



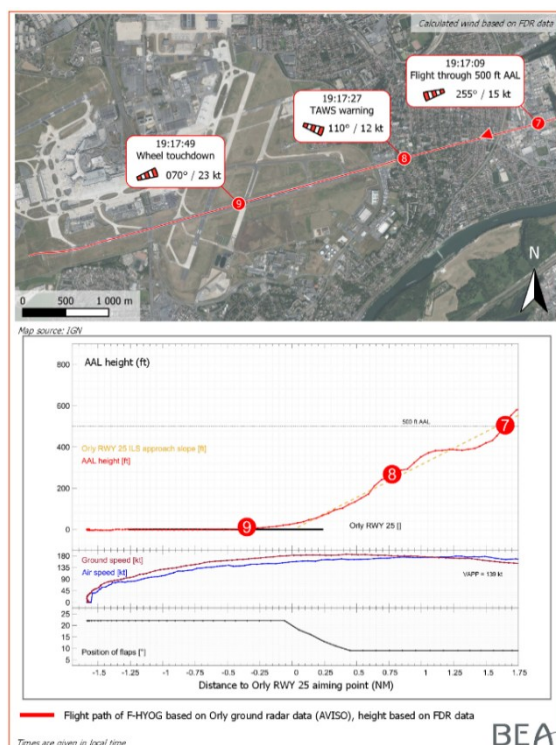
Serious incident to Embraer EMD145LR registered F-HYOG on 20/10/2022 at Paris-Orly AD

The below summary focuses on flight crew operational procedures.

Non-stabilized approach, long landing, runway overrun

SCENARIO

- Storm forecast was partially taken into account in the approach briefing.
- Storm cell avoidance disagreement between PF and PM, situational awareness progressively deteriorated.
- The PM's (captain) initiatives took precedence over the PF's requests and the decisions concerning flight management.
- The aeroplane overshot the ILS axis, because of an excessive speed. The PF corrected the lateral flight path, in HDG mode. This was associated with a vertical mode reversion. The aeroplane was then above the glideslope.
- The PM improvised glideslope interception from above.
- Speed was high and the flaps could not be extended to 22°.
- Just before 1,000 ft AAL, the PM decided to change the flap strategy for landing, due to the excessive speed.
- At 1,000 ft AAL, 4 of the 9 stabilization criteria (excessive speed, flap configuration, thrust management, before landing C/L) were not met, the speed was VAPP + 45 kt.
- The PM was no longer performing the monitoring tasks. The PF was very focused because of the weather conditions.
- The wind progressively changed during the final approach, the tail wind reinforced, this was not noticed by the pilots.
- At 240 ft AAL, a TAWS warning triggered because of the incorrect configuration for landing. The PM extended the flaps to 22°, creating lift. The aeroplane flew over the threshold with an excess of 30 kt.
- The aeroplane touched down 1,150 m after the runway threshold, with 20 kt tail wind.
- The runway was contaminated by 4 mm of stagnant water, because of a heavy storm that had just passed through. Braking was not effective, the aeroplane hydroplaned. The aeroplane skidded off the runway at 80 kt.



CONTRIBUTING FACTORS

Destructuring of CRM:

- pilots did not share doubts and concerns, absence of a joint project;
- failure to adhere to the division of PF/PM roles;
- evolution towards an autocratic cockpit, with a tendency for the captain to overstep his role as PM and the co-pilot (PF) who accepted this evolution without trying to assert himself;
- no attempt being made to restore the required synergy, despite the shared perception of the deterioration in CRM.

Inadequate decisions:

- unsuitable management of the aeroplane's energy and path by the crew, leading them to intercept the glideslope from above with an aeroplane that was travelling too fast and that was not configured;
- the continuation of the approach by the crew when several stabilization criteria were not met, and when a "TOO LOW TERRAIN" TAWS alert had triggered;
- the continuation of the landing even if the landing was perceived as long, the runway being not limitative according to their evaluation.

Incomplete preparation:

- incomplete TEM, not identifying possible runway limitations, the tailwind and the crosswind, in a stormy context conducive to showers and windshear.

SAFETY MESSAGE

- @Pilots - Risks associated with storms.** In stormy conditions, wind, precipitation and runway conditions may change rapidly and available information may no longer reflect actual landing conditions. TEM for approach and landing should be associated with mitigation barriers to preserve sufficient safety margins.

[For detailed information please view the full report](#)