

AIRPROX REPORT No 2022181

Date: 08 Aug 2022 Time: 1320Z Position: 5136N 00212W Location: Westonbirt

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DA42	Citabria
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	None ¹
Altitude/FL	2400ft	3000ft
Transponder	A, C, S+	A, C, S
Reported		
Colours	White	Yellow
Lighting	Strobe, nav, land, taxi	Strobes, nav
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	3100ft	NK
Altimeter	QNH (NK hPa)	QNH (NK hPa)
Heading	~180°	NK
Speed	140kt	80kt
ACAS/TAS	TAS	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	0ft V/500m H	200ft V/¼NM H
Recorded	600ft V/<0.1NM H	



THE DA42 PILOT reports that after departure they tried to call London Information to receive a service. They could hear the controller, but not the aircraft being talked to. The controller was very busy. They tried calling about 3 times but had no response. They elected to maintain a listening watch and try to raise the controller again once their workload reduced. Whilst approaching Bowdown farm strip at 3100ft, they saw a yellow high-wing aircraft at the 2 o'clock position. It was moving west to east and was around 300ft below. Although the TAS system was operating correctly, it did not indicate the other traffic. They elected to maintain course and height because they did not anticipate a confliction if the other aircraft remained on heading. As it got closer it executed a steep climbing turn towards them. In order to keep it in sight the DA42 pilot entered a steep descent and turned to the left by around 20°. The yellow aircraft passed on the right by around 500m. After the event they were able to raise London Information and inform them of the Airprox. London Information was not aware of another aircraft in the area.

The pilot assessed the risk of collision as 'Medium'.

THE CITABRIA INSTRUCTOR reports that the aircraft, with a student pilot in the front seat and instructor in the rear, was conducting an aerobatic and tailwheel conversion training flight to the west of Kemble. After climbing away from a practise forced landing to re-join the circuit at Kemble, the instructor saw the DA42 about 300ft above and on a reciprocal heading. The instructor told the student to level off from the climb and turn to the right to avoid the DA42. The DA42 passed down the left-hand side, still 200ft above. There was very little risk of collision and the DA42 in question seemed to make no attempt to turn to avoid. The Instructor noted that for the rear seat occupant there is a slight limitation in forward view in the Citabria.

¹ Reported as a Basic Service from Kemble but Kemble ATSU was closed on the date of the Airprox.

The pilot assessed the risk of collision as 'Low'.

Factual Background

The weather at Brize Norton and Bristol was recorded as follows:

METAR EGVN 081320Z 13005KT CAVOK 27/10 Q1026 NOSIG RMK BLU BLU=
 METAR EGGD 081320Z AUTO 19005KT 140V260 9999 NCD 26/11 Q1027=

Analysis and Investigation

UKAB Secretariat

The DA42 and Citabria pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.² If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.³ If the incident geometry is considered as converging then the DA42 pilot was required to give way to the Citabria.⁴

Summary

An Airprox was reported when a DA42 and a Citabria flew into proximity near Westonbirt at 1320Z on Monday 8th August 2022. Both pilots were operating under VFR in VMC, neither pilot in receipt of a FIS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots and radar photographs/video recordings. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

Members first discussed the pilots' actions and noted that the DA42 pilot had seen the Citabria in sufficient time to assess its flight path and make a decision to 'maintain course and height because they did not anticipate a confliction if the other aircraft remained on heading'. This unfortunately was not the case and the Board agreed that a 'more proactive' manoeuvre to give way, either laterally or vertically, would have been appropriate. Neither pilot had had situational awareness of the other aircraft before sighting it (**CF3**), partly because the DA42 TAS had not alerted when it would have been expected to (**CF4**) and partly because neither pilot had been in receipt of a surveillance based FIS (**CF1**). The Board felt that the DA42 pilot had missed an opportunity to adapt their plan (**CF2**) when they had been unable to establish contact with London Information, in that Brize LARS had been available in the area through which they had been transiting. It was felt that a Basic or Traffic Service with Brize LARS could have afforded the DA42 pilot additional situational awareness, such that they could have given way to the Citabria traffic, converging at about the same level from the right, rather than having to take avoiding action when the Citabria had turned and climbed towards them. The Board discussed the Citabria pilot's narrative, noted that their perception of events was somewhat at odds with the radar picture and wondered whether the Citabria pilot was recalling a different event. Members agreed that if they had seen the DA42 in this Airprox then they had flown close enough to cause the DA42 pilot concern (**CF5**) but, in any case, the DA42 pilot had undoubtedly been concerned by the proximity of the Citabria (**CF6**) and, given that they had not previously given way, had taken effective avoiding action and materially increased separation at CPA, risk C.

² (UK) SERA.3205 Proximity.

³ (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

⁴ (UK) SERA.3210 Right-of-way (c)(2) Converging.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**Contributory Factors:**

2022181				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements				
• Tactical Planning and Execution				
1	Human Factors	• Communications by Flight Crew with ANS	An event related to the communications between the flight crew and the air navigation service.	Pilot did not request appropriate ATS service or communicate with appropriate provider
2	Human Factors	• Insufficient Decision/Plan	Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation	Inadequate plan adaption
• Situational Awareness of the Conflicting Aircraft and Action				
3	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late, inaccurate or only generic, Situational Awareness
• Electronic Warning System Operation and Compliance				
4	Human Factors	• Response to Warning System	An event involving the incorrect response of flight crew following the operation of an aircraft warning system	CWS misinterpreted, not optimally actioned or CWS alert expected but none reported
• See and Avoid				
5	Human Factors	• Incorrect Action Selection	Events involving flight crew performing or choosing the wrong course of action	Pilot flew close enough to cause concern
6	Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: C.

Safety Barrier Assessment⁵

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because neither pilot established a FIS when a surveillance based FIS was available.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had situational awareness of the other converging aircraft until sighted.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the DA42 TAS did not alert when it could reasonably have been expected to do so.

See and Avoid were assessed as **partially effective** because the DA42 pilot took avoiding action rather than giving way and the Citabria continued into proximity with the DA42.

⁵ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

Airprox Barrier Assessment: 2022181		Outside Controlled Airspace						
Barrier		Provision	Application	Effectiveness				
				Barrier Weighting				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	●	●					
	Manning & Equipment	●	●					
	Situational Awareness of the Confliction & Action	●	●					
	Electronic Warning System Operation and Compliance	●	●					
Flight Element	Regulations, Processes, Procedures and Compliance	●	●					
	Tactical Planning and Execution	●	●					
	Situational Awareness of the Conflicting Aircraft & Action	●	●					
	Electronic Warning System Operation and Compliance	●	●					
	See & Avoid	●	●					
Key:		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>		
Provision	●	●	●	●				
Application	●	●	●	●				
Effectiveness	■	■	■	■	□			