

AIRPROX REPORT No 2010039

Date/Time: 30 Apr 2010 1434Z

Position: 5137N 00105W (Benson
Circuit - elev 203ft)

Airspace: ATZ (Class: G)

Reporting Ac Reported Ac

Type: Puma PA28

Operator: HQ JHC Civ Club

Alt/FL: 1000ft 800ft
(QFE 1002mb) (QFE 1016mb)

Weather: VMC CLBC VMC

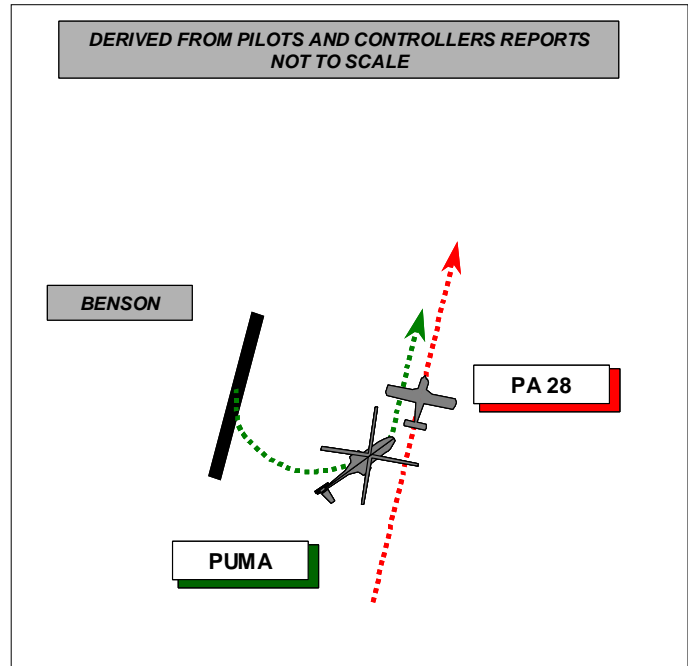
Visibility: 25km 10nm +

Reported Separation:

NR V/50/75m H 200ft V/0.6nm H

Recorded Separation:

~0.1nm



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE PUMA PILOT reports flying a training sortie in the Benson Circuit for RW19LH, in communication with Benson TWR. While levelling downwind at 1000ft QFE, passing through heading 060° at 100kt, another ac called to join the Benson circuit downwind and a blue and white low-wing light ac was seen simultaneously, 50-75m ahead and at the same height virtually in the circuit. He decelerated to increase the separation and assessed the risk as being medium.

THE PA28 PILOT reports that his departure from Kemble was delayed due to squally showers and a strong crosswind. Once airborne and squawking with Mode C, a BS was obtained from Brize Norton and a direct route to Benson was planned but a heavy shower over the Abingdon/Didcot area necessitated routing to the S and around P106. He notified Brize of his intentions and shortly after was given a handover to Benson. He did not call Benson immediately as he was concentrating on remaining clear of P106 but Benson ZONE then called him on VHF to see if he was on frequency. They passed him joining instructions including approval for a downwind join for RW19 so he positioned the ac for the downwind join. He was concentrating on ensuring his height and position were correct for the circuit at Benson and he did not get any further calls or requests from ZONE.

As he approached the circuit heading 010° at 90kt, still on the ZONE frequency, he called joining downwind RW19 and ZONE requested him to make the downwind call to Tower and he assumed that ZONE had co-ordinated with Tower. Tower clearly had not been expecting his call but he was cleared to join. Abeam the upwind position he noticed a Puma on climbout and kept his eye on it as it was not clear whether it would pass behind him and it continued to climb towards him apparently not having seen him. If the Puma had continued on its intended path he would have to take avoiding action by climbing above circuit height. When it became clear that the Puma had seen him he continued to final approach and landed.

After landing he called the ATC Supervisor and discussed the late downwind call to Tower and why it had happened; he suggested to him that he should have called Tower earlier. He felt that although a downwind join was not standard procedure a simple request to call 'field in sight' and a transfer to Tower several miles out would have given everyone better situational awareness. He believes that he complied completely with ATC instructions.

