LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/3/2/1518								
Classification	Serious Incident		**Date**	27 December 2025		**Time**	0425Z		
Type of Operation	Private (Part 91)								
Location									
Place of Departure	Bram Fischer International Airport (FABL), Free State Province		Place of Intended Landing	Wonderboom Airport (FAWB), Gauteng Province					
Place of Occurrence	Runway 11 Wonderboom Airport (FAWB)								
GPS Co-ordinates	Latitude	25° 39' 19.00" S	Longitude	028° 13' 25.00" E		Elevation	4 095ft		
Aircraft Information									
Registration	ZS-NTT								
Make; Model; S/N	Beechcraft; King Air B200 (Serial Number: BB-350)								
Damage to Aircraft	Substantial		Total Aircraft Hours	9 056.9					
Pilot-in-command									
Licence Type	Airline Transport Pilot Licence (ATPL)		Gender	Male		Age	31		
Licence Valid	Yes	Total Hours	5 314	Total Hours on Type	14				
Total Hours 30 Days	27		Total Flying on Type Past 90 Days	66					
People On-board	1 + 7	**Injuries**	0	**Fatalities**	0	**Other (on ground)**	0		

What Happened

On Saturday, 27 December 2025, a pilot and seven passengers on-board a Beechcraft King Air B200 aircraft registered ZS-NTT took off on a private flight from Bram Fischer International Airport (FABL) in Free State province to Wonderboom Airport (FAWB) in Gauteng province. The flight was conducted at dawn under instrument flight rules (IFR) and under the provisions of Part 91 of the Civil Aviation Regulations (CAR) 2011, as amended.

The pilot stated that he conducted a pre-flight inspection of the aircraft and did not note anomalies. The aircraft had approximately 2 400 pounds (lbs) of Jet A-1 fuel in the tanks. The aircraft took off at approximately 0135Z and climbed to flight level (FL) 250 (25 000 feet [ft]), cruising at 245 knots (kts). It reached FAWB at approximately 0330Z. During this time, FAWB was unmanned. After the pilot had selected the landing gear lever down in preparation to land, only the nose and right main landing gears moved to down and locked position, confirmed by the illuminated green lights on the annunciator panel.

The pilot followed the redundancy (manual) gear extension method but could not get the left main landing gear to extend to down and locked position. Whilst circling above FAWB vicinity, he contacted FAWB Aircraft Rescue and Firefighting (ARFF) personnel who responded to the active Runway 11 and sprayed fire-retardant foam to prevent a possible fire when the pilot conducts a belly landing. At approximately 0420Z, the aircraft approached Runway 11 and the pilot performed a belly landing. The aircraft sustained substantial damage; the radio antennas and the underside airframe panels abraded and both propellers sustained rotational contact damage after striking the runway surface. The pilot and the passengers were not injured.

After the examination of the landing gear system at the site, accessed through the main cabin floor panels, the investigator-in-charge (IIC) found that the nut which secures the pin that connects the left main landing gear torque shaft to the motor gearbox was missing; consequently, the shaft detached from the gearbox motor, disabling the left gear from extending to the down and locked position when selected.

The left main gear torque shaft was temporarily secured, and the aircraft was recovered to an aircraft maintenance organisation (AMO) for further engineering examination. Nothing abnormal was noted on the right main landing gear and the nose gear systems. The aircraft was placed on jacks, and a loaner pin and nut were fitted to the left main landing gear torque shaft in accordance with (IAW) the aircraft maintenance manual (AMM). The gear was cycled and it operated normally. All three down and locked indication lights illuminated after the gear lever was selected to the down position.

The left main gear was last overhauled and certified on 28 June 2024 at 8 000 cycles. The aircraft had completed 10 cycles and 8 landings since the landing gear overhaul.

