

HAPPY NEW YEAR TO YOU ALL!

FROM THE EDITOR

Well its only been a short while since our last newsletter. Quite a lot has happened—credit crunch, bankruptcy of country, dollar at an all time low, Obama elected and inaugurated and Brown still in office, but fear not EBG is still here training and flying and doing what its best at. Our instructors are ready, willing and able to fly at a moments notice our backroom staff are fully functional and the chief bowser attendant is itching to kick the year off. As I write this or rather edit it, the snow is 8 inches thick on the ground and the country has ground to a halt.

We have an exciting programme of events planned—well probably the same as last year but exciting none the less. New aircraft to fly (rebuild) and new battles to fight (CAA).



Do Helicopters Float?

What would you do if you realised you were 100 nm away from your destination with only 10 minutes fuel remaining plus 20 minutes reserves? Divert and land as soon as practicable is an easy answer. But what if you were flying out over the Atlantic Ocean and your destination was the only option?

I was walking up to the briefing room on the aircraft carrier, HMS ILLUSTRIOUS to brief for a routine training exercise when the above situation started to develop. An announcement was made on the ships tanyoy stating that an Airborne Early Warning (AEW) Sea King was 100 nm away low on fuel. The ship began to vibrate as it always did when it increased speed to over 20 knots and it listed to starboard as it started to turn.

Simple maths said that the aircraft wouldn't make it – 30 mins at 100kts and 15nm covered by the ship over the same period, even with a tailwind the aircraft would run out of fuel well short of it's one and only destination. One of my squadrons Anti-Submarine Warfare (ASW) Sea Kings was already airborne and as all our aircraft were SAR equipped, it was despatched towards the stricken craft.

A plan was quickly devised – the aircraft would close towards the ship but then land in the sea remaining upright with deft use of collective & cyclic control thus conserving fuel! Once the ship was close enough to the aircraft, it would lift back into the hover and land on the ship.

My crew immediately became plan B! We were to fly a Gemini boat as an under slung load to the scene complete with divers and extra safety equipment. We were airborne sooner rather than later but not before I diverted to my cabin for my camera!



£8 million helicopter – view of damaged tail rotor.

Initially the plan had worked well with the crew inflating the floatation gear to aid buoyancy once the aircraft had landed in the sea. Although the sea was relatively calm for the Atlantic it was not smooth and there was quite a swell. The plan seemed to be working but unfortunately, the tail rotor was damaged by a wave and the aircraft began to vibrate so the crew shut the aircraft down and abandoned it.



The divers in the Gemini trying to get the outboard motor started.

The crew didn't get their feet wet though – they deployed the multi crew life raft via the cargo door and climbed aboard. The ASW Sea King in attendance picked up all four crew members directly from the life raft.

We arrived after the event and lowered the Gemini into the sea with the divers jumping out next to it. We sat in the hover watching events and realised that the divers couldn't get the outboard motor to start. We came to a low hover next to them and literally blew the boat towards the ditched aircraft. Once alongside we backed off and watched the divers attaching more floatation bags to the aircraft to stop it rolling over and also to take the 'beany' off the rotor head so that lifting gear could be attached to recover the aircraft aboard the ship.

Job done and the ship now nearby, we reattached the Gemini and winched the divers back onboard and landed back on the ship. Flying operations were then suspended and the ship's company were allowed on deck to watch the recovery of the aircraft back on deck – which was done, managing to knock the tail unit off in the process – that's a story in itself!

So what happened to put the crew in this situation? Operational flying over the sea is not the same as civilian flying over land but some principles are the same, namely Situational Awareness. Irrespective of what this crew were involved in doing, they would have had knowledge of the ship's intended track and their own area of operation. Why

didn't they notice that the ship was going in the wrong direction? They would have been distracted by their task in hand and had placed over reliance on the auto tracking device thus reducing their SA.



The Cavalry arrives!

Pilots should not rely on aids such as GPS as this will reduce your navigation skills. We should not plan cross country flights without consideration of alternatives even if it is CAVOK – where are you going if you have a mechanical problem or your mate throws up in the cockpit?

