

No: 12/90

Ref: EW/G90/09/10

Category: 1c

**Aircraft Type and Registration:** Piper PA-28-160, G-ARVW

**No & Type of Engines:** 1 Lycoming O-320-B2B piston engine

**Year of Manufacture:** 1962

**Date and Time (UTC):** 26 September 1990 at 1010 hrs

**Location:** Bodmin Airfield, Cornwall

**Type of Flight:** Private

**Persons on Board:** Crew - 1                      Passengers - 2

**Injuries:** Crew - None                      Passengers - None

**Nature of Damage:** Substantial damage to the whole aircraft

**Commander's Licence:** Private Pilot's Licence

**Commander's Age:** 43 years

**Commander's Total Flying Experience:** 73 hours (of which 32 were on type)

**Information Source:** Aircraft Accident Report Form submitted by the pilot

When the pilot started the aircraft engine, there was a small 'clang' noise and investigation revealed that the aircraft's tow bar, which had inadvertently been left attached to the nose wheel, had fallen off one of the wheel lugs. In the pilot's opinion, this partial disconnection accounted for the clang. Nevertheless, the towing arm, which he then stowed in the aircraft, displayed a half-diameter crease which matched minor abrasions of the propeller tips.

Runway 03, used for the take-off, has a grass surface and is 480 metres long with a 1:20 up gradient for the first half and a down gradient of similar magnitude for the second. The wind was variable at less than 5 kt, the temperature was 16°C and there was a slight dew remaining on the grass. The aircraft weight was estimated by the pilot as 2162 lb, some 38 lb below the MTWA.

During take-off, although the nosewheel lifted at the expected time, the aircraft would not accelerate above 58 kt and, at a point about 140 metres from the end of the runway, the take-off was discontinued and the brakes were applied. The pilot states that the braking action was very poor and that this, assisted by the downslope, caused the aircraft to overrun the end of the runway and pass through some brambles, a wire fence and over a 10 foot drop beyond the overrun area before coming to rest.

All the safety restraint harnesses withstood the impact forces, there was no fire and, when the pilot had shut down the aircraft systems, the occupants vacated the aircraft through the forward door.