PRELIMINARY
KNKT.15.08.17.04

KOMITE NASIONAL KESELAMATAN TRANSPORTASI

Aircraft Accident Investigation Report

PT. Trigana Air Service
ATR 42-300; PK-YRN
Near Oksibil, Papua
Republic of Indonesia
16 August 2015

KOMITE NASIONAL KESELAMATAN TRANSPORTASI
REPUBLIC OF INDONESIA
2015

This Preliminary report was produced by the Komite Nasional Keselamatan Transportasi (KNKT), 3rd Floor Ministry of Transportation, Jalan Medan Merdeka Timur No. 5 Jakarta 10110, INDONESIA.

The report is based upon the investigation carried out by the KNKT in accordance with Annex 13 to the Convention on International Civil Aviation Organization, the Indonesian Aviation Act (UU No. 1/2009) and Government Regulation (PP No. 62/2013).

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ABBREVIATIONS AND DEFINITIONS

AFIS	:	Aerodrome Flight Information Services
AMSL	:	Above Mean Sea Level
AOC	:	Air Operator Certificate
ATPL	:	Airline Transport Pilot License
BEA	:	Bureau d'Enquêtes et d'Analyses
CPL	:	Commercial Pilot License
CVR	:	Cockpit Voice Recorder
DGCA	:	Directorate General of Civil Aviation
DVI	:	Disaster Victim Identification
EGPWS	:	Enhanced Ground Proximity Warning System
FDR	:	Flight Data Recorder
GPS	:	Global Positioning System
GPWS	:	Ground Proximity Warning System
KNKT	:	Komite Nasional Keselamatan Transportasi
LT	:	Local Time
MAC	:	Mean Aerodynamic Chord
MHz	:	Mega Hertz
NA	:	Not Applicable
NDB	:	Non- Directional Beacon
NM	:	Nautical miles
UTC	:	Universal Time Coordinated

INTRODUCTION

SYNOPSIS

An ATR 42-300 aircraft registered PK-YRN was being operated by PT Trigana Air Service on 16 August 2015 as scheduled passenger flight with flight number IL267. The flight departed Sentani Airport Jayapura with intended destination to Oksibil Airport, Papua. On board on this flight were 54 persons consist of 2 pilots, 2 flight attendants, 1 company engineer and 49 passengers (44 adult 2 children and 3 infants). The aircraft departed at 0522 UTC (1422 LT) and estimated time of arrival Oksibil was at 0604 UTC (1504 LT).

At 0555 UTC the pilot made first contact with Oksibil Aerodrome Flight Information Services (AFIS) officer reported cruising at 11500 feet on position ABMISIBIL. The AFIS controller acknowledged the message. The pilot reported that they intended to direct left base leg runway 11.

At 0600 UTC Oksibil AFIS officer expected the aircraft would have been on final but the pilot had not reported. The AFIS officer contacted the pilot but did not reply.

At 0730 UTC, the search and rescue team was assembled. The team consisted of the Oksibil airport authority, local government, police, and army.

On 17 August 2015 a pilot saw smoke on left base runway 11. The Oksibil AFIS controller informed to the search and rescue team who then deployed to the informed crash site. The aircraft wreckage was found on a ridge of Tanggo Mountain, Okbape District, Oksibil at approximately 8,300 feet AMSL at coordinates of 04°49.289'S, 140°29.953'E, approximately 10 NM from Oksibil Aerodrome on bearing of 306°.

All occupants were fatally injured and the aircraft was destroyed by impact force and post impact fire.

CVR was recovered on 19 August 2015 and has successfully downloaded at KNKT recorder facility. On 20 August 2015, the FDR recovered. The FDR downloading process at the KNKT recorder facility could not retrieve the FDR data. The FDR data will be downloaded at BEA facility in France.

The investigation is continuing and will include details of the following:

- Maintenance history of the aircraft
- Organisation information
- Flight crew manuals
- Flight crew training
- Recorded information including FDR and CVR
- Aerodrome and air traffic services
- Human Factors related aspects.

In this preliminary report Komite Nasional Keselamatan Transportasi issued several recommendations to the aircraft operator and Directorate General of Civil Aviation to address the safety issues identified in this investigation.

1 FACTUAL INFORMATION

1.1 History of the Flight

An ATR 42-300 aircraft registered PK-YRN was being operated by PT Trigana Air Service on 16 August 2015 as scheduled passenger flight with flight number IL267. The flight departed Sentani Airport Jayapura with intended destination to Oksibil Airport, Papua. On board on this flight were 54 persons consist of 2 pilots, 2 flight attendants, 1 company engineer and 49 passengers (44 adult, 2 children and 3 infants).

The aircraft departed at 0522 UTC[1] and estimated time of arrival Oksibil was at 0604 UTC. The flight was the 5th flight of the day for the crew and the aircraft and the second flight on the same route of Jayapura to Oksibil. The flight cruised at altitude of 11,500 feet.

At 0555 UTC the pilot made first contact with Oksibil Aerodrome Flight Information Services (AFIS)[2] officer reported cruising at 11500 feet on position Ambisibil. The AFIS controller acknowledged the message. The AFIS controller suggested the pilot to report when position overhead the airport. The pilot reported that they intended to direct left base leg runway 11. The Oksibil AFIS officer suggested the pilot to continue approach and to call when position on final runway 11.

