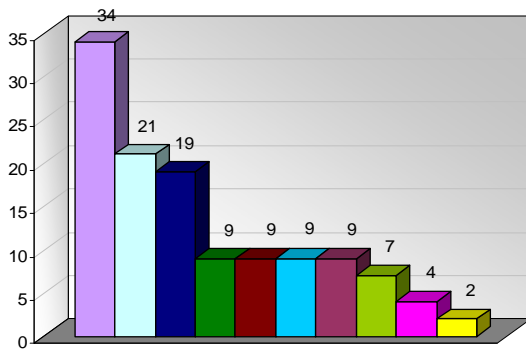












CHIRP FEEDBACK

Issue No: 43

Spring 2010

Most frequent GA Issues in CHIRP Reports 12 months to 31 January 2010



	Handling/Operation Airmanship, Handling of A/c, Operation of Equipment
	Individual Error Conflict, Lack of Leadership, Insufficient Team Work
	Communications - External With ATC
	Aircraft Technical Propulsion, Design, Systems
	Air Traffic Management Level of Service, Separation
	Near Miss Loss of Separation on Ground
	Situational Awareness In the Air
	Maintenance Inspection Error
	Regulation/Law Compliance Of, Knowledge Of, Absence Of
	Ground Handling Loading, Refuelling, Servicing

CARBURETTOR ICING - A HABIT?

Report Text: I had briefed my student for a Practice Forced Landing exercise before leaving the club house and I had reminded him to warm the engine every 500ft. The weather conditions were reasonable: 5/8 cloud 3500'; 10K+ visibility but with a strong wind 20kts, gusting 30kts.

We positioned overhead the airfield at 2500' and, having previously applied CARB HEAT, I closed the throttle. The student had control and carried out the following:

1. Checked CARB HEAT on (it was).
2. Converted speed to height and trimmed for best glide speed (73kt).
3. Turned into wind (we were).
4. Selected field (we had).
5. Checked for possible reasons for failure.

EDITORIAL - INDEPENDENT REVIEW

Thanks to all of you who took the time to comment on the General Aviation programme; the overwhelming majority of the comments that we received from the GA communities were extremely positive and supportive.

The Review was conducted last November by a Board comprised of nominees from CAA (SRG), industry representatives and several independent members associated with aviation and other domains in which confidential, voluntary reporting systems operate. The Chairman of the Review Board was Captain Jock Lowe.

The Board concluded that the reports that continued to be submitted through the aviation programmes, the comments from user groups and the endorsements by the representative associations provided clear evidence that the programmes were widely perceived to be a trusted and valued process.

The Board recommended that the Trust should continue to provide independent aviation confidential reporting programmes and that the programmes should continue to be funded by the CAA. The Board made further recommendations to improve further the Air Transport programme. The Trustees accepted all of the Review Board's recommendations.

The Review Board Report was submitted to the CAA and on 13 January 2010, the CAA (SRG) Policy Committee reviewed the report and approved the continued funding of the aviation programmes. The Review Report is published on our website at: www.chirp.co.uk.

We had now turned downwind and were passing 1800' - I reminded him to warm the engine - and nothing happened!!

I realised we had carburettor icing and took control due to the wind conditions, combined with the short runway with an industrial area at the downwind boundary. I called 'PAN' and requested two aircraft in front to clear circuit. After making a dead-stick landing the prop stopped. The engine re-started normally after 5 minutes and an engineer checked that the CARB HEAT control was operating correctly.

A Met Aftercast from a nearby regional airport confirmed the following: Relative Humidity 72%; OAT +18°C; Dew point +13°C. CAA GA Safety Sense leaflet 14 shows 'Serious icing risk' at low power!

Amazingly, three weeks later whilst undertaking a renewal skill test in our training area, exactly the same thing happened again; this time I left it to the candidate and we landed in a stubble field. This time I declared

GA FEEDBACK is also available on the **CHIRP** website - www.chirp.co.uk

A General Aviation Safety Newsletter

from **CHIRP** the Confidential Human Factors Incident Reporting Programme

'emergency' and noticed how quickly we lost contact. All was well (although I forgot to crack the door) and we had a cross country walk to civilisation.

Lessons Learned: I must have done 100s of PFLs and have never suffered complete engine failure due to carburettor icing - and then I have two in 3 weeks! I'm in current practice and still forgot to open the door and turn off the fuel. Both engine failure candidates 'enjoyed' their experience.

In this island of ours, this is an ever present threat and instructors beware; don't get blasé, whatever your experience and skill level!

