

ACCIDENT

Aircraft Type and Registration:	Spitfire Mk.T IX (Modified), G-CTIX	
No & Type of Engines:	1 Packard Motor Car Co Merlin 224 piston engine	
Year of Manufacture:	1944 (Serial no: PT462)	
Date & Time (UTC):	20 July 2021 at 1305 hrs	
Location:	Duxford Aerodrome, Cambridgeshire	
Type of Flight:	Safety Standards Acknowledgement and Consent (SSAC)	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Paint marks on underside of right wing	
Commander's Licence:	Airline Transport Pilot's Licence	
Commander's Age:	57 years	
Commander's Flying Experience:	19,000 hours (of which 500 were on type) Last 90 days - 42 hours Last 28 days - 17 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

While returning to park following a short local flight, the pilot of a Spitfire was unaware of an aircraft ahead that was conducting pre-flight checks at a holding point on the taxiway. Despite immediately turning away from the traffic when he saw it, the Spitfire pilot was unable to avoid a collision, resulting in minor cosmetic damage to the aircraft.

History of the flight

Following an experience flight in the local area, the Spitfire landed on the paved Runway 24L at Duxford Aerodrome. The pilot was given taxi instructions to its parking position to the north-east of the Eastern Apron (Figure 1). The aircraft taxied across the grass runway onto the paved taxiway, where it was given a further instruction by ATC to hold position due to conflicting traffic under tow. Once this traffic had passed, G-CTIX was given onwards taxi instructions. There was a Bearcat aircraft preparing for departure to the right of the taxiway which the pilot commented was not a common sight.

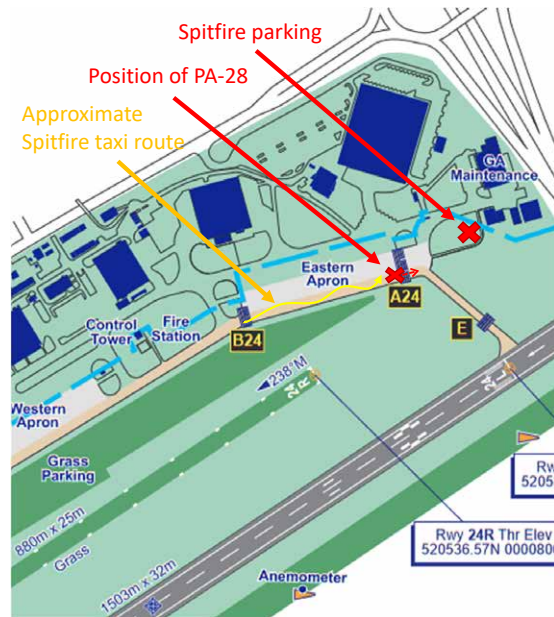


Figure 1

A portion of G-CTIX taxi route relative to PA-28

There was work in progress on an extension of the public area on the Eastern Apron. Therefore, the space available for apron parking was reduced, while the full area of the taxiway remained usable. A FISO familiar with operations at Duxford noted that when the full Eastern Apron area was available, it would routinely be used by taxiing aircraft to pass traffic holding on the taxiway at Holding Point A as in this event. A NOTAM had been published regarding reduced apron size, but this expired two days before the event and an extension was not sought by those carrying out the work.

The pilot stated that recently he had become mindful of potential exposure to carbon monoxide from engine exhaust as a result of taxiing with the canopy of the aircraft open. Consequently, he elected on this occasion to taxi with the canopy closed. This was the first time he had done so.

It is normal in a taildragger such as a Spitfire to weave from side to side when taxiing, enabling the pilot to see along the intended route. In preparation to leave the main taxiway and enter its parking area to the left, the pilot turned the aircraft right, away from the barrier; as he commenced the reverse turn, he saw a PA-28 forward of the right wing at the A24 holding point. The PA-28 was facing in a north-easterly direction and could not have seen the Spitfire approaching.

On seeing the PA-28 the Spitfire pilot applied full left rudder and brake. The Spitfire then swung to the left and its right wing contacted the left wing of the PA-28. The Spitfire pilot stopped the aircraft and shut down the engine. He also indicated to the PA-28 pilot to shut down, and went to check on the occupants. The airfield emergency services attended the scene, as did staff associated with the experience flight who arranged for the passenger to disembark. Both aircraft sustained minor cosmetic damage and there were no reported injuries.

