

GA FEEDBACK

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PRACTICE PAN VS TRAINING FIX

We have received a number of comments regarding our suggestion on Page 2 of the last issue of GA FEEDBACK to call for a 'Practice PAN' on 121.5 if unsure of your position.

Several respondents have pointed out correctly that for pilots who wish to confirm their position without carrying out an emergency procedure the correct procedure is to request a 'Training Fix', which takes precedence over a Practice PAN.

If you require navigation assistance in addition to confirming your position a 'PAN' call should be made.

If you are inexperienced, consider using the callsign prefix TYRO when communicating with the D&D Section or other military units. If TYRO is used, controllers will not issue complex instructions, which the pilot might have difficulty in following.

We apologise for the error and hope that the above information (Reference: CAP 413 Radiotelephony Manual, Chapter 9) clarifies the matter.

REMEMBER THE BASICS (GA226)

Arriving at a strange airfield - very hazy - searching for the grass runway on a grass field. Downwind; too high; too fast; too close to field.

In trying to get it sorted, knowing a group of very experienced ATPL holders would be watching my arrival with critical eyes, I missed the Downwind checks. On final approach into sun with haze, I concentrated on finding the runway. Fortunately a very alert A/G operator asked me to check 'three greens'. Shock! Horror! No greens!

I like to think that on short final 'the blue the red the green' check would have saved me but not sure. I offered my profuse thanks to ATC over the R/T and in person, later.

I consoled myself that the Auto gear extender fitted to my aircraft would have saved me, but later it occurred to me that on final, at around 80kt, with two stages of flap and throttled back, the Auto gear extender should have operated. If not in this situation, when?

On the way home at 3,500 ft I checked to see at what speed the gear would extend. The answer was - just below 70kts!! By that time I would expect to be in the flare or even digging ruts in the runway.

We will see about getting the speed up.

Rushed approaches often lead to errors of this kind; these, in turn, can result in an accident. The start of a good landing is a stabilised final approach with all checks completed. If it's not right, the best policy is to make a go-around.

Auto-extend systems should be regarded as an additional safeguard against a human error, but should be checked regularly to ensure that they operate at the correct calibrated speed.

THINK AND PLAN AHEAD (GA227)

Several years ago, not long after I had obtained my licence, I wanted to go to an air show. My instructor kindly suggested that I follow him, thus reducing the workload on what, for me, would be a complicated flight. He properly insisted I did all my usual planning and I went through a full routine, marking up the course, recording various beacons and frequencies, etc, etc.

We set off on a perfect day and I had him well in sight. He was right; it was easier this way. We kept a considerable separation and we covered the distance with no real difficulties until he went through a few clouds, just before we reached the very busy airfield (which was receiving exhibitors, visitors and display aircraft) and I, then not having any IR qualifications, had to peel off and stay well clear of cloud and in visual conditions.

What I had not appreciated was the complete disorientation that occurs when you suddenly have to resume thinking control of your aircraft, when you have not had the build up of "thinking ahead". At an instant, from simply following this 'tail', in the distance, flying the plane and keeping a good lookout, I was required to know exactly where I was and prepare for the approach and landing. There were planes everywhere, I had lost sight of my shepherd and for a horrible moment I was completely disorientated.

A General Aviation Safety Newsletter

from the Confidential Human Factors Incident Reporting Programme

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I recalled this incident the other day when flying to an unfamiliar airfield with a less experienced friend. He took us there and then suddenly handed control back to me saying, "There is a cross wind and neither of us have landed here, you have control". My approach was all wrong, my landing was poor. I walked away, remembering the earlier horrifying experience. What had gone wrong was that I had not been "thinking ahead" and had to act without that familiar routine.

Lessons: If two are flying, plan the handovers before you take off. At all times and in all circumstances continue to follow the route and 'feel' the environment, even if you do not expect to be taking control. Keep thinking ahead. For all but the most experienced a flying trip is something that must be handled by well-rehearsed routines. Above all else, it requires you to think ahead. It is not something where you can abdicate part of the responsibilities, expecting to pick them up again instantly and perform to your optimum.

The lesson applies to everyone; hours alone are no protection.

Plan the flight, brief all aspects and fly the plan.

LOOSE OBJECTS

Loose objects are a hazard in all classes of aircraft and, in some cases, can produce symptoms that would not be anticipated by many pilots.

The pilot in the first report had less than 50 hours total flying experience and less than 30 hours on type.

(1) AILERON RESTRICTION (GA232)

I am reporting this occurrence, as I was requested to do so by the pilot.

As he was letting down to ### airfield his control column jammed. No left aileron! Called PAN and gave his intention to land in the nearest field if he could accomplish it. The local RT suggested that he should "Fly the Aircraft" and make for the airfield if he could.

This pilot managed to reach the airfield and alighted without damage. Taxied to park, still no left aileron.

