

AIRCRAFT ACCIDENT REPORT AND EXECUTIVE SUMMARY

				Reference:		CA18/2/3/10541	
Aircraft Registration	ZS-LUG	Date of Accident	1 January 2025		Time of Accident	0605Z	
Type of Aircraft	Piper PA-36-285 Pawnee Brave		Type of Operation		Agricultural Operations (Part 137)		
Pilot-in-command Licence Type	Commercial Pilot Licence (CPL) A		Age	37	Licence Valid	Yes	
Pilot-in-command Flying Experience	Total Flying Hours		5 200.9	Hours on Type	35.4		
Last Point of Departure	Kirkwood Airstrip, north-west of Port Elizabeth, Eastern Cape Province						
Next Point of Intended Landing	Kirkwood Airstrip, north-west of Port Elizabeth, Eastern Cape Province						
Damage to Aircraft	Substantial						
Location of the accident site with reference to easily defined geographical points (GPS readings if possible)							
Runway 22 at Kirkwood Airstrip, approximately 30 nautical miles (nm) north-west of Port Elizabeth Airport (FAPE) at Global Positioning System (GPS) co-ordinates determined to be 33°25'49" South 025°23'48" East, at an elevation of 450 feet (ft)							
Meteorological Information	Wind velocity: 340° at 3KT; Temperature: 20°C; Dew Point: 15°C; Visibility: ≥10000m; Cloud: CAVOK; QNH: 1014 hPa						
Number of People On-board	1 + 0	Number of People Injured	0	Number of People Killed	0	Other (On Ground)	0
Synopsis							
<p>On Wednesday morning, 1 January 2025, a pilot on-board a PA-36-285-285 Pawnee Brave aircraft with registration ZS-LUG took off on a crop-spraying flight from Kirkwood Airstrip, north-west of Port Elizabeth in Eastern Cape province, with the intention to return to the same airstrip. The flight was conducted under visual flight rules (VFR) and under the provisions of Part 137 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The pilot reported that he completed seven uneventful chemical spray runs before returning to Kirkwood Airstrip. Approximately 300 metres (m) into the landing roll on Runway 22, the right main landing gear separated from the fuselage and the aircraft swung to the right of the runway. The right-wing tip and the propeller contacted the ground. The pilot was not injured; however, the aircraft sustained damage to the landing gear, propeller, right wing and spray boom during the accident sequence.</p>							
Probable Cause/s and/or Contributory Factors							
The bolt that secured the right main landing gear beneath the fuselage sheared off during the landing roll on Runway 22 and the landing gear separated from the fuselage. This resulted in the right-wing tip and the propeller contacting the ground; subsequently, the aircraft swung to the right.							
SRP Date	8 July 2025		Publication Date	8 July 2025			

Occurrence Details

Reference Number : CA18/2/3/10541
Occurrence Category : Category 2
Type of Operation : Agricultural Operations (Part 137)
Name of Operator : Van Den Berg Lugbespuiting CC
Aircraft Registration : ZS-LUG
Aircraft Make and Model : Piper PA-36-285 Pawnee Brave
Nationality : South African
Place : RWY 22 at Kirkwood Airstrip, Eastern Cape Province
Date and Time : 1 January 2025 at 0605Z
Injuries : None
Damage : Substantial

Purpose of the Investigation

In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011, 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.

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.

Investigation Process

The Accident and Incident Investigations Division (AIID) of the South African Civil Aviation Authority (SACAA) was notified of the occurrence involving a Piper PA-36-285 Pawnee Brave aircraft on 1 January 2025 at 0605Z. The occurrence was classified as an accident according to the CAR 2011 Part 12 and the International Civil Aviation Organisation (ICAO) STD Annex 13 definitions. Notifications were sent to the State of Registry and Operator in accordance with the CAR 2011 Part 12 and the ICAO Annex 13 Chapter 4. The States did not appoint an accredited representative and/or advisor. The investigator did not dispatch to the accident site for this occurrence.

