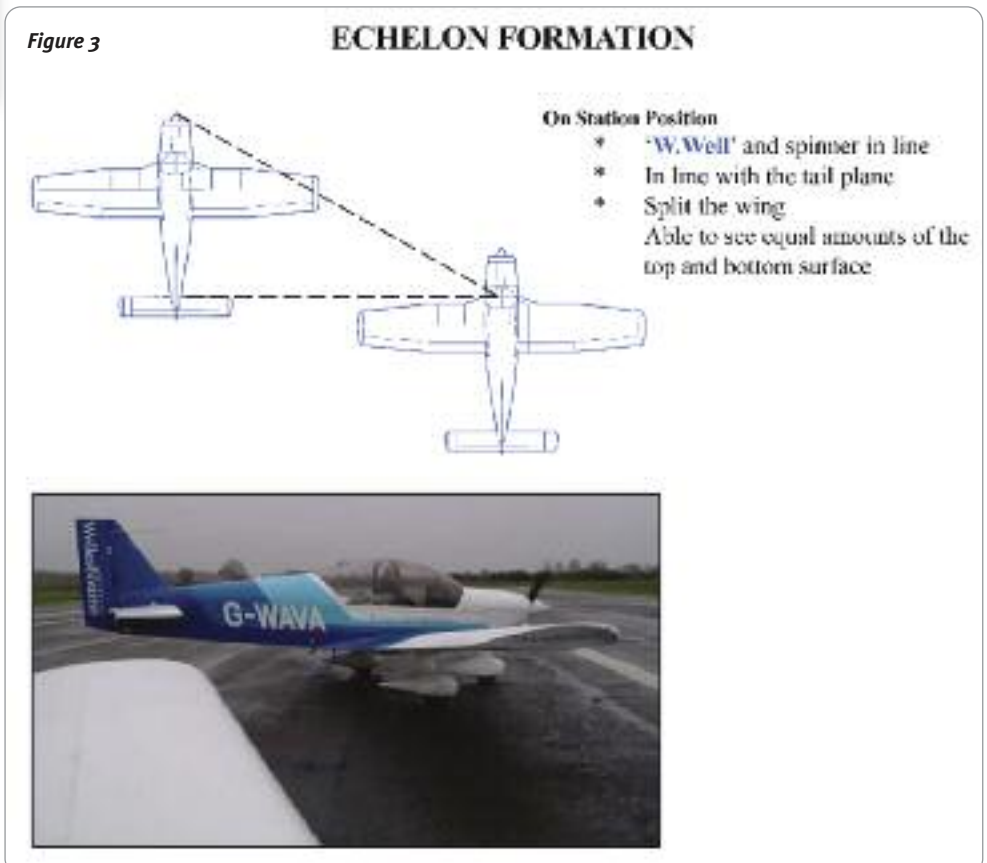
Ground Syllabus	Tuition	Private Study
Sections and formation positions	0.5	-
Joining formation and station keeping	0.5	0.5
Formation changes	0.5	-
Communications	0.5	-
Emergencies	0.5	0.5
Take-off and landing	0.5	-
Pre-flight briefing	0.5	-
Formation leading	0.5	-
Total (5 hours)	**4.00**	**1.0**

Flight Syllabus	Dual	Solo
Introduction and basic formation part 1	1.00	-
Pre-flight briefing		
Start-up and taxiing		
Stream take-off - Demo		
Join up in straight and level flight		
Manoeuvres in echelon and line astern		
Formation changes		
Lost leader procedure		
Run-in and break and stream landing		
Basic formation part 2	1.00	-
Stream take-off		
Manoeuvres in echelon and line astern		
Formation changes		
Join up in straight and level and turning flight		
Airmanship checks - bingo and chicken fuel		
Changing the leader		
Run-in and break and stream landing		
Advanced formation	1.00	-
Formation take-off		
Formation changes		
Manoeuvres in echelon, line astern and line abreast		
Changing the leader		
Emergencies		
Formation landing		
Revision	1.00	-
Pre-solo check	1.00	-
Solo	-	0.45
Total (5 hours 45 min)	**5.00**	**0.45**

The seven-ship formation

Figure 2

Figure 3



Planning the formation also requires knowledge of the pilots' abilities as a great many of the positions are flown by PPL holders we have taught over the years and they are not all as current and experienced as the On-Track Aviation instructors. Consequently, we always work to the lowest denominator to ensure the safety of the formation and its pilots.

In addition, we encourage each pilot to carry passengers as this provides a great source of photographs and a possible source of new trainees. As the leader I try and take a passenger to help monitor the aircraft around me as well as giving me another set of eyes to scan the horizon for possible conflicts.

Leading large formations around the sky, especially during the summer months, can be fraught with all sorts of challenges and threats which sometimes can be sorted out at the planning stage but most of the times are unplanned. A large formation of aircraft flying close together is not easy to manoeuvre out of the way of any potential threat so one has to always think well ahead and plan the outcome of any manoeuvre thoroughly.

As the briefing time approaches all the pilots assemble in the main briefing room. Today we will be flying a seven-ship formation lasting about 30-45 minutes, as much longer than that and fatigue sets in due to the amount of concentration required and expected of each pilot.

I always finish the briefing in the same way: "We will walk at 20 past for engine start at 30, time check 17:00, any questions?"

There is a general buzz around the room as each pilot prepares him or herself for the forthcoming event. There is an atmosphere of anticipation mixed with nervous tension and excitement as each of the pilots and their passengers chat together before making their way to the aircraft.

"On-Track formation check in"

'On-Track One... Two... Three... Four... Five... Six... Seven"

"Loud and clear, engine start, go"

As the aircraft are parked at different locations around the airfield it is not possible to see each individual pilot and communicate the engine start sequence visually, so we plan to use the radio. At this time of day the airfield traffic pattern is fairly quiet and soon the ATC will close down.

"On-Track formation check in"

"On-Track One... Two... Three... Four... Five... Six... Seven"

"On-Track formation, seven aircraft taxiing for runway 18, QNH 1005"

I apply power, moving off the grass parking area and taxi to the holding point for runway 18. The aircraft taxi either side of the taxiway centerline so as to reduce the slipstream affect and the possibility of throwing any stones into the aircraft immediately behind. It also gives a better view ahead as the pilots taxi out in numerical order behind me. At the holding point I turn my aircraft into wind, ready to complete the power and take-off checks. Each following pilot does the same. It's an impressive sight to look along the line of aircraft, but there isn't any time to take in the view as I have a job to do.

After completing my power and take-off checks I look left to await the thumbs up from my number Two, which tells me all the pilots are now ready for take-off. We work a cascade system of acknowledgement from the last pilot (number seven) to the leader with each giving the pilot next him/her the thumbs up as they become ready for take-off.

"On-Track formation ready for departure"

After a good look around, giving particular attention to the final approach, I taxi onto the runway ready for a stream take-off.

The stream take-off is the first type of formation take-off we teach the trainees. It isn't really a take-off in formation; more of a line-up in formation which then becomes an individual take-off. The major difference from a singleton take-off is that there will be other aircraft both ahead and behind on the runway conducting their own take-offs at a time interval of five seconds.

In order to ensure safety and avoid any wake turbulence the formation lines up in echelon into wind and operates a 'high-low-high' (figure 2) policy after take-off. Echelon into wind position allows any crosswind to blow the slipstream away from the adjacent aircraft. After take-off the preceding aircraft will fly a slightly higher climb profile than the following one for the same reason.

Echelon is when an aircraft flies slightly behind and on the left or right side of another. The pilot uses aircraft references to maintain the position (figure 3). These references will vary depending on what type of aircraft the pilot is flying echelon formation on.

I get a thumbs up from my number two, indicating that everyone is ready to go. I nod my head, which is the sign I am taking-off and apply power. Five seconds later number Two begins her take-off, and so on. On-Track formation takes to the sky.

Safely airborne I throttle back the engine and maintain the briefed climb speed to allow the following aircraft to catch up. As I am flying the least powerful of the aircraft in today's formation it will not be long before all the others join in their respective positions.

I glance over my right shoulder and see number Two moving quickly and accurately into place on my right echelon followed by the number Three on my left echelon.

"On-Track turning right 270 degrees. Rolling in, now"

By turning I will allow the pilots at the back of the formation to join quicker as they can cut the corner.

"On-Track Seven in"

After this call I know all pilots are in position and ready for the briefed exercise. It is an important call as I cannot see directly behind me. We continue the climb into the local training area to the briefed altitude ready for the exercise.

