

## Serious Incident

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|--|---|-------------------|
| <b>Aircraft Type and Registration:</b> | Spitfire IXT, G-BMSB  |                   |
| <b>No &amp; Type of Engines:</b>       | 1 Rolls-Royce Merlin 266 piston engine  |                   |
| <b>Year of Manufacture:</b>            | 1943 (Serial no: CBAF 7722)   |                   |
| <b>Date &amp; Time (UTC):</b>          | 25 June 2024 at 1355 hrs  |                   |
| <b>Location:</b>                       | London Biggin Hill Airport  |                   |
| <b>Type of Flight:</b>                 | Safety Standards and Consent  |                   |
| <b>Persons on Board:</b>               | Crew - 1  | Passengers - 1    |
| <b>Injuries:</b>                       | Crew - None   | Passengers - None |
| <b>Nature of Damage:</b>               | Cockpit canopy detached   |                   |
| <b>Commander's Licence:</b>            | Commercial Pilot's Licence  |                   |
| <b>Commander's Age:</b>                | 46 years  |                   |
| <b>Commander's Flying Experience:</b>  | 1,940 hours (of which 12 were on type)<br>Last 90 days - 135 hours<br>Last 28 days - 56 hours |                   |
| <b>Information Source:</b>             | Aircraft Accident Report Form submitted by the pilot  |                   |

## Synopsis

The front cockpit canopy detached from the aircraft during the climb, shortly after takeoff from London Biggin Hill Airport. The aircraft returned to the airport and landed safely. Neither occupant was injured and the aircraft did not sustain any additional damage, but the canopy was not recovered.

The pilot commented that low time on type and distraction during pre-flight preparations contributed to not closing the cockpit side door prior to takeoff. This meant that when the canopy was closed prior to departure it did not latch properly.

## History of the flight

The aircraft, a two-seat Spitfire IXT, was being operated on a passenger experience flight from London Biggin Hill Airport. As the aircraft accelerated during the takeoff run on Runway 03, the canopy on the forward cockpit began to slide backwards. The pilot continued the takeoff and during the climb out, while the aircraft was in a left turn, the canopy slid back further before detaching from the aircraft.

The pilot advised air traffic control of the situation and requested immediate clearance to land. A full airport emergency was declared and the airport RFFS were in attendance for the landing. The aircraft's return to the airport, approach and landing were uneventful and the aircraft was taxied back to the hangar, where it was met by the airport RFFS. The pilot and passenger were uninjured and disembarked the aircraft normally, without assistance.

The aircraft was undamaged but at the time of reporting, the canopy which fell into fields adjacent to the airport, had not been recovered. The canopy of the rear cockpit, in which the passenger was sat, remained securely latched through the flight.



**Figure 1**

G-BMSB after landing showing absent front canopy and open cockpit side door

### **Pilot's comments**

The pilot commented that being relatively new to the aircraft type and being somewhat distracted by a talkative passenger, meant that they omitted to close the cockpit side door and did not notice this before departure. Therefore, when the canopy was pulled forward as the final action before departure, it did not latch properly and as the aircraft accelerated, the canopy slid back. The pilot added that they may have reverted to common practice on other aircraft types, without a cockpit side door, where the final action before takeoff is simply to slide the canopy closed.

On the Spitfire IXT, the forward part of the left side canopy rail is on the top edge of the cockpit side door. With the door open, the canopy was not engaged in the rail and the air flow was able to get underneath the canopy causing it to detach.

The pilot considered that the safety lesson learned is to close the door before engine start and have the ground crew confirm that it is properly latched. The operator issued a crew notice instructing its pilots that the cockpit door must be closed prior to engine start. On subsequent passenger flights, the pilot has requested passengers to observe a sterile cockpit approach until the aircraft is airborne and clear of the Aerodrome Traffic Zone.

### **Conclusion**

The front cockpit canopy detached in flight as the cockpit side door had not been closed prior to departure. Contributory factors included the pilot's level of familiarity with the aircraft, being relatively new to the type and distractions due the pre-departure phase of flight.