Notes:

- Whenever the following words are mentioned in this report, they shall mean the following:*
Accident — this investigated accident
Aircraft — the Piper PA-36-285 Pawnee Brave involved in this accident
Investigation — the investigation into the circumstances of this accident
Pilot — the pilot involved in this accident
Report — this accident report
- Photos and figures used in this report were taken from different sources and may have been adjusted from the original for the sole purpose of improving clarity of the report. Modifications to images used in this report were limited to cropping, magnification, file compression; or enhancement of colour, brightness, contrast; or addition of text boxes, arrows, or lines.*

Disclaimer

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

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Abbreviation	Description
°	Degrees
°C	Degrees Celsius
AIID	Accident and Incident Investigations Division
A/C	Aircraft
ACCID	Accident
AGL	Above Ground Level
AMO	Aircraft Maintenance Organisation
CAA	Civil Aviation Authority
CAR	Civil Aviation Regulations
CAVOK	Ceiling and Visibility OK
CVR	Cockpit Voice Recorder
C of A	Certificate of Airworthiness
C of R	Certificate of Registration
CRS	Certificate of Release to Service
FAEL	East London Airport
FAPE	Port Elizabeth Airport
FDR	Flight Data Recorder
ft	Feet
GPS	Global Positioning System
hPa	Hectopascal
IIC	Investigator-in-Charge
kt	Knots
Lb	Pounds
L	Litres
m	Metres
METAR	Meteorological Aerodrome Report
MHz	Megahertz
nm	Nautical Mile
POH	Pilot's Operating Handbook
SACAA	South African Civil Aviation Authority
SAWS	South African Weather Service
TBO	Time Between Overhaul
UTC	Co-ordinated Universal Time
VDL	Corrective lenses for defective distant vision
VHF	Very High Frequency
VMC	Visual Meteorological Conditions
QNH	Altitude Above Mean Sea Level
Z	Zulu (Term for Universal Co-ordinated Time - Zero Hours Greenwich)

1. FACTUAL INFORMATION

1.1. History of Flight

- 1.1.1. On Wednesday morning, 1 January 2025, a pilot on-board a Piper PA36-285 Pawnee Brave aircraft with registration ZS-LUG took off from Kirkwood Airstrip in Sundays River Valley, north-west of Port Elizabeth in Eastern Cape province, with the intention to land at the same airstrip. The intention of the flight was to crop-spray a field at the same location. The flight was conducted under visual flight rules (VFR) and under the provisions of Part 137 of the Civil Aviation Regulations (CAR) 2011 as amended.
- 1.1.2. The pilot reported that he conducted the pre-flight checks and did not find anomalies. He then uplifted a load of chemical into the hopper which is located behind the engine fire wall in preparation for the crop-spraying operation. At 0545Z, the aircraft took off in a northerly direction and completed seven uneventful crop-spray runs on the nearby field.
- 1.1.3. The pilot stated that after the seventh spray run, he routed back to Kirkwood Airstrip to uplift another load for the eighth crop-spray run; the aircraft touched down on Runway (RWY) 22 at about 0605Z and, approximately 300 metres into the landing roll, the right main landing gear separated from the fuselage and caused the right-wing tip and the propeller to strike the ground.
- 1.1.4. The aircraft swung to the right and came to a stop on the runway facing east. The pilot shut down the engine and disembarked from the aircraft without assistance; he was uninjured. The aircraft sustained damage to the right main landing gear, right wing, propeller and the spray gear.
- 1.1.5. The accident occurred on Runway 22 at Kirkwood Airstrip, approximately 30 nautical miles (nm) north-west of Port Elizabeth Airport (FAPE) and at Global Positioning System (GPS) co-ordinates determined to be 33°25'49" South 025°23'48" East, at an elevation of 450 feet (ft).