Today number Seven will act as a 'whip', which means he will break out of the formation and sit above us to organize the positions of each of the formation aircraft into a symmetrical pattern. It is important to do this as we have a variety of different aircraft flying in formation

and not all the pilots have had experience formatting on these new types. As leader I will retain the formation lead but delegate the positioning of each aircraft to the whip. He will ask individual pilots to move in order to achieve a symmetrical formation about number One.

"On-Track Four move forward one aeroplane length"

'On-Track Four'

'On-Track Two and Three hold your positions'

'On-Track Two... Three'

Each formatting pilot shall acknowledge the commands in the same way pilots acknowledge ATC instructions.

The formation of seven aircraft is made up of a 'Vic' and 'Box' formation, which is a series of echelon and line astern positions (figure 4). The line astern position is two or more aircraft lined up behind each other and stepped down slightly (figure 5).

After the whip has done his job he returns to the formation and calls in. I begin a slow turn around back towards the airfield to position for a circuit and landing.

"On-Track Two out"

"On-Track formation heading 080 degrees, 90 knots, altitude 2,000 feet"

I look to my right and see number Two breaking away from the formation. She has got out of position and to ensure the safety of the rest of the pilots she has executed the 'Lost Leader' manoeuvre. This manoeuvre is taught early on to all pilots as it is the ultimate safety gate, in a similar way that a pilot is taught to go-around if the approach to land isn't stable and correct.

Lost Leader Procedure

- Climbing break using 45° AOB away from the leader
- Apply full power
- Hold for three seconds then reverse onto leader's heading
- Call 'On-Track (?) out'
- Leader will respond with heading, speed and altitude
- Manoeuvre to locate formation and put leader on horizon
- Call 'On-Track (?) visual'
- Re-join formation only when cleared by the leader

