

**Aviation Safety Investigation Report  
199603913**

**Beech Aircraft Corp  
Duchess**

**29 November 1996**

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**Occurrence Number:** 199603913                      **Occurrence Type:** Accident  
**Location:** Perth, Aerodrome  
**State:** WA    **Inv Category:** 4  
**Date:** Friday 29 November 1996  
**Time:** 1140 hours                                      **Time Zone**                      WST  
**Highest Injury Level:** None

**Aircraft Manufacturer:** Beech Aircraft Corp  
**Aircraft Model:** 76  
**Aircraft Registration:** VH-AHY                      **Serial Number:** ME-187  
**Type of Operation:** Instructional Dual  
**Damage to Aircraft:** Substantial  
**Departure Point:** Perth WA  
**Departure Time:** 1100 WST  
**Destination:** Perth WA

**Crew Details:**

<b>Role</b>	<b>Class of Licence</b>	<b>Hours on Type</b>	<b>Hours Total</b>
Pilot-In-Command	ATPL	167.0	6761

**Approved for Release:** Thursday, December 5, 1996

The instructor reported that he and the handling pilot were engaged in introductory ILS training at the time of the accident. An instrument training hood was being used to simulate instrument meteorological conditions. The aircraft had been cleared for an ILS approach to runway 24. As the aircraft approached localiser intercept the pilots were asked to reduce the aircraft's approach speed. The instructor suggested that the handling pilot lower the landing gear and flap earlier than normal. Both believe the gear was selected down at this point.

After glideslope intercept the handling pilot had to be prompted several times to reduce power to keep the aircraft's speed below the maximum. The instructor was not concerned with this as he had expected there would be a tailwind on final approach. Final's checks were completed prior to reaching decision height and both pilots reported that they thought they saw the green lights which indicated the gear was down. During the approach both pilots reported hearing the outer and middle marker identification signals over the aircraft's speaker but neither reported hearing the landing gear warning horn. The hood was removed at decision height and the handling pilot continued flying to a landing.

The handling pilot reduced power steadily to idle as he flew the aircraft into the landing flare. As the aircraft settled towards the runway the instructor realised the gear was still up and he reached for the selector handle to confirm it was in the down position. He did not recall moving the lever. The aircraft settled onto its lower fuselage and slid to a stop. Neither pilot reported hearing the landing gear warning horn during the flare.



Post-accident inspection of the landing gear did not disclose any faults. The gear selector handle was found in the down position and the main gear had been released from its uplocks. When the aircraft was lifted from the runway, and power applied, the gear extended and the landing gear warning horn sounded until the gear was locked down. The fact that the main gear had been released from its uplocks is an indication, from past experience, that the gear had been selected down after the aircraft had settled onto the runway.

The instructor reported that he was acting as safety pilot, searching for other traffic and maintaining a visual watch until the landing. As a result, he did not closely monitor the handling pilot's actions in the cockpit. Therefore, he could not be sure the handling pilot actually moved any of the selectors in the direction which he had indicated.

The surface wind was reported as blowing from 030 degrees at around 5 knots. With this wind it is unlikely there was a tailwind on final and the problem with speed control was probably an indication that the gear was still up. It could not be determined why the warning horn did not sound, or if it did, why the pilots didn't hear it.

It is evident that the landing gear was either not selected down, when speed was being reduced, or it was selected up again during the approach. Past investigation indicate that it is possible for a pilot working under stress, as can be evident during a practice precision instrument approach early in their training, to reverse a selection thinking they had selected it correctly. This error is more likely if the system had previously been selected out of sequence, as it was in this case. Consequently, the gear may have been selected up just before glideslope intercept rather than down, as would have been the normal action.

Previous investigations also indicate that pilots sometimes see what they expect to see (a mindset) rather than the actual indication. This may explain their observation of the green landing gear lights when there probably weren't any.