Figure 1: Aircraft achieved involved

At 0600 UTC, Oksibil AFIS officer expected the aircraft would have been on final but the pilot had not reported, the AFIS officer contacted the pilot but did not reply.

The Oksibil AFIS controller contacted Trigana flight operation in Sentani Airport and informed that they had lost contact with the pilot of PK-YRN. The Trigana flight operation staff contacted another company pilot who was flying near the area to

1 The 24-hour clock used in this report to describe the time of day as specific events occurred is in Coordinated Universal Time (UTC). Local time for Oksibil is Eastern Indonesia Standard Time / Waktu Indonesia Timur (WIT) is UTC + 9.

2 Aerodrome Flight Information Services (AFIS) is the provision of information useful for the safe and efficient conduct of aerodrome traffic at an aerodrome where the appropriate air traffic services authority determines that the provision of aerodrome control service is not justified.

contact with PK-YRN pilots and search the aircraft. The Oksibil AFIS officer also contacted to airport authority in the vicinity assuming that the aircraft might have diverted (Dekai and Tanah Merah Airport) and requested information but there was no information.

At 0730 UTC, the search and rescue team was assembled. The team consisted of the Oksibil airport authority, local government, police, and army. The search operation for that day terminated at 0900 UTC (1800 LT).

On 17 August 2015 a Twin Otter aircraft registration PK-YPX was on flight from Oksibil to Sentani Airport and the pilot saw smoke on left base runway 11. The pilot of PK-YPX asked the pilot of a Pilatus Porter aircraft that was also flying nearby to verify the smoke. The Pilatus Porter pilot flew to the position described at low altitude and confirmed that the smoke was from the debris of an aircraft. The Pilatus Porter pilot informed the Oksibil AFIS controller.

The Oksibil AFIS controller informed to the search and rescue team who then deployed to the informed crash site.

The aircraft wreckage was found on a ridge of Tanggo Mountain, Okbape District, Oksibil at approximately 8,300 feet AMSL at coordinates of 04° 49.289'S, 140°29.953'E, approximately 10 NM from Oksibil Aerodrome on bearing of 306°.

All occupants were fatally injured and the aircraft was destroyed by impact force and post impact fire.

CVR was recovered on 19 August 2015 and transported to KNKT recorder facility. On 20 August 2015, the FDR recovered and was also transported to KNKT recorder facility.

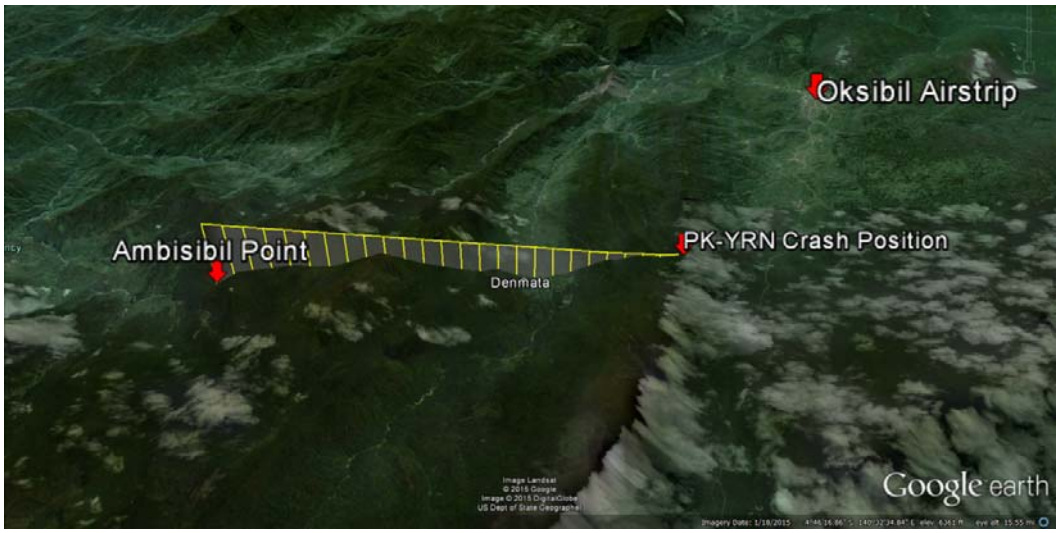


Figure 2: Predicted flight path and pilot intention based on initial data superimposed to Google earth

Figure 3: The accident site pictures taken from an aircraft

1.2 Injuries to Persons

Injuries	Flight crew	Passengers	Total in Aircraft	Others
Fatal	5	49	54	-
Serious	-	-	-	-
Minor/None	-	-	-	NA
TOTAL	5	49	54	NA

1.3 Damage to Aircraft

The aircraft was destroyed by impact force and post impact fire.

1.4 Other Damage

There was no significant other damage to property and/or the environment.

