



PNG AIC Office, Level one, NAQIA Haus, 6 Mile
PO Box 1709
BOROKO 111
National Capital District
Papua New Guinea

Telephone : (675) 327 9000
Facsimile : (675) 323 2139
Email : abouraga@aic.gov.pg

Our Ref: AIC 23-R14/22-2001

Safety recommendation: AIC 23-R14/22-2001

Addressed to: New Tribes Mission (PNG) Limited

Date issued: 19 April 2023

Investigation link: AIC 22-2001

Action status: Issued

Safety deficiency description

On 27 April 2022, at about 14:43 local (04:43 UTC¹) a Daher Kodiak 100 aircraft, registered P2-NTE, owned and operated by New Tribes Mission (PNG) Limited (NTML), was conducting a non-scheduled VFR² training flight from Lele Airstrip to Hoskins Airport, West New Britain Province, Papua New Guinea, when it sustained structural damage to the left tailplane about 6 nautical miles (NM) Northeast of Hoskins Airport.

At the time of the occurrence, recorded data captured a vertical descent rate of 974 feet per minute (fpm) and an airspeed of about 170 knots (kts). Recorded data including video pictures³ showed that at 14:43 the aircraft was descending through 2900 ft AMSL (2,700 ft AGL⁴) about 6NM Northeast of Hoskins when the aircraft's left upper wing-root fairing detached from the aircraft and struck the left inboard leading edge of the left horizontal stabilizer.

The Operators *Maintenance Control Manual, Section 1.4, Post-Maintenance Records Check* states:

- 1.4.1 Purpose To ensure maintenance specified to be done is accomplished accurately and fully to the standards required by this manual prior to the return of aircraft or components to service.
- 1.4.2 Scope This procedure applies to all maintenance performed on NTM PNG aircraft and associated components.

The operator's *Maintenance Organisation Manual, Section 8.1, Maintenance Supervision and Coordination* states:

- 8.1.1 Purpose: To ensure that the maintenance conducted by NTM Aviation is effectively coordinated and supervised.
- 8.1.3 Responsibilities
 - 8.1.3.1. The Chief Executive shall ensure that this procedure continues to reflect the way NTM Aviation controls maintenance.

¹ 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) is UTC + 10 hours.

² 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)

³ The aircraft was fitted with video cameras located on the tail and wing and inside the cockpit.

⁴ Above Ground Level (AGL). All altitude data obtained from the G1000 recorded data are referenced to Hoskins Airport elevation of 213 ft.

8.1.3.2. The Maintenance Manager shall assign appropriately trained and authorized personnel to coordinate and conduct maintenance.

8.1.3.3. The Maintenance Controller shall coordinate maintenance activities and certify accordingly.

8.1.4 Definitions

8.1.4.1. Unless otherwise stated, throughout this Section of the Exposition, the term maintenance encompasses routine inspections of aircraft or components and defect rectification.

8.1.6 Procedure

8.1.6.1. Control / Oversight

8.1.6.1.1 Maintenance tasks are allocated to engineering staff by the Maintenance Manager. All maintenance shall be carried out by persons authorized to do so and shall be supervised by appropriately authorized persons.

8.1.6.1.2 The objective of supervision is to ensure acceptable engineering techniques, practices and approved data are being applied correctly.

8.1.6.1.3 Persons authorized to supervise shall ensure that supervision is achieved by personal physical presence through being on site or in the immediate vicinity of the work being carried out. Engineers and tradesmen being supervised shall ensure they clearly understand at what stage, and under what circumstances, they must consult the supervisor.

The NTMA *Maintenance Organisation Manual*, Section 8.3, *General Maintenance* states:

8.3.1 Purpose: To give an overview of the general base and line maintenance procedures used by NTM Aviation Authorized Maintenance Center (AMC).

8.3.2 Scope: This procedure applies to scheduled and unscheduled maintenance conducted on NTM Aviation aircraft and any base or line maintenance provided to another operator.

8.3.3 Responsibilities

8.3.3.1. The Maintenance Manager shall ensure that all engineering personnel comply with this procedure.

8.3.3.2. Individual engineers shall ensure that they conduct base maintenance in accordance with this procedure.

Cognisant of the explicit procedures and instructions in the NTMA *Maintenance Organisation Manual*, particularly with respect to on-site supervision, the AIC was concerned when maintenance engineers informed the investigation that it was standard practice that once unlicensed aircraft maintenance engineers (AMEs) are trained, work assigned to them by the Job Coordinator is not necessarily inspected by a Licensed AME (LAME).

The fact that the panel (upper wing root fairing) detached in flight due to screws not being appropriately secured or were missing following the maintenance that concluded on 4 April 2022, indicates that there was inadequate supervision and safety checks to ensure maintenance carried out was done correctly.

Recommendation number *AIC 23-R14/22-2001* to New Tribes Mission Aviation (PNG) Limited

The PNG Accident Investigation Commission (AIC) recommends that New Tribes Mission Aviation (PNG) Limited (NTMA) should review its in-service maintenance standard operating procedures (SOPs) to ensure that maintenance supervisors are fully conversant with the explicit procedures and instructions in the NTMA *Maintenance Organisation Manual*, particularly with respect to on-site supervision, to ensure approved engineering techniques, practices and approved data are being applied correctly before certifying for release to service.

- The outcome of the review should ensure that authorised persons are appropriately qualified and experienced to supervise inspections and maintenance in compliance with the approved SOPs. Furthermore, LAMEs and AMEs should have no doubts as to the requirements for supervised work practices.

Action requested

The AIC requests that New Tribes Mission (PNG) Limited note recommendation *AIC 23-R14/22-2001* and provide a response to the AIC within 90 days of the issue date and explain (including with evidence) how New Tribes Mission Aviation (PNG) has addressed the safety deficiency identified in the safety recommendation.



Capt. A Bouraga, MBE
Acting Chief Commissioner

19 April 2023

New Tribes Mission Aviation (PNG) Limited response to Safety Recommendation AIC 23-R14/22-2001

On 18 July 2023, New Tribes Mission Aviation PNG Limited (NTML) responded via email providing their preventative action to address the safety deficiency identified in the AIC *Safety Recommendation AIC 23-R14/22-2001*, which was contained in an attached letter dated 17 July 2023.

The letter stated that their preventative actions included a review of the organisational and CASA procedures, policies and regulations which was conducted by the Maintenance Manager and maintenance operations team which opened the floor for discussion. This action was taken during a safety meeting conducted on 31 May 2023 and summarized in *Engineering Notice 044* issued that same day. A copy of *Engineering Notice 044* was attached to the letter.

The letter also stated:

As part of the on-boarding process, for new engineers is reviewing past Engineering Notices, this will serve as an enduring reminder, reinforcing guidance pertaining to the performance and supervision of aircraft maintenance by LAMEs and AMEs within our organization.

PNG Accident Investigation Commission assessment of New Tribes Mission Aviation (PNG) Limited response

The AIC assessed New Tribes Mission Aviation PNG Limited's response and notes that the preventative actions address the safety deficiency identified in *Safety Recommendation AIC 23-R14/22-2001*.

The AIC assigned this response as *fully satisfactory* rating.

The AIC recorded the **Status of the AIC Recommendation: CLOSED**



Capt. A Bouraga MBE

Acting Chief Commissioner

19 July 2023