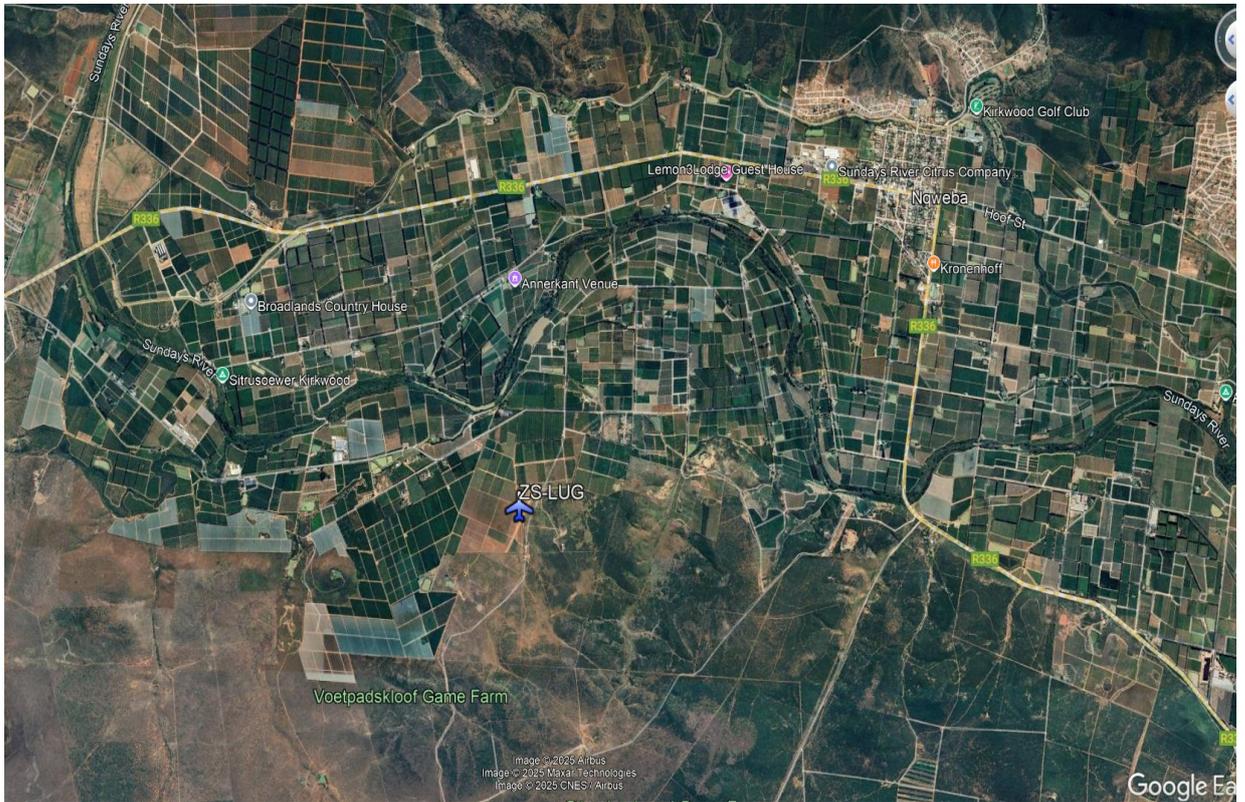


Figure 1: Aerial view of the approximate accident site. (Source: Google Earth)

1.2. Injuries to Persons

Injuries	Pilot	Crew	Pass.	Total On-board	Other
Fatal	-	-	-	-	-
Serious	-	-	-	-	-
Minor	-	-	-	-	-
None	1	-	-	1	-
Total	1	-	-	1	-

Note: Other means people on the ground.

1.2.1. No person was injured during the accident sequence.

1.3. Damage to Aircraft

1.3.1. The aircraft sustained damage to the right main landing gear, right wing, propeller and spray gear.

1.4. Other Damage

1.4.1. None.

1.5. Personnel Information

Nationality	Swazi	Gender	Male	Age	37
Licence Type	Commercial Pilot Licence (CPL) Aeroplane				
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	Agricultural Rating				
Medical Expiry Date	30 June 2025				
Restrictions	Wear suitable corrective lenses for defective distant vision (VDL)				
Previous Accidents	None				

Note: Previous accidents refer to past accidents the pilot was involved in, when relevant to this accident.

Flying Experience:

Total Hours	5 200.9
Total Past 24 Hours	4.3
Total Past 7 Days	9.9
Total Past 90 Days	36.9
Total on Type Past 90 Days	35.4
Total on Type	35.4

1.5.1. The pilot had a Commercial Pilot Licence (CPL) Aeroplane that was initially issued on 8 June 2012 in accordance with (IAW) Part 61 of the CAR 2011. The licence was revalidated on 16 July 2024 with an expiry date of 30 June 2025.

1.5.2. The pilot had a Class 1 medical certificate that was issued on 1 July 2024 with an expiry date of 30 June 2025 with a restriction to wear suitable corrective lenses for defective distant vision (VDL).

