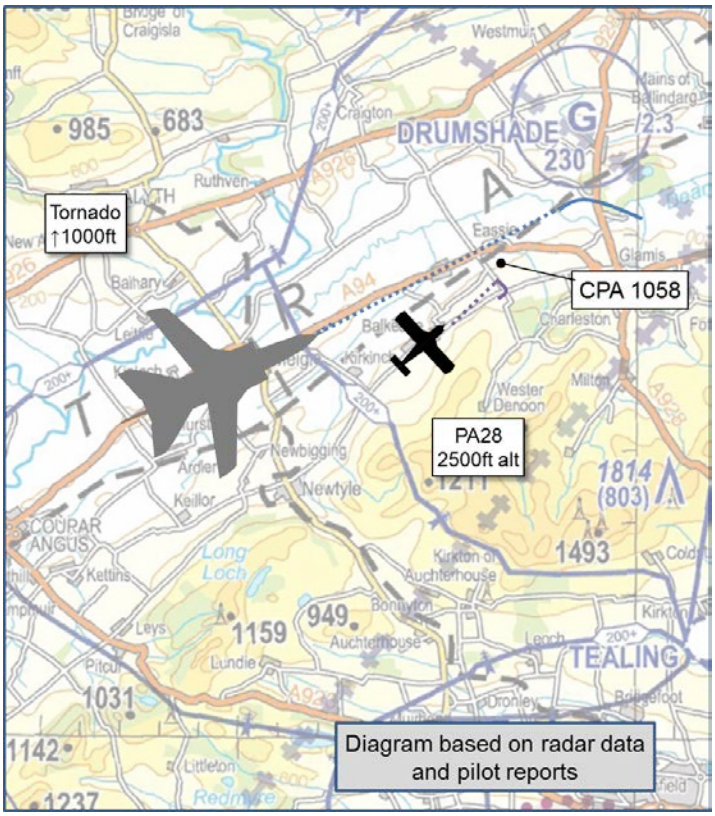
AIRPROX REPORT No 2015161

Date: 22 Sep 2015 Time: 1058Z Position: 5636N 00301W Location: 5nm W Forfar

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Tornado	PA28
Operator	HQ Air (Ops)	Civ Trg
Airspace	Scottish FIR	Scottish FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider	NA	Dundee
Altitude/FL	NK	FL025
Transponder	A,C,S	A,C,S
Reported		
Colours	Grey	White, Blue, Red
Lighting	NK	Nav, Landing, wing and tail strobes
Conditions	VMC	VMC
Visibility	20km	25km
Altitude/FL	1000ft	2600ft
Altimeter	RPS (994hPa)	QNH
Heading	060°	NR
Speed	400kt	95kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	200ft V/0.25nm H	NK
Recorded	NK	



THE TORNADO PILOT reports being on a low-level sortie, monitoring the VHF low-level common frequency (135.475 MHz) and making information calls every 10-15 minutes. Check-in calls for Perth and Leuchars were planned for situational awareness on local traffic. The call to Perth was made, who advised that there was no traffic to affect, so they left the frequency. Shortly afterwards, when passing to the north of Perth, the instructor initiated a simulated birdstrike, with the intention of a practice diversion to Leuchars. The student correctly eased the aircraft away from the ground to assess the aircraft for damage. At this time the instructor set the Leuchars frequency on the radio as this was the obvious choice as the nearest diversion. During the climb-out the student spotted a light aircraft at a range of about 0.5nm and manoeuvred away from it. Two-way contact had not yet been established with Leuchars, so the instructor told the student to call Leuchars as a matter of priority to establish a Traffic Service. They did this and Leuchars informed them of the traffic, which was now behind them. At the time they didn't consider it to be an Airprox and so didn't report it on frequency but, after subsequent discussion on the ground, they decided to report it. The pilot made two observations, firstly that had the Tornado been fitted with TCAS, the crew would have received in-cockpit warnings about the traffic which may have allowed them to avoid it by a greater distance, and secondly, below 1000ft in that area it is rarely possible to obtain two-way communications with Leuchars due to the terrain.