The official report said that the tracking cursor on the aircraft's radar, which had been placed on Illustrious, had 'somehow' transferred itself to another vessel which had passed very close to Illustrious during the flight and the observer had tracked this other vessel by mistake. Perhaps the fact that the CO of the squadron was in charge of the flight, might have had some bearing on the official findings but I know what everyone thought!

Martin Burley
Chief Pilot, EBG Helicopters

EBG JOLLY TO NATS SWANWICK

Thanks to Squadron Leader Chris Wray for another well organised EBG beano to NATS Swanwick on the 5th September. The flight packs would have been a real bonus, (had we been able to use them) so I hope these handy packs are a constant feature of future outings. Unfortunately there will be points deducted because Chris forgot to organise the weather..

The day started brilliantly, but, then I woke up, I was no longer the Red Baron and it was raining. A more dreary and downcast day it was harder to imagine.

Some of the party showed foresight and initiative and made there way early down to Swanwick whilst the remainder of us met at EBG drank copious amounts of coffee looked to the skies and prayed for a break in the

cloud and rain. Nothing doing, so one last check on the weather and then a show of hands to see whose cars we would travel in. This was a forgone conclusion as Nick was chomping at the bit to show off his Audi RS.

So two hours later and a lot deafer after Nick drove the whole way in *sports mode* so we could listen to his baf-fles, we arrived at NATS.

After getting through security that was tighter than an ants chuff we were met and taken upstairs to start the grand tour. After a most enlightening and interesting introduction our genial host asked if there were any questions.

Up shot the hand of the only lady in our party..

"Yes" asked our host smiling politely..

"Is this place unionised?" Came the American accented enquiry from Pam..

After our host regained his composure he ignored the question and tried again.

The same hand shot up and smiling again he nodded cautiously in Pam's direction.

"How much do you earn a year?"

"Any other...erm....relevant questions?" He asked

The very same hand shot up once more

"Did you know that American planes are bigger than yours..".!!! said Pam smiling...

A resigned look of despair was evident on what was once a happy smiling face.

This was going to be a long day he thought.....

Lunch went well and the staff restaurant was good quality tucker, I can recommend the sausage and mash. The fact it only cost Nick about 10 shillings for everybody's lunch left a smile on his face that couldn't be moved..

From my own point of view the trip was well worth it and to actually see just how much traffic is in the sky and the way it is dealt with was nothing short of mind boggling

It was all very interesting actually being in the operations room watching live the comings and goings of our crowded skies. The new Mode S transponders give a wealth of information such as altitude, speed, heading, aircraft type, call sign and even inform if you are wearing your wife's underwear - Ron & Giles be warned.!!

I'm sure Bob was also wondering what all the fuss was about with all this technical spy in the sky wizardry when he neither flies high enough or fast enough to be seen on even the most sophisticated radar.

I think all those who went have taken something on board for their future flights.

For instance don't fly along the mapping contours of the CTA's because different radar fixes can have you inside the CTA and busting airspace. And as our host pointed out that this is something they are taking very seriously now, coming down hard on and prosecuting every case. So do your self a favour and give them a wide berth. For me and my own peace of mind, from now on I will always be talking to someone down on the ground..

Well day over and the drive back to EBG HQ beckoned. I donned a set of old Bose's I found in the back of Nicks car for the journey home, which nicely drowned out Nicks Audi baffles. I was soon asleep and was the Red Baron once more...

By Lee

Thanks to Lee Carroll and Martin Burley for their contributions to this newsletter. If anybody has anything to say or would like to be published please don't be a stand back fusilier and send an article in to us. info@ebghelicopters.co.uk.

Starter Motor Debacle— Finalised

The R44's have this year been plagued with start motor and ring gear problems—PGGY ended up with 8 starter and as many sets of ring gear.

The last starter was very carefully installed by Sloanes and has been giving near faultless performance for over 150 hours which is much better than the previous 7 or 8 hours.

DNH now provide us with maintenance and you may have noticed better reliability over the past few months. We certainly have with niggling hydraulic leaks virtually eliminated.

REDHILL PLANNING SAGA (Cont'd)

The saga of planning for the airfield continues. RAVL (owners of the aerodrome) have withdrawn their planning application for an Equestrian Centre and have stated that they won't submit another one.

The application for a hard runway has also been withdrawn although this is only temporary. As the new CEO for RAVL is aviation orientated, let's hope they drop the idea of a housing estate.