THE BENSON ADC reported that at the time the Benson Watchman radar was U/S but the HiBrite was serviceable; TWR was band-boxed with GND and he had been in position for about 35min. He was warned by APP that a PA28 was 10nm SW and would join the CCT downwind for RW19 LH. The circuit had been very busy but the traffic level had just reduced leaving 3 ac in the circuit comprising of another light ac going around on the dead-side, the reporting Puma had just completed a slow approach to touch and go (T&G), and a Heli-Med ac on approach to point west; in addition there was one ac on a PAR approach for a low approach for further PAR, one or two aircraft on the GND frequency and one other warned in. He saw the PA28 on the HiBrite to the SW at 10nm and then again at 6nm slightly later. The next time his attention was drawn to the ac was when the pilot called downwind.

About 5min previously he called the Supervisor up to local and informed her that the Puma concerned had been flying non-standard circuits. It had been flying tighter circuits than normal and looked to be turning early and below 500ft, routing just to the S of the houses on the SE corner of the airfield in the climb. Also, on his last approach the pilot asked for a touch and go (T&G); however, when cleared for a T&G he had actually stopped on the RW for 5 to 10sec while radar traffic was approaching 4nm as he stopped and then got airborne again into the circuit, technically without permission. Both Assistants and the Controller noted the Puma stopping and considered it wrong as a less experienced ADC controller may have released the traffic lights and allowed vehicles to cross when the aircraft had stopped. The supervisor decided that he should monitor the Puma's next approach and she would contact the pilot on landing. That being the case his attention was focused on the Puma's next approach when he called finals for a T&G. At that time he had PAR traffic on approach, the second light ac going around due to the slow approach, radar traffic and the Heli-Med approaching Point West. At that point the Puma had completed a standard T&G and, as it was in forward motion and clear of the RW, he gave the radar traffic, which was at 3nm permission for a low approach. The Puma once again turned early and below 500ft. As he completed the 3-mile call broadcast, the PA28 called joining downwind and he noted its position as approaching the mid-downwind point, slightly ahead of the Puma. Although the ac looked to be at a similar height, he considered there to be sufficient lateral separation, enabling him to give the PA28 full joining instructions, before asking him if he was visual with the Puma, which he replied that was. When asked, the Puma pilot reported visual with the PA28 and then complained about the PA28 pilot not making an early downwind call.

With hindsight he thought that he should have informed the circuit traffic about the downwind joiner and maintained a closer watch on the HiBrite. However, he was informed that the PA28 would be conducting a downwind join when it was 10 miles out. He made a decision at that time not to inform the busy circuit as 10 miles was too far out to be of any relevance to the circuit traffic and he expected the PA28 to make a standard joining call 3 miles from the airfield. He thought that his attention being focussed on the Puma that was flying unusual circuits might have added to his lack of monitoring of the downwind joiner.

UKAB Note (1): The recording of the Heathrow radar shows the PA28 throughout and the Puma intermittently. The PA28 joins the circuit as described by its pilot, descending to be at 1000ft at the beginning of the downwind leg. The Puma appears as a primary only contact almost abeam the ARP converging with the PA28 and closing to 0.1nm (the minimum radar resolution) before the separation increases as the Puma decelerates in the PA28's 6 o'clock.

HQ AIR BM Safety Management reports that the Benson ADC was working under a medium to high loading without a GND controller. The Puma was flying non-standard circuits, turning straight onto the downwind leg rather than continuing upwind prior to turning not below 500ft IAW the Flying Order Book; further it was stopping on the RW after asking for a touch-and-go procedure. These actions distracted the ADC and therefore increased his workload; further the SUP reported that the initial pre-note from ZONE to TWR was not evident on the tape transcript [since it was agreed that there was a pre-note it probably took place before the transcript commenced]. The transfer of the PA28 from ZONE to TWR was not prompted by ZONE before the ac entered the circuit area and was therefore late; this compounded the poor SA of both the ADC and the circuit traffic. As the PA28 was mid-point

downwind the Puma got airborne and turned below 500ft, which put it into conflict with the PA28 at 800ft.