CHIRP Comment: When the weather conditions are conducive to a moderate/serious risk of carburettor icing (See: GA Safety Sense Leaflet 14; Page 3) the possibility of carburettor icing should always be a consideration when cruising or when planning to operate at a relatively low power setting for any significant period of time, including when on the ground. Also, remember that it is the temperature/relative humidity where the aircraft is that determines the severity of the carburettor icing risk.

In circumstances similar to those in this report, a practice forced landing or a prolonged descent at reduced power, applying Carburettor Heat for several minutes before reducing power to pre-warm the air inlet and also to remove any ice deposits that might already be present is strongly recommended.

FAMILIARISATION LESSON

Report Text: This was an incident that was entirely of my own doing. I had just taken collection of my aircraft, a Jabiru two-seater. I had had a briefing, read the flight manual and had a familiarisation circuit before flying it with a friend who was also a PPL pilot to an en route airfield for a fuel stop. My father, an experienced glider pilot but with little power experience, met us and we decided that he would take the right hand seat for the next leg; it is worth noting at this point that this changeover was not part of the original plan.

Once in the cockpit, I was more stressed than normal having to reorganise my navigation kit and think more about navigating the last leg than had been planned. Having carried out my usual pre-flight checks, I proceeded to start the engine. It instantly ran up to full power and we started accelerating across the concrete apron towards the grass verge next to the runway. This was where my unfamiliarity with the aircraft caused me serious problems because, for those few seconds, I could not remember where the throttle was located in order to shut it down. As I was grabbing every lever I could see, I found the wheel brake and hauled it on whilst still under full power. Thankfully, the brakes on this aircraft work well and it stopped me just short of the runway on the grass. Once stopped, I found the throttle and shut it. Meanwhile, this had caused a landing aircraft to abort and go around.

The throttle lever on this aircraft is in a very unusual position. It is between your legs on the base of the seat. I could not see it when I was looking because my kneepad (which I had not been wearing for the first leg) obscured it. I can only assume my father had inadvertently knocked the lever forward whilst getting in.

I shut down and pushed the aircraft back to allow me to compose myself and discuss it with airfield staff. No damage was done to either my aircraft or any other third party and we departed 20 minutes later without further incident.

Lessons Learned: Despite thousands of hours in gliders and hundreds of hours in light aircraft, this incident taught me a few salutary lessons.

- Know how to shut down an engine in the quickest way. My brain was totally focussed on finding the throttle; I could have just switched off the magnetos as the switches are on the instrument panel.
- Be very wary of changing plans at short notice. I had changed my normal routine pre-flight checks which have always served me well. I am not certain if I had forgotten to apply the parking brake or if it was just not on enough but I certainly had not checked the position of the throttle. I felt a bit rushed and should have resisted this pressure, especially as we had had a long 3½ hour flight to this point. This is something I will never forget but I hope others can read it and learn from it too. I was very lucky not to write off my new aeroplane!

CHIRP Comment: This incident highlights several important points about flying a different aircraft type, or flying after a long lay-off. The first is to ensure that you are sufficiently familiar with the location/operation of all of the controls and instruments to be able to deal with an emergency situation. One way is to complete a flight (not just a circuit) with a suitably qualified person on that type; as an example, the LAA Coaching Scheme assists qualified pilots with unusual/different aircraft types and this service is available to all. If this is not possible, spend some time sitting in the cockpit - in peace and quiet with no distractions - and familiarise yourself with the location and operation of all of the principal controls/equipment. Test pilots use this technique before flying a type for the first time.

The second point is not to carry passengers in a type that is new to you until you are sufficiently familiar with operating it. The third is the importance of using a formal pre-flight checklist or carrying out a methodical check of all controls/instruments, particularly in the circumstances described.

The reporter is to be congratulated for submitting this report, as it might avoid another pilot making a similar simple error with a much more serious outcome.

ATC HANDOVERS - DON'T ASSUME

Report Text: I was receiving a zone crossing from Lyneham at 2,500ft on their QFE and with their squawk and had advised the controller that I was on a direct track from Yeovil to Daventry; normally a handover is arranged from them to Brize Norton. As I approached Fairford, although out of Lyneham's zone, I was still on their frequency and on their squawk. Lyneham then told me to "Squawk 7000 and free call Brize Zone". This surprised me but I called Brize and was told to climb immediately, which I did, as some heavy traffic was departing; by now I was in their Controlled Airspace.