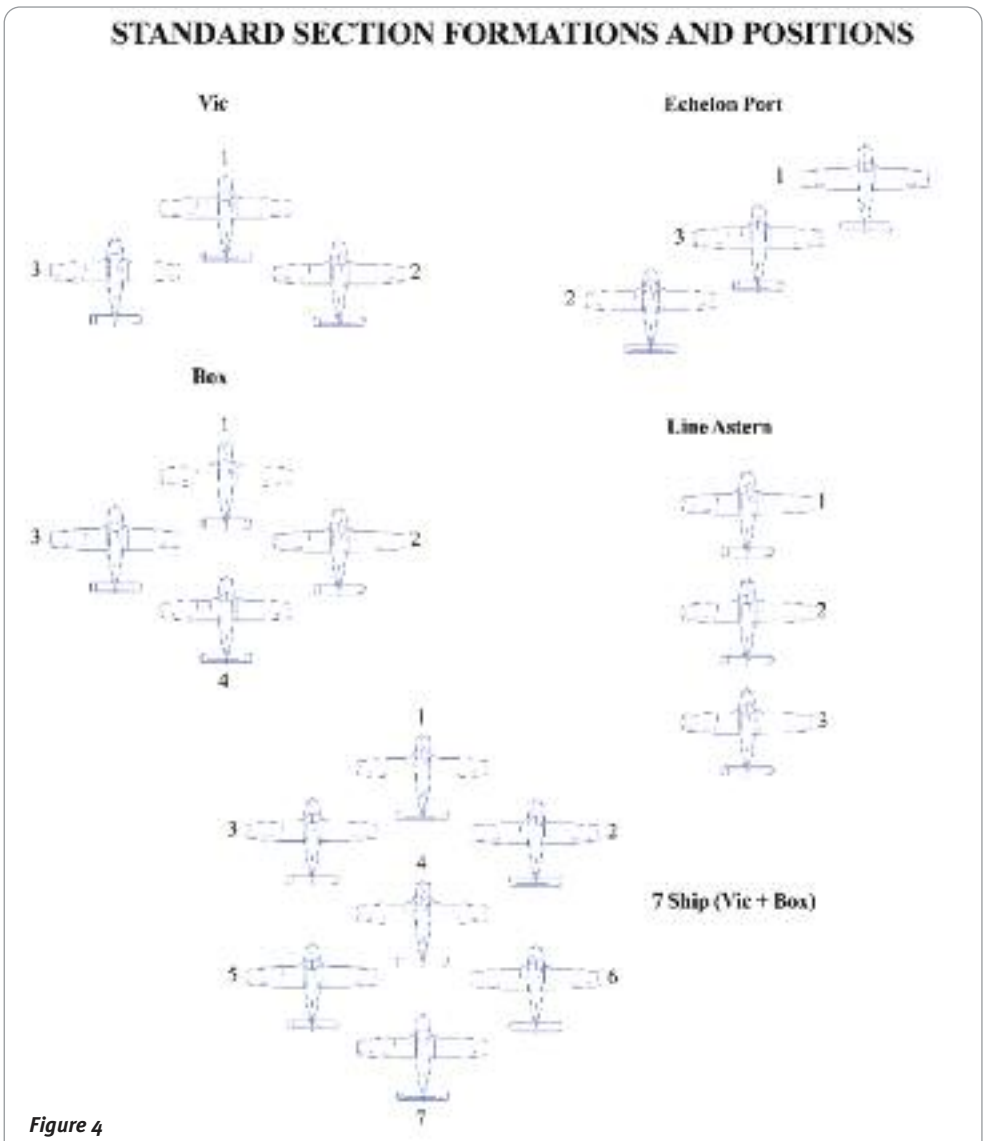
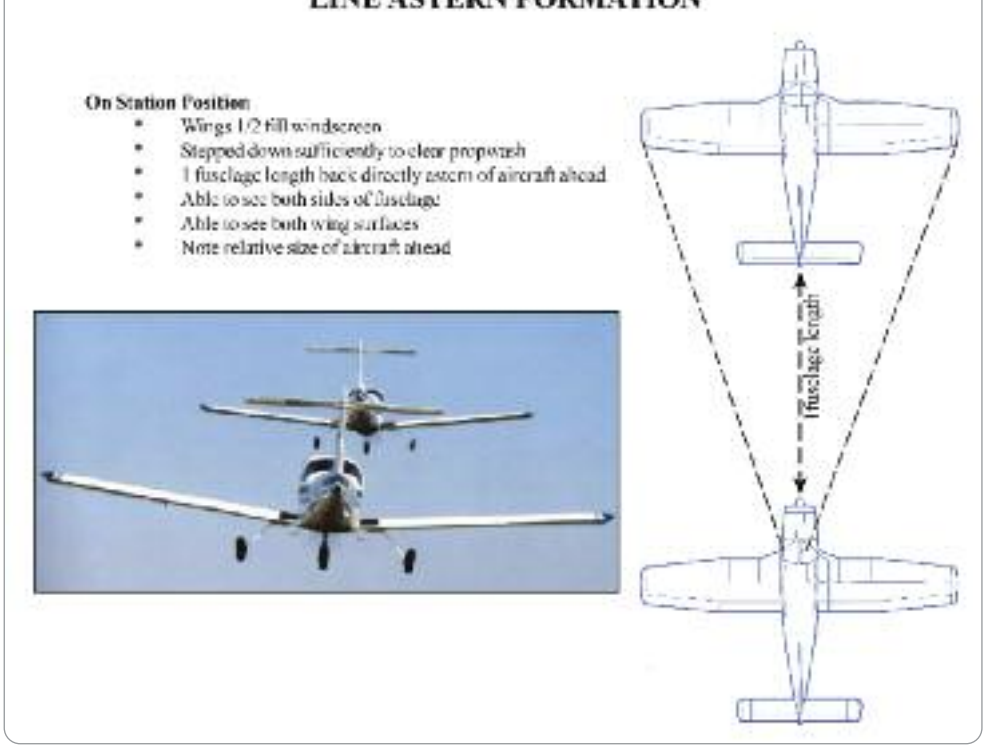


Figure 4

Figure 5



I begin a gentle roll out of the turn onto a heading of 080 degrees and await a call from the number Two that she is visual and ready to rejoin the formation.

"On-Track Two visual"

"On-Track Two rejoin echelon starboard on the leader"

"On-Track Two"

It doesn't take long for her to re-join the formation and then I can continue positioning the formation for a rejoin at the airfield.

I make a radio call on the airfield frequency advises any traffic that we are rejoining the visual circuit.