On investigation he eventually discovered the plastic cover of the GPS mounted on the instrument panel had detached itself and fallen to the cockpit floor, where it found its way between a cockpit cross-tube and a control horn preventing movement in one direction.

As designed, there seems to be nothing to prevent any loose article from falling to this area and some sort of preventative solution is required.

One thing worth doing would be to check all your cockpit fittings for security and ensure nothing can fall

from your clothing. A pen and lighter both jam the ailerons when introduced in the above-mentioned gap.

I think the pilot should be commended due to his low hours, and safe handling of what might have been a tragic accident.

The pilot handled a difficult situation extremely well.

A subsequent inspection of another aircraft of the same type revealed that it had a Velcro strip over the gap into which the GPS cover had fallen.

(2) ELEVATOR RESTRICTION (GA 238)

The aircraft (a tandem two-seater) was being flown solo: On commencement of the descent the aircraft flew through a strong thermal, a loud bang from the rear of the aircraft was heard and an uncommanded movement of the control column was felt. At this point the aircraft was accelerating through 80kts in a descending turn to the right.

Suspecting a problem with the elevator control I decided not to move it unless absolutely necessary. A radio call was made to base advising of the problem. I established (as much as possible) through the rear-view mirror that the tail of the aircraft appeared undamaged and that nothing appeared to be fouling the control surface or the tailplane.

Using minimal control input the wings were levelled, gradually reducing the power, a gentle rate of descent was established at 70kts. I advised base that my intent was to fly a gentle descent onto a long, flat, flapless approach, landing well into the airfield. This was uneventful, power was used to control the rate of descent successfully.

On commencement of the round-out the control column would only move back approximately 1/2 inch, this was sufficient to gain level flight, the aircraft then sank gradually, landed and bounced gently two or three times.

Whilst slowing down on the ground, the control restriction suddenly disappeared. Aircraft taxied clear of runway and shut down. On exiting the aircraft it was noticed the rear seat had moved out of the seat pan and was resting against the control column. A complete loose article check was carried out subsequently by a licensed engineer, no other faults were found. The rear seat was then secured permanently to the seat pan. The aircraft was given a handling check with no further problems.

On investigation it was found that during the annual servicing (just completed), the front and rear seat pans had been replaced 'wrong way round', not normally possible, the other seat pan (front), had the seat secured. (A 'Murphy'?)

Apparently in the dim and distant past the front seats of this type were left unsecured to enable the pilot to wear a

parachute whilst spinning, part of the air-test requirements for the type. It was not thought that the seat pans were interchangeable, - wrong! There is now no requirement to spin the aircraft; indeed the aircraft is not cleared for intentional spinning. It is recommended that all such seats are secured, front and rear.

Although this was an unusual problem, it is a useful reminder to confirm that any potential loose articles such as seat cushions, straps and R/T leads are secured when flying solo, particularly in tandem seat configurations

(3) SMALL OVERSIGHT - BIG PROBLEM (GA250)

On returning from an overnight stay in the Channel Islands, I initiated a descent from 3,000ft to 2,000ft and trimmed for a standard 300ft per min descent. On lowering the nose to maintain airspeed, I heard and felt a heavy banging noise - severe vibration also.

I carried out standard emergency checklist drills suspecting magneto problems, carburettor icing or engine/exhaust problems. All instruments read normal, but banging continued.

I levelled out at about 2,500ft and made a PAN call on the ATC frequency on which I was receiving a Flight Information Service, as I did not wish to possibly lose all contact by changing to another frequency (i.e. 121.50). They advised me to squawk 7700 as I had been squawking 7000 (I had forgotten the correct emergency code) and agreed that I should stay on frequency until closer to the nearest airfield. Subsequently, the controller transferred me to ### Radio.

I maintained 2,500ft until I was sure that I could reach ### and although the engine and all other instruments were reading normal, and the banging had now ceased, there was still a small amount of buffeting. On setting the controls and trim for a gradual descent downwind, the heavy banging and vibration returned.

had given me priority landing clearance and had their emergency ground crew in attendance. I made an uneventful landing apart from the noise and vibration and taxied to the front of the tower. At this point with the emergency service in close proximity the controller advised me they had observed a strap hanging out of the passenger door!

I didn't know whether to laugh or cry. It had been so hot in the cabin in Alderney that my wife had held the door slightly ajar until all the pre-take off checks had been carried out, prior to lining-up for departure. We had also been wearing life jackets. As she had turned to close and lock the door her shoulder strap had come undone and the return spring must have projected it

through the door which had been opened wider, as it needs to be slammed, and had been trapped outside.

In level flight and climbing there had been no problem but on descent the buckle had been hitting the fuselage badly peppering it behind the door area.

Completing checklist items out of sequence can provide traps for the unwary.

This incident highlights the importance of a good security check immediately before commencing the take off roll.

(4) WELL BRIEFED? (GA 241)

I was at an open day. (I am not a pilot). I was invited to take a ten-minute flight with a colleague in a ### (aerobatic type).

