



**Preliminary Report**

**AIC 22-1002**

**Niugini Aviation Services Limited**

**P2-BWC P2-BWC**

**PAC 750XL**

**Landing Gear Collapse during Landing Roll**

**Tekin Airstrip, Sandaun Province**

**PAPUA NEW GUINEA**

**26 January 2022**



## ABOUT THE AIC

The Accident Investigation Commission (AIC) is an independent statutory agency within Papua New Guinea (PNG). The AIC is governed by a Commission and is entirely separate from the judiciary, transport regulators, policy makers and service providers. The AIC's function is to improve safety and public confidence in the aviation mode of transport through excellence in independent investigation of aviation accidents and other safety occurrences within the aviation system, safety data recording and analysis, and fostering safety awareness, knowledge and action.

The AIC is responsible for investigating accidents and other transport safety matters involving civil aviation in PNG, as well as participating in overseas investigations involving PNG registered aircraft. A primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations.

The AIC performs its functions in accordance with the provisions of the PNG Civil Aviation Act 2000 (as Amended), and the Commissions of Inquiry Act 1951 and Annex 13 to the Convention on International Civil Aviation.

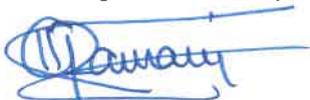
The object of a safety investigation is to identify and reduce safety-related risk. AIC investigations determine and communicate the safety factors related to the transport safety matter being investigated.

On 26 January 2022 at 10:13 local time (00:13 UTC), the Operator, Niugini Aviation Service Limited (NASL) notified the AIC via phone call of an accident which occurred earlier on the same day, involving a PAC 750XL aircraft, registered P2-BWC, owned and operated by NASL. The AIC immediately commenced an investigation and dispatched a team of investigators to perform on-site activities.

This Preliminary Aircraft Accident Investigation Report was produced by the AIC, and contains facts known to the AIC before its official release date. It is developed by the Commission in accordance with Para 7.1 of Annex 13 to the Convention on International Civil Aviation. The report is also published on the AIC website: <https://aic.gov.pg/investigation>.

The report is based on the initial investigation activities carried out by the AIC in accordance with Papua New Guinea Civil Aviation Act 2000 (as Amended), Chapter 31 of the Commissions of Inquiry Act, Annex 13, and the PNG AIC Investigation Policy and Procedures Manual. It contains factual information and three safety recommendations. Analysis of that factual information, findings and contributing (causal) factors, other factors, safety actions, and other safety recommendations are reserved for the Final Report.

The sole objective of the investigation and the Preliminary Report is the AIC's obligation to the Convention on International Civil Aviation and in accordance with Annex 13, and thereby promote aviation safety, (Reference: Annex 13, Chapter 7). Readers are advised that in accordance with Section 219 of the Civil Aviation Act 2000 (as Amended) and Annex 13, it is not the purpose of the Commission's aircraft accident investigation to apportion blame or liability. Fact based statements in the report should not be interpreted as apportioning blame. Consequently, AIC reports are confined to matters of safety significance and may be misleading if used for any other purpose.