HEATHROW FLIGHT BRIEFING UNIT

With effect from 1200hrs on Wednesday 28 January 2009 the flight briefing unit will close and the parent AFTN function will be transferred to Swanwick. Swanwick will not accept faxed flight plans unless they are correctly addressed.

The AFPEX system (free of charge) is available to individuals and companies enabling flight plans to be filed via the internet. <https://ts1.flightplanningonline.co.uk/>

Registration and verification is required before this can be used. Assistance is provided within the programme. Redhill AFTN address is EGKRZTZX.

Redhill ATC would prefer pilots utilise the AFPEX service to file flight plans, however faxed flight plans will be accepted and transmitted on your behalf. Please ring and let them know you have sent a flight plan to be actioned.

Where's Clive This Time?

Once again this years main (read, only) visit overseas was our annual visit to Le Touquet.

The day started off pretty well, with good weather and all the flight planning in place. Three R44's were assembled together with three R22's and Clive's allouette for the visit. No trouble this year on the M25 for Ken—Hoorah!

We managed to depart Redhill on time with the 22's and allouette followed by the 44;s. We headed to Lydd enmasse to clear customs and pick up fuel.

The departure to Le Touquet was delayed somewhat by the poor weather in the channel. Poor Chris had the worst of it on the way over with CDMG and no AH. The rest of us managed to plod along under the crud with Ken, Ron and Lee vying for squadron leadership.

Once again we adjourned for luncheon at the well known fish restaurant recommended by Chris Wray. Certain of us electing to have their lobster killed and cooked on the spot. Damn Yankees. Yours truly did not fly this year and was plied with alcohol by one of the aircraft owners (see Caption competition). Ken's overwhelming desire to eat ice cream on the sea front after lunch was closely followed by our return

to the airfield. On this occasion Clive managed to stay in touch. The return leg over the channel was uneventful other than Ron pretending he was in the worlds first airborne submarine. Could have been Bob was flying he was that low!



Proposed Fly Outs 2009

- **Normal French trip under consideration but may change venue.**
- **Weston-Super-Mare**
- **A Trip to Bonnie Scotland—Ardrochy cottages, Glengarry, Invegary—www.ardrochy.com.**

Expressions of interest for any of the above please. Full agenda to follow by email.

Done it Again

EASA and the CAA in their infinite wisdom on the grounds of safety have complicated aircraft maintenance and in so doing added yet more costs to aircraft ownership, anywhere between £500 and £4000 per annum per aircraft dependent on type complexity and where you have it maintained. More well thought out legislation from Europe. It will be interesting in a few years to see the dramatic fall in accident statistics that will follow. I don't think so somehow as we all know most accidents are pilot/weather related. Few relate to maintenance issues. Will a maintenance program managed by an organisation significantly contribute to helicopter safety? Seems to be all about covering backsides again. If the average engineer is going to do something perverse to your aircraft no amount of paper saying he did it properly is going to change that.—Comments?

Weston Super Mare Visit

I have asked Bob Kember to do an article for this but unfortunately it hadn't arrived by the time of publication.



MORE PASSES

Since the last newsletter the following students have gained their PPLS:

Mark Williams (R44)	Hendrik Freeke (R22)
Josh Burrill (R22)	Victoria Twelves (R22)
Paul Duncombe (R22)	Tom Mulvey (R22)
Miles Hunt (R44)	

Accompanied by the following who have gained further type ratings:

Bob Fidler (R44)	Hendrik Freeke (R44)
Tom Mulvey (R44)	David Woods (EC120)
Jamie Heard (EC120)	Matt Beeke (B206)

Congratulations to all of you—how about joining the old boys luncheon club?

Special congratulations to David Milton for being the first person that has started from scratch with EBG and has just achieved a pass on his Commercial Helicopter Pilot's test. I hope David will start doing some work for EBG this summer.

Now it's time for Nick, Lee, Jamie etc to stop talking the talk and to start walking the walk.

