Aviation Safety Investigation Report 199702089

Saab Aircraft AB 340

27 June 1997

Readers are advised that the Australian Transport Safety Bureau investigates for the sole purpose of enhancing transport safety. Consequently, Bureau reports are confined to matters of safety significance and may be misleading if used for any other purposes.

Investigations commenced on or before 30 June 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with Part 2A of the Air Navigation Act 1920.

Investigations commenced after 1 July 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with the Transport Safety Investigation Act 2003 (TSI Act). Reports released under the TSI Act are not admissible as evidence in any civil or criminal proceedings.

NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

Aviation Safety Investigation Report

199702089

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

Occurrence Number: 199702089 **Occurrence Type:** Incident
Location: Sydney, Aerodrome
State: NSW **Inv Category:** 4
Date: Friday 27 June 1997
Time: 1116 hours **Time Zone** EST
Highest Injury Level: None

Aircraft Manufacturer: Saab Aircraft AB
Aircraft Model: SF-340B
Aircraft Registration: VH-CMH **Serial Number:** 327
Type of Operation: Air Transport Domestic Low Capacity Passenger Scheduled
Damage to Aircraft: Minor
Departure Point: Sydney NSW
Departure Time: 1116 EST
Destination: Wagga Wagga NSW

Approved for Release: Thursday, September 25, 1997

The SAAB 340 departed normally from runway 16R, but shortly after becoming airborne the crew requested a return to land. When asked if operations were normal the crew reported the aircraft had suffered an engine failure. ATC activated the crash alarm and closed the airport. The crew were offered a circuit to either runway 07 or 34L/R, but elected to continue for a right circuit to runway 16R. The aircraft was flown on a visual low level circuit to a safe landing. Preliminary investigation revealed major damage to the power turbine section of the left engine.

The engine was subsequently returned to the manufacturers engine overhaul facility for examination. Their engineering report revealed that the stage two turbine forward cooling plate had separated at the outer rim. The report noted that the failure was consistent with other cooling plate separation events.

The manufacturer had previously issued a service bulletin which introduces improvements to the cooling plate to preclude this type of failure. The operator had a program to incorporate this modification during planned hot section module changes. Incorporation of the modification to the failed engine was planned for the week following the incident.