

## **AIRPROX REPORT No 2014012**

Date/Time: 16 Feb 2014 1336Z (Sunday)

Position: 5234N 00105W  
(4.3nm SW Leicester Airfield)

Airspace: London FIR (Class: G)

Aircraft 1                      Aircraft 2

Type: C152                      Jabiru J430

Operator: Civ Trg              Civ Pte

Alt/FL: 2000ft                  1700ft  
QNH                                  QNH

Conditions: VMC                  VMC

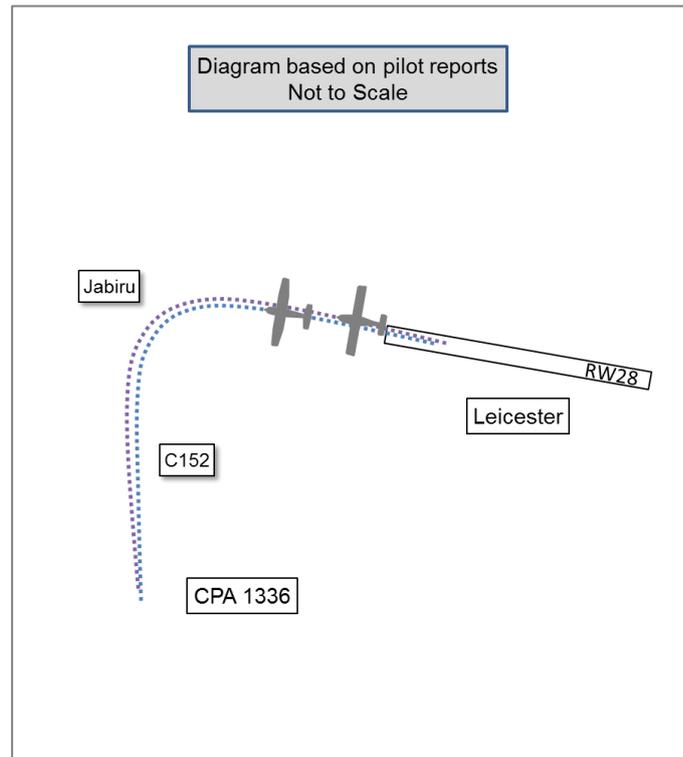
Visibility: >10km              NK

Reported Separation:

0ft V/30m H              NK

Recorded Separation:

NK



## **PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

**THE C152 PILOT** reports his aircraft was coloured white, with blue stripes; the beacon was illuminated; SSR Mode C was selected. He was departing Leicester airfield, VFR, on an instructional flight with a low-hours (pre-solo) student, and in receipt of an Air/Ground (A/G) Service. At approximately 300ft during a RW28 departure a visual check to the rear was conducted (to check tracking extended centre-line) and an aircraft was noticed climbing away in formation with his aircraft (to the rear and starboard side) approximately 50-100m away. This was the same aircraft he had seen doing power checks next in line at the hold, and believed that the pilot had called 'lining up' as he commenced his take-off roll. The aircraft maintained station throughout his climb to 1000ft QNH, his turn to the south (to avoid flying over Leicester City), the remainder of the climb to 2000ft, and when cruising at 2000ft. At this point, he had planned to turn right *en route* to the west but was unable to as this would have brought him directly into the flight-path of the other aircraft so he maintained heading and altitude. Eventually, the aircraft climbed and increased its speed, at which point it disappeared behind the starboard wing of his Cessna. At the time his airspeed was 85kt. He was satisfied that the pilot of the other aircraft had visual contact with him but, due to its close proximity, was concerned that manoeuvring to re-acquire it visually could have resulted in conflict. Therefore, in accordance with the regulations governing aircraft being overtaken, he maintained heading and altitude, continuing his scan where he expected to see the aircraft re-appear. The aircraft re-appeared not in front of the starboard wing as expected but in the top of the front windshield, in a shallow descent which resulted in passing through his altitude, directly in front at a range assessed to be no more than 30m. Once satisfied that the aircraft was clear he turned onto his planned heading.

He assessed the risk of collision as 'Medium'.

**THE JABIRU PILOT** reports that his aircraft was coloured white; the lighting state was not reported; SSR Mode C and S was selected. He was on a VFR flight from Leicester airfield, in receipt of an A/G Service. After the C152 started rolling on RW28 he entered the runway, lined up and waited. After the C152 had rotated he waited until the aircraft became a 'little smaller' before he commenced his take-off roll, as was his normal practice. It soon became apparent that he was rapidly catching up the C152. Wishing to comply with normal departure procedures he reduced engine power and applied flap, reducing speed to just less than 70kt. This virtually kept a constant distance between the two aircraft and the space opened very marginally. To keep the aircraft in sight at all times, and to

comply with Leicester airfield's preferred departure procedures, he followed the C152 as it climbed out southwards, clearing the busy Leicester circuit at 1500ft. He hoped that the pilot would then either turn left or right but he did neither. He, therefore, assumed that they would both be heading south. To keep the aircraft in view, and to get away safely from this 'unofficial formation', he increased speed and moved to the right, climbing. With increasing speed, and visual at all times with the C152 on his left and now some 45° degrees below him, he watched it slipping ever quicker behind his rear under the tail-plane and then it passed out of sight. His aircraft cruises at 110-120kt and was accelerating rapidly towards that speed. Consequently, he knew that clear air between the two aircraft would continue to increase rapidly. With hindsight, he wished that either he or the other pilot had communicated on the A/G frequency to try and resolve any concern. However, the frequency was busy at the time. Additionally, although he did not consider that he had compromised safety, he regretted not slowing down earlier. He remained on frequency until shortly before passing abeam Market Harborough.