Bowser movements

Beaurocracy strikes again! We were forced, not asked or requested, to move the bowser outside of the hanger because of the Fire Risk to the building. Health and Safety gone mad yet again. It hasn't occurred to RAVL that a bowser full of fuel locked in a hanger is safer than a bowser stored outside. The temptation to steal the fuel and cause damage is far more inviting to the average village yobs. RAVL and their insurers say that a bowser in a locked hanger is a far greater risk. They seem to have forgotten the fuel in the aircraft more than equivalent in quantity and in unlocked aircraft constructed from thin aluminium. Reliance on statistics not common sense.

Fuel Costs

You will have noticed the hourly rate has remained static for a while. Unfortunately the reduction in world oil prices seems to have missed the G.A. community by. We now have the excuse of the dollar exchange rate and the small quantities used to contend with.

Yet More Fuel Problems

RAVL's supplier of the jet fuel has advised that they will no longer be including an anti-freeze additive to the fuel. I believe on cost grounds (funny that they haven't advised us of a reduction in price because of the saving). The nett effect of this is that the anti-freeze additive will have to be added in order to avoid the possibility of untreated fuel freezing in flight. Its not quite clear yet who or how this is going to be done. Seems to me like an additional expense is coming our way. Not forgetting of course the potential detrimental effect on safety. I can see it now a new statistic helicopter crash caused by freezing fuel—no additive.

If I am wrong in any of this or have got the wrong end of the proverbial stick somebody let me know and I will publish a new article.

Coming Soon

An article by Matt Beeke. "How I flew across the Irish Sea in an R44 in February and survived". Should make interesting reading!



ELT's

Don't forget if you cross the channel from January this year you have to carry an operable ELT or be illegal. Should add spice to the annual jaunt to Le Touquet. Does one ELT cover a fleet of aircraft—I suspect not. Big expense for owner/operators yet again!



Safety Regulations Group Charges

Here comes the latest EBG rant at the CAA. For those of you who don't know our friends in high places have deemed it appropriate to levy increased charges to small AOC holders such as EBG. We have seen increases from £1188.00 to £3188.00 last year, this is scheduled to rise to £6188.00 this year and up thence to £12000.000 next year. This level of outrageous increases has a severe detrimental effect on the profitability of EBG. The nett effect is that for every hour flown on the R44 on a charter based upon the number of hours flown last year we will be paying the CAA £100.00. Nice work if you can get it! Without labouring the point we have written to the CAA to complain but to no avail. This increase in costs is to be followed by increases on the Training Side. Maintenance costs are also set to rise significantly. The ultimate effect of this will be to push the hourly rates up for everybody. If you care about EBG and flying can we ask that you write to your MP, Mayor, Councillor, Village Priest in fact anybody to register your disapproval and disappointment. Obviously the primary reason for this increase is our own governments insistence on the competent authority (CAA)

being funded by Industry. (The only one in Europe). It's all very well for British Airways with millions of passengers per year but for an operation like EBG it's criminal. EBG will be writing to other AOC operators to form a user group to fight these punitive and unjust charges.

What Did he Say?

Prize for the best caption to the following photograph.



My decision on the best will be final and will be published in the next newsletter sometime in the not too distant future!

Firework Display

Despite the terrible wet weather the first EBG firework display was a splendid success. For those of you who missed this special event put a note in your diary Saturday November 7th 2009. No excuses—you have been invited.

Special thanks go to Chris and Robin for their excellent sequencing and lighting of the explosive devices. Loads of rocket debris was seen around the airfield the following day. Catering was provided by Dawn Adams, Linda, (Piggy) and Sue. Alcohol courtesy of EBG via Sainsbury's. The leftovers are still being drunk in the Rehbein household. Despite the number of photographs that were taken on the night none have surfaced other than the following admittedly nicked off the internet.



BBQ and Hover Challenge

Following the cancellation for the second year of the Redhill Air Display, EBG took advantage of the situation and held its annual BBQ complimented with a hover challenge. Despite our best efforts we didn't quite get it right. We seriously underestimated the number of people who wished to take part.

The intention was to have the competition followed by the presentation to the winner and then the BBQ. Unfortunately the



flying didn't finish until after 5.00pm. The overall winner on this occasion was Bob Fidler in the R44 who was presented with a Bottle of Vintage Tesco Champagne. Special thanks have to go to the usual suspects, Linda, Sue, Omi and Dawn for the BBQ arrangements.