1.6. Aircraft Information

Piper PA-36-285 Pawnee Brave Description (Source: Pilot's Operating Handbook [POH]):

1.6.1. *The Piper PA-36-375 Pawnee Brave is a single-seat, full cantilever semi-monocoque low-wing, tail wheel type, special purpose agricultural aircraft equipped with a 1 000L chemical hopper behind the engine fire wall with optional sprayer and spreader. The primary structure is made of welded steel tubing truss type fuselage frame with structural redundancy characteristics and progressive collapse and load absorption during a crash scenario. The multiple panel design allows a full disassembly of the structure for inspection or cleaning. The accident aircraft was powered by a single Pratt & Whitney PT6A-20A turboprop engine. It had a conventional landing gear with a tailwheel.*



Figure 2: The ZS-LUG resting on the gravel runway. (Source: Pilot)

Airframe:

Manufacturer/Model	Piper; PA-36-286-285 Pawnee Brave	
Serial Number	36-7660005	
Year of Manufacture	1976	
Total Airframe Hours (At Time of Accident)	6 597.5	
Last Inspection (Date & Hours)	4 October 2024	6 593.5
Hours Since Last Inspection	4	
CRS Issue Date	4 October 2024	
C of A (Issue Date & Expiry Date)	7 December 2024	31 December 2025
C of R (Issue Date) (Present Owner)	26 September 2024	
Type of Fuel Used	Jet A1	
Operating Category	Part 137 - Restricted	
Previous Accidents	None	

Note: Previous accidents refer to past accidents the aircraft was involved in, when relevant to this accident.

Engine:

Manufacturer/Model	Pratt & Whitney / PT6A
Serial Number	PCE24059
Part Number	PT6A-20A
Hours Since New	6 166.8
Hours Since Overhaul	3 117.8

Propeller:

Manufacturer/Model	Hartzell / Add model
Serial Number	BUA22463
Part Number	HC-B3TN-3B
Hours Since New	Unknown
Hours Since Overhaul	41.60

- 1.6.2. The last mandatory periodic inspection (MPI) of the aircraft was conducted on 4 October 2024 at 6 593.5 total airframe hours. The aircraft was flown a further 4.0 hours before the accident flight. The aircraft was issued a Certificate of Release to Service (CRS) on 4 October 2024 with an expiry date of 3 October 2025 or at 6 693.5 airframe hours, whichever occurs first.
- 1.6.3. The aircraft's landing gear was assembled with new hardware when the aircraft was initially received by the operator in October 2022 at 6 451.9 total airframe hours. The landing gear hardware had, therefore, accumulated 145.6 hours at the time of the accident. The post-accident inspection revealed that the bolt that secured the main right-side gear beneath the fuselage sheared off during the landing roll; consequently, the spring loaded right main landing gear strut detached from the fuselage.
- 1.6.4. According to the Pilot's Operating Handbook (POH), the landing gear hardware is an on-condition item with no specified hours between overhaul or replacement:

Piper PA-36-285-285 Pawnee Brave

*Under Carriage Inspections
Service Manual 761-471:*

The undercarriage inspections are addressed under the Landing Gear Section of the Service Manual.

The following excerpts from the manual address the inspections mentioned above:

According to section VII, a routine inspection of the undercarriage is required to inspect clamp and inboard bolts for condition and wear, please refer to the excerpt:

Section III – Servicing of the manual addresses the following:

PAWNEE BRAVE SERVICE MANUAL

TABLE III-I. INSPECTION REPORT (cont.)

Nature of Inspection	Inspection Time (hrs)			
	50	100	500	1000
D. WING GROUP (cont.)				
8. Lubricate per lubrication chart in Service Manual.....	○	○	○	○
9. Inspect wing attachment bolts and brackets (See latest revision Piper Service Bulletins Nos. 425, 471, 472, 501 and 744) (See Note 15).....		○	○	○
10. Inspect wing spar carry through assembly (PA-26-285) per latest revision Piper Service Bulletin No. 552 and 744.....		○	○	○
11. Inspect fuel cell internal baffles for deterioration per Service Manual Section IX.....		○	○	○
12. Inspect fuel cells and lines for leaks and water.....		○	○	○
13. Check fuel filler markings for capacity and minimum octane rating (Refer to Piper Service Bulletin No. 797B).....		○	○	○
14. Inspect fuel cell vents.....		○	○	○
15. Inspect all control cables, electrical leads, lines and attaching parts for security, routing, chafing, deterioration, wear and correct installation (See Note 20).....		○	○	○
16. Reinstall inspections plates and fairings.....		○	○	○
E. LANDING GEAR GROUP				
1. Remove fairings, inspect main landing gear attachment bolts and nuts for safety.....	○	○	○	○
2. Jack airplane, inspect gear bolts for looseness (Replace as required).....		○	○	○
3. Remove gear pads, inspect springs in clamp area and landing gear spring for corrosion, (See Note 22) (Replace pads if required).....		○	○	○
4. Inspect main tires for cuts, uneven or excessive wear and slippage.....		○	○	○
5. Remove main wheels, clean, inspect and repack bearings.....		○	○	○
6. Inspect main wheels for cracks, corrosion and broken bolts.....	○	○	○	○
7. Check main tire pressure (28-32 pounds).....		○	○	○
8. Inspect brake lining, disc, backing plates and brake lines and hoses.....		○	○	○
9. Inspect main wheel gear alignment (0° +/- 1° Toe in) (0° +/- 1° camber at gross weight).....		○	○	○
10. Clean and inspect tail wheel attachments and tail spring.....	○	○	○	○
11. Inspect tail wheel fork for looseness on bracket.....		○	○	○
12. Inspect tail wheel tire for cuts and uneven or excessive wear.....		○	○	○
13. Inspect tail wheel for cracks, corrosion and broken bolts.....		○	○	○
14. Check tail wheel tire pressure (35-45 pounds).....	○	○	○	○
15. Lubricate tail wheel swivel and bearing per lubrication chart in Service Manual.....	○	○	○	○
16. Inspect tail wheel swivel tension per Service Manual Section VII.....		○	○	○
17. Reinstall fairings.....	○	○	○	○