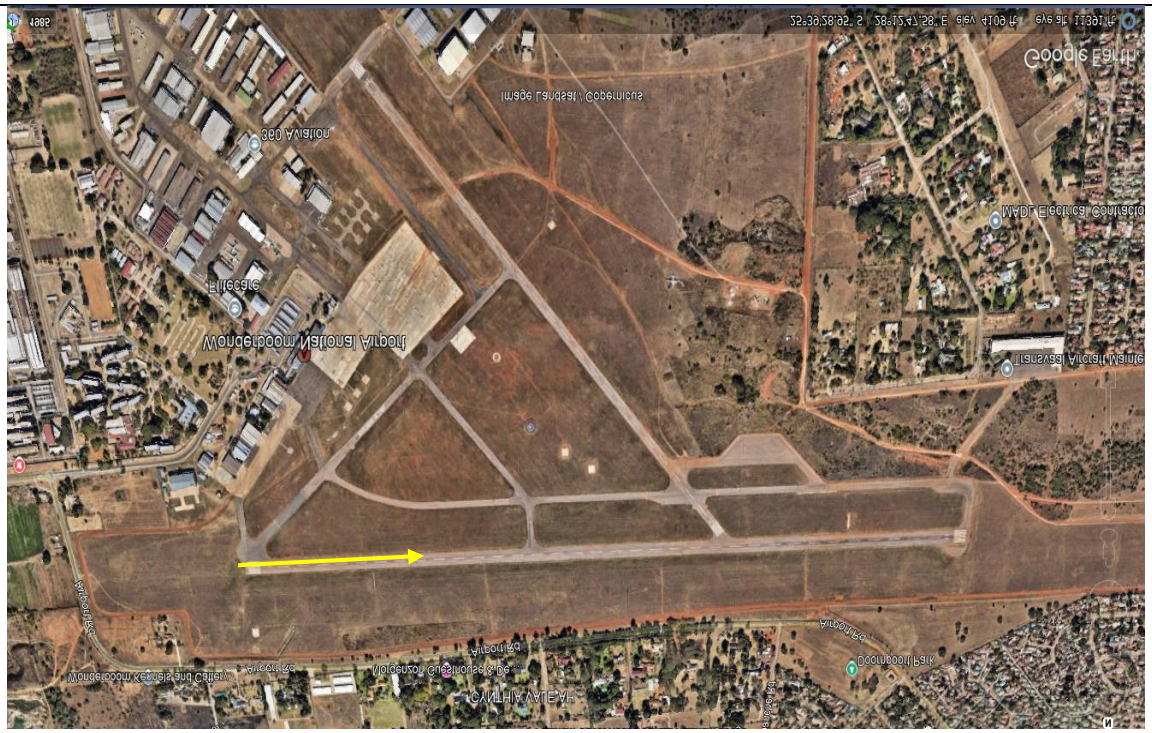
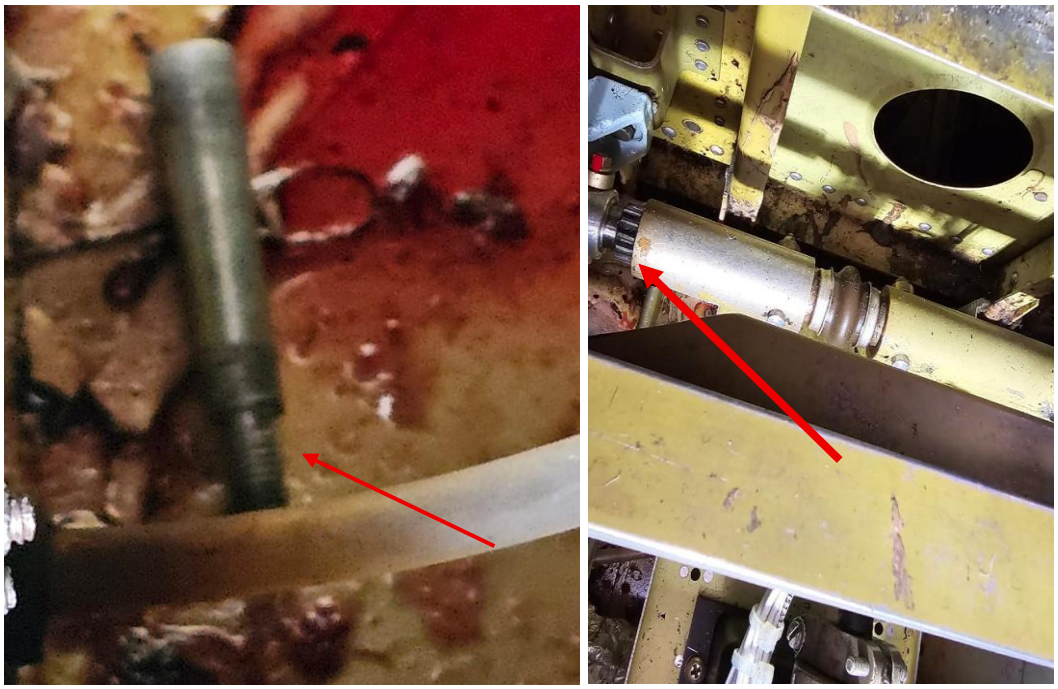


Figure 1: An aerial view of FAWB Runway 11 and the direction of landing (yellow arrow). (Source: Google Earth)

Figure 2: The fire-retardant foam sprayed on the runway during the serious incident. (Source: Operator)

Figure 3: Abraded underbelly.



Figures 4 and 5: The detached left main landing gear torque shaft pin (left picture). The red arrow indicates the area where the shaft had separated and the exposed torque tube support bearing (right picture).