I was told that I should have called earlier but in any event, as I know, I should not have entered their

airspace without permission. Brize asked when I last spoke to Lyneham and I told them 'about a minute or two ago'. I apologised for my mistake but stated that I did feel I had been 'dumped' by Lyneham. The Brize Norton controller told me that he had had words with them.

Lessons Learned: I accept that this was my fault but the lessons are clear:

- Do not assume you will get a handover. Ask if it is being arranged - don't assume it is.
- Always be prepared to climb or turn to avoid controlled airspace until you get clearance even if you are under another zone's control - I could have climbed or turned east but my speed and late communication from Lyneham meant it was always going to be close.
- RAF controllers are nearly always really helpful and this is a flight I have made many times; I assumed I would be handed over as normal. Wrong!

CHIRP Comment: On many occasions civil and military controllers will assist pilots by arranging a handover in similar circumstances but this cannot be assumed. Good practice would be to notify ATC as soon as you are clear of the control zone and confirm whether a handover is being arranged for entry into the adjacent zone. It is ultimately the pilot's responsibility to ensure that clearance to enter Controlled Airspace has been obtained.

INSTRUMENT APPROACHES - LOOKOUT

The following report is one of a number of close encounters in similar circumstances and was published recently in Air Transport FEEDBACK. There are also some useful lessons for GA pilots:

Report Text: We were completing an asymmetric training sortie on final approach into AAA on the published ILS procedure. The ILS approach to AAA is in the open FIR. I was in the right hand seat. The weather was greater than 10 km in VMC.

We had just left the instrument approach platform level to descend on the ILS when a single engine light aircraft crossed right to left in front of us around 100 feet above. Our TCAS screen was blank and therefore it can only be assumed the light aircraft was not transponder equipped. Given the workload at this point of the training exercise, the aircraft was sighted too late to initiate avoiding action. Also given his height above us, it is probable he had not even seen us as he passed our track.

Lessons Learned: Assuming the pilot of the light aircraft had a valid VFR map, his track was just outside the instrument approach symbology on his map. So he probably had no idea that at his height he was almost passing through the ILS glideslope. Given we were both in the open FIR and he was VFR, the other pilot had every right to fly that track.

CHIRP Comment: As the reporter notes, the GA pilot was entitled to be in the position reported on the basis of 'See and avoid'. Moreover, from the reporter's description, the GA pilot had 'right-of-way'. Carrying out a practice instrument approach in the Open FIR does not absolve the crew from maintaining a visual lookout.

It is worth noting that although UK 1:500,000 (and UK 1:250,000) aeronautical charts include an instrument approach symbol to depict instrument approaches to airfields outside Controlled Airspace, the charts only show the final approach track and do not show the complete instrument approach pattern. If you elect to cross an instrument approach, call the ATSU and advise them of your intention. If unable, a useful rule-of-thumb is that the height of an aircraft on the instrument approach will increase by approximately 300ft for each mile away from the threshold up to the platform height from which the final approach is commenced. Full details of instrument approach profiles at UK airfields are published in the UK Aeronautical Information Publication (AIP).

Also a reminder on 'See and avoid'; CAA General Aviation Safety Sense Leaflet 13 and CAA FODCOM 27/2009, issued on 18 August 2009, both contain very useful advice on visual scanning techniques to minimise the risk of collision.

CLEARED TO LAND - BUT WHERE?

Report Text: A cross-channel flight to France was to be conducted to give the participants experience in flying abroad. The evening before, the group who were participating had a full briefing, going over routes, frequencies, flight plans and customs. While the briefing was taking place, I was checking and filing the flight plans for the aircraft taking part.

The flight to France was uneventful. Approaching our destination, we were asked to make a base join for the southeasterly grass runway (R13). The grass runway was difficult to see from the air, but we established our position by reference to the tarmac areas on the airfield. Prior to calling, "Final 13 Grass", another aircraft called, "Final 05 Grass". He was told he was not where he should have been, but appeared to continue the approach. My attention was now focused on this aircraft, as we appeared to be on converging tracks.

As we reached 400' AGL, the other aircraft, which was at a similar height, reported "Going around". We were then able to make the final call, and were given a clearance to land.

Now focusing back on the runway, it appeared not as clear as one would have hoped. The tarmac was easily seen, but a blur of green taxiways made the grass runway difficult to identify.