Revised: 5/1/89

1D11

INSPECTION

Detail Report

AOC Compliance Details : ZS-LUG

Inspections Compliance

Linked to Aircraft	Next Compliance					
	Name Group	Inspect Hours	Period	Date	Days Remaining	Hours Hobbs Remaining
Download Satloc / AgNav (Ag Aircraft - 100 hour) Internal : Airframe		100.00 Hrs				100.00
Bolts with Hinges (PA36-285 - 1000 hr) Internal : Airframe		1000.00 Hrs				958.40
SB744 - Wing Carry-Through Spar Fitting (Piper PA36-285 - 4100 Hrs) Internal : Airframe		4100.00 Hrs				1674.60
SB744 - Spar Carry-Through Assembly (PA36-285 - 4100 Hrs) Internal : Airframe		4100.00 Hrs				1674.60
SB744 - Spar Assembly (PA36-285 - 4100 Hrs) Internal : Airframe		4100.00 Hrs				1674.60
SB744 - Wing Attachment Bolt, Lower (PA36-285 -2000 Hr) Internal : Airframe		2000.00 Hrs				1958.40
SB744 - Wing Attachment Bolt, Upper (Piper PA36-285 - 4100 Hrs) Internal : Airframe		4100.00 Hrs				4058.40

Table 1: Routine inspection record from the aircraft maintenance organisation. (Source: Operator)

1.7. Meteorological Information

1.7.1. The weather information below was obtained from the Meteorological Aerodrome Report (METAR) that was issued by the South African Weather Service (SAWS), recorded at FAPE on 1 January 2025 at 0600Z. FAPE is located 30nm from the accident site.

Wind Direction	340°	Wind Speed	3 kt	Visibility	10 000 m
Temperature	20°C	Cloud Cover	CAVOK	Cloud Base	CAVOK
Dew Point	15°C	QNH	1014 hPa		

1.7.2. The weather conditions were not a contributing factor to this accident.

1.8. Aids to Navigation

1.8.1. The aircraft was equipped with standard navigational equipment as approved by the Regulator (SACAA). There were no records which indicated that the navigational equipment was unserviceable prior to the flight.

1.9. Communication

1.9.1. The aircraft was equipped with a standard communication system as approved by the Regulator. There were no recorded defects with the communication system prior to the flight.

1.10. Aerodrome Information

1.10.1 The accident occurred on Runway 22 at Kirkwood Airstrip.

Aerodrome Name	Kirkwood Airstrip
Aerodrome Location	Eastern Cape Province
Aerodrome Status	Unlicensed
Aerodrome GPS coordinates	33°25'49" South, 025°23'48" East
Aerodrome Elevation	450 feet
Runway Headings	04/22
Dimensions of Runway Used	750 m x 30 m
Heading of Runway Used	220 degrees
Surface of Runway Used	Gravel
Approach Facilities	None
Radio Frequency	130.35 Megahertz (MHz)

1.11. Flight Recorders

1.11.1. The aircraft was neither equipped with a flight data recorder (FDR) or a cockpit voice recorder (CVR), nor was it required by regulation to be fitted to the aircraft type.

1.12. Wreckage and Impact Information

1.12.1. The aircraft landed on Runway 22 at Kirkwood Airstrip after completing seven successful spray runs. During the landing roll, the right main landing gear separated from the fuselage. The aircraft swung to the right and came to rest on the right side of the runway.



Figure 3: The separated landing gear strut and the wheel assembly in the foreground. (Source: Pilot)

1.13. Medical and Pathological Information

1.13.1. The pilot was not injured during the accident sequence.

1.14. Fire

1.14.1. There was no evidence of a pre- or post-impact fire.

1.15. Survival Aspects

1.15.1. The accident was considered survivable as there was minimal impact to the cockpit and the pilot had made use of the aircraft's safety harness.

1.16. Tests and Research

1.16.1. A runway inspection post-accident revealed that a bolt had sheared off during the landing roll on Runway 22.



Figure 4: The failed bolt. (Source: Operator)

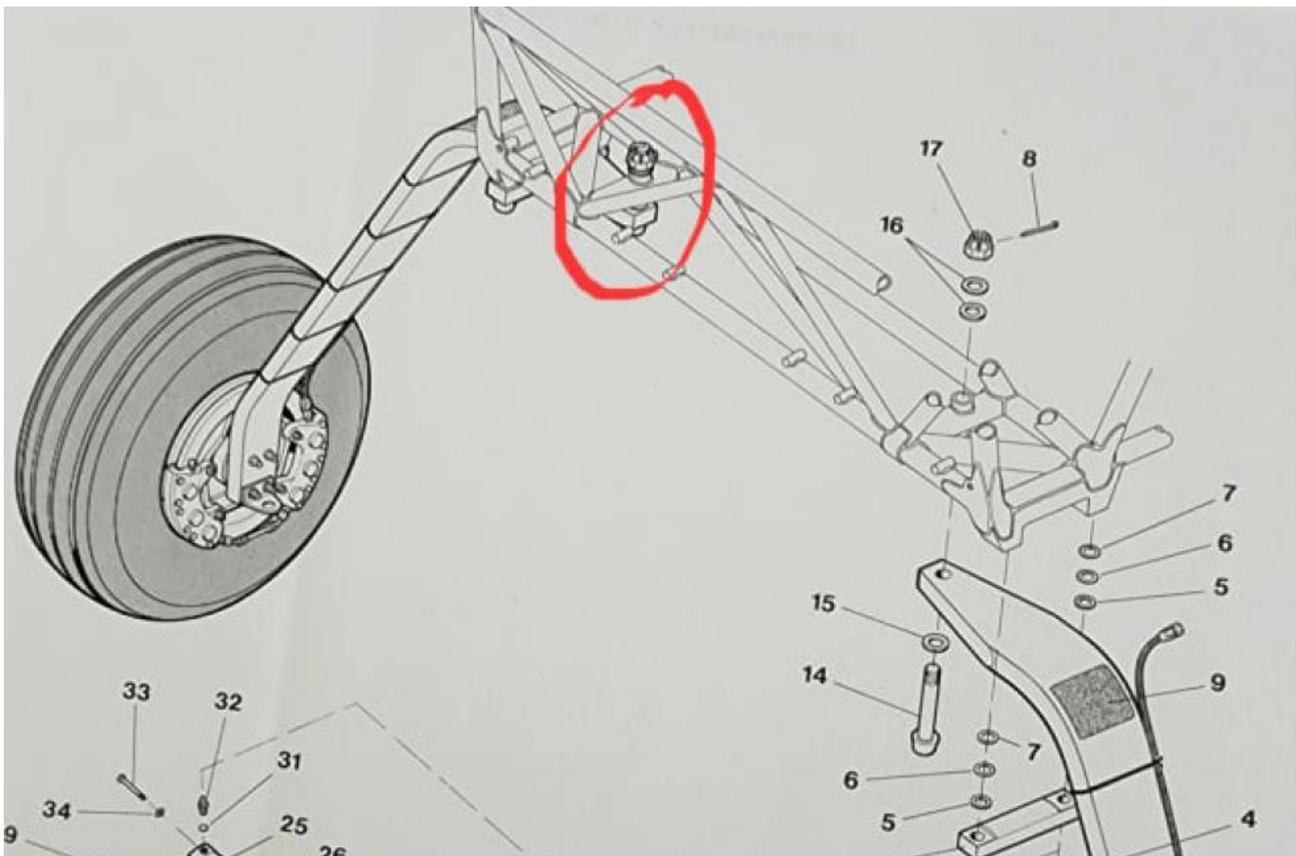
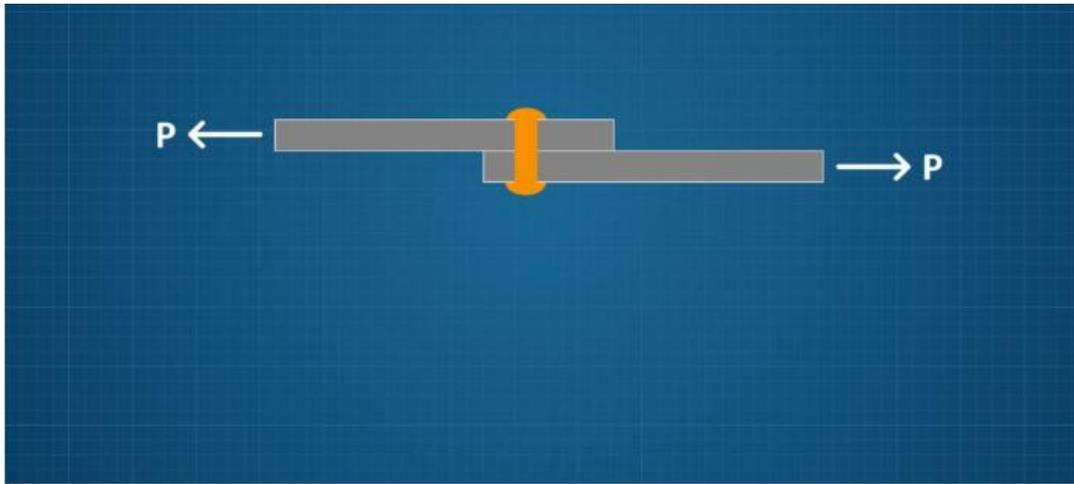