1.5 Personnel Information

1.5.1 Pilot in Command

Gender	:	Male
Age	:	60 years
Nationality	:	Indonesia
Marital status	:	Married
Date of joining company	:	01 October 1991
License	:	ATPL
Date of issue	:	18 November 1997
Validity	:	30 September 2015

Aircraft type rating	:	ATR 72/42
Instrument rating	:	30 September 2015
Medical certificate	:	First class
Last of medical	:	19 May 2015
Validity	:	11 November 2015
Medical limitation	:	Holder shall posses glasses that correct for near vision
Last line check	:	20 March 2015
Last proficiency check	:	31 March 2015

Flying experience

Total hours	:	25,287hours 18 minutes
Total on type	:	7,340hours59 minutes
Last 90 days	:	181 hours 10 minutes
Last 60 days	:	87 hours 53 minutes
Last 24 hours	:	8 hours 5 minutes
This flight	:	Approximately 40 minutes

1.5.2 Second in Command

Gender	:	Male
Age	:	44 years
Nationality	:	Indonesia
Marital status	:	Married
Date of joining company	:	01 June 2008
License	:	CPL
Date of issue	:	06 December 2007
Validity	:	30 September 2015
Aircraft type rating	:	ATR 72/42; B 737 CL
Instrument rating	:	30 September 2015
Medical certificate	:	First class
Last of medical	:	21 April 2015
Validity	:	31 October 2015
Medical limitation	:	Holder should wear corrective lens for distance and near vision
Last line check	:	14 October 2014
Last proficiency check	:	30 September 2014

Flying experience

Total hours	:	3,818 hours 12 minutes
Total on type	:	2,640 hours 17 minutes
Last 90 days	:	103 hours 37 minutes
Last 60 days	:	100 hours 13 minutes
Last 24 hours	:	5 hours 26 minutes
This flight	:	Approximately 40 minutes

1.6 Aircraft Information

1.6.1 General

Registration Mark	:	PK-YRN
Manufacturer	:	ATR (Avions de Transport Regional)
Country of Manufacturer	:	France
Type/ Model	:	ATR 42-300
Serial Number	:	102
Year of manufacture	:	1988
Certificate of Airworthiness		
Issued	:	31 March 2015
Validity	:	Valid until 30 March 2016
Category	:	Transport
Limitations	:	None
Certificate of Registration		
Number	:	2196
Issued	:	27 June 2015
Validity	:	Valid until 26 June 2018
Time Since New	:	50,133 Hours 39 Minutes
Cycles Since New	:	55,663 Cycles
Last Major Check	:	C1 Check date 20 December 2012 at Total Airframe: 45,839:23 Hrs
Last Minor Check	:	Work card 09 date 14 August 2015 at Total Airframe : 50,127:56 Hrs

1.6.2 Engines

Manufacturer	:	Pratt & Whitney Canada
Type/Model	:	PW120
Serial Number-1 engine	:	120562

- Time Since New : 42,468 hours 52 minutes
- Cycles Since New : 43,180 cycles

Serial Number-2 engine : 131372

- Time Since New : 26,186 hours 29 minutes
- Cycles Since New : 27,018 Cycles

1.6.3 Propellers

Manufacturer : Hamilton Sundstrand

Type/Model : 14SF-5

Serial Number-1 propeller : 20061111

- Time Since New : 8,580 hours 04 minutes
- Time Since Overhaul : NA

Serial Number-2 propeller : 2021

- Time Since New : 24,797 hours
- Time Since Overhaul : 4,749 hours

1.6.4 Maintenance record

Until this preliminary report is published, the aircraft data such as EGPWS or GPWS, and GPS installed, the operator could not provide valid data. KNKT is still waiting for the valid data.

The recovered FDR part number was 17M800-251 while the part number provide by the operator was 980-4100-DXUN and CVR part numbers was 2100-1020-02 while the data provided by the operator was 93A-100-83.

1.6.5 Weight & Balance

Maximum allowable take-off weight : 16,700 kg

Actual take-off weight : 16,688 kg

Maximum allowable landing weight : 16,400 kg

Actual landing weight : 16,188 kg

Fuel at take off : 1,900 kg

Flight planned fuel burn : 500 kg

Fuel at landing : 1,400 kg

Take off Centre of Gravity : 26 % MAC

1.7 Meteorological Information

The Oksibil Airport did not have meteorological office. Weather observation conducted by AFIS officer. The weather observation report was as follows:

Wind	:	110 / 08 knots
Visibility	:	4000 m – 5000m
Weather	:	Nil
Cloud	:	BKN (broken) [3]8000 feet (4000 AGL)

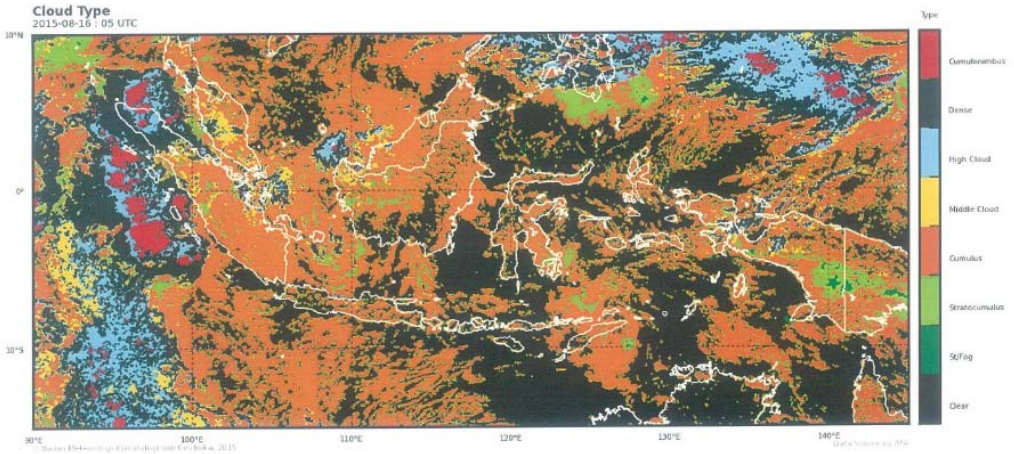


Figure 4: The satellite weather image at 0500 UTC

1.8 Aids to Navigation

Oksibil airport equipped with a Non- Directional Beacon (NDB) identify as ZX on frequency 342 MHz. There was no instrument approach procedure published for this airport.

