

Flying on Empty

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Air Transat Flight 236

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Flight Info



Toronto, Canada ► Lisbon, Portugal



Air Transat - Airbus A330



23-24/08/2001



8:52 PM (ET)



306 (293 passengers + 13 crew members)

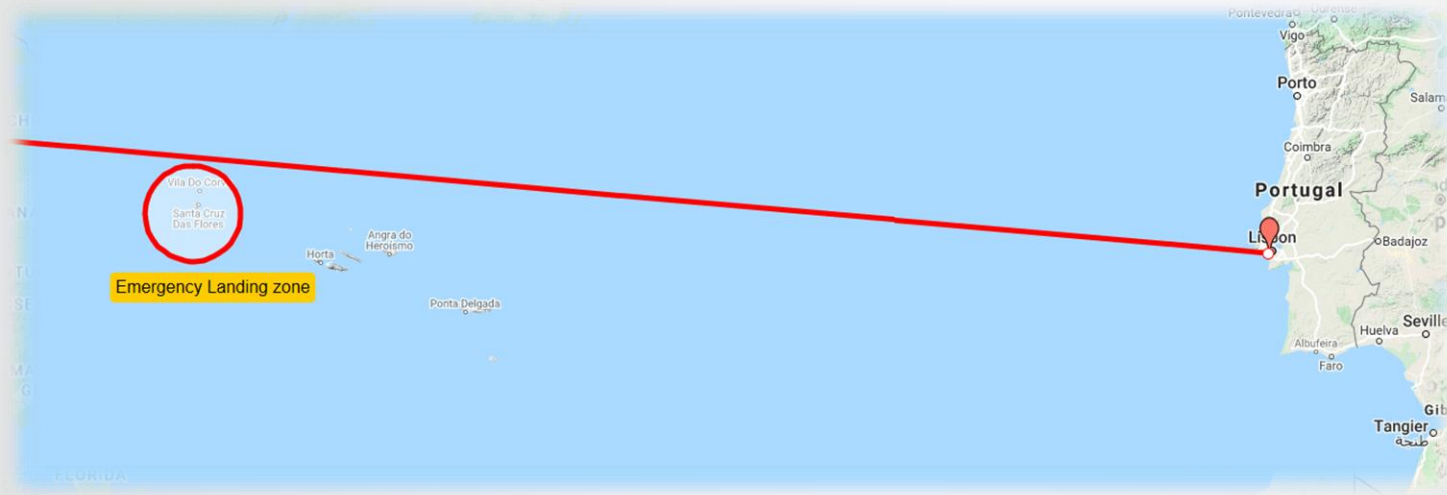


Captain
Robert Piché
Age: 48



First officer
Dirk de Jager
Age: 28

Overall Situation



Landing speed: 200 knots (370 km/h)

Landing run: 2.3 km

Runaway length: 3 km

No victims

2 people seriously injured

Standard Flight Routine

- Take off time: 8:52 PM (ET)
- Initial fuel weight: 46.9 t
- Route adjustments: 60 miles South
- Time flown without any problem: 5 hours

First Problems

- Low temperature and high pressure warning
- Flight manual gave no information
- Control centre advised monitoring oil level
- Crew suspected false readings
- No other problem for next 30 minutes



Snowball Effect

- Significantly lower fuel level in right engine
- Flight manual suggested crossfeed
- Calculations discovering a fuel leak
- Decision to divert the flight
- Right engine shuts down
- 13 minutes later left engine cuts out

