ACCIDENT INVESTIGATION COMMISSION
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Safety recommendation: AIC 19-R12/18-1004

Addressed to: Air Niugini Limited

Date issued: 25 February 2019

Date reissued: 25 March 2019
(Amended Safety Deficiency text page 2)

Investigation link: AIC 18-1004

Action status: Issued

Introduction

On 28 September 2018, the Federated States of Micronesia, Department of Transportation, Communications and Infrastructure (DTC&I) was notified of the aircraft accident referenced in this safety recommendation. DTC&I commenced an investigation and deployed investigators to Chuuk and invited the Papua New Guinea Accident Investigation Commission (AIC) to join the investigation in the capacity of the State of Registry and also a State providing experts and facilities for the investigation. The AIC team is comprised of an Accredited Representative and Technical Advisers. The US National Transportation Safety Board (NTSB) as the State of Manufacture of the aircraft and in response to FSM National Government's request for assistance also sent a team comprised of an Accredited Representative and Technical Advisers from the Federal Aviation Administration (FAA) and Boeing. Technical Advisers from the US National Weather Service are assisting the US Accredited Representative.

The Transportation Safety Board of Canada (TSBC) as the State of Manufacture of specific components appointed an Accredited Representative and Technical Advisers to download the data from the AFIRS.

The PNG AIC has identified a significant safety deficiency, which if not rectified could result in cabin crew not correctly deploying the life raft. This could contribute to an injury or loss of life

Occurrence

On Friday 28 September 2018, a Boeing 737-8BK aircraft, registered P2-PXE, was being operated by Air Niugini Limited, on a scheduled passenger flight from Pohnpei to Chuuk, Federated States of Micronesia.

At 23:17:19 UTC[1] (09:17:19 local time) the aircraft impacted the water of Chuuk Lagoon about 1,443 ft (440 m) short of the runway 04 threshold, during its approach to runway 04 at Chuuk International Airport. As the aircraft settled in the water, it turned clockwise through 210º and drifted 460 ft (140 m) south east of the runway 04 extended centreline, with the nose of the aircraft pointing about 265º.

There were 12 crew members and 35 passengers on board. Six passengers were seriously injured, and one passenger was fatally injured.

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 accident, Pacific/Chuuk Time is UTC + 10 hours.

The 12 crew members and 34 passengers exited the aircraft and were promptly rescued and brought to shore by U.S. Navy divers (who were the first on scene), Chuuk State Government boats, Red Cross, Transco, and more than twenty privately-owned boats. Local divers located the fatally injured passenger in the aircraft 3 days after the accident.

Safety deficiency description

The 56-person life raft stowed in the ceiling between Business Class Rows 1 to 2 reportedly partially inflated while being brought to Door L1. The Purser (CSM) stated that she *"tugged the Lanyard, but only one chamber inflated"*. She *stated "I did it twice more. Cabin Crew 3 (CC3) came and gave two pulls [the lanyard], but nothing happened"*. The rescue boats arrived at the aircraft so the CSM pushed the life raft out of the way. She advised that by that stage most of the passengers were out in the boats. The bag/cover for that life raft remained in the aircraft following the partial deployment.

At interview one of the cabin crew said that she kicked it out of the way so it would not obstruct the evacuation. The rescue boats arrived at the aircraft so the life raft was pushed out of the way. The CSM advised that by that stage most of the passengers were out of the aircraft and in the boats.

Section 7.11.19.3 of the *Air Niugini Training Reference Manual* has diagrams of an inflated life raft (a side view and a plan view), but the captions describing the various parts of the life raft are very small font and blurred and therefore are unreadable, and provide no assistance to the user. ***(See Appendix)***

The description in *Section 7.11.19.3* states that the life raft

> Should be tied to the aeroplane before launched with the mooring line which is located under a flap at one end of the life raft.
>
> NOTE: When the life raft is carried to an exit, care must be taken to keep the mooring line folded under the flap to prevent inflation inside the aeroplane. If the life raft should accidentally inflate it must be punctured immediately.