Aircraft information

Originally built as a single seat aircraft in 1944, G-CTIX is a monoplane with a conventional landing gear which was restored to flying condition in 1987. During its restoration it was modified to a two-seat configuration. Although this places the pilot seat somewhat further forward than in its original configuration, the view ahead is still substantially obscured by the aircraft's nose.

Discussion

Duxford Aerodrome provides an AFIS¹, in which AFISOs issue instructions to aircraft on the ground and provide traffic information to aircraft while airborne². The pilot had not been advised of the PA-28 traffic holding at A24. The AFISO on duty believed there was sufficient room for the aircraft to follow its cleared taxi route while the PA-28 conducted its checks. The AFISO commented that there is no other appropriate location for aircraft to carry out pre-flight checks prior to departing Runway 24.

An investigation by the aerodrome operator found that the appropriate traffic information was not passed to the pilot of G-CTIX. The report recommended issuing an operational reminder to AFISOs to pass traffic information to taxiing aircraft, in particular taildraggers.

CAP 797 – *Flight Information Service Officer Manual*³, which details the responsibilities of an AFISO, states:

'The importance of issuing clear and concise instructions to taxiing aircraft cannot be over-emphasised. The visibility from an aircraft flight deck is limited and, when taxiing, the pilot is dependent to a large degree upon the AFISO to assist him in determining the correct taxi route to be followed. Essential aerodrome information is to be passed to the pilot to assist him in preventing collisions with parked aircraft and obstructions on or near the manoeuvring area.'

The pilot, who is familiar with operating at Duxford, stated that ordinarily he would receive traffic information from the AFISO. As there were works to the extended public area along the cleared taxi route, he considered that there was not sufficient room to follow his cleared route on this occasion. Whilst the responsibility of the safe operation of an aircraft ultimately lies with the pilot, the service provided by an AFISO can assist in maintaining the pilot's awareness of traffic and other obstacles.

The pilot noted that taxiing with the canopy closed had reduced the view from the cockpit, indicating that more pronounced turns might be necessary to check the way ahead was clear. He also commented that activity beside the active taxiway to extend the public area was a significant distraction.

Footnote

¹ UK AIP, Duxford Aerodrome <https://www.aurora.nats.co.uk/htmlAIP/Publications/2021-11-04-AIRAC/html/index-en-GB.html> [accessed 12 November 2021].

² Civil Aviation Publication CAP 413 '*Radiotelephony Manual*'.

³ Civil Aviation Publication CAP 797 '*Flight Information Service Officer Manual*' Chapter 8.68.

The NOTAM which had been published to advise AFISO's and pilots of the reduction of the Eastern Apron size was not valid at the time of the accident. Had the NOTAM been extended when the works continued after the planned period, it is more likely the FISO and pilot would have been aware of the reduced apron area and ongoing works.

Works on an apron area do not necessarily require a NOTAM to be published⁴. However, CAP 2173⁵ states:

'The aerodrome operator shall:

(1) establish and implement procedures in accordance with which it originates a NOTAM issued by the relevant aeronautical information services provider:

(i) that contains information on the establishment, condition, or change of any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel involved with flight operations;'

Given the proximity of the Eastern Apron to Holding Point A and the main taxiway, it would be reasonable to consider information about works on the apron as essential for those involved with flight operations.

The aerodrome operator stated that, in response to this event, it has issued an Operational Notice to all ATC staff advising them of a new form, '*Eastern Apron Usage Requests*', which must be completed prior to the approval of any future works on the area. It also requires a temporary fence line be assembled to leave a clear space around Holding Point A.

Conclusion

Temporary reduction of the movement area without a valid NOTAM, the pilot's decision to taxi with the canopy closed in order to reduce exhaust exposure, and the lack of traffic information provided to the pilot by the AFISO, contributed to the loss of separation between the aircraft on the ground. The aerodrome operator has issued an Operational Notice to AFISOs reminding them of the restricted visibility experienced by pilots of taildragger aircraft and of the benefit of passing traffic information to taxiing aircraft.

Footnote

⁴ Civil Aviation Publication (CAP) 2173 Assessment, Measurement and Reporting of Runway Surface Conditions for Certificated Aerodromes ADR.OPS.A.057 (b).

⁵ CAP 2173 ADR.OPS.A.057 (a) available at [https://publicapps.caa.co.uk/docs/33/GRF%20Certificated%20\(CAP2173\).pdf](https://publicapps.caa.co.uk/docs/33/GRF%20Certificated%20(CAP2173).pdf) accessed 31 January 2022.