The air operator issued visual guidance approach for internal use.

3 Cloud amount is assessed in total which is the estimated total apparent area of the sky covered with cloud. The international unit for reporting cloud amount for Broken (BKN) is when the clouds cover more than half (5/8 up to 7/8) area of the sky.

OKSIBIL
OKL / WAJO

2 - 1

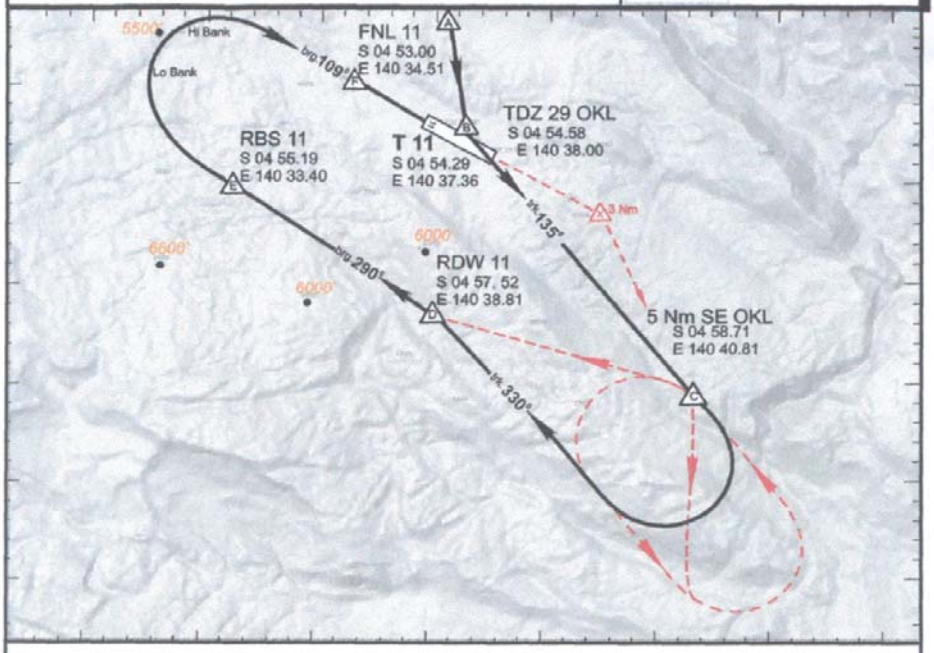
Effective date : 28.03.2012

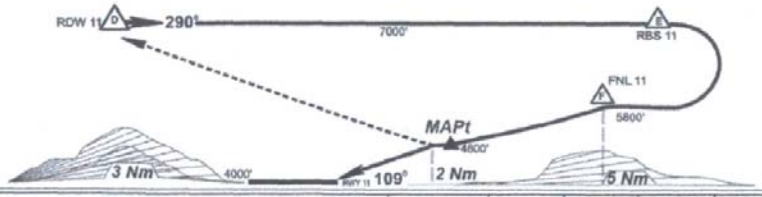
Visual Guidance
Circling Approach Rwy 11
ATR 42

Jayapura App : 119.1 MHz	Oksibil Afis : 123.0 MHz
ADF ZX - 342	

Missed Approach :
Go Around Maintain Rwy Heading Until 3 Nm leaving Tdz 29 and continue climb, making right turn proceed to 5 Nm SE OKL.

