

Ground handling technician blown over by engine blast during an assistance operation on a stopover

Aircraft	Embraer 190 registered G-LCYJ
Date and time	21 January 2012 à 08 h 20 UTC ⁽¹⁾
Operator	BA CityFlyer
Place	Chambéry Aix-les-bains Airport (73)
Type of flight	Scheduled public transport of passengers
Persons on board	Captain (PF), Copilot (PNF), 2 cabin crew + 53 passengers
Consequences and damage	Runway technician lightly injured

⁽¹⁾Except where otherwise stated, the times shown in this report are expressed in Universal Time Coordinated (UTC).

This is a courtesy translation by the BEA of the Final Report on the Safety Investigation. As accurate as the translation may be, the original text in French is the work of reference.

1 - HISTORY OF FLIGHT

The crew was undertaking a flight between London City airport (United Kingdom) and Chambéry Aix les Bains airport (73). On final approach to runway 18, the aeroplane was subject to windshear. The crew stated that they had difficulties in controlling the speed and decided to fully extend the flaps. They were unable to prevent a slight overspeed in this configuration. They performed a go-around, made a second approach and landed without any further problems.

During taxiing, both pilots wondered what maintenance actions would be required after the overspeed and whether to contact the airline's operations service. On arrival at the ramp, they started the engine shutdown procedure then interrupted it to talk about the go-around again. The Captain took over the procedure, cut the rotating beacon lights and forgot to shut down the engines.

Seeing that the rotating beacon lights were off, the aeroplane proximity supervisor authorised the ground handling technicians to move around the aeroplane. One of them, responsible for positioning the chocks under the main landing gear and for positioning the ground anti-collision cones at the end of the wings, walked along the fuselage and passed behind the engine. He was thrown violently to the aft by the blast from the engine, which was still running.

When the cabin crew opened the aeroplane's doors, an emergency message appeared on the instrument panel to remind the crew that the engines were still running. At the same time, the chief cabin attendant entered the cockpit to say that the engines were not shut down. The crew then shut down the engines.

2 - ADDITIONAL INFORMATION

2.1 The Operator's Procedures

On the ground

Chapter 3.9 (Aircraft Arrival, Departure, Chocking and Power Procedures) of the operator's Ground Handling Manual states that no personnel, vehicle or equipment must approach the aeroplane before the latter has been immobilised with the nose gear chocks in place, the engines shut down and the rotating beacon lights off.

Engine shutdown procedure

The airline's operations manual states that engine shutdown is usually performed by the Captain, according to the following procedure:

"Shutdown Checklist

The Capt should call for the Shutdown Checklist, which is to be read by the FO as Challenge and Response:

Emergency/Parking Brake _____ *SET/TEMP*

Pull the Emergency/Parking Brake to the set position ...

N1 _____ *OFF*

...

Beacon _____ *OFF"*

2.2 The ground handling company's procedures

This operator's ground handling procedures are not undertaken by its own personnel, but sub-contracted to an outside company.

At the time of the incident, the ground handling company's procedure stated that the ground handling technicians should not approach the aeroplane before the rotating beacon lights were off, without any explicit mention of engine shutdown.

The ground handling technicians stated that, taking into account the background noise at an airport, it is mandatory to wear anti-noise headphones. This does not allow them to distinguish whether the engines on an aeroplane are shut down or running. The usual signals that enable them to start work in the aeroplane zone are the thumbs up from the aeroplane proximity supervisor and extinction of the rotating beacon lights.

Following this incident, the ground handling company modified its procedures by making it mandatory to establish radio contact between the aeroplane proximity supervisor and the crew as soon as the chocks on the nose gear are in place and asking the crew for confirmation that the engines are really shut down. The supervisor then authorizes the agents to move with a "thumbs up" gesture. This procedure, which is the company's own, has been applicable since 15 December 2012. However, there are many other companies that do not plan for a dialogue between the aeroplane proximity supervisor and the crew relating to engine shutdown.

3 - LESSONS LEARNED AND CONCLUSION

The incident was due to an inappropriate procedure, used by many ground handling companies, which presumed that the extinction of the rotating beacon lights guaranteed that the engines were shut down. This led to an erroneous appreciation of the situation and allowed the unfortunate runway technician to pass behind the engine that was still running.

Inadequate application of the engine shutdown procedure by the crew, who turned off the rotating beacon lights before shutting down the engines, contributed to the incident.

It is possible that the "overspeed" event during final distracted the crew's attention during execution of the engine shutdown procedure.

4 - RECOMMENDATIONS

Note: In accordance with Article 17.3 of European Regulation (EU) 996/2010 of the European Parliament and Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation, a safety recommendation shall in no case create a presumption of blame or liability for an accident, a serious incident or an incident. The addressee of a safety recommendation shall inform the safety investigation authority which issued the recommendation of the actions taken or under consideration, under the conditions described in Article 18 of the aforementioned Regulation.

The usual procedure used by many operators and ground handling companies allow access into the aeroplane zone when the rotating beacon lights are extinguished. The investigation showed that such a procedure is not sufficient to guarantee safety around the aeroplane when it arrives at the ramp.

The ground handling company involved in this incident has, since the incident, added to its procedures with a radio link between the runway agents and the crew to confirm the effective shutdown of the engines. Similar procedures for all ground handling companies would make it possible to avoid similar incidents in the future.

Consequently, the BEA recommends that:

- **DGAC and EASA ensure that the procedures for arrival at the ramp, for operators and for ground handling companies, guarantee that ground handling agents only intervene around the aeroplane when the engines are in fact shut down. (Recommendation FRAN-2013-083)**