

# Investigation Report

The Investigation Report was written in accordance with para 18 Law Relating to the Investigation into Accidents and Incidents Associated with the Operation of Civil Aircraft stating facts only.

## Identification

Type of Occurrence:	Accident
Date:	24 August 2008
Location:	Munich
Aircraft:	Transport aircraft
Manufacturer / Model:	ATR-GIE Avions de Transport Regional / ATR 72-212A
Injuries to Persons:	One passenger seriously injured, one crew member slightly injured
Damage:	Aircraft severely damaged
Other Damage:	None
Information Source:	Investigation by BFU
State File Number:	BFU AX003-08

## Factual Information

### History of the Flight

At 1954 hrs<sup>1</sup> the ATR was stationary at taxi hold point B12 when it was given clearance to enter runway 26L. The clearance was given immediately after an Airbus A320 had commenced its take-off run on runway 26L. Twenty seconds later, the ATR was cleared for take-off from runway 26L and confirmed receipt of the message. Forty seconds later the tower asked the ATR to begin the take-off run, because otherwise another aircraft then on approach would have to go around. The ATR confirmed the immediate commencement of the take-off run. Six seconds later the tower instructed the ATR to abort the take-off: "[Call sign] disregard departure clearance vacate first high-speed to the right again." The ATR followed the instruction and was then cleared via taxiway T to return to taxi hold point B14 for runway 26L. (see appendix).

On arrival at hold point B14, the crew noted that the brake temperature indicated was excessive. At 2002 hrs the tower asked the ATR crew if they were ready for an immediate take-off, to which they replied in the negative. Seventy seconds later the crew of another aircraft reported by radio: "[...] Air Dolomiti you are on fire at B14 your left tyre is on fire." A few seconds later the tower gave the alarm and 59 passengers and four crew members left the aircraft via the rear left door and the front left emergency exit. The fire service reached the aircraft shortly thereafter and extinguished the fire, which by then had spread from the tyre to the undercarriage fairing.

During the evacuation, one female passenger broke her left forearm.

### Personnel Information

The 42 year-old pilot was an Italian citizen with an Air Transport Pilot's Licence (ATPL (A)), issued on 27 May 2003 in accordance with national law and conforming with ICAO standards. The licence included a Type Rating for the ATR 42/72 valid until 6 May 2009.

The 33 year-old co-pilot was an Italian citizen with a Commercial Pilot's Licence (CPL(A)), issued on 8 September 2003 in accordance with national law and

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<sup>1</sup> All times local, unless otherwise stated.

conforming with ICAO standards. The licence included a Type Rating for the ATR 42/72 valid until 14 August 2009.

## Aircraft Information

The ATR 72-212A is a transport aircraft with a maximum gross weight of 22.5 t and bears the manufacturer's serial number 543.

The airplane is equipped with two Pratt & Whitney PW 127 turboprop engines.

The aircraft was registered in Italy and operated by an Italian company.

## Meteorological Information

The accident happened in daylight with visibility better than 10 km. The wind was 020°/3 kt. The temperature was about 18°C, and the dew point about 10°C. Barometric air pressure (QNH) was 1,015 hPa.

## Aids to Navigation

During taxi, the ATR was followed and recorded by ground radar (ASMR). Extracts from the recordings were available to the BFU for evaluation and are depicted in the appendix.

## Radio Communications

Radio communications between the aircraft, Munich Tower and Munich Ground respectively, were recorded, and the transcription made available to the BFU. Relevant passages are part of the factual information.

## Wreckage and Impact Information

Damage to the aircraft related to the left main landing gear and the surrounding fuselage fairing (see photo).

Examination of the left landing gear showed that a brake cylinder on the inner wheel of the left landing gear had ruptured. Two others had been deformed. The brake was examined in detail at the component manufacturer in the presence of the French safety investigation authority BEA, and the examination revealed that the damages had been caused by overheating. A thermal analysis determined that normal taxiing

to the runway, rejected take-off, and the taxiing back to the taxi hold point could not heat up the brake to an extent which would cause the found damages.

## Fire

Inspection of the aircraft on-site revealed that fire started on the inner of the two tyres on the left main landing gear. The fire then spread to the outer tyre and the landing gear fuselage fairing immediately above. The fuselage area above the landing gear was blackened by soot.

The Airport Fire Service extinguished the fire before it could spread further into the fuselage and wing.

Investigator in charge:	Kostrzewa
Assistance:	Blanke Hempelmann Ritschel Berndt
Field Investigation:	Kostrzewa Berndt

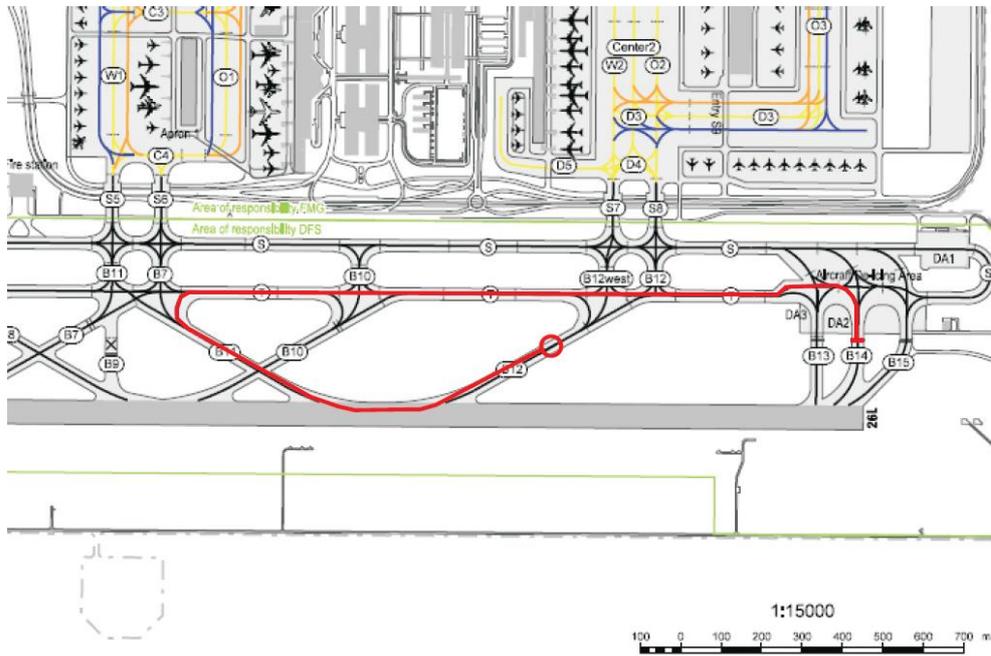
Braunschweig, 6 August 2015

## Appendices

Appendix 1: Taxiway plan

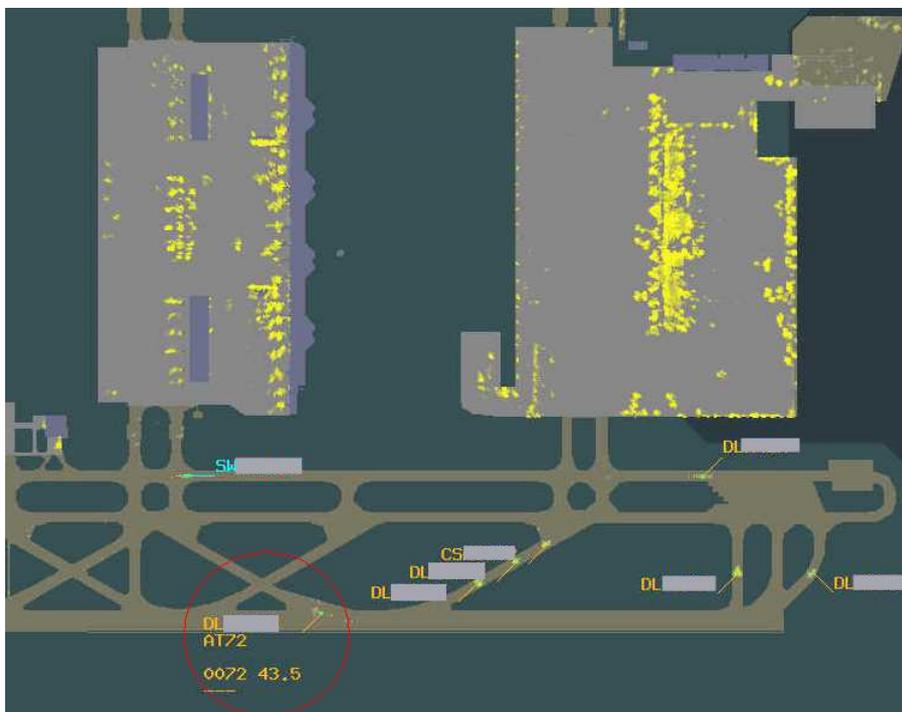
Appendix 2: Ground radar trace

Appendix 3: Damage to aircraft



Appendix 1 Taxiway plan

Source: DFS, BFU



Appendix 2 Ground radar trace

Source: DFS



Appendix 3 Damage to aircraft

Photo: BFU

This investigation was conducted in accordance with the regulation (EU) No. 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and the Federal German Law relating to the investigation of accidents and incidents associated with the operation of civil aircraft (*Flugunfall-Untersuchungs-Gesetz - FIUUG*) of 26 August 1998.

The sole objective of the investigation is to prevent future accidents and incidents. The investigation does not seek to ascertain blame or apportion legal liability for any claims that may arise.

This document is a translation of the German Investigation Report. Although every effort was made for the translation to be accurate, in the event of any discrepancies the original German document is the authentic version.

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