AD ELEV
4000 ft
Height related to MSL

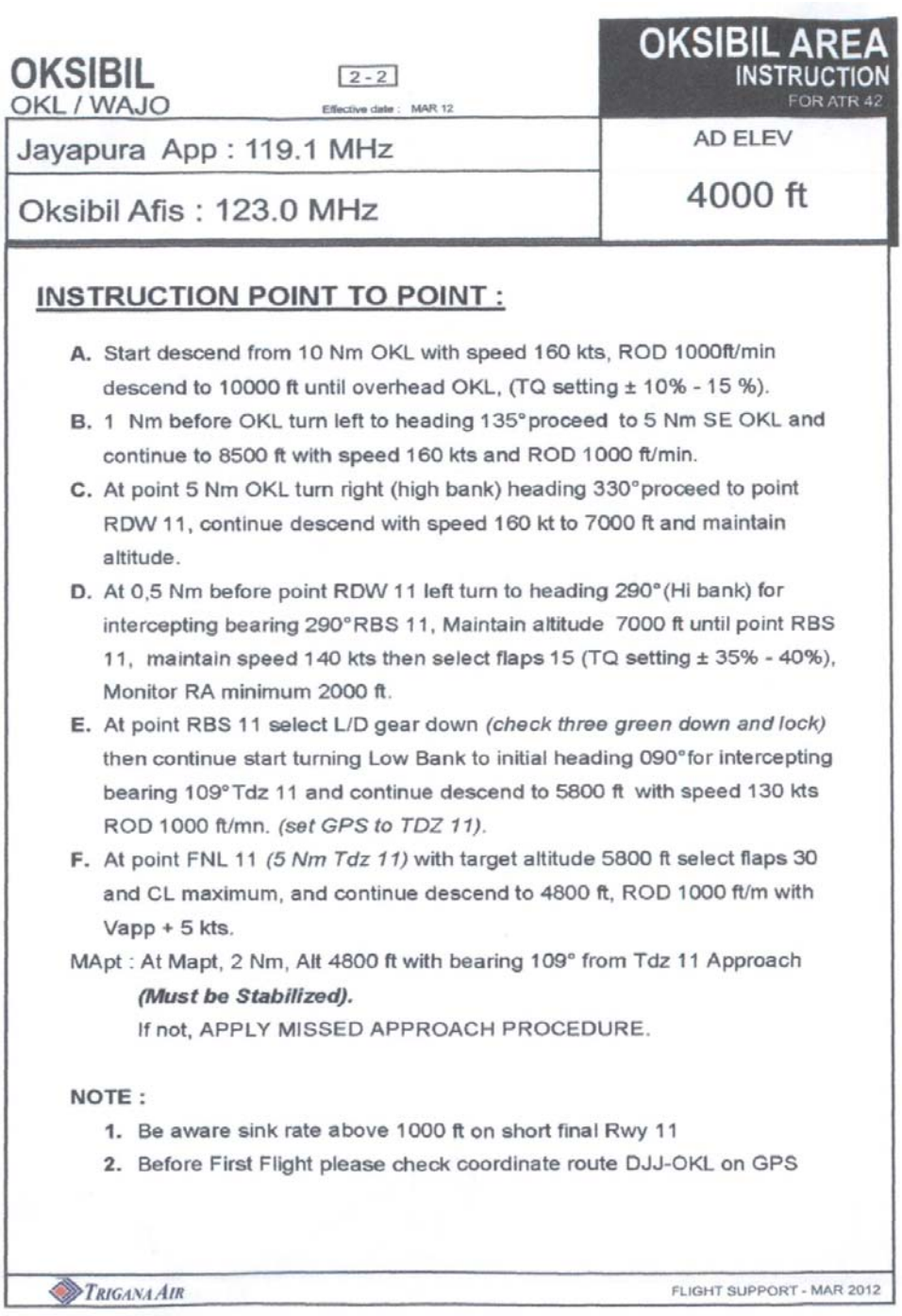




Instruction Point	A	B	C	D	E	F
Speed (knots)	160	160	160	140	130	V_{APP+5}
Rate of Desc. (ft/min)	1000	1000	1000	ALT	1000	1000
ALTITUDE (Feet)	13500	10000	8500	7000	7000	5800
Flight Configuration				FLAP 15	L/G DOWN	CL MAX
BANK	HI	HI	HI	HI	LO/HI	HI

TRIGANA AIR

FLIGHT SUPPORT - MAR 2012



OKSIBIL 2 - 2
OKL / WAJO Effective date : MAR 12

OKSIBIL AREA INSTRUCTION FOR ATR 42

Jayapura App : 119.1 MHz	AD ELEV
Oksibil Afis : 123.0 MHz	4000 ft

INSTRUCTION POINT TO POINT :

A. Start descend from 10 Nm OKL with speed 160 kts, ROD 1000ft/min descend to 10000 ft until overhead OKL, (TQ setting ± 10% - 15 %).

B. 1 Nm before OKL turn left to heading 135° proceed to 5 Nm SE OKL and continue to 8500 ft with speed 160 kts and ROD 1000 ft/min.

C. At point 5 Nm OKL turn right (high bank) heading 330° proceed to point RDW 11, continue descend with speed 160 kt to 7000 ft and maintain altitude.

D. At 0,5 Nm before point RDW 11 left turn to heading 290° (Hi bank) for intercepting bearing 290° RBS 11, Maintain altitude 7000 ft until point RBS 11, maintain speed 140 kts then select flaps 15 (TQ setting ± 35% - 40%), Monitor RA minimum 2000 ft.

E. At point RBS 11 select L/D gear down *(check three green down and lock)* then continue start turning Low Bank to initial heading 090° for intercepting bearing 109° Tdz 11 and continue descend to 5800 ft with speed 130 kts ROD 1000 ft/mn. *(set GPS to TDZ 11)*.

F. At point FNL 11 *(5 Nm Tdz 11)* with target altitude 5800 ft select flaps 30 and CL maximum, and continue descend to 4800 ft, ROD 1000 ft/m with Vapp + 5 kts.

MApt : At Mapt, 2 Nm, Alt 4800 ft with bearing 109° from Tdz 11 Approach
(Must be Stabilized).
If not, APPLY MISSED APPROACH PROCEDURE.

NOTE :

1. Be aware sink rate above 1000 ft on short final Rwy 11
2. Before First Flight please check coordinate route DJJ-OKL on GPS

TRIGANA AIR FLIGHT SUPPORT - MAR 2012

Figure 5: Visual approach chart guidance issued by the operator

1.9 Communications

Communication between the pilot and the AFIS controller was normal as recorded on the Cockpit Voice Recorder (CVR).