**Hubert Namani, LLB**

*Chief Commissioner*

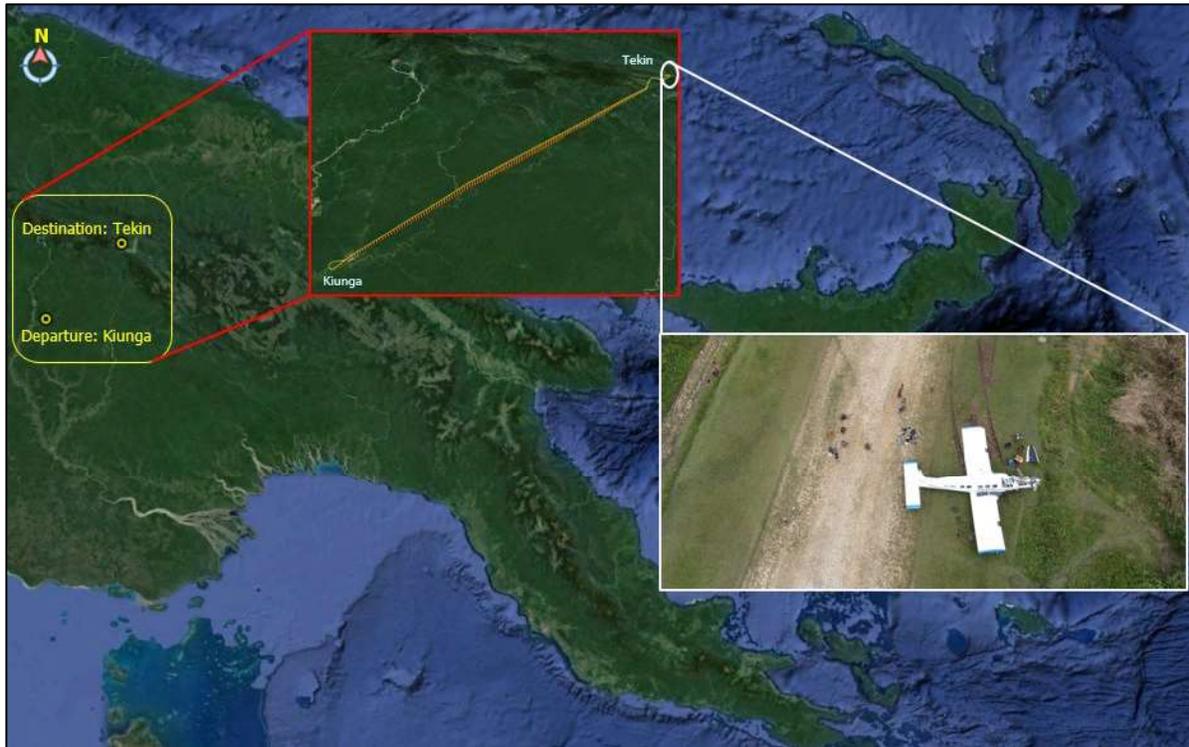
*25 February 2022*

## PAC 750XL landing gear collapse and runway excursion at Tekin Airstrip

### Occurrence details

On 26 January 2022, at about 9:40 local (23:40 UTC<sup>1</sup>) PAC 750XL aircraft, registered P2-BWC, owned and operated by Niugini Aviation Services Limited (NASL) was conducting a VFR<sup>2</sup> passenger charter flight from Kiunga, Western Province to Tekin, Sandaun Province, Papua New Guinea, when, during the landing roll at Tekin, the aircraft sustained a left main landing gear (MLG) assembly collapse and subsequent runway excursion.

There were six persons onboard: one pilot and five passengers. No injuries were reported.



**Figure 1: Depiction of P2-BWC flight path.**

According to the Spidertracks<sup>3</sup> recorded data, at 09:00 the aircraft departed from Kiunga Airport, climbed to an altitude of 9,000 ft AMSL<sup>4</sup> and began tracking north-east for Tekin. During an interview with the AIC, the pilot stated that there was no significant weather along the route and in the Tekin area when he arrived.

According to the initial notification from NiuSky Pacific Limited, the pilot reported to Air Traffic Services (ATS) at 9:40, informing them that he was in the Tekin circuit area and that he would call back again when on the ground.

The Spidertracks data showed that when the aircraft arrived in the Tekin area, it entered a gradual descent as it tracked over the airstrip. The aircraft was positioned overhead the airstrip at about 2,000 ft AGL<sup>5</sup>. The pilot stated that while flying overhead, he conducted an aerial inspection and from his observation, the airstrip

<sup>1</sup> The 24-hour clock, in Coordinated Universal Time (UTC), is used in this report to describe the local time as specific events occurred. Local time in the area of the serious incident, Papua New Guinea Time (Pacific/Port Moresby Time) is UTC +10 hours.

<sup>2</sup> Visual Flight Rules: Those rules as prescribed by national authority for visual flight, with corresponding relaxed requirements for flight instruments (Source: The Cambridge Aerospace Dictionary)

<sup>3</sup> Tracking system that transmits a combination of parameters (such as location, time, altitude, speed, rate of climb, heading and distance) back to the website and mobile application for real-time viewing by end users.

