

AIRPROX REPORT No 2011108

Date/Time: 22 Aug 2011 1314Z

Position: 5152N 00117W (2.4nm
NNE Oxford - elev 270ft)

Airspace: ATZ/Oxford AIAA (Class: G)

Reporting Ac Reported Ac

Type: PA34 PA28

Operator: Civ Trg Civ Pte

Alt/FL: 1500ft 1500ft
QNH (1019mb) NK

Weather: VMC CLBC VMC CLBC

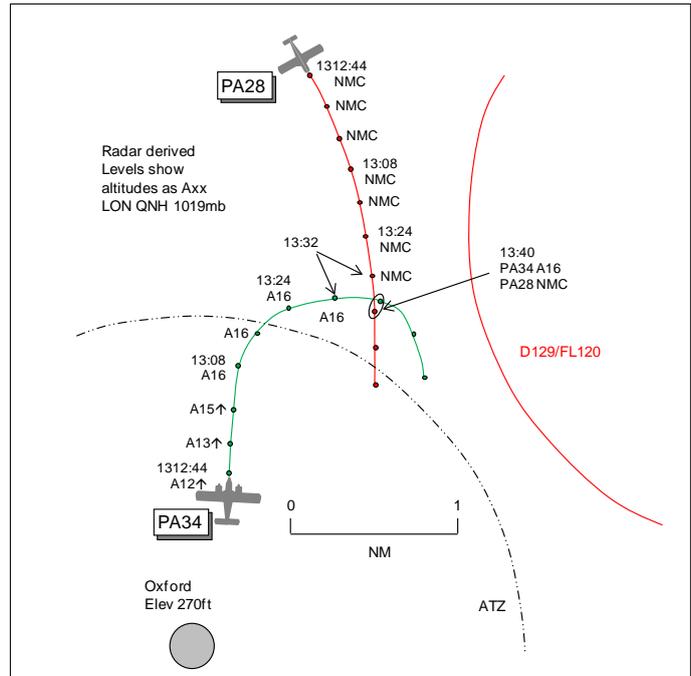
Visibility: >20nm 10km

Reported Separation:

75ft V/Nil H 1000m H

Recorded Separation:

<0.1nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE PA34 PILOT reports flying a dual cct training detail, VFR and in communication with Oxford Tower on 133.425MHz, squawking 7000 with Modes S and C. The visibility was 20nm flying 3000ft below cloud in VMC and the ac was coloured blue/white; no lighting was mentioned. They were flying RH ccts to RW01 when the incident occurred. As they commenced their crosswind turn a PA28 flight was cleared to join downwind and was informed by ATC that an ac was climbing out crosswind (their ac). They flew a continuous turn to downwind and when about 2/3rd of the way round the turn, passing through heading 160°, he thought, at 120kt and levelling at 1500ft QNH 1019mb, he saw a blue and white coloured PA28 as it appeared between the fuselage and RH engine nacelle travelling towards their 2 o'clock position; it was 75ft below. It was too late to take avoiding action as the ac were already diverging. He informed ATC that the PA28 had passed directly beneath their ac and the PA28 pilot then reported that he had their ac in sight. By this stage the PA28 was approximately 200m to their R at the same level. He assessed the risk as high.

THE PA28 PILOT reports inbound to Oxford, VFR and in receipt of a BS from Oxford Tower on 133.425MHz, squawking with NMC. The visibility was 10km flying 2000ft below cloud in VMC and the ac was coloured blue/white; no lighting was mentioned. They were advised to join the cct downwind and to look out for a PA34 departing RW01. Heading 190°, he thought, at 90kt and level at 1500ft both he and another pilot aboard had visual contact with a PA34 which was seen to turn behind their ac when they were downwind. He elected to fly a tight cct pattern in case the PA34 should want to overtake their ac. Later on the downwind leg he asked ATC if they wished him to 'go-around' and was told "no, extend downwind leg, PA34 will cross below you and we will fit you in". Both he and his pilot colleague were visual with the PA34 about 1000m away and did not consider this to have been an Airprox.

ATSI reports that the Airprox occurred at 1314 UTC, 2.4nm NE of Oxford Airport and just outside the Oxford ATZ (Class G airspace), which comprises a circle 2nm radius centred on the mid-point of RW01/19 and extends to a height of 2000ft above aerodrome level.

The PA34 was operating VFR in the visual RH cct for RW01 at Oxford Airport and in receipt of an Aerodrome Control Service. The PA28 was operating on a VFR flight from Shobdon inbound to Oxford.

CAA ATSI had access to area radar recordings, together with written reports from both pilots. RT recordings for the Airprox were requested by the CAA ATSI transcription unit on 30 August 2011. However the Oxford ATSU did not impound the recordings and therefore no transcription of the event was available. The PA34 pilot's report indicated that the incident was reported later by telephone. The ATSU reported that the pilot discussed the incident but did not indicate that an Airprox was being filed. ATC were unaware of the Airprox and no controller report was received.

The METAR for Brize Norton shows EGVN 221250Z 06006KT 9999 SCT045 BKN300 21/10 Q1019 BLU NOSIG=

The PA34 pilot's written report indicated that the Oxford controller had advised the PA28 pilot about the PA34 which was climbing out crosswind.

The PA28 pilot's written report indicated that the controller had instructed the PA28 pilot to join downwind RH, advising the pilot to look out for the PA34. The PA28 pilot in his written report, indicated that he had visual contact with the PA34.

The PA34 pilot indicated that as he turned from crosswind to the downwind position he noticed that the PA28 had passed approximately 75ft below and the pilot reported this to ATC. The pilot reported that as the PA34 turned downwind the PA28 was 200m to the R.