Section 7.11.19.3, Equipment attached to the life raft. The first dot point states:

> Mooring line
>
> This line should be used to tie the life raft to the aeroplane to prevent them from drifting away. After the line has been attached to a seat leg and the life raft has been launched the line is pulled until the inflation bottles open and inflate the life raft.

The investigation examined photographic evidence and found that two life rafts were in the water and one was on a seat in the over-wing exit row and had not been used because of the abundance of small rescue craft that came to the crash site. There was a 56-person life raft bag/cover laying on the floor in front of Business Class Seats 1A and 1B.

The investigation revealed that the Cabin Crew attempted to inflate the life raft before deploying it from the aircraft into the water.

Reissued Recommendation number *AIC 19-R12/18-1004* to Air Niugini Limited

The PNG Accident Investigation Commission recommends that Air Niugini Limited should, as a matter of urgency, ensure that the *Training Reference Manual* and all relevant Air Niugini manuals related to emergency evacuation are amended to ensure descriptors on drawings are clear and unmistakable, and that the *Training Reference Manual* and operational procedures clearly stress the requirement for life rafts to be deployed outside the aircraft before attempting inflation.

Action requested

The Accident Investigation Commission requests that Air Niugini Limited note recommendation *AIC 19-R12/18-1004* and provide a response to the PNG AIC within 60 days, but no later than 25 April 2019, and explain including with evidence how Air Niugini Limited has addressed the safety deficiency identified in *Safety Recommendation AIC 19-R12/18-1004.*

HUBERT NAMANI, LLB
Chief Commissioner

23 March 2019.

Air Niugini Safety Action

On 26 March 2019, Air Niugini Limited informed the PNG Accident Investigation Commission of its safety actions to address the safety deficiencies identified in *Safety Recommendation AIC 19-R12/18-1004*.

Air Niugini also provided documentary evidence of the safety action taken with the CASA PNG accepted[2] amendment of the *Safety and Emergency Procedures Manual (SEPM) Vol 6, Section 2.14.4.1* to require the life raft to be launched outside the aircraft. This amendment reinforces *Section 7.11.19.3* of the *Air Niugini Training Reference Manual.* The diagram and descriptors on drawings of the life raft have been redrawn to make them clear and unmistakable. (See page 5)

PNG Accident Investigation Commission (AIC) assessment of Air Niugini Limited response

The AIC has reviewed the Air Niugini Limited documents providing evidence to the AIC of the safety action taken. The AIC is satisfied that the evidence satisfactorily addresses the safety deficiencies identified in the AIC *Safety Recommendation AIC 19-R12/18-1004.*

The AIC has assigned the Air Niugini Limited response a ***fully satisfactory*** rating, and records the **Status of the AIC Recommendation: CLOSED RESPONSE ACCEPTED**