He perceived the severity of the incident as 'Medium'.

THE PA28 PILOT reports that he did not see the Tornado at the time and was only made aware of the incident subsequently.

Factual Background

The weather at Leuchars was recorded as follows:

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METAR EGQL 221050Z 29007KT 9999 SHRA BKN050 13/09 Q1001 BLU=
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Analysis and Investigation

UKAB Secretariat

The Tornado and PA28 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[1]. If the incident geometry is considered as converging then the PA28 pilot was required to give way to the Tornado[2]. If the incident geometry is considered as overtaking then the PA28 pilot had right of way and the Tornado pilot was required to keep out of the way of the other aircraft by altering course to the right[3].

Comments

HQ Air Command

The Tornado crew planned and flew the sortie in accordance with current regulations and made efforts to announce their presence on the VHF low-level common frequency. It seems that the PA28 pilot elected to receive a Basic Service from Dundee rather than monitor the common frequency but it is unclear whether or not this has any bearing on the incident itself. It is, however, apparent that the PA28's SSR was visible to Leuchars radar so had either aircraft been equipped with TCAS then it is likely that the crews would have been alerted to the presence of the other aircraft. Ultimately, the Tornado pilot saw the PA28 in sufficient time to take action to increase separation, albeit that separation was considered by the Tornado crew to be less than they would ideally have liked to achieve.

Summary

An Airprox was reported when a Tornado and a PA28 flew into proximity at 1058 on Tuesday 22nd September 2015. Both pilots were operating under VFR in VMC, the Tornado pilot was not in receipt of an ATS and the PA28 pilot in receipt of a Basic Service from Dundee.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

The Airprox took place in Class G airspace where see-and-avoid is the main mitigation to mid-air collision; without a CWS in either aircraft, and at a height where a radar service was not available, good look-out was paramount. The Board was aware that there is an on-going programme to fit TCAS to Tornado aircraft and agreed that, as the pilot suggested, had it been fitted already then it would probably have given the pilot some indication that the PA28 was there and enabled him to take earlier action to avoid the Airprox. Nevertheless, the Board commended the Tornado crew for doing all that they could at the time to assist in collision avoidance. They were too low to receive a Traffic Service from ATC (although they did arrange one as soon as they climbed into radar cover); had checked in with local airfields; and were listening out and making information calls on the VHF common frequency 135.475mhz currently being trialled in Scotland.

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c) (2) Converging.
[3] SERA.3210 Right-of-way (c) (3) Overtaking.

It was unfortunate that the PA28 pilot wasn't also on the VHF common frequency, and the Board weren't sure whether this was through lack of knowledge or because the PA28 pilot preferred to speak to an ATC unit. If the latter, some members opined that receiving a Basic Service from a unit some distance away would provide little in the way of Traffic Information, and that the PA28 pilot would have been better served listening out on the VHF common frequency. During the subsequent conversation, military representatives from HQ Air Command further elaborated on the VHF trial and informed the Board that it had been on-going since February 2015 and was due to finish in August 2016. They noted that although military crews were all aware of the frequency, there was some concern that it wasn't being used effectively by civilian pilots; they were keen to highlight that they were looking for feedback from pilots as to whether they thought it was useful or not. They also commented that, if the trial is deemed a success, a frequency has been identified that could be used in a similar way in the rest of the UK. More information and a link to a feedback survey can be found on the RAF website at link: low-level frequency survey.[4]

In the event, the Board noted that the Tornado crew had seen the PA28 early enough to take avoiding action, albeit later than the crew would have liked. They also noted that the PA28 pilot didn't see the Tornado at all and was unaware of the Airprox. Commending the Tornado pilot for filing the report because it had highlighted some valuable points and helped to further spread the Flight Safety message, the Board reasoned that, because the Tornado crew had seen the PA28 with enough time to take the appropriate avoiding action, this had been a sighting report; they assessed the risk as Category C, timely and effective action had been taken.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A sighting report.

Degree of Risk: C.

[4] http://www.raf.mod.uk/organisation/vhflowlevelfrequencytrialinscotland.cfm