



**Aviation Safety Council
Taipei, Taiwan**

**EVA AIRWAYS FLIGHT BR316
AIRCRAFT TYPE BOEING MD-11
REGISTRATION NO.B16101 HARD
LANDING AT CKS INTERNATIONAL
AIRPORT**

Executive Summary

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On November 20, 2001, EVA Airways flight BR316, aircraft type MD-11, Nationality Mark and Registration No. B-16101, conducting a scheduled passenger flight from Brisbane International Airport, Australia to Taipei CKS International Airport, the aircraft carried 3 flight crewmembers, 10 cabin crewmembers, 3 ACM (Additional Crewmember) and 207 passengers onboard, total 223 people on board.

Bounced Landing occurred when BR316 touched down at 1650 Taipei time. After discovered the abnormality, the captain took over the aircraft and conducted a go around procedure. After go around, the flight crew discovered the tire pressure indication of left nose wheel was zero. The aircraft touched down again at 1706, no casualties for passengers and crewmembers aboard. After vacated runway, the maintenance personnel found out that left nose wheel had a flat tire. The aircraft was towed to the maintenance apron of Evergreen Aviation Technologies Corp. by a tow tractor for detailed inspection, the structure of nose wheel well was damaged, buckling phenomenon appeared in the skin of the nose wheel well.

Findings related to the probable causes

1. After the first bounce of the hard landing by the PF, excessive maneuvers lead to second hard landing and bouncing, causing damage to the nose wheel well and the nearby structure.

Findings Related to the Risks

1. The flare timing by the PF before the first touchdown was late,

the PM (captain) did not find out and dispose, leading to high descent rate and a hard landing when touchdown.

2. Parts of the maneuver techniques of the PF during landing were not conformed to the requirements from the Aircraft Operation Manual.

Other Findings

1. The flight crewmembers possessed qualified and valid licenses according to the current Civil Aviation Laws.
2. The Pilots had completed relevant trainings according to current Civil Aviation Laws.
3. The Pilots' information about duty time, flight time, rest time and personal life status etc. did not reveal any medical, behavioral, or mental problems etc., which might affect the performance of the day of the occurrence.
4. The weight and balance was within limits.
5. The power cutoff timing of the cockpit voice recorder of the occurrence aircraft, the flight crewmembers did not cut off CVR power immediately according to article 103, section 2 of Aircraft Flight Operation Regulations.
6. The last 30 minutes of the cockpit voice records were not able to provide the important cockpit voice data for the needs of this investigation.

Safety Recommendations

TO EVA AIRWAYS

1. Strengthen the situation awareness and disposal techniques that PIC (or captain) should have when first officer acts as the pilot flying during the landing phase. (ASR-02-12-001)
2. Review MD-11 pilots with the observance situation of the maneuver techniques from the operation manual. (ASR-02-12-002)
3. Review the “late flare” and “excessive maneuvering during landing” situations of pilots from the MD-11 Instructor Pilot’s Manual. (ASR-02-12-003)

To Civil Aeronautics Administration, CAA

1. Operation procedures of all flight operation divisions in domestic airports should include the procedure of CVR power cutoff confirmation when flight operations officers arrived at the scene during accidents or serious incidents. (ASR-02-12-004)
2. Referring to the recommendations of Annex 13, section 6.3.8.2 of ICAO; evaluate the feasibility of amending relevant civil aviation laws to stipulate that the recording time length of CVR should be at least two hours. (ASR-02-12-005)

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