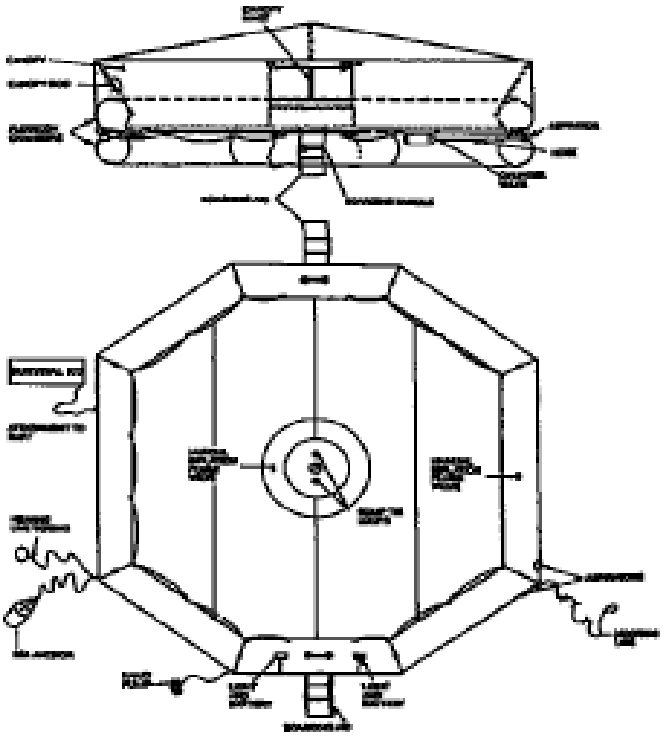
HUBERT NAMANI, LLB
Chief Commissioner

26 March 2019

2 CASA PNG does not *approve* the Air Niugini manuals, rather it *accepts* the Air Niugini manuals.

Appendix

7.11.19.3 **56 - Man Liferaft / 46 - Man Liferaft / 36 – Man Liferaft**



Description

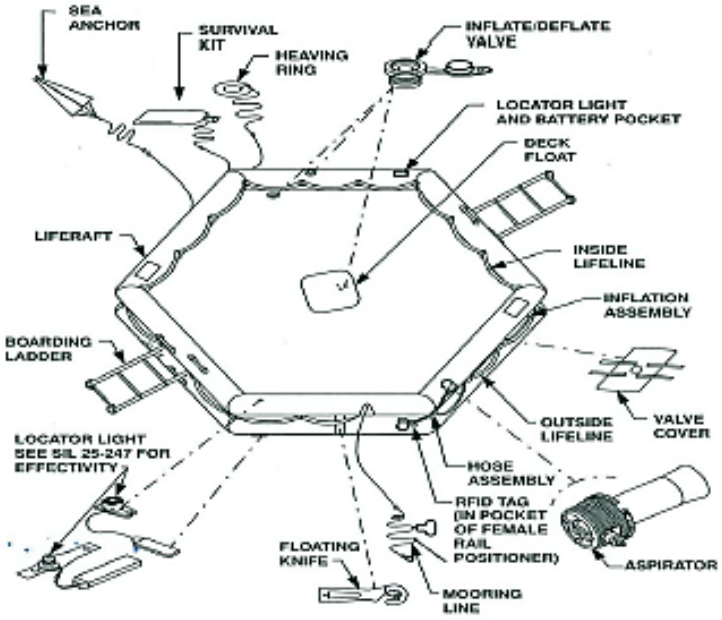
- Have capacity of:
  - A. 56 persons and overload of 50% = 84 persons
  - B. 46 persons and overload of 50%= 69 persons
  - C. 36 persons and overload of 50%= 54 persons.
- Have dual floatation chambers but they can be used even with one tube deflated.
- Weight approximately 50 kg.
- Are reversible.
- Have accessible items attached to it regardless of which side they inflate.
- Should be tied to the aeroplane before launched with the mooring line which is located under a flap at one end of the life raft.

NOTE: When the life raft is carried to an exit, care must be taken to keep the mooring line folded under the flap to prevent inflation inside the aeroplane. If the life raft should accidentally inflate it must be punctured immediately.

Undecipherable diagram *Training Reference manual Section 7.11.19.3*, page 7-55 dated 5 July 2017

7.11.19.3 56 - Man Liferaft / 46 - Man Liferaft / 36 – Man Liferaft

COMPONENT MAINTENANCE MANUAL
64356



LIFERAFT ASSEMBLY P/N 64356-101
FIGURE 1

25-62-15

Page 5
21 Aug 2015

Description

- Have capacity of:
  - A. 56 persons and overload of 50% = 84 persons
  - B. 46 persons and overload of 50%= 69 persons
  - C. 36 persons and overload of 50%= 54 persons.
- Have dual floatation chambers but they can be used even with one tube deflated.
- Weight approximately 50 kg.
- Are reversible.
- Have accessible items attached to it regardless of which side they inflate.
- Should be tied to the aeroplane before launched with the mooring line which is located under a flap at one end of the life raft.

NOTE: When the life raft is carried to an exit, care must be taken to keep the mooring line folded under the flap to prevent inflation inside the aeroplane. If the life raft should accidentally inflate it must be punctured immediately.

Amended *Training Reference Manual Section 7.11.19.3*, page 7-55 dated 13 March 2019