


Last updated: 10 October 2020

Status: Final
 Date: Monday 21 February 2011
 Time: 18:45



Type: [ATR 72-212](#)
 Operator: [TRIP Linhas Aéreas](#)
 Registration: PR-TTI
 C/n / msn: 454
 First flight: 1995-05-11 (15 years 10 months)
 Total airframe hrs: 32886
 Engines: 2 [Pratt & Whitney Canada PW124B](#)
 Crew: Fatalities: 0 / Occupants: 4
 Passengers: Fatalities: 0 / Occupants: 47
 Total: Fatalities: 0 / Occupants: 51
 Aircraft damage: Substantial
 Aircraft fate: Written off (damaged beyond repair)
 Location: Altamira Airport, PA (ATM)  [Brazil](#)
 Phase: Landing (LDG)
 Nature: Domestic Scheduled Passenger
 Departure airport: [Belém/Val-de-Cans International Airport, PA \(BEL/SBBE\)](#), Brazil
 Destination airport: [Altamira Airport, PA \(ATM/SBHT\)](#), Brazil

Narrative:

An ATR-72-212, registered PR-TTI, was damaged in a runway excursion accident at Altamira Airport, PA (ATM), Brazil. The airplane operated on a domestic flight from Belém/Val-de-Cães International Airport. The approach for landing was visual and stabilized. The touchdown on runway 25 was smooth, with gradual deceleration, in which only ground idle power was utilized.

After the 70kt callout, a strong noise was heard, and the left main gear collapsed, with the aircraft veering off to the left. The aircraft exited the runway and came to a stop in a grass area.

Probable Cause:

Contributing factors

1 Human Factor

1.1 Medical aspect

Nil.

1.2 Psychological aspect

Nil.

1.2.2 Psychosocial information

Nil.

1.2.3 Organizational information

a) Capacitation - a contributor

The lack of capacitation and training of the subcontractors' professionals for handling aircraft material hindered the execution of an efficient maintenance work as prescribed by the manufacturer's manual, culminating in inadequate machining during the maintenance process.

b) Organizational Processes - a contributor

The lack of an effective process of supervision, both on the part of TRIP Linhas Aéreas and on the part of the other contractors and subcontractors allowed the existing maintenance services' latent failures not to be checked and corrected, in a way capable of subsidizing, in an adequate and safe manner, the execution of the landing gear maintenance service. The process of supervision of the TRIP Linhas Aéreas and the AV Indústria Aeronáutica Ltda. companies by the Civil

Aviation Authority, prescribed by specific legislation in force, was not enough to mitigate the latent conditions present in the accident in question.

2 Operational Factor

2.1 Concerning the operation of the aircraft

a) Aircraft maintenance - a contributor

According to the technical opinion issued by the DCTA, the AFT PIVOT PIN (D61000 and SN 25) presented fracture surfaces with $\pm 45^\circ$ inclination, as well as a flat area with multiple initiations, indicative of a fracture mechanism related to fatigue.

In examinations of the external surface of the pin, in a region close to the fatigue fracture, cracks were observed that had initiated from scratches created by an inadequate maintenance machining process.


In the region where the overload-related fracture occurred, it was also possible to identify that the machining process had modified the profile of the part in the section transition region, by producing a depression. Thus, it can be said that the AFT PIVOT PIN (D61000 and SN 25) of the PR-TTI left main gear broke on account of fatigue, whose onset was facilitated by an inadequate machining process that had been performed in the section transition region of the pin.

3 Material Factor

Not a contributor.

Accident investigation:




Investigating agency: CENIPA 

Status: Investigation completed

Duration: 2 years and 9 months

Accident number: A - 012/CENIPA/2013

Download report:  [Final report](#)

Classification:

[Landing gear collapse](#)

[Runway excursion](#)

Sources:

- » [Pista de Aeroporto de Altamira segue parcialmente interditada \(G1\)](#)
- » [REGISTRO FOTOGRÁFICO DO ACIDENTE COM AVIÃO DA TRIP EM ALTAMIRA. \(SBHT\)](#)

Follow-up / safety actions

CENIPA issued 6 Safety Recommendations

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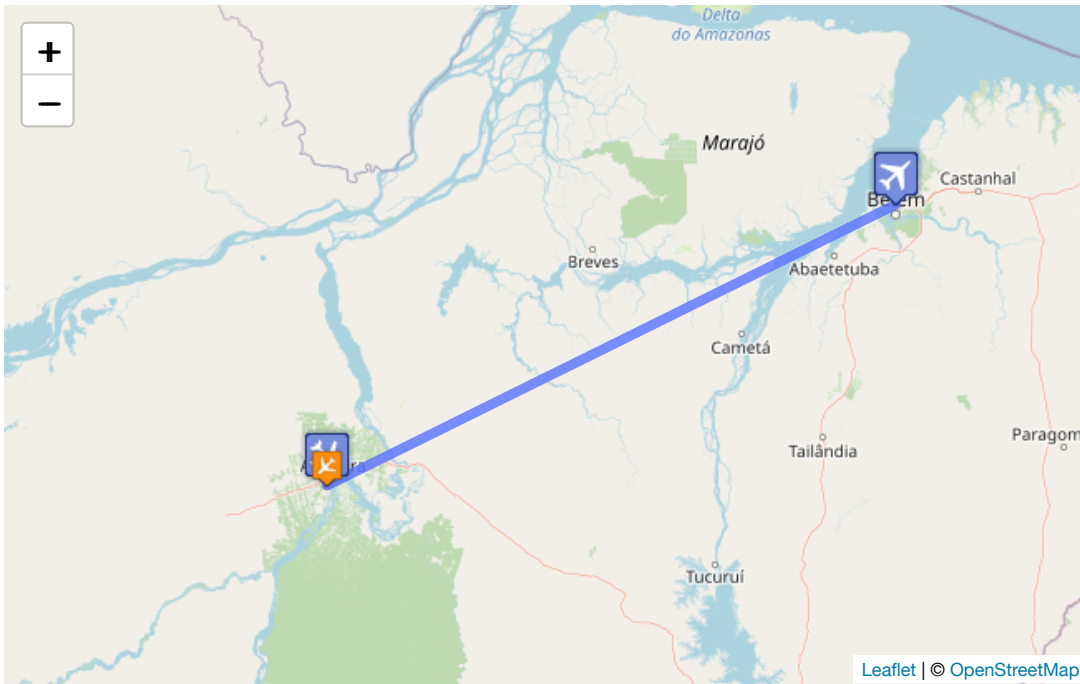
Photos



Map

This map shows the airport of departure and the intended destination of the flight. The line between the airports does not display the exact flight path.

Distance from Belém/Val-de-Cans International Airport, PA to Altamira Airport, PA as the crow flies is 466 km (292 miles).



This information is not presented as the Flight Safety Foundation or the Aviation Safety Network’s opinion as to the cause of the accident. It is preliminary and is based on the facts as they are known at this time.

languages: 

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