After lining up with some white edge markers, they appeared to be far too narrow for a runway. and I assumed it to be a taxiway. Therefore, we positioned to the left of this and continued to land. In the flare, glancing at the ground, the surface condition did not appear to be a "suitable" runway condition, but at this point, the main gear touched down, and we continued the roll. After noticing a small pile of grass, I confirmed my error; I had landed in the field between the taxiway and runway. On frequency, we were then informed of our error, and given taxi instructions.

Lessons Learned:

- Always ensure a through pre-flight briefing. Even as an instructor, I should have not neglected the fact I have never landed at this airport before.

- Do not lose sight of the big picture. My attention for a critical part of flight was diverted to the other aircraft. This was important, but I must have also considered where I was.
- If there's any doubt, there's no doubt. In the flare, after noticing the conditions were not as I had expected, I should have gone around.

As far as the airfield goes, I do believe it to have unsuitable and unclear markings. Whilst this is no excuse for my error, I believe it would help prevent similar errors.

CHIRP Comment: In a situation such as that described, it can be very easy to convince yourself that all is well. As we have commented before, if it doesn't feel right, it most probably isn't. The correct and safe course of action, as noted, would have been to have made a go-around and repositioned.

If you are not familiar with your destination, a detailed pre-flight briefing of the airfield layout/obstructions is most important. It is also good practice to call the destination airfield and ascertain whether there are any special instructions.

Satellite images, such as Google Earth, can provide useful information about the surrounding area but remember that the image might not be recent and more importantly, telephone wires might not be visible.

A LANDING IS NOT OVER UNTIL ...

Report Text: I was returning from a local flight in my Flash 2 flexwing in the late afternoon. The approach to the strip is sometimes very turbulent with rotor from a hill and trees to the right of the runway, with a big sink just short of the south end of the airfield.

I flew over the strip to check the windsock, which showed the wind to be 30–40° from the right for an approach from the South. I completed a left hand circuit and approached along the left hand side for a landing slightly across the runway. On touchdown I tracked to the right hand edge with the bar back to brake.

At a fast taxi the aircraft was turned left to cross to the left hand side of the runway prior to executing a wide turn to the right to exit the runway towards the hangar. The aircraft was struck by a severe gust from the right and possibly slightly behind which lifted the right wing and was too strong to allow the wings to be pulled back horizontal. The left wingtip hit the rough ground off the left edge of the runway and tipped onto the left side. The wing folded in the centre to about 90°. The engine was still running with damaged blades and was stopped.

Immediate damage apparent was that the A frame base bar had snapped, probably against my left thigh, and the lower flying wires on the port side had broken along with the base bar, allowing the wing to fold. Neither I nor my passenger suffered significant injuries and there was no leakage of fuel even though the tank tipped over.

Conclusion: The conditions had deteriorated during the short flight contrary to normal at this time of day. Measurements after landing showed the wind up to

10kts at 040° but with gusts up to 20kts and veering to about 080°.

CHIRP Comment: This incident is a good reminder of one of the hazards associated with gusty conditions and the importance of being aware of changing wind conditions at all times, even after a landing.

GYROPLANES - SOME IMPORTANT DIFFERENCES

We receive a significant number of reports that indicate a lack of appreciation of the differences in speeds/final approach profiles of different GA categories, such as the slow, steep approaches flown by some microlight types. Gyroplanes also have significant differences.

Report Text: I run a Gyroplane school and sometimes operate from a licensed airfield with an A/G radio service. On three occasions in the last couple of years aircraft have flown approaches which would have led to them passing underneath me while I was on final approach. In all of these cases they have seen me and, presumably, heard my radio calls but, due to the steep approaches made by gyros (we could well be at 500 feet as we approach the airfield boundary particularly if there is a bit of wind), the pilots following me have been confused by what they have seen (“he can’t possibly be landing if he’s that high”) and have continued their approach in spite of my presence. In each case, I have carried out a 'go-around' in order to resolve the conflict. An identical incident occurred recently to one of my former students whilst landing at an airfield with full ATC.

With the advent of factory-built 2-seaters in the UK the number of gyroplanes is growing rapidly and they are appearing at airfields all over the country. At my home base I have no problem with local aircraft, as the pilots know how we operate, but I am always more cautious when visiting aircraft join the circuit.