Diagram 1: The Illustrated Parts Catalogue (IPC) shows the sheared bolt as item 14. (Source: IPC)



Rivet holding metal plates

Figure 5: An illustration of a shear force. (Source: <https://structures-explained.com/shear-forces-and-shear-stresses/>)

In mechanics, shear forces are unaligned forces pushing one part of a body in one specific direction, and another part of the body in the opposite direction. Assume two metal plates attached to each other by a rivet. If we apply a force 'P' on each plate in the opposite direction, there will be some stresses generated at the cross section of the rivet. If the rivet is unable to withstand that force it will break along the cross-section.

(Source: <https://structures-explained.com/shear-forces-and-shear-stresses/>)

1.16.2 Failure Analysis of the Main Landing Gear Cylinder Support:

Landing gear assemblies are subjected to high stress, both static and dynamic, and are also exposed to atmospheric conditions.

Stress corrosion cracking, fatigue, and overload failures are the most common failure mechanisms of various landing gear components. A high percentage of these failures are a result of an operation, maintenance, design, and manufacturing process.

Asymmetric landing, hard landing, landing with a fully loaded aircraft, landing at a high horizontal or vertical speed, landing in heavy atmospheric conditions such as rain, snow, ice, or excessive wind, and harsh taxi maneuvers are the most common causes of landing gear damage.

A combination of these sources place even more strain on the landing gear components.

(Source: <https://www.sciencedirect.com/science/article/abs/pii/S1350630724002796>)

1.17. Organisational and Management Information

1.17.1. The aircraft was operated under the provisions of Part 137 of the Civil Aviation Regulations (CAR) 2011 as amended.

1.17.2. The operator was issued an Air Operating Certificate (AOC) by the Regulator on 29 August 2024 with an expiry date of 31 August 2025.

1.17.3. An aircraft maintenance organisation (AMO), approved by the SACAA, maintained the aircraft. The AMO had an AMO Certificate that was issued by the Regulator on 29 August 2024 with an expiry date of 31 August 2025.

1.18. Additional Information

1.18.1. None.

1.19. Useful or Effective Investigation Techniques

1.19.1. None.

2. ANALYSIS

2.1. General

From the available evidence, the following analysis was made with respect to this accident. This shall not be read as apportioning blame or liability to any organisation or individual.