The PA28 was in a tighter cct inside the PA34 and the Tower controller advised the PA28 to extend downwind in order to allow the PA34 to position ahead.

The inbound PA28 pilot was passed TI on the PA34. The Manual of Air Traffic Control, Part 1, Section 2, Chapter 1, Page1 Paragraph 2.1 states:

'Aerodrome Control is responsible for issuing information and instructions to aircraft under its control to achieve a safe, orderly and expeditious flow of air traffic and to assist pilots in preventing collisions between:

aircraft flying in, and in the vicinity of, the ATZ'

The PA28 pilot was instructed to join downwind RH. The PA28 pilot indicated that he had the PA34 in sight. Rule 12 (a) of RoA, states:

'the commander of the aircraft.....shall:

(a) conform to the pattern of traffic formed by other aircraft intending to land at that aerodrome or keep clear of the airspace in which the pattern is formed'

The controller passed TI to the PA28 pilot, in the expectation that the PA28 pilot would join downwind, positioning sensibly into the traffic pattern.

CAA ATSI considered that the PA28 pilot passed underneath the PA34 into a tighter than normal circuit pattern, which caused the PA34 pilot to be concerned.

UKAB Note (1): The UK AIP at AD 2 EGTK 1-6 Para 2.21 Noise Abatement Procedures states:

'b. After departing from Runway 01, climb straight ahead to 750ft QFE (1000ft QNH) or 1.0 DME I OXF, before turning on course. Pilots carrying out visual departures should endeavour to complete this turn before reaching the Mercury Satellite Station (at 1.5nm). When turning right, pilots are to avoid overflying the village of Shipton-on-Cherwell [approx 0.8nm NE of ARP].

e. Whenever possible aircraft joining the circuit should, subject to ATC approval, plan to join on base leg or via a straight-in approach, giving way to traffic already established in the circuit.'

Para 2.22 Flight Procedures Section 1 Circuits states:

- 'a. Circuits variable. To be flown to the east of Runway 01/19.
- b. To provide separation between fixed-wing and rotary-wing traffic, the circuit height for fixed-wing ac is 1200ft QFE. All departing fixed-wing aircraft are to climb straight ahead to 750ft QFE (1000ft QNH) before turning crosswind.'

UKAB Note (2): The radar recording at 1312:44 shows the PA34 1nm N of Oxford climbing straight ahead from RW01 and climbing through altitude 1200ft QNH 1019mb. At the same time a 7000 squawk is seen, believed to be the PA28, 3.5nm NNE of Oxford in a gentle R turn towards the downwind leg RW01 passing through heading 150° showing NMC. The PA34 is seen to level at altitude 1600ft and commence a R turn at 1313:08 with the PA28 1.4nm to its NE. The ac converge, and by 1313:24 the PA34 has departed the ATZ turning through heading 070° with the PA28 0.6nm to its NE. Eight seconds later at 1313:32 the PA28 is in the PA34's 11 o'clock range 0.2nm crossing from L to R. The CPA occurs just before the next radar sweep at 1313:40 as this radar update reveals the ac having passed, the PA28 tracking S, having crossed just ahead of the PA34, which is now in its 7 o'clock range 0.1nm. Lateral separation at the CPA was estimated to be <0.1nm, vertical separation was not recorded.

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 video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC authorities.

Members were disappointed that Oxford ATSU did not impound the RT recordings, which left the Board without a transcript of the RT exchanges during the incident. As a result it was unclear exactly when the PA28 pilot called to join the cct but he was cleared to join downwind; the PA34 pilot thought it was when he commenced his turn onto the crosswind leg that the PA28 pilot made his joining call, which would have made it a late call. The PA34 pilot thought that ATC told the PA28 pilot that his ac was climbing out crosswind whereas the PA28 pilot thought ATC told him the PA34 was departing RW01. With ac joining a visual cct, it is essential to ensure the 'mental air picture' is correct to allow traffic to integrate themselves safely, being cognisant of the other traffic's position and intentions. The ADC did not have an ATM which made it difficult for the controller to give a cct order or more positive instructions, which left it down to the PA28 pilot to fit in to the cct pattern formed by other ac. An experienced GA Board Member thought that the cct pattern flown by the PA34, although probably standard during a student's training phase, did appear large in size with the ac leaving the ATZ whilst turning from crosswind onto the downwind leg. Also, with the ADC giving the PA28 flight a downwind join, this didn't give the pilot many options to sequence himself i.e. build in separation against the PA34 turning towards his ac climbing to the same level. The PA28 pilot reported positioning for a tight cct pattern, seeing the PA34 and watching it as it turned to pass behind. In doing so Members thought the PA28 pilot had flown close enough to cause the PA34 pilot concern which had caused the Airprox.

Looking at risk, some Members thought that, as the PA34 was turning 'belly up' to the approaching PA28 and the flightpath flown relative to it had been fortuitous, while the PA28 pilot would have been unaware that the PA34 pilot was unsighted, safety had not been assured. The PA34 pilot only saw the PA28 as it appeared in his 2 o'clock, between the fuselage and RH engine an estimated 75ft below and diverging. Other Members believed that as the PA28 pilot had maintained visual contact with the PA34 and was always in a position to manoeuvre further, if necessary, any risk of collision had been effectively removed. The recorded radar shows the PA28 passing 0.1nm ahead of the PA34, the vertical separation not showing owing to the PA28's NMC. Without agreement between Members, a vote was taken which resulted in a small majority in favour of the collision risk having been effectively removed.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The PA28 pilot flew close enough to the PA34 to cause its pilot concern.

Degree of Risk: C.