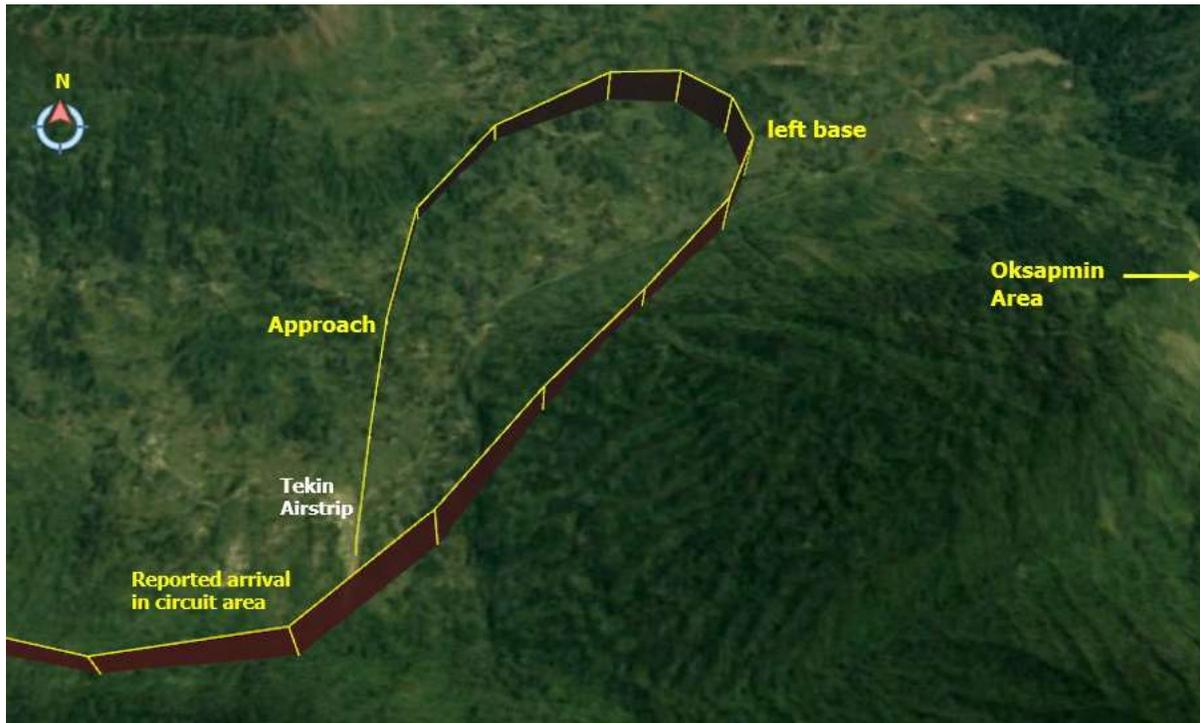
<sup>4</sup> Above Mean Sea Level

<sup>5</sup> Above Ground level (AGL). All altitude data obtained from the Spidertracks recorded data are referenced to the Tekin Airstrip threshold elevation of 5,632 ft

appeared suitable for landing. He continued about 2 nm north-east of the airstrip before turning left base for the approach for Tekin airstrip runway 18.

During the interview with AIC, the pilot stated that he established the aircraft on the final approach profile at about 6,000 ft AMSL (400 ft AGL) for airstrip runway 18.

The Spidertracks data showed that the aircraft was about 1 nm from the airstrip when it had descended to 400 ft AGL.



**Figure 2: Circuit area at Tekin Airstrip**

The pilot stated that when he established the aircraft on the final approach, he configured the aircraft for landing and maintained an airspeed of 80 knots (kts). He stated that the airspeed at touchdown was about 75 kts.

According to the pilot, following touchdown, he noticed the left wing abruptly dropping. The aircraft immediately began veering left, towards the eastern edge (boundary) of the airstrip. There was a PAC 750XL aircraft, P2-BWE wreckage sitting about 170 m up-strip runway 18, on the left edge, since 18 February 2022. The pilot stated that he applied full right rudder to veer the aircraft back to the right and maintain the centreline to avoid collision with the P2-BWE wreckage, but the aircraft continued veering left. The aircraft's left wingtip struck the outer edge of the extended right flap of the P2-BWE wreckage causing it to abruptly veer further left and skid across the airstrip boundary as the nose-wheel and right MLG bogged into the ground. The aircraft came to rest about 13m to the right of the P2-BWE wreckage.

The PIC stated that he immediately shut down the engine and evacuated the passengers with the assistance from one of the Operator's personnel who was also a passenger on board.