The weather information in the table below was obtained from the South African Weather Service (SAWS) prepared for FAWB on 27 December 2025 at 0400Z.

FAWB 270400Z 11003KT CAVOK 18/16 Q1017=

Wind Direction	110º	Wind Speed	3 knots	Visibility	10000 m
Temperature	18ºC	Cloud Cover	SCT	Cloud Base	CAVOK
Dew Point	16ºC	QNH	1017 hPa		

Description of the Landing Gear System (Source: Super King Air B200 POH)

The King Air 200 is fitted with a mechanical landing gear system controlled by a switch located in the cockpit on the right side of the pilot's sub-panel. An electric motor drives the landing gear gearbox assembly when the switch is selected to either extend or retract the gear.

The main landing gear actuators drive torque tubes from the gearbox. A duplex chain from a sprocket on the gearbox torque shaft drives the nose gear. Four support bearings retain the left and right main landing gear torque tubes. Each outboard torque tube is coupled to a pinion gear within the main landing gear actuator housing. A spring-loaded clutch between the gearbox and the torque shaft protects the system in the event of a mechanical malfunction. A 60-Ampere circuit breaker protects the system from an electrical overload.

Emergency manual extension and retraction of the landing gear are controlled through a floor-mounted lever centrally located between the left and right pilots' seats. When the lever is manually operated, the landing gear electric motor and gearbox drive mechanisms are overridden; thus, allowing extension or retraction of the landing gear system.

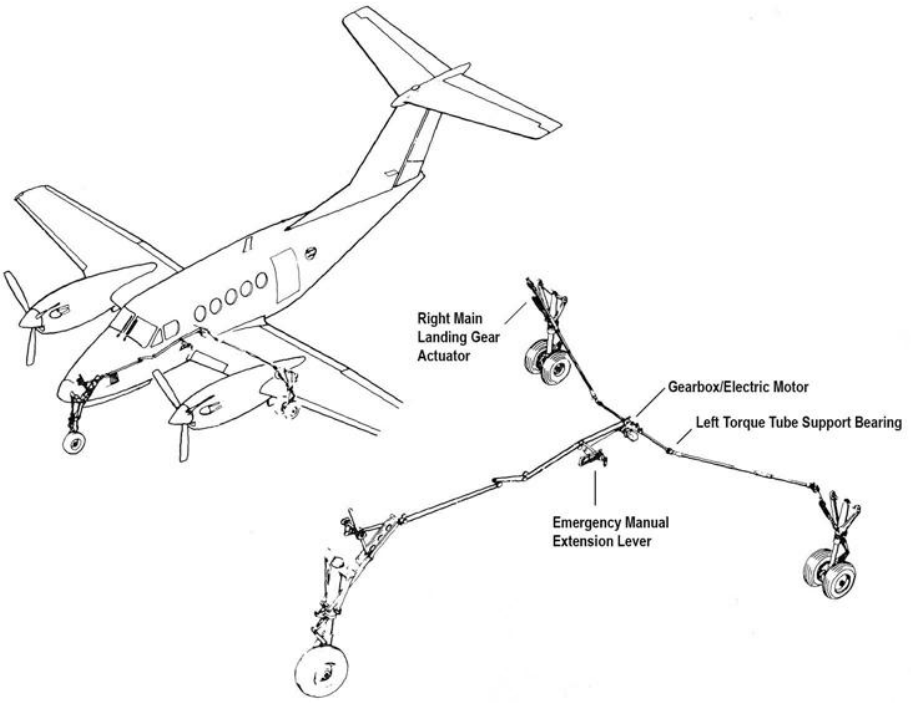


Illustration 1: The mechanical landing gear system of the Super King Air 200 B200.
(Source: Pilot's Operating Handbook)

