

SERIOUS INCIDENT

Aircraft Type and Registration:	Sling 4, G-LDSA	
No & Type of Engines:	1 Rotax 914-UL piston engine	
Year of Manufacture:	2017 (Serial no: LAA 400-15412)	
Date & Time (UTC):	27 July 2017 at 1355 hrs	
Location:	Near Hailsham, East Sussex	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Right canopy door detached in flight	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	72 years	
Commander's Flying Experience:	865 hours (of which 31 were on type) Last 90 days - 12 hours Last 28 days - 4 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

The right canopy door detached in flight. Subsequent inspection of the aircraft, and in particular the canopy latch pins, by the LAA indicates that the canopy locking lever had not been in the fully closed position, which allowed the canopy to open and then detach. The canopy, incorporating the locking lever and mechanism, was not recovered. There have been no other reported incidents of canopy loss for this aircraft type. The LAA is to publish a safety article reminding pilots to check that canopies are fully locked prior to flight.

History of the flight

The aircraft's owner, who was piloting the aircraft, and a passenger who was also a pilot, were flying from Lydd Airport to Shoreham Airport. The pilot was in the front left seat and the passenger was seated next to him. About 30 minutes into the flight, at an altitude of 2,200 ft and airspeed of about 116 kt, there was a sudden increase in wind noise in the cockpit accompanied by the passenger feeling a "blast of air on his face". The passenger then noticed that the right canopy door had opened about 5 cm at its upper forward corner, with the gap tapering back to the rear of the canopy. After about 15 to 20 seconds, there was a loud bang and the canopy departed the aircraft. The pilot informed ATC at Shoreham, where the aircraft subsequently landed without further incident. Sussex Police were also notified. The canopy door has not been located to date and no injuries to persons or damage to property on the ground have been reported.

The Sling 4 is fitted with two canopy doors, one on the left and one on the right side of the cockpit that open in a 'gullwing' design. Each canopy door is attached to the top of the fuselage by two hinges and secured by a single over-centre lever that moves two latches, one adjacent to the lever assembly and one at the rear of the canopy via by a pull-push rod (Figure 1). The levers are located forward of the pilot and passenger seats (Figure 2).

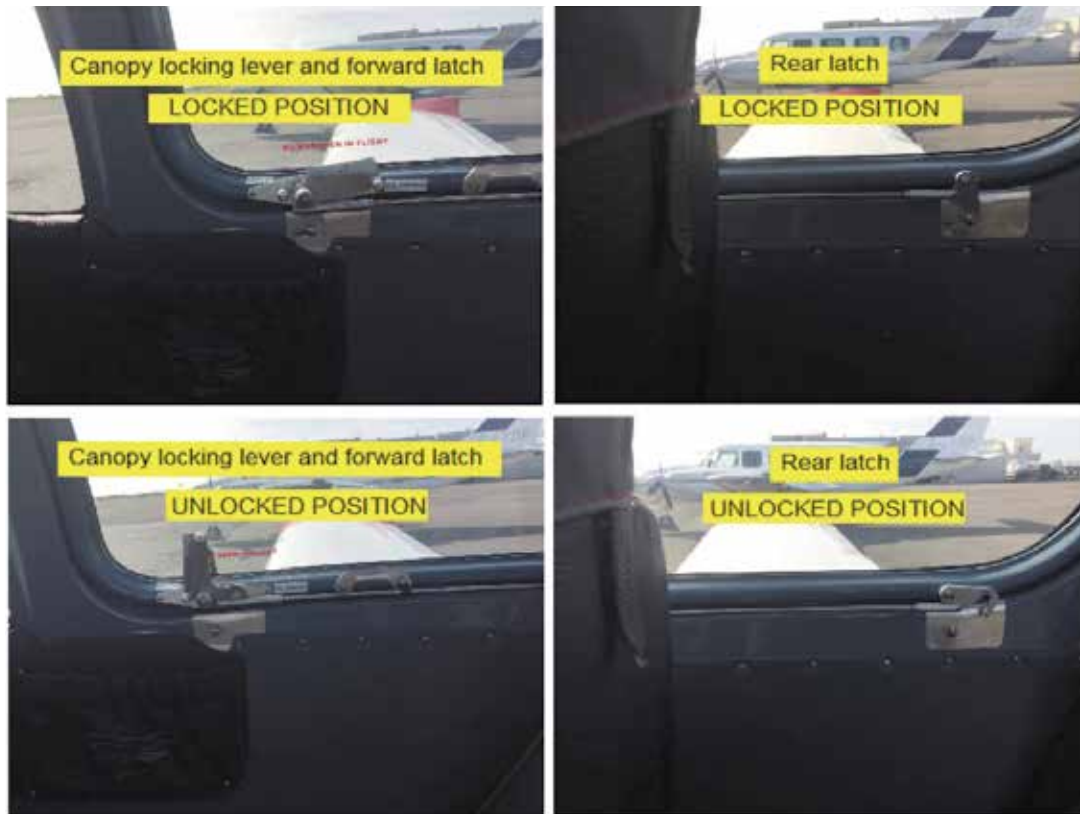


Figure 1

Passenger canopy locking lever and latches



Figure 2

Passenger canopy locking lever position

The LAA inspected the aircraft and contacted the aircraft manufacturer. Analysis of damage to the forward and aft hinge fuselage attachment points indicate that both hinges failed in overload. Both forward and aft latch pins remained attached to the fuselage and were both intact. The canopy was not recovered and so it was not possible for the canopy locking lever and mechanism to be examined.

The pilot stated that the passenger had advised him that the lever had remained in the closed position until the canopy detached from the aircraft. However, the LAA found that it was possible to partially lock the canopy with the lever not fully in the closed 'over-centre' position.

There have been no other reported incidents for this aircraft type of a canopy opening in flight. The LAA is to publish a safety article reminding pilots to check that canopies are fully locked prior to flight.

Conclusion

The inspection of the aircraft by the LAA indicates that the canopy opened in flight because the passenger door lever was not in the fully closed position. It is possible that the lever may not have been in the fully closed position prior to the commencement of the flight, or that the lever was inadvertently moved at some point during the flight.