

AIRPROX REPORT No 2011034

Date/Time: 14 Apr 2011 1453Z

Position: 5539N 00156W
(5nm SSE Berwick)

Airspace: UKDLFS (Class: G)

Reporting Ac Reported Ac

Type: Tornado GR4 Tucano

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

Alt/FL: 260ft MSD 250ft MSD
(RPS 1011mb)

Weather: VMC CLBC VMC CLBC

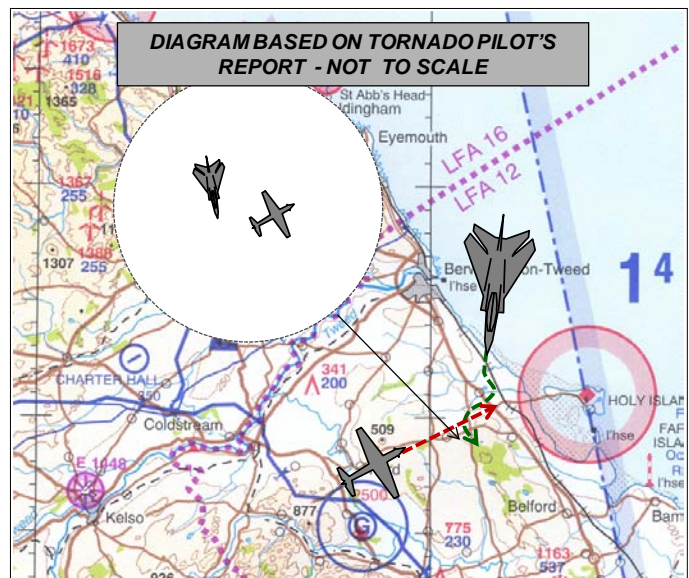
Visibility: 20km 20km

Reported Separation:

<1000ft H NK

Recorded Separation:

NR



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE TORNADO GR4 PILOT reports flying a grey ac with all lights switched on, squawking 7001 with Mode C, as No 2 of a pair of Tornado GR4 ac conducting evasion training with a Hawk. They were heading 185° at 430kt and at 360ft and following a bounce by the Hawk they were separated from the flight lead by about 5nm, when the pilot saw a small ac in 1.30 position at about one mile range and slightly high. He instinctively manoeuvred to the L but after about 15° of turn, he quickly realised the ac was tracking from R to L. A further L turn would have put the Tornado belly-up to the ac and exacerbated the chance of a collision, so he reversed to the R and descended to 260ft agl. They passed below and slightly behind the ac, which was by then clearly identifiable as a Tucano (black with yellow sunburst on wings) and he assessed that they passed within 1000ft [H] of it. The Tucano was initially in straight and level flight but just before they passed it turned R (belly-up) to them. The time from initially sighting the Tucano to passing it was 7sec.

He had been conducting an aggressive all-round look out scan due to the knowledge of the presence of a bounce ac and this would have been a slightly different scan to that conducted on a normal low level navigational cruise.

He reported the incident after landing and informed Linton on Ouse [the Tucano base] and assessed the risk as being low due to his avoidance.

THE TUCANO PILOT reports that he was flying with an instructor in a black ac with yellow wing flashes and at the time was in the immediate area of the reported incident but neither pilot was aware of another ac. They were squawking 7001 with Modes C and S and TCAS 1 was fitted.

UKAB Note (1): The incident took place about 2nm inland from the coast in low, rolling, wooded terrain and neither ac shows on the recorded radars. The Tornado mission tapes were retained and reviewed but the incident is not recorded.

HQ AIR (OPS) comments that if the geometry of the incident is as reported by the GR4 pilot, the initial 15° of turn would have put the Tucano in the 2 o'clock. With the relative speeds (430kt vs 240kt) the GR4 would have been passing well ahead of the Tucano despite the fact that it was tracking to the E. The decision to reverse the turn may therefore have reduced the separation

somewhat but provided him with greater confidence in the fact that the risk had been reduced. Without the benefit of any radar recording it is not possible to confirm the geometry precisely. However, if the GR4 pilot actually perceived the Tucano was tracking R to L, i.e. moving towards his nose even after the initial turn, it is likely that the Tucano was much closer to his nose at first sighting. In this case, the reversal of the turn was essential and a greater initial risk existed.

HQ AIR (TRG) comments that it is noted that the TCAS did not appear to highlight the conflict. This is not unknown in the low-level environment where terrain masking can reduce the effectiveness of the equipment but this incident occurred in a relatively flat area. This incident has reminded the Tucano community of the necessity of not relying on their electronic aids for spotting traffic and the need to maintain a robust visual scan. The crew made a turn shortly before the CPA and may well have been focussing their attention on acquiring a turn point or target in the lead-up to the incident. They are also likely to have been focussing more into the turn where the threat is generally considered to be higher.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac and reports from the respective ac operating authorities.

Despite there being no supporting data, the Board agreed that this had been a fairly routine encounter between two ac operating legitimately in the UKADLFS. Both ac were operating in good VMC and should have been visible to the other crew. The Tucano instructor had been instructing his student in low level flying techniques as the Tornado had been descending back to low level, initially at least, on a line of constant bearing. Members were unable to offer any explanation as to why the Tornado was not displayed on the Tucano TCAS1 as there were no obvious constraints; the Board endorsed HQ Air (Trg)'s comments regarding lookout. Members accepted the HQ Air reasoning for the Tornado reversing his direction of turn and possibly reducing the separation but, keeping the Tucano visible thereby removing any risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A non-sighting by the Tucano crew and a late sighting by the Tornado crew

Degree of Risk: C.