

INTERIM STATEMENT

Accident and Incident Investigations Division

Incident
Interim Statement -
AIID Ref No: CA18/3/2/1385



Figure 1: File picture of the ATR 72-600, A2-ABK.

Description:

On 30 December 2021 at 1027Z, an ATR 72-600 aircraft with registration A2-ABK operated by Air Botswana was involved in a serious incident during the climb phase from O.R. Tambo International Airport (FAOR) in Gauteng province. Whilst the aircraft was at flight level 80 (FL80), the torque read 8% and the Interstage Turbine Temperature (ITT) increased by approximately 40°C on engine number 2 (ENG 2). At FL140, the ENG 2 fire warning came on and, as a resolve, the crew shut down ENG 2. The crew then decided to return to FAOR where they landed safely on Runway 03L. This was an international scheduled flight from FAOR to Sir Seretse Khama International Airport (FBSK). Visual meteorological conditions (VMC) prevailed at the time of the flight and the instrument flight rules (IFR) flight plan was filed. The occupants were not injured during the serious incident sequence; however, the aircraft's right-side engine was damaged.

NOTE

All times given in this report are Co-ordinated Universal Time (UTC) and will be denoted by (Z). South African Standard Time is UTC plus 2 hours.

Purpose of the Investigation:

*In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011, this interim statement was compiled in the interest of the promotion of aviation safety and the reduction of the risk of aviation accidents or incidents and **not to apportion blame or liability**.*

The interim statement gives a brief account of the progress of the investigation and should be read in conjunction with the preliminary report with reference number CA18/3/2/1385 that was published on 27 January 2022.

The interim statement is released in accordance with Standard 6.6 of the International Civil Aviation Organisation (ICAO) Annex 13 and CAR Part 12.05.1(7).

The final report may contain altered information if new evidence becomes available during the on-going investigation.

Any person who has information concerning this accident should contact the Accident and Incident Investigations Division (AIID) on AIIDinbox@caa.co.za

Investigations process:

The occurrence was categorised as a serious incident and the AIID has assigned an Accident Investigation File Number CA18/3/2/1385 to this investigation.

The AIID appointed the investigation team, led by the investigator-in-charge (IIC). The States of the Operator, Registry and/or Design were notified of the serious incident. The French Bureau of Enquiry and Analysis (BEA), being the State of Manufacture and Design, assigned an accredited representative.

The AIID reports are made available to the public at:

<https://www.caa.co.za/industry-information/accidents-and-incidents/>

Disclaimer:

This interim statement is produced without prejudice to the rights of the SACAA, which are reserved.

Interim Statement

The serious incident, which occurred on 30 December 2021, involved an ATR 72-600 aircraft with registration A2-ABK that departed O.R. Tambo International Airport (FAOR) in Gauteng province for Sir Seretse Khama International Airport (FBSK) in Botswana.

The pilot-in-command (PIC) reported that whilst on the climb, 40 nautical miles (nm) north-west of FAOR and passing flight level 80 (FL80), they observed the torque fluctuation and the increase in Interstage Turbine Temperature (ITT) on the right engine (ENG 2) parameters. The ENG 2 fire warning came on and the crew complied with the engine fire checklist and shut down ENG 2 as a resolve; the fire alert was reset without discharging the fire extinguishing bottles. The crew notified the air traffic control (ATC) about the engine problem and requested to return to FAOR. The PIC was able to land the aircraft safely on Runway 03L. Post-incident inspection of the ENG 2 (right engine) revealed that the exhaust pipe, turbine blades, exit vanes and handling bleed valve (HBV) electrical connectors were damaged. The inspection also revealed the presence of exhaust pipe metal pieces in the bottom cowling.

The investigator is currently analysing the engine shop findings report, as well as the flight data recorder (FDR) to determine the cause of the right engine fire warning reported by the pilots, which led to the air turnback decision.

In addition, the investigator has reviewed the maintenance records of the engine. At this stage of the investigation, no adverse findings were found in this regard.

The AIID investigator has collaborated with the BEA, SACAA and other organisations involved in areas of interest (including flight operations, human performance, maintenance procedures and aircraft systems) in this investigation, which is on-going. The investigator will be looking into other aspects of this occurrence which may or may not have safety implications.

This report is issued by:

**Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa**