

PRELIMINARY
KNKT.10.02.05.04

**NATIONAL
TRANSPORTATION
SAFETY
COMMITTEE**

Aircraft Serious Incident Investigation Report

PT. Metro Batavia Airline

Boeing 737-200; PK-YTR

Juanda International Airport, Surabaya

Republic of Indonesia

13 February 2010



**NATIONAL TRANSPORTATION SAFETY COMMITTEE
MINISTRY OF TRANSPORTATION
REPUBLIC OF INDONESIA
2010**

This Preliminary Factual Report was produced by the National Transportation Safety Committee (NTSC), Karya Building 7th Floor Ministry of Transportation, Jalan Medan Merdeka Barat No. 8 JKT 10110, Indonesia.

The report is based upon the investigation carried out by the NTSC in accordance with Annex 13 to the Convention on International Civil Aviation, Aviation Act (UU No.1/2009), and Government Regulation (PP No. 3/2001).

Readers are advised that the NTSC investigates for the sole purpose of enhancing aviation safety. Consequently, NTSC reports are confined to matters of safety significance and may be misleading if used for any other purpose.

As NTSC believes that safety information is of greatest value if it is passed on for the use of others, readers are encouraged to copy or reprint for further distribution, acknowledging NTSC as the source.

When the NTSC makes recommendations as a result of its investigations or research, safety is its primary consideration. However, the NTSC fully recognizes that the implementation of recommendations arising from its investigations will in some cases incur a cost to the industry.

Readers should note that the information in NTSC reports and recommendations is provided to promote aviation safety. In no case is it intended to imply blame or liability.

TABLE OF CONTENTS

TABLE OF CONTENTS.....	i
FIGURES.....	ii
GLOSSARY OF ABBREVIATIONS.....	iii
INTRODUCTION.....	1
1 FACTUAL INFORMATION.....	3
1.1 History of the Flight	3
1.2 Injuries to Persons	4
1.3 Damage to Aircraft.....	4
1.4 Other Damage.....	5
1.5 Personnel information	6
1.5.1 Pilot in command.....	6
1.5.2 Co-pilot.....	7
1.6 Aircraft information.....	8
1.6.1 Aircraft Data.....	8
1.6.2 Engines	8
1.6.3 Weight and Balance (W&B).....	8
1.7 Meteorological Information.....	10
1.8 Aids to Navigation.....	10
1.9 Communications.....	10
1.10 Aerodrome information.....	10
1.11 Flight Recorders	11
1.11.1 Flight Data Recorder	11
1.11.2 Cockpit Voice Recorder	12
1.12 Wreckage and Impact information	12
1.13 Medical and Pathological Information	13
1.14 Fire.....	13
1.15 Survival Aspects.....	13
1.16 Tests and Research	13
1.17 Organizational and Management Information.....	14
1.18 Additional Information.....	14
1.19 Useful or Effective Investigation Technique.....	14

FIGURES

Figure 1: Serious incident location	4
Figure 2: Main landing gear wheels one and two	5
Figure 3: Main landing gear wheels three and four	5
Figure 4: Runway damage	6
Figure 5: Load sheet.....	9
Figure 6: Flight Data Recorder	11
Figure 7: Cockpit Voice Recorder	12
Figure 8: The aircraft at the final position (N6 intersection)	13

GLOSSARY OF ABBREVIATIONS

AD	:	Airworthiness Directive
AFM	:	Airplane Flight Manual
AGL	:	Above Ground Level
ALAR	:	Approach-and-Landing Accident Reduction
AMSL	:	Above Mean Sea Level
AOC	:	Air Operator Certificate
ATC	:	Air Traffic Control
ATPL	:	Air Transport Pilot License
ATS	:	Air Traffic Service
ATSB	:	Australian Transport Safety Bureau
Avsec	:	Aviation Security
BMG	:	Badan Meterologi dan Geofisika
BOM	:	Basic Operation Manual
°C	:	Degrees Celsius
CAMP	:	Continuous Airworthiness Maintenance Program
CASO	:	Civil Aviation Safety Officer
CASR	:	Civil Aviation Safety Regulation
CPL	:	Commercial Pilot License
COM	:	Company Operation Manual
CRM	:	Cockpit Recourses Management
CSN	:	Cycles Since New
CVR	:	Cockpit Voice Recorder
DFDAU	:	Digital Flight Data Acquisition Unit
DGCA	:	Directorate General Civil Aviation
DME	:	Distance Measuring Equipment
EEPROM	:	Electrically Erasable Programmable Read Only Memory
EFIS	:	Electronic Flight Instrument System
EGT	:	Exhaust Gas Temperature
EIS	:	Engine Indicating System
FL	:	Flight Level
F/O	:	First officer or Copilot
FDR	:	Flight Data Recorder
FOQA	:	Flight Operation Quality Assurance
GPWS	:	Ground Proximity Warning System
hPa	:	Hectopascals

Hrs	:	Hours
ICAO	:	International Civil Aviation Organization
IFR	:	Instrument Flight Rules
IIC	:	Investigator in Charge
ILS	:	Instrument Landing System
Kg	:	Kilogram(s)
Km	:	Kilometer(s)
Kts	:	Knots (nm/hours)
Mm	:	Millimeter(s)
MTOW	:	Maximum Take-off Weight
NM	:	Nautical mile(s)
KNKT/NTSC	:	Komite Nasional Keselamatan Transportasi / National Transportation Safety Committee
PIC	:	Pilot in Command
QFE	:	Height above airport elevation (or runway threshold elevation) based on local station pressure
QNH	:	Altitude above mean sea level based on local station pressure
RESA	:	Runway End Safety Area
RPM	:	Revolution per Minutes
R/W	:	Runway
ROV	:	Remotely Operated Vehicle
SCT	:	Scattered
S/N	:	Serial Number
SSCVR	:	Solid State Cockpit Voice Recorder
SSFDR	:	Solid State Flight Data Recorder
TS/RA	:	Thunderstorm and rain
TAF	:	Terminal Aerodrome Forecast
TPL	:	Towed Pinger Locator
TSN	:	Time since New
TT/TD	:	Ambient Temperature/Dew Point
UTC	:	Universal Time Coordinate
VFR	:	Visual Flight Rules
VMC	:	Visual Meteorological Conditions

INTRODUCTION

SYNOPSIS

On 13 February 2010, a Boeing 737-200 aircraft, registered PK-YTR, operated by PT. Metro Batavia as flight number 7P.735, departed from Juanda International Airport (SUB), Surabaya to Hasanudin International Airport (UPG), Makassar. The flight plan indicated that the flight was to be conducted in accordance with the Instrument Flight Rules (IFR). There were 125 persons on board; two pilots, three flight attendants and 120 passengers. The Pilot in Command (PIC) was the support monitoring pilot, and the copilot was the handling pilot for the sector.

The aircraft commenced the take-off roll on runway 10 at 0235 UTC (0935 LT). Approximately 300 meters after commencing the take-off roll, main-wheel tire number one (left outboard) exploded followed by tire number two (left inboard) approximately 1,100 meters further along the runway. Both tires shredded and the aircraft rolled along the runway on the wheel rims.

The copilot decided to abort the takeoff and stopped the aircraft at intersection N6, approximately 350 meters from the departure end of runway 10. Tires numbers three and four deflated.

The pilots did not declare an emergency. Passengers disembarked normally from the forward left passenger door using air stairs. They were transported by bus to the airport terminal. None of the aircraft's occupants were injured.

The investigation is continuing and will include a detailed examination of the left main wheel assemblies.

1 FACTUAL INFORMATION

1.1 HISTORY OF THE FLIGHT

On 13 February 2010, a Boeing 737-200 aircraft, registered PK-YTR, operated by PT. Metro Batavia as flight number 7P.735, departed from Juanda International Airport (SUB), Surabaya to Hasanudin International Airport (UPG), Makassar. The flight plan indicated that the flight was to be conducted in accordance with the Instrument Flight Rules (IFR). There were 125 persons on board; two pilots, three flight attendants and 120 passengers. The Pilot in Command (PIC) was the support monitoring pilot, and the copilot was the handling pilot for the sector.

The aircraft commenced the take-off roll on runway 10 at 0235 UTC¹ (0935 LT). Approximately 300 meters after commencing the take-off roll, main-wheel tire number one (left outboard) exploded followed by tire number two (left inboard) approximately 1,100 meters further along the runway. Both tires shredded and the aircraft rolled along the runway on the wheel rims.

The copilot decided to abort the takeoff and stopped the aircraft adjacent to taxiway N6, approximately 350 meters from the departure end of runway 10. Tires numbers three and four deflated.

The pilots did not declare an emergency. Passengers disembarked normally from the forward left passenger door using air stairs. They were transported by bus to the airport terminal. None of the aircraft's occupants were 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, East Indonesia standard Time (Waktu Indonesia Timur (WIT)) is UTC +9 hours.

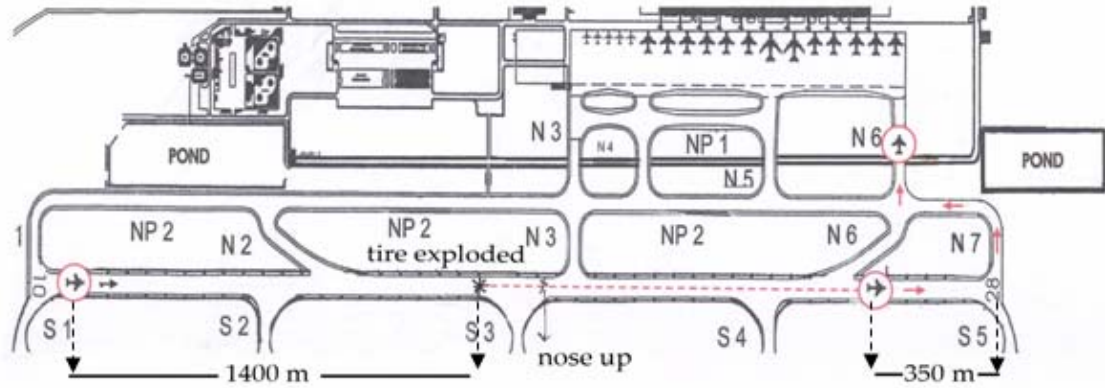


Figure 1: Serious incident location

1.2 INJURIES TO PERSONS

Table 1: Injuries to persons

Injuries	Flight crew	Passengers	Total in Aircraft	Others
Fatal	-	-	-	-
Serious	-	-	-	-
Minor	-	-	-	Not applicable
Nil Injuries	5	120	125	Not applicable
TOTAL	5	120	125	-

1.3 DAMAGE TO AIRCRAFT

The tires on main landing gear wheels one and two shredded, and tires three and four deflated. There was no other damage to the aircraft.



Figure 2: Main landing gear wheels one and two



Figure 3: Main landing gear wheels three and four

1.4 OTHER DAMAGE

The asphalt surface of runway 10 was damaged by the number-one and – two main landing gear wheels for a distance of approximately 925 meters between taxiways N3 and N6.



Figure 4: Runway damage

1.5 PERSONNEL INFORMATION

1.5.1 Pilot in command

Gender	: Male
Date of birth	: 12 April 1971
Nationality	: Indonesia
License	: Airline Transport Pilot License No: 5062
Date of issued	: 7 July 2008
Valid to	: 25 May 2010
Aircraft type rating	: Boeing 737-200
Medical certificate	: Class 1
Date of medical	: 5 January 2010
Valid to	: 5 July 2010
Last proficiency check	: 25 November 2009
Total hours	: 5,000 hours
Last 90 days	: 107 hours

Last 30 days : 32 hours
Last 24 hours : 0 hours

1.5.2 Co-pilot

Gender : Male
Date of birth : 28 June 1961
Nationality : Indonesia
License : Airline Transport Pilot
License, No: 3021

Date of issued : 12 December 1988
Valid to : 22 October 2010
Aircraft type rating : B737-200
Medical certificate : 4 January 2010
Date of medical : 4 January 2010
Valid to : 4 July 2010
Last proficiency check : 22 October 2009
Total hours : 14,700 hours
Last 90 days : 185 hours
Last 30 days : 69 hours
Last 24 hours : 0 hours

1.6 AIRCRAFT INFORMATION

1.6.1 Aircraft Data

Aircraft manufacturer	: Boeing Company
Aircraft model/type	: Boeing 737-200
Serial number	: 21766
Year of manufacture	: 1979
Aircraft registration	: PK-YTR
Certificate of Registration	: No.2266
Valid to	: 14 August 2011
Certificate of Airworthiness	: No.2266
Valid to	: 10 July 2010
Total time since new	: 62,454 hours

1.6.2 Engines

Engine type	: Turbofan
Manufacturer	: Pratt and Whitney
Model	: JT8D-17
Engine number One (left)	
Serial Number	: 709443
Total Time Since New	: 42,864 hours
Total Time Since Overhaul	: 1,576 hours
Engine number two (Right)	
Serial Number	: 688545
Total time since new	: 68,449 hours
Total time since overhaul	: 2,701 hours

1.6.3 Weight and Balance (W&B)

The operator provided the following completed weight and balance sheet that was used for the flight.