He assessed the risk of collision as 'None'.

## **Factual Background**

Noise abatement procedures for Leicester RW28<sup>1</sup> are: 'All aircraft to climb straight ahead maintaining runway centre-line to 1000ft before turning.'

The Rules of the Air Regulations 2007<sup>2</sup> states:

(1) An aircraft which is being overtaken in the air shall have the right-of-way and the overtaking aircraft, whether climbing, descending or in horizontal flight, shall keep out of the way of the other aircraft by altering course to the right.

(2) An aircraft which is overtaking another aircraft shall keep out of the way of the other aircraft until that other aircraft has been passed and is clear, notwithstanding any change in the relative positions of the two aircraft.

Additionally<sup>3</sup>:

(4) An aircraft which is obliged by this Section [Section 4 General Flight Rules] to give way to another aircraft shall avoid passing over or under the aircraft, or crossing ahead of it, unless passing well clear of it.

(5) An aircraft which has the right-of-way under this rule shall maintain its course and speed.

## **Analysis and Investigation**

### **CAA ATSI**

Both aircraft departed from Leicester and were in communication with Leicester Radio (A/G). There is no facility to record RTF at Leicester Airfield. The A/G operator was not aware of an Airprox and, apart from observing the two aircraft depart, was unable to provide any further details about the occurrence.

### **UKAB Secretariat**

Despite viewing several radars, the C152 did not appear until 1337:42 (after the Airprox is reported to have occurred), as it turned onto a WSW track. However, the Jabiru was visible throughout. The radar recording at 1337:42 shows the two aircraft at 2100ft, 0.8nm apart: the C152 is NNW of the Jabiru, tracking WSW; the Jabiru is tracking SSW and, thereafter, horizontal separation increased.

<sup>1</sup> UK AIP Page AD2.EGBG-5.

<sup>2</sup> Rule 11 Overtaking.

<sup>3</sup> Rule 8 Avoiding aerial collisions.

## Summary

Both aircraft were departing from Leicester airfield and following the noise abatement procedures for RW28. The C152 pilot, who had taken off ahead of the Jabiru, was concerned to observe the latter aircraft 'forming' about 50-100m behind his aircraft. Subsequently, he lost sight of the aircraft as it overtook him until, on regaining contact, he observed the Jabiru in the top of the front windshield in a shallow descent which resulted in it passing through his altitude, directly in front, at a range assessed to be no more than 30m. The pilot of the Jabiru initially reduced speed on departure to follow the C152 before subsequently deciding to overtake it, keeping the aircraft in sight while he passed it.

## **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available included reports from both pilots, area radar recordings and reports from the appropriate ATC and operating authorities.

The Board first considered the actions of the Jabiru pilot. It was quickly decided that he had not left sufficient space to ensure separation before taking off behind the C152. This was considered to be a contributory factor to the Airprox. Although it was noted that the Jabiru has a greater cruising speed than the C152, a GA pilot member commented that it can also fly 'quite slowly' if required. Turning to the overtaking manoeuvre; members agreed that the root of the Airprox was that the Rule 11 requirement to allow 'plenty of room' had not been followed on this occasion. Consequently, the Board quickly agreed that the cause of the Airprox had been that the Jabiru pilot flew into conflict with the C152.

The Board then discussed the risk of collision. If it was considered that the Jabiru pilot had lost sight of the C152 during his overtaking manoeuvre then this could be construed as having resulted in a providential situation that had just stopped short of a collision in which case the risk would be A. However, the Jabiru pilot had reported that he had maintained visual contact with the C152 during the overtaking manoeuvre, and had only lost sight after he had passed it. Based on that information, and that of the C152 pilot, who reported sighting the other aircraft passing 30m ahead of him, it was decided, after much debate, that the Jabiru pilot had simply flown too close to the C152 and, therefore, it was more a case of safety margins being much reduced below the normal. Consequently, the risk was categorised as B.

## **PART C: ASSESSMENT OF CAUSE AND RISK**

|                               |  |
|-------------------------------|--|
| <u>Cause:</u>                 | The Jabiru pilot flew into conflict with the C152.                   |
| <u>Contributory Factor:</u>   | The Jabiru pilot did not allow sufficient separation after take-off. |
| <u>Degree of Risk:</u>        | B.   |
| <u>ERC Score<sup>4</sup>:</u> | 4.   |

<sup>4</sup> Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.