1.10 Aerodrome Information

Airport Name	:	Oksibil
Airport Identification	:	WAJO/OKL
Airport Operator	:	DGCA
Coordinate	:	S 4°54.47’; E 140°37.76’
Elevation	:	4000 feet (1219.2 m)
Runway Direction	:	11-29
Runway Length	:	1350 m
Runway Width	:	30 m
Surface	:	Asphalt 14 F/C/Y/T

1.11 Flight Recorders

1.11.1 Flight Data Recorder

Manufacturer : Fairchild
Type/Model : F800
Part Number : 17M800-251
Serial Number : 3612

The Flight Data Recorder (FDR) recovered from the accident site was transported to KNKT facility. The download data process in KNKT facility was observed by BEA (Bureau d’Enquêtes et d’Analyses) France as the Accredited Representatives of the State of Manufacture.

The downloading process to retrieve data from the FDR was unsuccessful. For further examination, the FDR data will be downloaded at BEA facility in Paris, France.

1.11.2 Cockpit Voice Recorder

Manufacturer : L3 Communication
Model : FA2100
Part Number : 2100-1020-02
Serial Number : 000274767

The Cockpit Voice Recorder (CVR) recovered from the accident site was transported to KNKT facility. The CVR download process was observed by BEA, France investigator. The process successfully downloaded 2 hours of good quality voice recording data. The voice of significant part of the flight will be filtered to get better quality and understanding.

The excerpts of CVR data contains several information of:

- The flight cruised at 11,500 ft via W 67 up to point MELAM, then to Ambisibil.
- First communication between pilot and Oksibil AFIS officer was conducted when the aircraft position over Ambisibil and pilot stated the intention to fly direct to left base runway 11.

- The pilot had extended the flap and landing gear in preparation for landing.
- There was no GPWS warning recorded up to the impact.
- There was no crew briefing and checklist reading recorded, from cruising up to the impact.

1.12 Wreckage and Impact Information

The aircraft wreckage was found on a ridge of Tanggo Mountain, Okbape District, Oksibilat approximately 8,300 feet AMSL at coordinates of 04°49.289'S, 140°29.953E, approximately 10 NM from Oksibil Aerodrome on bearing of 306°.

According to the information of the pilot observing the accident site, the wreckage distributed on direction approximately 195°-200°.

The area of the aircraft fuselage debris was destroyed by post impact fire.

Figure 6: The view from the accident side toward the aircraft flight path

Figure 7: The wreckage of the fuselage damaged by post-impact fire

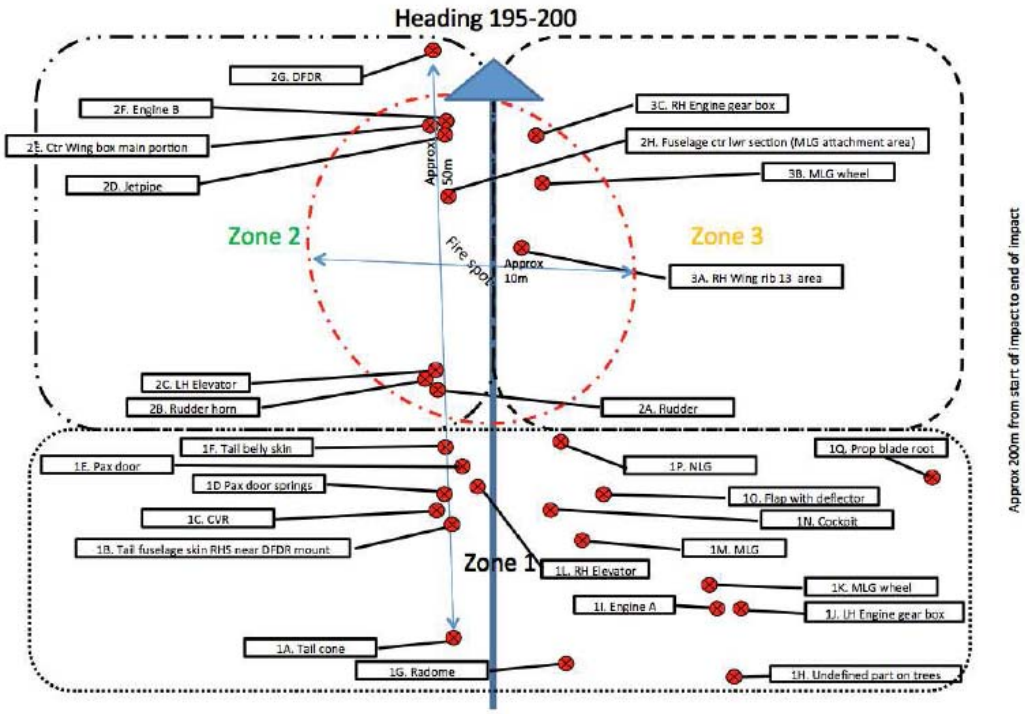


Figure 8: Wreckage distribution chart

1.13 Medical and Pathological Information

Total occupants on board were 54, included two flight crew members, two flight attendants, one company engineer and 49 passengers. The occupants consisted of 49 adults, 2 children and 3 infants were fatally injured and recovered from the accident site.

The deceased bodies were recovered from the accident site were evacuated to Bhayangkara Hospital in Jayapura for identification purposes.

The identification of the bodies was performed by the Indonesian Disaster Victim Identification (DVI) Team. As reported on 9 September 2015, the DVI has successfully identified 27 victims.

1.14 Fire

There was no indication of in-flight fire and the fuselage wreckage was destroyed by post impact fire. The fire extinguished when the search and rescue team arrived at the accident site.