ATS declared an INCERFA<sup>6</sup> due to the unreported arrival of the aircraft at Tekin. The INCEFRAs were cancelled at 10:12 after the Operator reported the accident and the position of the aircraft obstructing the airstrip.

<sup>6</sup> INCERFA-The code word used to designate an uncertainty phase.



Figure 3: P2-BWC final resting position.

### Damage

During the on-site investigation, the investigators identified significant damage to the left MLG assembly, left wing and left horizontal stabiliser (See Figure 4).



Figure 4: Overview of the damage sustained on P2-BWC

## **AIC Comment**

The investigation is continuing, and will include but not limited to flight operations, aircraft systems, performance, airworthiness and serviceability, airstrip conditions, weather and organisational aspects, to the appropriate extent.

The accident to the subject aircraft, P2-BWC, occurred 8 days after another PAC 750XL aircraft accident (investigation reference AIC 22-1001) at the same airstrip and is considered a recurrence for the purpose of contextualizing potential safety risk levels and hazards common to both accidents at this point.

Note: Information related to one investigation, where appropriate and relevant, may be used in the other for the purpose of highlighting safety related commonalities.

The safety recommendations listed below are premised on the apparently elevated potential risks stemming from the fact that the accident to P2-BWC shares remarkably common or similar circumstances which include the Operator, the airstrip, the manner of undercarriage collapse and aircraft type within a matter of days.

The investigation analysis and findings will be included in the Final Report.

## **Safety Actions**

The Operator announced on 2 February 2022 that they had suspended all their operations pending a full and detailed investigation into all aspects of the organisation.

## **Recommendations**

### **Recommendation number AIC 22-R01/22-1002 to CASA PNG.**

The AIC recommends that the Civil Aviation Safety Authority of PNG prohibit operators from conducting fixed wing flights into Tekin Airstrip until the responsible parties cause the airstrip to be re-evaluated and deemed safe for such operations.

### **Recommendation number AIC 22-R02/22-1002 to CASA PNG.**

The AIC recommends that the Civil Aviation Safety Authority of PNG ensure that appropriate action is taken to ensure it is satisfied that the Operator, Niugini Aviation Services Limited, meets the minimum safety standards before resuming normal operations.

### **Recommendation number AIC 22-R03/22-1002 to Sandaun Provincial Government.**

The AIC recommends that the Sandaun Provincial Government:

- a) engage an appropriate party, such as the Rural Airstrips Agency (RAA), to take appropriate actions to ensure Tekin Airstrip meets the acceptable safety levels for fixed wing operations.
- b) cause the dissemination of results and data to CASA PNG and Operators for risk assessment and mitigation.

### General Details

Date and time	26 January 2022, 09:40 (23:40 UTC)	
Occurrence category	Accident	
Primary occurrence type	Landing Gear Collapse during Landing Roll	
Location	Tekin Airstrip, Sandaun Province	
	Latitude: 5°14'41.64"S	Longitude: 142° 9'52.56"E
Elevation	5,632 ft (at threshold)	
Runway Direction	18/36	
Length	531m	
Width	24 m	
Slope	9.6% North	

### Type of Operation, Injury and damage details

Type of Operation	VFR, Charter flight	
Persons on board	Pilot: 1	Passengers: 5
Injuries	Pilot: Nil	Passengers: Nil
Damage	Significant	

### Pilot details

Gender	Male
Age	63
Nationality	Papua New Guinean
Licence type	PNG CPL (A)
Total hours	14,012.9
Total hours in Command	8,371.3
Total hours on type	3,625.3

### Aircraft details

Aircraft manufacturer	Pacific Aerospace Corporation
Aircraft Model	750XL
Registration	P2-BWC
Serial number	136
Year of manufacture	2007
Total time since new	6,752.6 hours
Total cycles since new	8,649

### Engine details

Engine manufacturer	Pratt and Whitney Canada
Engine Model	PT6A-34
Serial number	PCE-RB0433
Total time since new	5,766.7 hours
Total time since overhaul	1,251.8 hours

### Propeller details

Manufacturer	Hartzell Propeller Inc
Model	Hartzell
Serial Number	BUA30860
Total Time Since New	4,972.9 hours
Total time Since Overhaul	1,251.8 hours