Bad situation

Nearest land: Lajes airport - 280 km away

Altitude: 12 000 m

Ram air turbine deploys

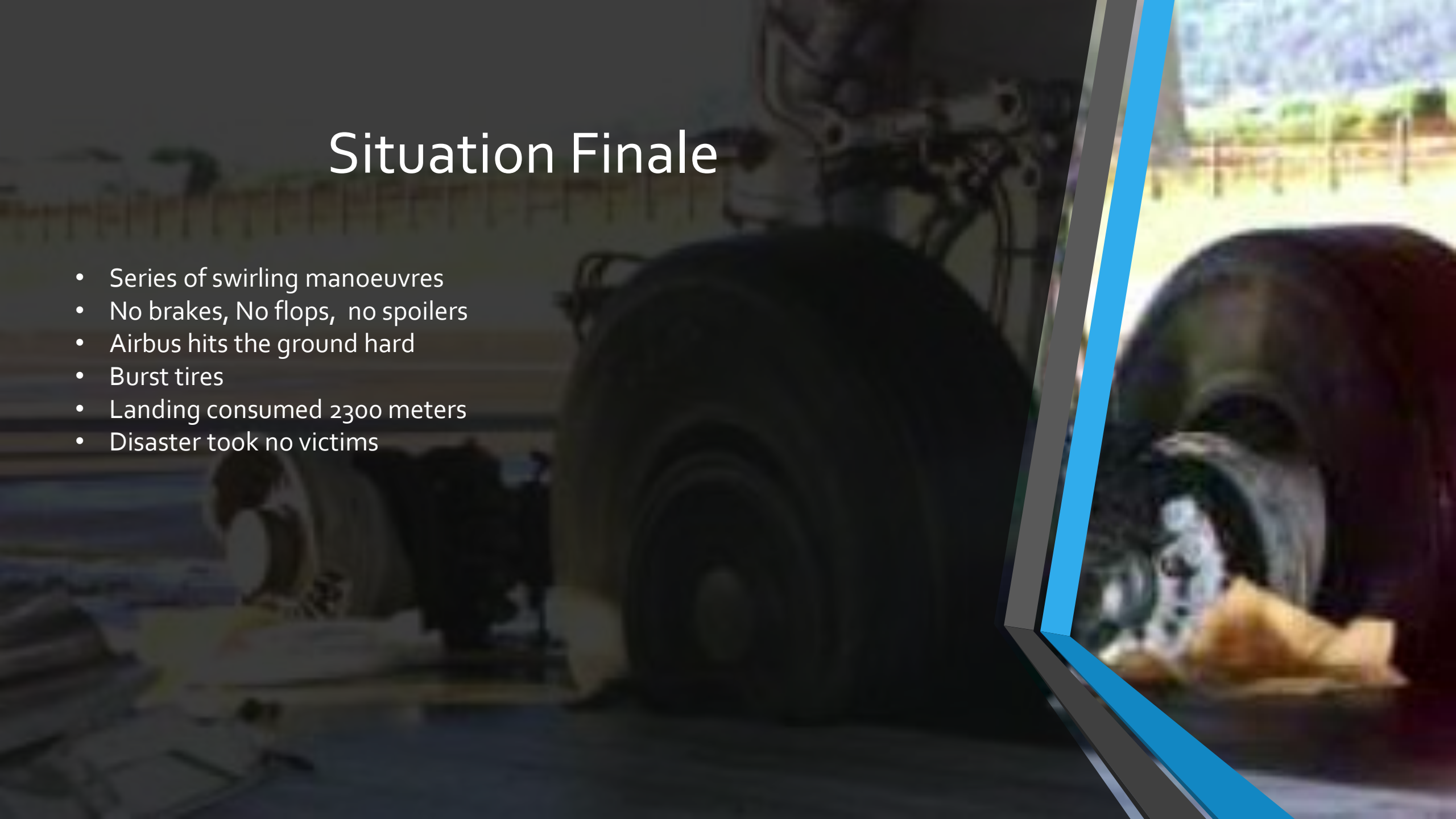
Passengers must wear life jackets

Oxygen masks drop down



Situation Finale

- Series of swirling manoeuvres
- No brakes, No fops, no spoilers
- Airbus hits the ground hard
- Burst tires
- Landing consumed 2300 meters
- Disaster took no victims



Investigation

- Aviation Accidents Prevention and Investigation Department investigated the accident along with Canadian and French authorities
- Engine number 2 faulty maintenance
- Replacement unit supplied with a hydraulic pump
- Incompatible part from a similar model
- Few millimetres of difference caused the fuel line rupture
- Pilots marginalised warnings



Aftermath

- Flight manuals now have more procedures about fuel leaks
- Air Transit cares more about pilots' knowledge of the manual
- Rolls Royce announced the incompatibility of the relevant part engines
- Onboard computer have more sensors



Resources:

- https://en.wikipedia.org/wiki/Air_Transat_Flight_236
- <https://www.dailymotion.com/video/x1162dc>