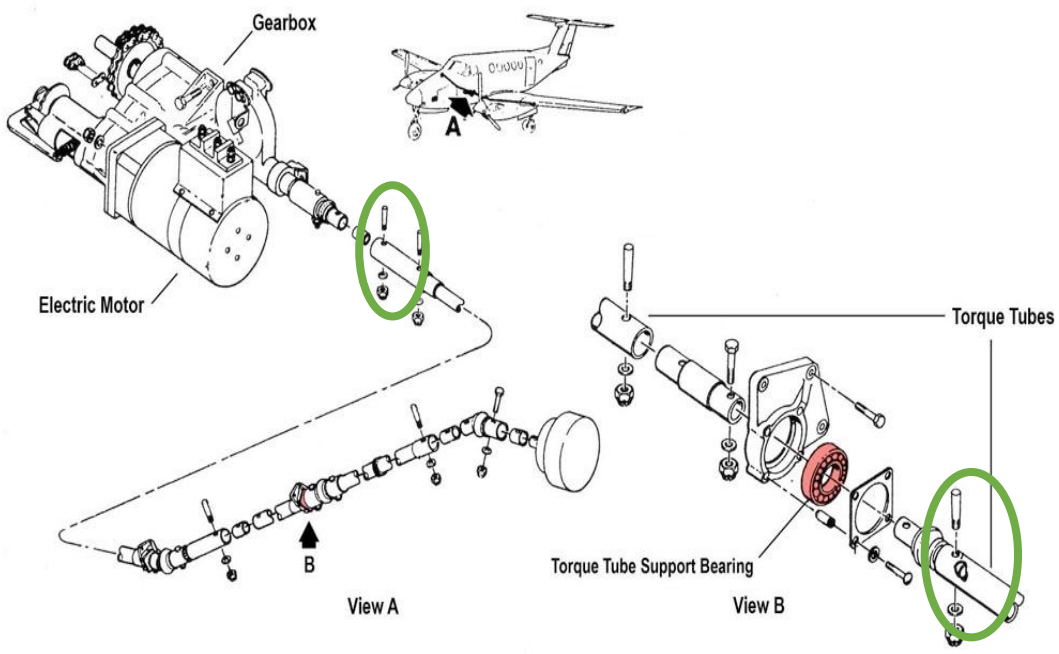


Illustration 2: A breakdown of the main gear retraction mechanism detailing the torque shaft and gearbox arrangement. The green circles indicate the pin that was found as well as the nut that was missing.

Findings

Personnel Information

1.1 The pilot had an Airline Transport Pilot Licence (ATPL) that was initially issued by the Regulator (SACAA) on 3 January 2023. The licence was renewed on 23 December 2025 with an expiry date of 31 December 2026. The pilot had flown a total of 14 hours on the aircraft type. The aircraft type was endorsed in his licence.

1.2 The pilot was issued a Class 1 aviation medical certificate on 28 August 2025 with an expiry date of 31 August 2026.

Aircraft Information

1.3 The last 100-hour mandatory periodic inspection (MPI) of the aircraft was conducted and certified on 21 October 2025 at 9 049.0 total airframe hours. The aircraft had accrued 90.6 hours since the said inspection.

1.4 The aircraft was issued a Certificate of Release to Service (CRS) on 21 October 2025 with an expiry date of 20 October 2026 or at 1 138.8 airframe hours, whichever occurs first.

1.5 The aircraft maintenance organisation (AMO) which maintained the aircraft was issued an AMO Certificate on 24 February 2025 with an expiry date of 28 February 2026.

1.6 The aircraft had a valid Certificate of Airworthiness (C of A) that was issued on 3 November 2025 with an expiry date of 2 November 2026.

1.7 The aircraft's Certificate of Registration (C of R) was issued to the present owner on 11 November 2012.

1.8 The aircraft completed 8 flights and 10 maintenance retractions after the overhaul. The left main landing gear was last overhauled and signed out on 28 June 2024 for the 8 000-cycle inspection.

Meteorological Information

1.9 The weather conditions were not a contributory factor to this serious incident.

Conclusion

1.10 The pin which secured the left main landing gear torque shaft to the landing gearbox motor had dislodged due to the missing nut. The left main landing gear torque shaft separated from the landing gear motor located in the cockpit under floorboards and forward of the main spar. Consequently, the left main landing gear could not extend, and the pilot performed a belly landing after a fire-retardant foam was sprayed on Runway 11.

Probable Cause(s)

The left main landing gear failed to extend because of the pin that had dislodged due to the nut that was missing, resulting in the separation of the torque shaft from the landing gear motor. The aircraft landed with the retracted undercarriage at FAWB Runway 11.

Contributing Factor(s)

Inadequately secured left main landing gear torque shaft during maintenance.

Safety Action(s)

None.

Safety Message and/or Safety Recommendation/s

None.

About this Report

The decision to conduct a limited investigation is based on factors including whether the cause is known and the evidence supporting the cause is clear, the level of safety benefit likely to be obtained from an investigation and that will determine the scope of an investigation. For this occurrence, a limited investigation has been conducted, and the Accident and Incident Investigations Division (AIID) has relied on the information submitted by the affected person/s and organisation/s to compile this limited report. The report has been compiled using information supplied in the initial notification, as well as from follow-up desk top enquiries to bring awareness of potential safety issues to the industry in respect of this occurrence, as well as possible safety action/s that the industry might want to consider in preventing a recurrence of a similar occurrence.

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

In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011 and ICAO Annex 13, this report 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.

Disclaimer

This report is issued by:

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