



EASA Safety Information Bulletin

SIB No.: 2013-20
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Subject: **Bounced Landing Recognition and Recovery Training**

Ref. Publication: Federal Aviation Administration (FAA) Safety Alert for Operators (SAFO) [06005](#), dated 09 June 2006: Bounced Landing Training for certificate holders operating under Title 14 of the Code of Federal Regulations (14 CFR) parts 121 and 135.

Transport Canada Civil Aviation (TCCA) Advisory Circular [705-007](#): Bounced Landing Training for 705 Air Operators.

Flight Safety Foundation (FSF) Approach-and-landing Accident Reduction (ALAR) Briefing Note [6.4](#): Bounce Recovery – Rejected Landing

Applicability: National Aviation Authorities, Aeroplane Manufacturers, Operators, Training Organisations, Flight Crews.

Description: On 23 May 2006 an ATR72-202, while performing a visual approach for Runway 27 at Guernsey Airport, UK, bounced on touchdown due to insufficient landing flare being applied. In an attempt to cushion the second touchdown the co-pilot, who was the handling pilot, over-pitched the aircraft resulting in the tail bumper making contact with the runway surface. The co-pilot was relatively inexperienced, this being his first airline aircraft type, and he could not recall ever having received formal instruction on recovery techniques for bounced landings. The following safety recommendation was issued by the UK Air Accidents Investigation Branch (AAIB): *“The UK Civil Aviation Authority should require UK aircraft manufacturers, operators and training providers to issue appropriate guidance to pilots in the techniques for recovering from bounced landings”.*

Further analysis of accident and incident data revealed a significant number of similar non type related events. These events were typically, but not necessarily, associated with gusty wind conditions. Several of these events led to a runway excursion with substantial aircraft damage and injuries to passengers and crews.

This is information only. Recommendations are not mandatory.

Evidence suggests that a poorly executed approach and touchdown can generate a bounce that, if not properly identified and managed by the Flight Crew, can result in inappropriate pitching causing premature nose gear contact with the runway or excessive rate of descent. Additionally, various aircraft systems (such as spoilers) can complicate the recovery process.

The purpose of this Safety Information Bulletin is to provide Aeroplane Manufacturers, Operators, Training Organisations, and Flight Crews with recommendations on Pilot training for bounced landing recognition and recovery.

Recommendation(s): Manufacturers are encouraged to provide, where not already available, guidance on bounced landing recovery techniques in the applicable manuals, including relevant Crew Resource Management elements.

Operators and Training Organisations are recommended to ensure that bounced landing recognition and recovery information is available to Flight Crew members and that training is provided to Flight Crews by adequately briefing them on the proper techniques to be used.

Operators' and Training Organisations' training syllabi should include the causal factors that can lead to bounced landings such as:

- excessive sink rate;
 - excess airspeed;
 - late flare initiation;
 - incorrect flare technique and power management;
 - gusty wind conditions;
- (list not exhaustive).

Training syllabi should also include a recommended recovery technique for the specific aeroplane. Recovery techniques should be consistent with the applicable Flight Crew operating and training manuals produced by the Manufacturers.

Operators and Training Organisations are encouraged to use their Safety Management System to assess the risk of bounced landings and mitigate it through appropriate preventive actions such as the ones suggested in this SIB.

Although bounced landing training is intended to be mainly conducted in a classroom or briefing environment, as it should not be deliberately performed in an aeroplane and it may not be adequately replicated in a flight simulator, Flight Simulation Training Devices may be used to train the appropriate recovery technique, taking into account the devices' limitations.

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