With this in mind I hope that the following will help pilots of other aircraft types understand gyroplane flight characteristics and how they are operated so that we can reduce the risk of conflicts caused by misunderstanding:

1. When landing, gyroplanes approach the runway at a much steeper angle than fixed wing aircraft (so a gyro may maintain circuit height on final and still be high when on very short final).
2. Gyroplane approach speeds are typically in the order of 50kt, so many GA aircraft types will tend to catch them up in the circuit.
3. Gyroplanes typically stop on the runway when carrying out a “touch and go” (so a following aircraft should allow more room than when following a fixed-wing aircraft carrying out the same manoeuvre).
4. Gyroplanes have a very short landing roll ('spot' landings are taught as part of the PPL syllabus), so may land very long in comparison to other types in order to exit the runway as soon as possible.
5. After lining up to take-off a gyro normally has to pre-rotate its rotors before rolling – this typically takes 60 to 90 seconds – so don't think a gyro will roll and start to clear the runway as soon as it lines up.

CHIRP

GENERAL AVIATION REPORT FORM

CHIRP is totally independent of the Civil Aviation Authority

Name:			
Address:			
Post Code			Tel:
e-mail:			

1. **Mandatory Fields:** Your personal details are required only to enable us to contact you for further details about any part of your report.

NO RECORD OF YOUR NAME AND ADDRESS WILL BE KEPT

2. On closing, this Report Form will be returned to you.

It is **CHIRP** policy to acknowledge a report on receipt and then to provide a comprehensive closing response, if required. If you do not require a closing response please tick the box

No I do not require a response from **CHIRP**

PLEASE COMPLETE RELEVANT INFORMATION ABOUT THE EVENT/SITUATION

YOURSELF - CREW POSITION			THE FLIGHT/EVENT			
CAPTAIN <input type="checkbox"/>	FIRST OFFICER <input type="checkbox"/>		DATE OF OCCURRENCE		TIME	(LOCAL/GMT)
PILOT FLYING <input type="checkbox"/>	PILOT NOT FLYING <input type="checkbox"/>		LOCATION		HEIGHT/ALT/FL	
OTHER CREW MEMBER <input type="checkbox"/>			AIRCRAFT TYPE		DAY <input type="checkbox"/>	NIGHT <input type="checkbox"/>
EXPERIENCE			TYPE OF FLIGHT		NATURE OF FLIGHT	
TOTAL FLYING HOURS		HRS	IFR <input type="checkbox"/>	VFR <input type="checkbox"/>	PLEASURE <input type="checkbox"/>	BUSINESS <input type="checkbox"/>
HOURS ON TYPE		HRS	OTHER: <input type="checkbox"/>		TRAINING <input type="checkbox"/>	OTHER: <input type="checkbox"/>
LICENCE/RATING			WEATHER		FLIGHT PHASE	
STUDENT <input type="checkbox"/>	PRIVATE <input type="checkbox"/>		VMC <input type="checkbox"/>	IMC <input type="checkbox"/>	TAXI <input type="checkbox"/>	TAKE-OFF <input type="checkbox"/>
CPL <input type="checkbox"/>	ATPL <input type="checkbox"/>		RAIN <input type="checkbox"/>	FOG <input type="checkbox"/>	CLIMB <input type="checkbox"/>	CRUISE <input type="checkbox"/>
INSTRUCTOR <input type="checkbox"/>	MULTI-ENG <input type="checkbox"/>		ICE <input type="checkbox"/>	SNOW <input type="checkbox"/>	DESCENT <input type="checkbox"/>	APPROACH <input type="checkbox"/>
INST. RATING <input type="checkbox"/>	OTHER: <input type="checkbox"/>		OTHER: <input type="checkbox"/>		LANDING <input type="checkbox"/>	GO AROUND <input type="checkbox"/>
COMPANY/ORGANISATION (if applicable)			MY MAIN POINTS ARE:			
NAME OF ORGANISATION:			A:			
REPORT TOPIC			B:			
MY REPORT RELATES TO:			C:			

DESCRIPTION OF EVENT

Your narrative will be reviewed by a member of the **CHIRP** staff who will remove all identifying information such as dates/locations/names that may identify you. Bear in mind the following topics when preparing your narrative:

Chain of events • Communication • Decision Making • Equipment • Situational Awareness • Weather

The UK Confidential Human Factors Incident Reporting Programme

 PLEASE PLACE THE COMPLETED REPORT FORM, WITH ADDITIONAL PAGES IF REQUIRED, IN A SEALED ENVELOPE (no stamp required) AND SEND TO:

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Confidential Tel (24 hrs): +44 (0) 1252 395013 or **Freefone** (UK only) 0800 214645 and Confidential Fax: +44 (0) 1252 394290

Report forms are also available on the **CHIRP** website: www.chirp.co.uk

LESSONS LEARNED

Describe the lessons learned as a result of the incident. Do you have any suggestions to prevent a similar event?

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