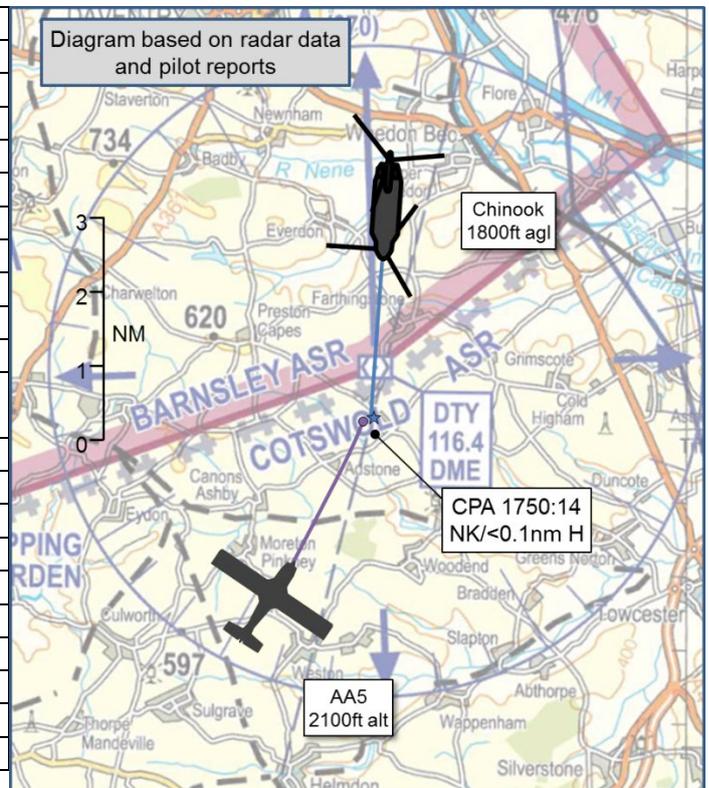


AIRPROX REPORT No 2015147

Date: 20 Aug 2015 Time: 1750Z Position: 5210N 00106W Location: Maidford, Northants

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

| Recorded | Aircraft 1 | Aircraft 2 |
|-------------|-----------------|----------------------|
| Aircraft | Chinook | Grumman AA5 |
| Operator | HQ JHC | Civ Pte |
| Airspace | London FIR | London FIR |
| Class | G | G |
| Rules | VFR | VFR |
| Service | None | None |
| Altitude/FL | 2400ft alt | NK |
| Transponder | A,C,S | A on, C off |
| Reported | | |
| Colours | Green | Blue, White |
| Lighting | Strobes, Nav | Beacon, Strobes, Nav |
| Conditions | VMC | VMC |
| Visibility | 20km | 10km |
| Altitude/FL | 1800ft | 2100ft |
| Altimeter | RPS (1020hPa) | QNH |
| Heading | 180° | 008° |
| Speed | 130kt | 105kt |
| ACAS/TAS | Not fitted | Not fitted |
| Separation | | |
| Reported | 0ft V/50-100m H | 0ft V/100m H |
| Recorded | NK V/<0.1nm H | |



THE CHINOOK PILOT reports he was transiting at 1800ft agl when he became aware of a blue and white aircraft, with lettering down the side, in his 1 o'clock. Both aircraft turned left to avoid, and it passed approximately 50-100m away on his right-hand side.

He assessed the risk of collision as 'Medium'.

THE AA5 PILOT reports that the weather was overcast at 2100ft but becoming broken at 2500ft towards his destination. He was flying VFR on a route that he had flown many times before. As he approached the DTY VOR, he was pleased to reach a height of 2100ft, the cloud base was now lifting, and sunshine was pouring through. However, there was a wispy bar of cloud hanging down some 200-300ft below the main cloud base, slightly thicker to the right but lighter and, he deemed, more acceptable where he was flying. He had the radio tuned to Leicester but couldn't hear anything so he spent a few moments checking the frequency: he didn't linger over this, but when he resumed his scan he saw 2 small lights dead ahead on the other side of the cloud bar. After a few seconds he realised this to be a Chinook, quite close at around 4km, so he moved into clear airspace to keep sight and pass a reasonable distance on a parallel track, intending to regain his planned track after he was clear. This all seemed fine until Chinook pilot broke hard left; he couldn't understand why at the time, but, on reflection, realised that the other pilot was flying into worsening conditions and hadn't seen him.

He assessed the risk of collision as 'Medium'.