Despite one or two mishaps I think the challenge went rather well. Chris was heard to use some colourful language on occasion (recorded in video by John Henshall) but other than one slightly hairy moment the event went quite well. Next time we will modify things a little.

Answers to the quiz set in the April newsletter.



How many did you get right?

Question 1—c

Question 2—b

Question 3—d

Question 4—d

Question 5—a

Question 6—d

Question 7—a

Question 8—c

Question 9—a

Question 10—d

Question 11—c

Question 12—d

Another Quiz to tax the old grey matter!

1. The speeding up and slowing down of the rotor blade during a given revolution accompanied by blade flapping is termed:

- a. Hookes joint effect
- b. Control orbit
- c. Coriolis effect
- d. Phase lag

2. In the event that on touch down, ground resonance exists, the more appropriate action to take is to:

- a. Increase rotor RPM to change the resonant frequency
- b. Turn the tail into wind to reduce the resonant effects
- c. Take off immediately if rotor RPM is high enough
- d. Operate the cyclic control to change the ground/rotor recirculating flow

3. Washout describes rotor blades that have:

- a. Reduced blade angle at the tips
- b. Increased blade angle at the tips
- c. A neutral angle of attack at the roots
- d. A maximum blade angle at the 2/3 point

4. Overtorqueing in a helicopter is where:

- a. Lead and lag, whereas the fully articulated rotor is free to flap and feather
- b. The engine power is insufficient to maintain RPM with an increase in pitch
- c. If the rotor RPM reduces and the power to maintain total rotor thrust remains the same, the torque may increase over limits
- d. If the rotor RPM increases and the power to maintain total rotor thrust remains the same, the torque may increase over limits

5. Some helicopter fins have a camber on one side to:

- a. Counteract tail rotor thrust at high speeds
- b. Help in reducing tail rotor drift
- c. Improve low-speed stability
- d. Produce a side force to assist the tail rotor

6. To correct the effects of retreating blade stall in flight, the pilot would:

- a. Increase the collective pitch to increase the angle of attack
- b. Push the cyclic stick forward to increase speed
- c. Reduce the collective pitch and reduce forward speed
- d. Immediately reduce power and increase the collective pitch to reduce speed

7. Water in the pipelines of a static system:

- a. Will not freeze if the pitot heater is on
- b. Will cause the Airspeed Indicator to over read

- c. Is automatically separated from the air by a water separator
- d. May produce inaccurate readings on pressure instruments
8. Considering a helicopter in autorotation flight, which of the following is correct:
- If a helicopter is autorotating with forward speed, the angle of attack increases, and the inflow angle is reduced
 - If a helicopter is autorotating vertically, following autorotation with forward speed, the inflow angle decreases and the pitch angle increases
 - If a helicopter is autorotating with forward speed, the inflow angle will reduce as does the pitch angle
 - If a helicopter is autorotating vertically, the inflow angle increases as does the mean pitch angle
9. If a magneto becomes disconnected from its ignition switch:
- A dead cut will result when the ignition check is carried out at high RPM and the other magneto is selected to "OFF"
 - Selecting the other magneto is "OFF" will fail to stop the engine
 - The ammeter will show a continual discharge
 - The pilot would notice the engine torque will reduce accompanied by slight rough running
10. Under conditions where the maximum power available for a vertical climb is insufficient, then the horizontal distance covered to clear an obstacle is dependent upon:
- Helicopter gross mass, the temperature and pressure altitude
 - The aerodrome elevation, the helicopter equipped mass and temperature
 - The density altitude, the relative humidity and temperature

- d. Translational lift, temperature and density altitude
11. A helicopter moves forward from a hover condition to forward flight. Which of the following is correct:
- The power required decreases, and the total rotor thrust remains constant
 - Both the power required and the total rotor thrust will effectively increase
 - Both the power required and the total rotor thrust will effectively decrease
 - The total rotor thrust decreases initially, but the power required remains constant.
12. Flying in the rain with an outside air temperature of -2°C causes:-
- The water droplet to freeze immediately and form rime ice
 - Part of the water to freeze immediately, and the rest to flow back over the airframe becoming hoar frost
 - 4% of the droplet changes to rime ice
 - 97.5% of the droplet becomes clear ice

