

AIRPROX REPORT No 2010171

Date/Time: 16 Nov 2010 1240Z

Position: 5240N 00328W (10nm
W Welshpool)

Airspace: LFA 7 (Class: G)

Reporting Ac Reporting Ac

Type: Hawk T Mk1 Hawk T Mk 1

Operator: HQ AIR (Trg) HQ AIR (Trg)

Alt/FL: 250ft 250ft
(RPS 1009mb) (RPS 1009mb)

Weather: VMC CAVOK VMC CAVOK

Visibility: 30km 20km

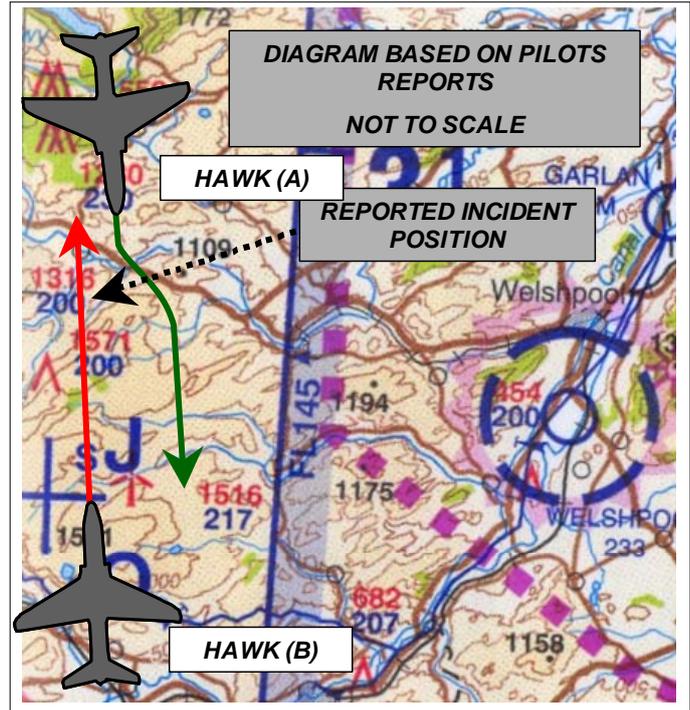
Reported Separation:

500ft H 0 V/500ft H

Recorded Separation:

NR

BOTH PILOTS FILED



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

HAWK (A) PILOT reports that he was a student pilot on an advanced flying training low level introduction sortie in a black ac with all lights switched on, squawking 7001 with Mode C but TCAS was not fitted. During the planning, low level deconfliction had been checked and a possible confliction had been identified. Because there was a possibility of a confliction, during the flight they had made numerous position reports on the RAF Valley low level deconfliction frequency but did not receive a reply to any of them.

Having completed 25min of 'free nav', on a southerly nav leg, heading 176° at 420kt into sun, the front seat student pilot saw [the nose light of] a fast jet on a reciprocal heading about 1nm away at the same height. Immediately assessing there to be a collision risk, he took avoiding action by conducting a 5G left break and during the manoeuvre he informed the captain of the confliction. As they passed abeam the other ac it was identified as another Hawk T1, which he assessed as passing 500ft away with a high risk of collision.

HAWK (B) PILOT reports flying a singleton instructional low level training flight in a black ac with all lights switched on, squawking 7001 with Mode C but TCAS was not fitted. Both ac captains had a general awareness of each other's routeing from the RAF Valley de-confliction procedures and while airborne he had heard calls on the de-confliction frequency. While heading 355° at 420kt flying at low level in Mid Wales he saw another black Hawk 1-2nm away at the same altitude and on a reciprocal heading; he noted the strobes, landing and nav lights of the other ac. The other ac passed within an estimated 500ft lateral displacement at co-altitude but, due to their late acquisition, neither pilot in their ac gained tally early enough to take action to avoid the Airprox. He reported the incident on the radio to Valley and assessed the risk as being medium.

HQ AIR (Trg) comments that the 500ft is a typical separation achievable in this scenario where only one ac had time to avoid. Separation might have been more comfortable had a vertical element been included in the avoidance manoeuvre. Whilst a level break is tactically sound and produces the best lateral separation, a late navigation turn or emergency break by the second ac might have put it back

into confliction. Without more precise detail of the geometry it is difficult to comment on the direction of the break, which appears to be contrary to the 'go right' rule of the air; however, as drawn, with slight right aspect, the left break was correct. Hawk (B)'s report is confusing in that the reported acquisition range should have allowed ample time for avoiding action to be taken. Whether this an overestimation or whether there were other factors in play is not clear. Whilst it is likely that Hawk (B) should have had the best chance of seeing the other ac, which was flying almost into sun (it is not clear if sun was actually an issue), because of the terrain, Hawk (B) was probably sky-lined to a degree, whilst Hawk (A) would have been in relatively low ground.

It highlights that there are deconfliction measures in place at Valley that were effective in ensuring that at least one crew was aware of the potential proximity of the other. Again, the nose mounted conspicuity light proved effective in alerting one crew to the other's presence. This incident is not uncommon amongst low level operators and highlights the imperative on all crews in Class G airspace to devote sufficient time to lookout and to take immediate avoiding action.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac and a report from the Hawk operating authority.

The Board noted that both ac had been operating legitimately in the UKDLFS and, due to RAF Valley local procedures, both pilots were aware that their ac would be in the area at the same time, thus prompting enhanced lookout; however, during free-nav any procedural deconfliction measures are less effective than when used for deconflicting specific routes and times.

Although the sightings by both pilots were relatively late, this was largely due to terrain masking concealing the opposing ac. That being the case, TCAS (as fitted to the Hawk T Mk2 but not the Mk1) would probably not have provided a significantly earlier warning since it is also dependent on 'line-of-sight' between the respective ac. The Board noted, however, that ac lighting had been a significant factor in the acquisition of the opposing ac.

The HQ Air (Trg) Member informed the Board that in these circumstances where only one ac took avoiding action while ensuring that there was no risk of collision, only 500ft horizontal separation is not unusual.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A conflict in the UKDLFS resolved by Hawk (A) pilots.

Degree of Risk: C.