OIC Flying Club has briefed members of the importance of being conversant with local procedures; in addition the unit is reviewing the Flying Club Orders. Best practice remains for Supervisors to roster a GRD Controller when busy periods are expected in TWR, thus reducing the workload on ADCs.

HQ JHC comments that the actions of the Puma in the build-up to the incident were far from satisfactory. By flying non-standard circuits and, in particular, remaining on the RW during a Touch and Go, the Puma caused an unnecessary increase in workload for the controller. This Airprox highlights the importance of timely radio calls - both by the controller and joining traffic - but it could have been wholly prevented by better airmanship on the part of the Puma.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequencies, radar recordings, reports from the air traffic controller involved and reports from the appropriate ATC and operating authorities.

Both Controller and Pilot Members alike found this a challenging incident to analyse as there were so many elements and because it highlighted significant differences between civil and military regulations and practices regarding clearances to enter an ATZ and to join a visual circuit. The Board agreed that since there were so many factors that contributed to this incident, they should not be enumerated formally below as 'Contributory Factors'.

Members agreed that in this high-workload situation, the ADC had become distracted to such an extent by the Puma's non-standard circuits, that he had temporarily overlooked the approaching PA28. Had the ADC not been distracted, Members agreed that he would most likely have paid more attention to the PA28, of which he was previously aware having agreed with ZONE that it could join downwind and noted it on the HiBrite on 2 occasions; he could then have prompted the ZONE Controller to transfer it to him in an unrushed and timely manner. The ZONE Controller too, Members agreed, had contributed to the incident by not instructing the PA28 pilot to report 'visual' with the airfield, as is normal procedure, and then to call TWR before entering the circuit area; Controller Members agreed that although civil and military procedures differed, in this situation such a call would have been best practice and might have prevented the incident. It was also unanimously agreed that if a controller does not instigate a handover to TWR, then the pilot should take the initiative and request it before nearing the airfield, for example by saying 'would you like me to contact TWR?'

Civil and military Controllers also noted the discrepancy between civil and military procedures regarding circuit joining clearances; although the PA28 was a civilian ac being operated by the local flying club, it was operating from a military airfield and flying club members are required to comply with local Flying Orders and military procedures. That being the case, only the ADC had the authority to clear the ac to join the circuit. Although perhaps harsh, and despite the mitigating circumstances, Members agreed that the PA28 pilot had not been cleared by the ADC to join the circuit until well after the ac had entered it. This breakdown of Flying Order Book procedures had not been the cause of the incident as the PA28 pilot had seen from the upwind end of the runway the Puma climbing out directly towards him; the non-standard circuit had apparently also caused confusion in the PA28 pilot's mind as to the Puma pilot's further flight-path and intentions. The Board discussed the responsibility of the PA28 pilot to integrate safely with traffic already established in the circuit. With the Puma just airborne and no other aircraft in the circuit, there was no established circuit pattern for the PA28 pilot to conform with, and he would have expected the Puma to climb to 500ft before turning. With the PA28 in the downwind position and probably ahead of the Puma, albeit only just, it was the Puma pilot's responsibility to see the PA28 and integrate behind it. Clearly the Puma crew had no indication from the RT that there was traffic downwind when they turned short and saw the PA28 at a very late stage (50-75m ahead).

In determining the Cause of the Airprox, the Board struggled to establish a consensus of where the balance of responsibility lay between the controllers and aircrew involved. Therefore the Board agreed to make a factual statement indicating what had happened.

A Member familiar with both GA and Military operations commented that this incident was a good example of how an incident could occur basically through poor communication by all those involved – one transmission from any of the participants, he opined, could have broken the chain of events. In the event, however, by monitoring the Puma's flightpath continuously, and thereby being in a position to manoeuvre should it be required, the PA28 pilot ensured that there was no risk of the ac colliding.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Unaware that the PA28 had joined the circuit downwind, the Puma crew turned into conflict with it.

Degree of Risk: C.