"On-Track Four bingo"

"On-Track One roger"

Each pilot in the formation must carry out his/her own regular airmanship checks so as to monitor important items such as fuel level, engine health, etc. During the formation briefing, two fuel levels are nominated by the leader and called 'Bingo' and 'Chicken'. These are set figures based on either time or amount and when each member of the formation reaches either of these values they must tell the leader at the earliest opportunity.

Fuel Levels

- **Bingo**
- This fuel state can be any amount of fuel and will be briefed by the leader e.g. less than one hour remaining. More than one Bingo fuel may be nominated.
- **Chicken**
- This fuel state generally indicates that a wing-man has reached the fuel required for immediate recovery home or to a nominated diversion airfield.

With such a large formation with such a variety of pilot experience levels it is not safe to do a formation landing so I briefed a run and break followed by a stream landing. A run and break is a manoeuvre where the leader positions the formation for a straight-in approach to the runway and changes the formation into echelon. The leader continues towards the airfield and when he decides it is safe to do so breaks away from the other aircraft into the visual circuit. This may be a level or climbing manoeuvre. At the briefed time interval each of the other pilots follows suit. The leader makes all the radio calls for the formation. The run and break is then followed by a stream landing where each pilot positions his/her aeroplane behind the preceding one and makes an individual landing on the runway centre line. After landing and when it is safe to do so each pilot will move his/her aircraft over to the side of the runway from which they will vacate.

Additionally to keep the formation changes simple the seven ship will break up into two formation elements comprising a Vic (three aircraft) under my leadership and a Box (four aircraft) lead by On-Track Four. As formation leader I am still responsible for the overall safety and positioning of the formation into the visual circuit but On-Track Four takes it on himself to position his element in trail by a few hundred yards.

The visual circuit on runway 18 is a right hand pattern and therefore to complete the run and break each element (Vic and Box) must now change formation into echelon port.

"On-Track Two echelon port, go"

"On-Track Two"

All formation changes are initiated by the leader or deputy if briefed. Each pilot who is required to move acknowledges first and then moves safely into position. When moving around the formation pilots are taught to move in 'squares' one side of a square at a time. So to move from echelon starboard to echelon port the pilot, after acknowledging the command, will move down, then back and then across to the opposite side. Then move forward, then up and into position. Pilots never move diagonally for safety reasons and must always consider an escape route should things go wrong.

"On-Track Seven echelon port, go"

"On-Track Seven'

"On-Track Six echelon port, go"

"On-Track Six"

After hearing the command for On-Track Six to move and allowing a few moments for him to move into position, the formation is ready for the run and break. I begin a slow descent towards the briefed height for the break while at the same time allowing the aeroplane to slowly accelerate without increasing the power.

The circuit is clear and I have reached the start point for the break. Looking quickly right to check it's clear I rapidly roll the aircraft to the right and apply full power whilst transmitting on the radio.

'On-Track formation, seven aircraft on the break to land'

Three seconds later number Three breaks followed by number Two, followed by numbers Four, Five, Seven and finally number Six. I keep the turn very tight to give the following aeroplanes plenty of room to manoeuvre behind me. Almost as soon as I have applied full power I am reducing it again to bring the speed back within the flap limit. First stage of flap is lowered and I continue to tighten the turn on to final approach. The crosswind is having an effect on my ground track now. I lower the final stage of flap and line up with the runway at 150ft on approach speed.

"On-Track formation final"

I land the aircraft on the runway centre line and allow it to decelerate before moving across the right hand edge from where I will vacate the runway at the penultimate taxiway and wait for the rest of the formation to land and re-form ready for the taxi back to parking.

I now have a chance to view the last two aeroplanes positioning on final and making a smooth touchdown.

"On-Track formation vacated"

The last aircraft is clear of the runway and ready to taxi back to parking. We taxi back in the same way we taxied out, left and right of the centre line. On our return we are able to park next to each other and complete the shutdown checks.

"On-Track formation cut"

One final call to shutdown the engines and the formation flying is over, but not the exercise. After every flight there is a full debrief under the guidance of the leader. It is sometimes just a few words but on other occasions it can be quite heated.

The look on everyone's face said it all – happy, smiling and well and truly knackered. "It's great to be able to do a job with such variety and have so much fun as well," commented one of the instructors.

If you wish to have a go at formation flying contact On-Track Aviation Limited. Tel: 01789 842777 or visit www.ontrackaviation.com for details.

The Echelon formation