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**Safety recommendation: AIC 16-R01/15-2028**

**Addressed to: Travel Air PNG Limited**

**Date issued: 2 June 2016**

**Investigation link: AIC 15-2028**

**Action status: Issued**

### **Safety deficiency description**

On 21 August 2015, at 02:47 (UTC)<sup>1</sup> a Fokker F27 Mk 050 (F50) registered P2-TAE (TAE) operated by Travel Air and a Bombardier DHC-8-102 (Dash 8) registered P2-MCW (MCW) operated by Airlines PNG, were involved in a breakdown of separation about 9.5 nm (17.5 km) northwest of Lae (Morobe Province).

During the Accident Investigation Commission's (AIC) investigation, the crew of MCW reported that shortly after they had levelled off at 8,000 ft and were above cloud, they received a traffic alert and collision-avoidance system<sup>2</sup> (TCAS) Traffic Alert (TA), followed by a Resolution Advisory (RA) instruction, and observed TAE descending to within 600 ft vertical separation with MCW. They took immediate (visual) avoidance manoeuvring action to avoid TAE, based on the RA instruction.

The crew of MCW reported the breakdown of separation serious incident to their operator on 22 August when they returned to Port Moresby, but did not report the serious incident to the Civil Aviation Safety Authority as required by the Civil Aviation Act Section 60. The operator sent a serious incident notification to CASA by email 4 days after the serious incident (and cc'd the email to the AIC). However, CASA did not forward a notification to the AIC as required by the Civil Aviation Act Section 62, but appears to have solely relied on the cc'd email from Airlines PNG rather than telephoning the AIC with such important information.

Due to the elapsed time between the breakdown of separation and the AIC being notified of the occurrence, the recorded TCAS data, Flight Data Recorder (FDR) and Cockpit Voice Recorder (CVR) data were overwritten, resulting in the data for the flight on 21 August 2015 no longer being available for the AIC's investigation. The AIC also sought to analyse the TCAS data to check the functionality and integrity of the TCAS system in TAE. Time and date data were not logged which further hampered the accuracy of the AIC's analysis of the TCAS data.

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

<sup>2</sup> Specific type of Airborne Collision Avoidance System.

The AIC found that the TCAS defect rectification testing and maintenance on the Travel Air fleet of Fokker F27 Mk 050 aircraft was not robust, and was not conducted in accordance with the approved Travel Air Maintenance Control manual, and the aircraft manufacturer's TCAS functional test instructions.

Specifically, the TCAS defect rectification maintenance was not supported by appropriate testing equipment or qualified and experienced maintenance personnel. The maintenance documentation provided to the AIC by Travel Air was incomplete, and there were inconsistencies in the documents. Accordingly, the AIC was not able to verify the veracity of the maintenance carried out on the TCAS systems with any degree of confidence.

Prior to December 2015 Travel Air did not have a qualified avionics maintenance engineer, nor was there staff available who were qualified or experienced to use the IFR 6000 test equipment. The TCAS system was tested during the 27 January 2016 AIC visit. The maintenance engineer conducting the TCAS defect remedial actions until December 2015 was not experienced or qualified to carry out the avionics defect rectification maintenance. His aircraft maintenance engineering coverage was for airframes and powerplants.

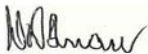
### **Recommendation number AIC 16-R01/15-2028 to Travel Air PNG Limited**

The Accident Investigation Commission recommends that Travel Air PNG Limited should ensure that their Civil Aviation Safety Authority of PNG (CASA) approved maintenance organisation continues to have within its organisation, or has CASA approved external access to:

- a) Appropriately experienced and qualified (licenced) aircraft maintenance engineers;
- b) Appropriate tools and equipment to conduct testing and maintenance of its aircraft fleet; and
- c) A maintenance documentation system that meets the CASA requirements of its Air Operators Certificate and Maintenance Control Manual.

### **Action requested**

The AIC requests that Travel Air PNG Limited note recommendation AIC 16-R01/15-2028 above, and provide a response to the AIC within 60 days of the issue date, and explain (including with evidence) how Travel Air has addressed the safety deficiencies identified in the AIC investigation report AIC 15-2028.



**DAVID INAU, ML**

*Chief Executive Officer*