Shortly after take off, the pilot said, "If you are in this type of aircraft you don't just fly straight and level" and swiftly rolled inverted. He had checked my straps prior to take-off but not my camera, which was slung around my neck. It weighs just over a kilogram and it hit the canopy with a solid clunk, but no other ill effects.

We landed shortly afterwards with no (audible) comments from either the pilot or myself.

A point I did not make but thought about after was, would he have done the same thing if it had been an open cockpit?

Hopefully, the pilot concerned has learned a very salutary lesson about passenger briefings from this incident

DEFECT REPORTING (GA 236)

No defects in the log. The aircraft checks complete and looking forward to a great day out in the club's aircraft; clear sky and great views. Taxied out of the club and down to the runway to do the run-up checks. Noticed a back-firing when coming back down to idle. Had heard this on start-up but thought it was due to this being the first flight.

Requested return to club. Reported the back-fire in the defects section. Then found out that someone had reported the back-fire the day before when the aircraft was moved. A note had been pencilled into the booking list but as I had the aircraft booked for the day, this was not an obvious place and indeed no one saw this until it was pointed out later on.

Lesson :-

Any defect must be written in the only place that pilots look at and review; the defects pages for the aircraft.

These pages also allow pilots hiring aircraft to see a history of defects and any patterns that may have built up.

The power checks found the back-firing but I was concerned that the problem was previously noted but I was unaware of this; I could have easily gone flying with this potential problem.

Some clubs/associations have procedures for the recording of technical defects. Where this is the case, the procedure should be promulgated in the Flying Order Book and should ensure that all reported defects are retained with the Technical Log to permit all pilots to review them, appropriate engineering follow-up action to be taken when necessary, and to allow trends to be identified.

This report was forwarded to CAA (SRG), who has advised that changes to the R22 checklist have been sanctioned; these changes state that the RRPM should be set manually to 100% before the governor is engaged. This procedure requires the governor to increase RRPM by only 4% and provides the pilot with a better chance to prevent an overspeed condition.

The CHIRP GA Board has recommended that the FAA be petitioned to consider a similar change to the manufacturer's POH.

NEW TRANSPONDER ERGONOMICS (GA 233)

My new aircraft has push button rather than rotary section of transponder codes. While receiving RIS/RAS from various controllers, I was asked to change transponder code several times. I was experiencing light/mod turbulence and noted just how difficult / distracting it was to select the correct code pushing little buttons rather than holding onto knobs!! Small but important lesson learnt, new does not mean better ergonomics!! (This applies to many new equipment types).

LARS - TRANSPONDER CODES (GA 247)

Flying towards my destination AAA, I was receiving a FIS (*Flight Information Service*) with traffic information from ### LARS (*Lower Airspace Radar Service*). I have two points, both typical of many previous experiences:

1. I was concentrating on looking for two aircraft notified to me by the LARS controller, and was looking so hard I failed to see a third aircraft which passed 400 feet directly underneath me at right angles.
2. Shortly afterwards, with AAA in sight, ### released me and said, "Squawk standby".

What is the point of a secondary radar service, and the TCAS I am thinking of installing if pilots are frequently told to turn off their transponders?

Under a LARS Radar Information Service a pilot will only be notified of those aircraft known to the LARS controller.

Discrete transponder codes are allocated to ATS Units to enable other units to know who is controlling the aircraft. A pilot has the option to squawk 7000 en route. The transponder should be selected off in an Aerodrome Traffic Zone.

R22 OVERSPEED (GA240)

I had already flown the aircraft twice that day, once on a short trip from AAA to BBB, and then on a series of joyrides lasting approximately an hour. The aircraft had been shut down after both flights. I prepared for the return flight to AAA, and the start-up proceeded normally until the last few moments.

I finished all Vital Actions prior to putting the checklist away, put the checklist away, finished the last few items, and started to increase the RPM to 104% - the normal operating RPM. Prior to this point the RPM is set at 75%. At the same time as opening the throttle, I switched the governor on. I was momentarily distracted, and the next time I looked at the RPM gauge both the engine and rotor RPM gauges had exceeded the upper red line that is they were both in excess of 116%. I wound RPM down to approximately 90% and checked the governor was on. I do not remember clearly if I switched the governor back on or whether it was still on. I then shut the aircraft down and went to seek advice from home base.

Since then I have become aware that I'm not the only person to overspeed an R22 and not understand exactly how it happened.

The last items on the POH "Starting Engine and Run-up" checklist for the R22 (POH pages 4-7) are:

Cyclic/Collective Friction	OFF
Governor ON	RPM 102% - 104%
Lift collective slightly, reduce RPM	Horn light at 97%

Now, that last but one item is a bit ambiguous.

I have spoken with several experienced helicopter pilots. The advice I have received has been inconsistent, with various reasons given for doing things differently to the manufacturer's POH checklist.