2.2. Analysis

2.2.1 The pilot had a Commercial Pilot Licence (CPL) Aeroplane that was initially issued on 8 June 2012 IAW Part 61 of the CAR 2011. The licence was revalidated on 16 July 2024 with an expiry date of 30 June 2025. The pilot had a Class 1 medical certificate that was issued on 1 July 2024 with an expiry date of 30 June 2025 with a restriction to wear suitable corrective lenses for defective distant vision (VDL). The pilot was licensed and had the aircraft endorsed on his licence. He had a total of 5 200.9 hours of which 35.5 hours were on the aircraft type. The flight was conducted during day light. Good weather conditions prevailed on the day of the accident flight.

2.2.2 The pilot reported that seven successful spray runs were completed after which he routed back to the airstrip to upload another chemical load. Touchdown was firm on Runway 22; however, approximately 300m during the landing roll, the bolt that secured the right main

landing gear on the underside of the fuselage sheared off. Consequently, the right main gear separated, and the right-wing tip and the propeller contacted the runway surface. The aircraft swung to the right before it stopped on the runway facing east. The pilot was not injured during the accident sequence.

- 2.2.3 It is possible that the bolt had worn off over time due to the landing forces exerted on the gear. The pre-flight inspection could not reveal the wear on the bolt due to its concealed location. According to the POH and the Service Manual, the failed bolt is an on-condition item that is to be inspected at 50-hour intervals.

3. CONCLUSION

3.1. General

From the available evidence, the following findings, causes and contributing factors were made with respect to this accident. These shall not be read as apportioning blame or liability to any organisation or individual.

To serve the objective of this investigation, the following sections are included in the conclusion heading:

- **Findings** — are statements of all significant conditions, events, or circumstances in this accident. The findings are significant steps in this accident sequence, but they are not always causal or indicate deficiencies.
- **Causes** — are actions, omissions, events, conditions, or a combination thereof, which led to this accident.
- **Contributing factors** — are actions, omissions, events, conditions or a combination thereof, which, if eliminated, avoided or absent, would have reduced the probability of the accident occurring, or would have mitigated the severity of the consequences of the accident. The identification of contributing factors does not imply the assignment of fault or the determination of administrative, civil, or criminal liability.

3.2. Findings

- 3.2.1. The pilot had a Commercial Pilot Licence (CPL) that was initially issued on 8 June 2012 IAW Part 61 of the CAR 2011. The licence was revalidated on 16 July 2024 with an expiry date of 30 June 2025.
- 3.2.2. The pilot had a Class 1 medical certificate that was issued on 1 July 2024 with an expiry date of 30 June 2025 with a restriction to wear suitable corrective lenses for defective distant vision (VDL).
- 3.2.3. The aircraft's Certificate of Registration was issued to the current owner on 26 September 2024. The aircraft's Certificate of Airworthiness (C of A) was initially issued on 9 December

2022 with an expiry date of 31 December 2025. The operator had an Air Operating Certificate (AOC) that was issued by the Regulator on 29 August 2024 with an expiry date of 31 August 2025.

3.2.4. The aircraft maintenance organisation (AMO) that maintained the aircraft had an AMO Certificate that was issued on 29 August 2024 with an expiry date of 31 August 2025.

3.2.5. The last mandatory periodic inspection (MPI) of the aircraft was conducted on 4 October 2024 at 6 593.5 hours. The aircraft was flown a further 4.0 hours before the accident flight. The aircraft was issued a Certificate of Release to Service (CRS) on 4 October 2024 with an expiry date of 3 October 2025 or at 6 693.5, whichever occurs first.

3.2.6. The pilot completed seven uneventful crop-spray runs and, during the landing roll on Runway 22, the right undercarriage failed and separated from the fuselage. The aircraft swung to the right and came to a stop on the runway facing east.

3.3. Probable Cause/s

3.3.1. The bolt that secured the right main landing gear on the under fuselage sheared off during the landing roll on Runway 22 and caused the gear to separate. This resulted in the right-wing tip and the propeller contacting the ground; subsequently, the aircraft swung to the right.

3.4. Contributory Factor/s

3.4.1. None.

4. SAFETY RECOMMENDATIONS

4.1. General

The safety recommendations listed in this report are proposed according to paragraph 6.8 of Annex 13 to the Convention on International Civil Aviation and are based on the conclusions listed in heading 3 of this report. The AIID expects that all safety issues identified by the investigation are addressed by the receiving States and organisations.

4.2. Safety Recommendation/s

4.2.1. None.

5. APPENDICES

5.1. None.

This report is issued by:

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