1.15 Survival Aspects

This chapter will be included in the final report**.**

1.16 Tests and Research

This chapter will be included in the final report.

1.17 Organizational and Management Information

Aircraft Owner	:	PT. Trigana Air Service
Address	:	KomplekPuri Sentra Niaga. Jl. Wiraloka Blok D 60-61 Kalimalang, Jakarta 13620.
Aircraft Operator	:	PT. Trigana Air Service
Address	:	KomplekPuri Sentra Niaga. Jl. Wiraloka Blok D 60-61 Kalimalang, Jakarta 13620.
Certificate Number	:	AOC 121 - 006

1.18 Additional Information

The investigation is continuing and will include details of the following:

- Maintenance history of the aircraft
- Organization information
- Flight crew manuals
- Flight crew training
- Recorded information including FDR and CVR
- Aerodrome and air traffic services
- Human Factors related aspects.

KNKT plans to complete the investigation within 12 months since the day of the occurrence. Should any further relevant safety issues emerge during the course of the investigation, KNKT will immediately bring the issues to the attention of the relevant parties and publish as required.

1.19 Useful or Effective Investigation Techniques

The investigation was conducted in accordance with the KNKT approved policies and procedures, and in accordance with the standards and recommended practices of Annex 13 to the Chicago Convention.

2 FINDINGS

According to factual information during the investigation, the Komite Nasional Keselamatan Transportasi determines that the findings of the investigation are listed as follows:

1. The aircraft was airworthy prior to the occurrence and was operated within the weight and balance envelope.
2. All crew has valid licenses and medical certificates.
3. The aircraft departed at 0522 UTC and estimated time of arrival Oksibil was at 0604 UTC.
4. The flight was the 5th flight of the day for the crew and the aircraft and the second flight on the same route of Jayapura to Oksibil.
5. At 0555 UTC the pilot made first contact with Oksibil AFIS officer reported cruising at 11500 feet on position Ambisibil.
6. The weather reported was cloud broken, overhead area the cloud base was 8,000 feet (4,000 feet above airport elevation), on final the visibility was 4-5 km and wind 110°/ 09 knots.
7. The pilot reported that they intended to direct left base leg runway 11.
8. The air operator issued visual guidance approach for internal use which contain procedure to fly overhead the airport prior to land.
9. At 0600 UTC Oksibil AFIS officer expected the aircraft would have been on final but the pilot had not reported, the AFIS officer contacted the pilot but did not reply.
10. The aircraft wreckage was found on a ridge of Tanggo Mountain, Okbape District, Oksibilat approximately 8,300 feet AMSL at coordinates of 04° 49.289’S, 140°29.953’E, approximately 10 NM from Oksibil Aerodrome on bearing of 306°.
11. All occupants were fatally injured and the aircraft was destroyed by impact force and post impact fire.
12. The CVR did not record any GPWS warning up to the impact.
13. The CVR also did not record any crew briefing and checklist reading.
14. The downloading process to retrieve data from the FDR was unsuccessful. For further examination, the FDR data will be downloaded at BEA facility in Paris, France.
15. Aircraft data such as EGPWS or GPWS, and GPS installed, the operator could not provide valid data. KNKT is still waiting for the valid data.

3 SAFETY ACTION

At the time of issuing this preliminary report, the Komite Nasional Keselamatan Transportasi had not been informed of any safety actions resulting from this occurrence.

4 SAFETY RECOMMENDATIONS

According to factual information and initial findings, the Komite Nasional Keselamatan Transportasi issued safety recommendations to address safety issues identified in this preliminary report.

