

**REPORT**

HCLJ510-2013-181	Serious incident	
Aircraft:	ATR 72-212	Registration: E7 - AAD
Engines:	2 - PW 127	Flight: Scheduled, IFR
Crew:	4 - no injuries	Passengers: 38 – no injuries
Place:	Copenhagen Airport, Kastrup (EKCH)	Date og time: 14.1.2013 at 09:17 UTC

All times in this report is UTC.

The Aviation Unit of the Danish Accident Investigation Board (AIB) was notified of the serious incident by the Area Control Centre in Copenhagen Airport, Kastrup on 14.1.2013 at 09:50.

Factual information**History of the flight**

The serious incident occurred on a flight from Sarajevo (LQSA) to Copenhagen (EKCH).

The aircraft landed on runway 22L.

Just after touch down the commander who was pilot flying (PF) retarded the engine power levers (PL) to position ground idle (GI). The left engine engaged the GI, but the right engine did not follow the command.

The aircraft started to veer to the left and the PF tried to select reverse on both engines in order to compensate for the left momentum. At the same time the first officer who was the pilot not flying (PNF), called out twice “one low pitch”, which warned the PF that only one engine was in ground idle.

As the aircraft continued to veer to the left the PF tried to regain directional control by right hand (RH) rudder input and the use of right wheel brakes. The aircraft continued to veer to the left and ran off the side of the runway and entered the safety zone (short grass) with the left hand runway marking lights to the right of the aircraft.

After approximately 350 meters in the safety zone the PF regained control of the aircraft and entered runway 22L again.

The PF taxied the aircraft with low taxi speed to the nearby taxiway B5 and stopped. The flight crew informed ATC about the runway excursion and requested taxi instruction to the gate.

The request was granted after the fire and recues brigade on scene confirmed that there was no visually damage to the aircraft.

The serious incident took place in daylight and under visual meteorological conditions (VMC).

Damage to aircraft

There was no damage to the aircraft



Personnel information

The commander held a valid ATPL (A) (Airline Transport Pilot Licence) and a Medical Certificate without limitations.

Flight experience until the day of the serious incident:

Total flight hours: 4900

Total flight hours on ATR-72: 4600

The first officer held a valid ATPL (A) (Airline Transport Pilot Licence) and a Medical Certificate without limitations.

Flight experience until the day of the serious incident:

Total flight hours: 5000

Total flight hours on ATR-72: 4700

Technical investigation

The investigation was conducted at an authorized operator with an approved maintenance shop and with a representative from the Danish AIB present.

A visual inspection of the aircraft revealed that the runway excursion did not lead to any aircraft damage.

A trouble shooting of the right propeller system was initiated according to the Maintenance Manual 61-27-00 page 110.

The PEC (Propeller Electronic computer) had two fault codes (fault code 03 and 27). Both codes indicated failure to the ground fine pitch system and would appear when the PLA (power lever angle) was moved to a position below flight idle and for some reason the propeller blade did not follow the command. Normal taxi and reverse functions would be unavailable.

With reference to Maintenance Manual, the trouble shooting was completed and neither mechanical nor adjustments discrepancies were discovered. The failure codes in the PEC were reset, an engine run up was performed according to procedures and the propeller system operation was satisfactory.

The aircraft was released for further operation by the authorized operator.

Meteorological information

Metar EKCH 140850 13016kt 9km sct3500 m02/m07q1020 r04/420278 nosig

Aerodrome information

Name:	Copenhagen Airport, Kastrup
Location indicator:	EKCH
Position:	4, 4 NM southeast of Copenhagen (55 37 04,50N / 012 39 21,50E)
Traffic permitted:	IFR / VFR
Firefighting / rescue:	Approved to category 9 (ICAO Annex 14) and rescue boats.
Runway 22L:	Asphalt, dimensions 3.300 x 45m, elevation 8ft. Slope less than 0, 2%
Lightning runway 22L:	PAPI, ALS, THR, TDZ 22L Centre line, Edge, End
Navigation aids:	VOR, ILS, and DME.

Runway 22L was dry at the time of the serious incident, but with 2 mm of dry snow on both sides of the paved zone.

Operational information

After touch down the PF selected the power levers to GI but the right engine propeller blades did not follow the command. The right engine pitch light remained off, disabling the use of right engine reverse thrust, while the left engine low pitch light illuminated.

The aircraft started to veer slightly to the left.

With main and nose landing gear on ground the PF applied reverse thrust on both engines and the aircraft veered strongly to the left. At the same time the PNF called out “one low pitch ” according to Standard Operational Procedures (SOP). This call out informs the PF that only one set of the propellers on one engine is in ground fine pitch.

PF cancelled the application of reverse and applied full right rudder and aileron deflection and made use of wheel brakes.

The aircraft exited the runway about 1250 meters from the runway 22L threshold and the lateral deviation reached about 60 meter to the left of the center line. It corresponded to a lateral excursion of about 17, 5 meters beyond the left border of runway 22L.

With low taxi speed the aircraft returned to the runway about 1600 meters from the runway 22L threshold.

At the time of the runway excursion the crosswind component from the left was 16 knots.

Operational Procedures

*ATR 72 Flight Crew Operational Manual
Procedures and Techniques 2.02.12*

Landing:

As soon as main landing gear is on ground:

- *Control nose wheel impact*
- *Both Power levers: ground idle*
- *Both LO PITCH lights: check illuminated.*

Caution: *if a thrust dissymmetry occurs or if one LO PITCH light is not illuminated, the use of any reverser is not allowed*

In this case the propeller pitch change mechanism is probably locked at a positive thrust for any PL position.

Additional information

Subsequently, the Operator took the following action in regard to the operational procedures:

To revise 2013 Flight Crew Recurrent Training program both on ground and simulator parts by refreshment sessions on landing procedures in accordance with FCOM 2.02.12 with special attention to procedure and call outs in case of “one low pitch” indication including procedures following failures in PEC system.

Conclusion

Upon landing the right hand PEC system failed. An inadequate action and not according to SOP, the reverse thrust with one LO PITCH light not illuminated was initiated and together with left hand crosswind component at 16 knots, worsening the asymmetric forces to the left.