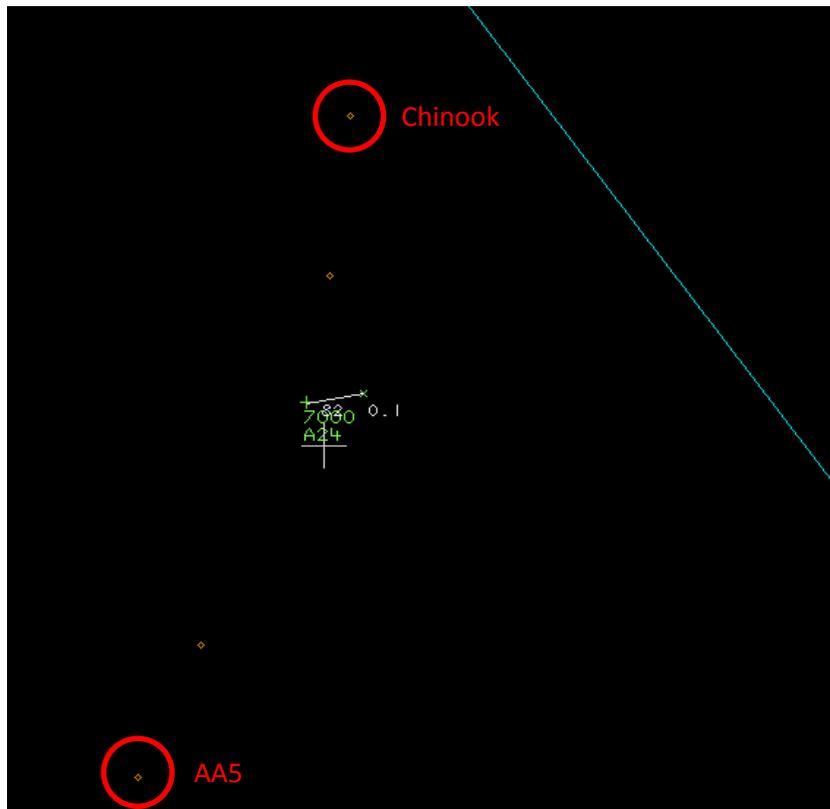
Factual Background

The weather at Coventry was recorded as follows:

METAR EGBE 201750Z 17007KT 140V200 9999 FEW020 SCT025 21/16 Q1018

Analysis and Investigation

UKAB Secretariat



The Chinook and AA5 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right². If the incident geometry is considered as converging then the Chinook pilot was required to give way to the AA5³.

Comments

JHC

The AA5 was already in a gentle left hand turn when first sighted by the Chinook crew. This reason, and because it was in the 1 o'clock position relative to the Chinook, meant that it made sense to turn left away from the other aircraft. As mid-air collision is Commander JHC's top risk to life, the TAS fitment to Chinook is funded and will be embodied in the very near future, which would have provided a barrier against this.

Summary

An Airprox was reported when a Chinook and an AA5 flew into proximity at 1750 on Thursday 20th August 2015. Both pilots were operating under VFR, in VMC, and neither was receiving an ATS.

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c) (1) Approaching head-on.

³ SERA.3210 Right-of-way (c) (2) Converging.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft and radar photographs/video recordings.

The Board first looked at the actions of the AA5 pilot. It was clear that he was flying on a radial to the DTY VOR, and some members wondered whether his desire to maintain his track had constrained his actions such that, when he first saw the Chinook, he only took a small turn to keep clear. Although he was obviously content with the separation (he reported that he turned to keep clear by a 'reasonable distance'), the Board noted that the radar recording indicated that there was less than 0.1nm between the two aircraft, head-on, at CPA. The Board felt that this might not be considered a reasonable distance by many pilots, and opined that pilots should consider the perspective from the other cockpit on an assumption that the other pilot might not have seen their aircraft; good airmanship dictates that one applies an extra margin not only to allow for the fact that other pilots might not have the same risk appetite as you, but also because they might not be visual with you and could therefore behave unexpectedly to reduce the separation still further. In short, members felt that although the AA5 pilot had taken measures to avoid the Chinook, he could have done more to ensure greater separation as they approached head-on.

As for the Chinook crew, the Board noted that it was clear that they hadn't seen the other aircraft until late, possibly due to the weather conditions; being unaware whether the other pilot had them in sight, they felt the need to take avoiding action and were concerned enough to report an Airprox. The Board were heartened to hear that the Chinook fleet were to be fitted with TAS, which, had it been available, might have alerted the crew to the presence of the AA5 earlier. That being said, in this instance, they noted that the AA5 did not report having Mode C, and it wasn't known whether this was because it wasn't fitted, or it was switched off. The Board wished to reiterate to all pilots the benefit of flying with Mode C switched on, because it provided height information to pilots in ACAS fitted aircraft and also provided situational awareness to ATC who might be providing a Traffic Service to other aircraft.

In determining the cause of the Airprox, the Board quickly agreed that this was a conflict of flight paths, resolved, partially, by the AA5 pilot. However, there was much discussion when assessing the risk. Some members thought that effective and timely action had been taken, which would be Category C, whilst others thought that, due to the separation (the same height, head-on, and less than 0.1nm after manoeuvring), the action had not been effective and that this was a Category B event. In the end, a vote was taken which was tied between the 2 factions. The Chairman cast his deciding vote, making this Category B, safety margins had been much reduced below the normal.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A conflict of flight paths, resolved by the AA5 pilot.

Degree of Risk: B.