

**SERIOUS INCIDENT**

<b>Aircraft Type and Registration:</b>	Saab-Scania SF340B, G-LGNC	
<b>No &amp; Type of Engines:</b>	2 General Electric Co CT7-9B turboprop engines	
<b>Year of Manufacture:</b>	1992 (Serial no: 340B-318)	
<b>Date &amp; Time (UTC):</b>	20 July 2016 at 0545 hrs	
<b>Location:</b>	On takeoff from Glasgow Airport	
<b>Type of Flight:</b>	Commercial Air Transport (Passenger)	
<b>Persons on Board:</b>	Crew - 3	Passengers - 13
<b>Injuries:</b>	Crew - None	Passengers - None
<b>Nature of Damage:</b>	Left hand upper nacelle fairing 451AT damaged at leading edge and damage to the trailing edge of all four propeller blades on the left hand engine.	
<b>Commander's Licence:</b>	Airline Transport Pilot's Licence	
<b>Commander's Age:</b>	37 years	
<b>Commander's Flying Experience:</b>	5,020 hours (of which 4,700 were on type) Last 90 days - 131 hours Last 28 days - 32 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot, and information provided by the operator	

**Synopsis**

The aircraft took-off from Glasgow Airport with an unsecured left engine cowling. The commander noticed it during the climb and the aircraft returned to Glasgow, where it landed safely.

After landing it was discovered that the loose cowling had been in contact with the rotating propeller. The operator determined that the member of engineering staff had been distracted during a maintenance task and had not secured the cowling before dispatch.

**History of the flight**

After departure from Glasgow Airport, on passing FL090, the commander noticed that the top section of the left engine 'Figure of 8' cowling was flapping in the airflow (Figure 1). He decided to return to Glasgow, and stopped the aircraft's climb at FL100. He then carried out two orbits to give the cabin crew time to secure the cabin, during which the loose cowling started to vibrate violently. Slowing the aircraft to the minimum clean speed reduced the vibration. The aircraft then returned to Glasgow where it landed safely.



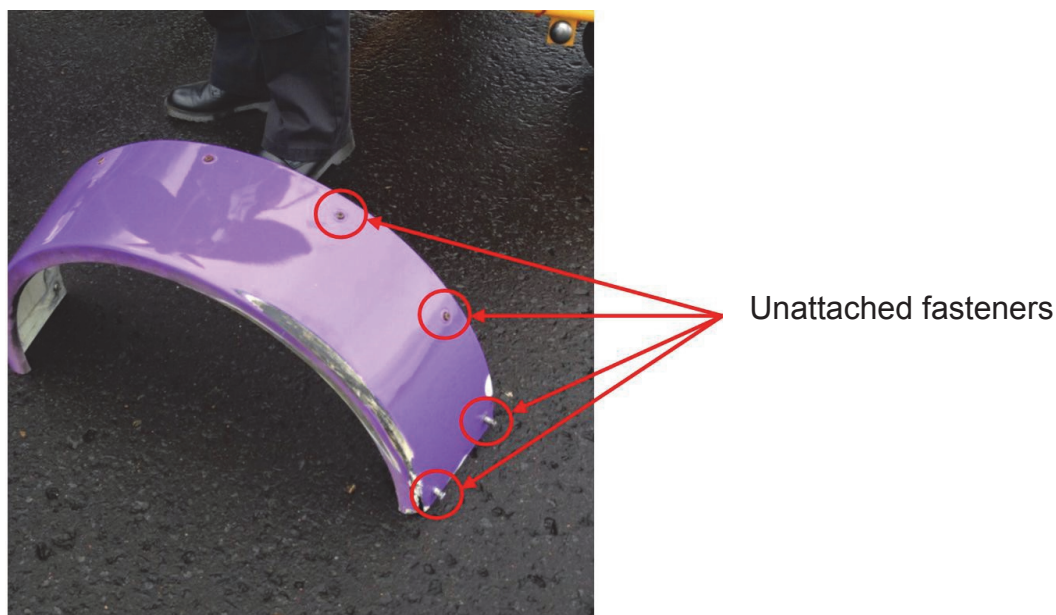
**Figure 1**

Picture taken in flight by a passenger showing the outboard section of the loose cowling

A section of the loose cowling was found to be worn on its forward face, and a small section of the cuff section of all four propeller blades had been damaged by contact with the cowling.

### Operator investigation

The operator determined that a member of engineering staff had been distracted during a maintenance task performed the previous day, and had not secured the cowling before dispatch. The unsecured latches (shown in Figure 2) were then not spotted by engineering staff during before-flight checks, or by the flight crew during the pre-flight external check.



**Figure 2**

Cowling removed with unattached fasteners highlighted

Further investigation by the operator determined that some of the fasteners fitted were of an incorrect length and protruded when secure, making it more difficult to spot insecure fasteners by comparison.

The operator issued a safety notice to remind its personnel of the need to adhere to the correct procedures, and the importance of routine inspections.