4.1 PT. Trigana Air Services

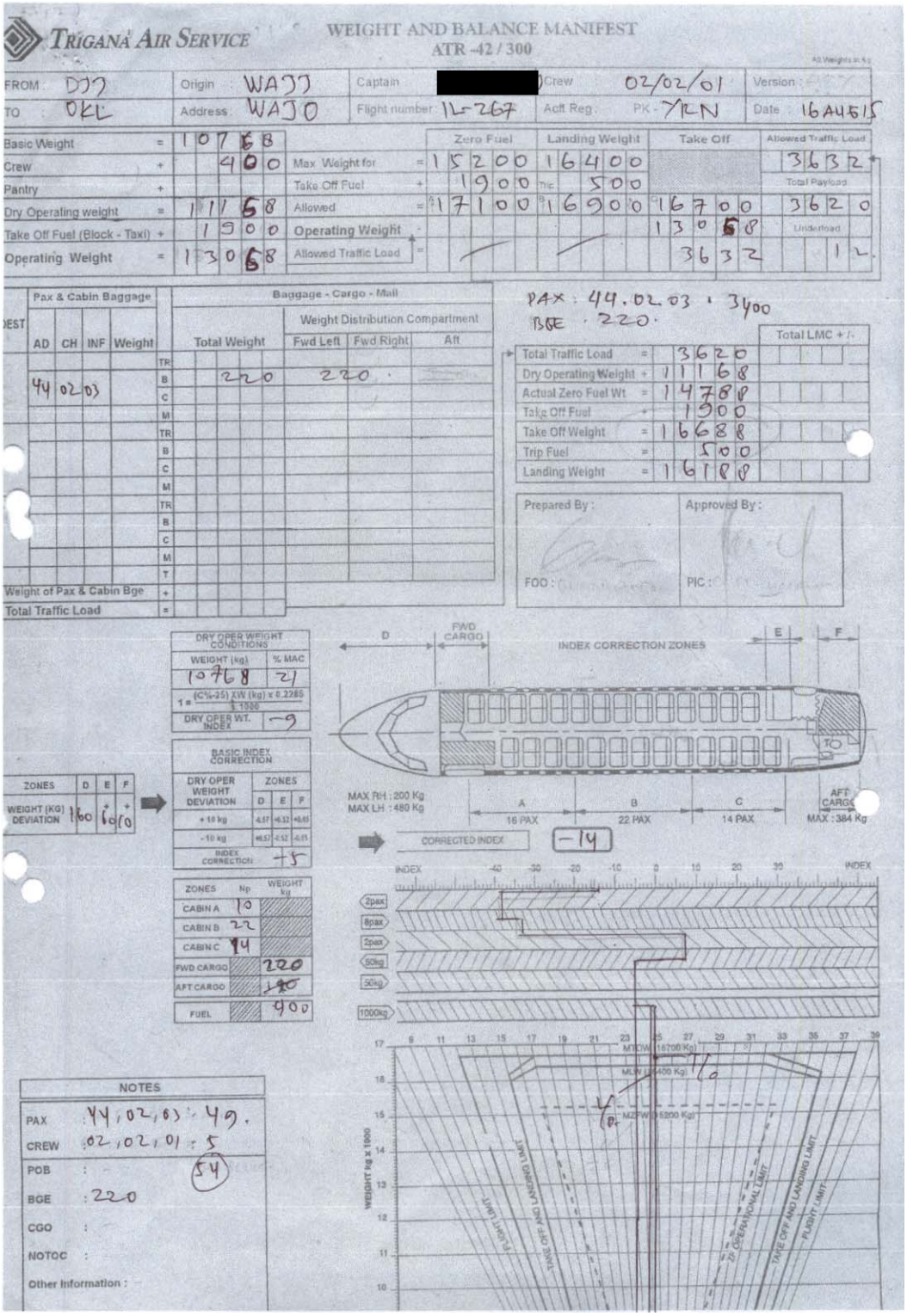
1. To emphasis the flight crew to comply with the company procedures such as crew briefing, checklist reading, approach procedure and visual flight rules (VFR) minima and provide monitoring system.
2. To ensure the maintenance data record up date includes the installed component.

4.2 Directorate General of Civil Aviation (DGCA)

To ensure that the recommendations addressed to the air operator are well implemented.

5 APPENDICES

5.1 Weight and Balance sheet



TRIGANA AIR SERVICE

WEIGHT AND BALANCE MANIFEST
ATR -42 / 300

FROM : DJJ	Origin : WAJJ	Captain : [redacted]	Crew : 02/02/01	Version :		
TO : OKL	Address : WAJO	Flight number : IL-267	Acft Reg : PK - YRN	Date : 16AUG15		

		Zero Fuel	Landing Weight	Take Off	Allowed Traffic Load
Basic Weight	= 10768				
Crew	+ 400	Max. Weight for	= 15200	16400		3632
Pantry	+	Take Off Fuel	+ 1900	TIC 500		Total Payload
Dry Operating weight	= 11168	Allowed	= A 17100	B 16900	16700	3620
Take Off Fuel (Block - Taxi)	+ 1900	Operating Weight			13068	Underload
Operating Weight	= 13068	Allowed Traffic Load	=		3632	12

	Pax & Cabin Baggage				Baggage - Cargo - Mail			
	AD	CH	INF	Weight	Total Weight	Weight Distribution Compartment: Fwd Left	Fwd Right	Aft
TR								
B	44	02	03		220	220		
C								
M								
TR								
B								
C								
M								
TR								
B								
C								
M								
T								
Weight of Pax & Cabin Bge	+							
Total Traffic Load	=							

PAX : 44.02.03 : 3400
BGE : 220.

		Total LMC + / -
Total Traffic Load	= 3620	
Dry Operating Weight	+ 11168	
Actual Zero Fuel Wt	= 14788	
Take Off Fuel	+ 1900	
Take Off Weight	= 16688	
Trip Fuel	= 500	
Landing Weight	= 16188	

Prepared By :	Approved By :
FOO :	PIC :

DRY OPER WEIGHT CONDITIONS

WEIGHT (kg)	% MAC
10768	21
1 = (C%-25) X/W (kg) x 0.2285 / 1000	
DRY OPER WT. INDEX	-9

BASIC INDEX CORRECTION

DRY OPER WEIGHT DEVIATION	ZONES D	E	F
+ 10 kg	+0.57	+0.32	+0.65
- 10 kg	-0.57	-0.32	-0.65
INDEX CORRECTION		+5	

ZONES	D	E	F
WEIGHT (KG) DEVIATION	160	100	+

ZONES	Np	WEIGHT kg
CABIN A	10	
CABIN B	22	
CABIN C	14	
FWD CARGO		220
AFT CARGO		~~120~~
FUEL		400

INDEX CORRECTION ZONES

MAX RH : 200 Kg
MAX LH : 480 Kg
A 16 PAX
B 22 PAX
C 14 PAX
AFT CARGO MAX : 384 Kg

CORRECTED INDEX -14

NOTES	
PAX	44,02,03 : 49.
CREW	02,02,01 : 5
POB	: 54
BGE	: 220
CGO	:
NOTOC	:
Other Information :	