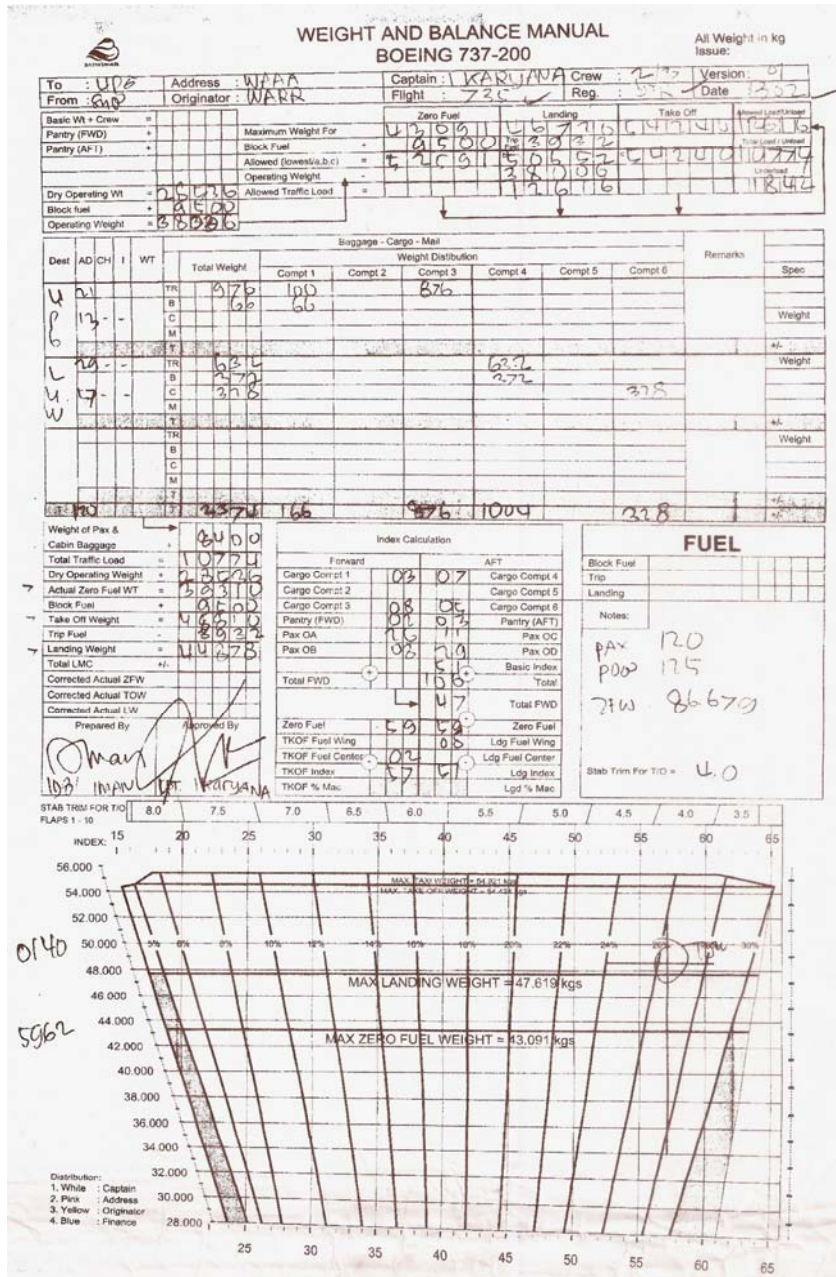


Figure 5: Load sheet

1.7 METEOROLOGICAL INFORMATION

Surface wind : 200/06 Kts
Visibility : 10 Km
Present weather : Nil
Cloud : Few 2000
Temperature : 29 C
Dew Point : 24 C
QNH : 1011 Mbs

1.8 AIDS TO NAVIGATION

Not relevant to this serious incident investigation.

1.9 COMMUNICATIONS

Communication was normal and the crew had no difficulty communicating with the Surabaya aerodrome controller during the take off.

1.10 AERODROME INFORMATION

Aerodrome Code : WARR
Airport Name : Juanda International Airport
Airport Address : Jl. Ir.Juanda No.1 Sidoarjo, Surabaya,
East Java 61235 1A
Airport Class : I A
Airport Authority : Directorate General of Civil Aviation
Airport Service : No Information
Coordinates : 07°22'50" S / 112°47'10" E
Elevation : 9 feet
Runway Length : 3,000 meters
Runway Width : 45 meters
Azimuth : 10 / 28

1.11 FLIGHT RECORDERS

The aircraft was equipped with a Flight Data Recorder (FDR) and a Cockpit Voice Recorder (CVR).

1.11.1 Flight Data Recorder

FDR Manufacturer : Honeywell
Model : 980-4120-GQUS
Serial Number : 20473



Figure 6: Flight Data Recorder

1.11.2 Cockpit Voice Recorder

CVR Manufacturer : Honeywell
Model : 93A100-80
Serial Number : 56473



Figure 7: Cockpit Voice Recorder

1.12 WRECKAGE AND IMPACT INFORMATION

Apart from the main landing gear wheel assemblies, the aircraft was not damaged.



Figure 8: The aircraft at the final position (N6 intersection)

1.13 MEDICAL AND PATHOLOGICAL INFORMATION

No medical or pathological examinations were required.

1.14 FIRE

There was no pre- or post- serious incident fire.

1.15 SURVIVAL ASPECTS

None of the aircraft's occupants were injured.

1.16 TESTS AND RESEARCH

No tests or research were performed up to the date of issuing the Preliminary Report.

1.17 ORGANIZATIONAL AND MANAGEMENT INFORMATION

Aircraft Owner : PT. Metro Batavia
Aircraft Operator : PT. Metro Batavia
Jl. Ir. H. Juanda, No.15 Jakarta
Republic of Indonesia.
AOC : 121-007

1.18 ADDITIONAL INFORMATION

This serious incident caused the closure of runway 10 for about 4 hours.

The investigation is continuing and will include a detailed examination of the left main wheel assemblies.

1.19 USEFUL OR EFFECTIVE INVESTIGATION TECHNIQUE

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