

BULLETIN

AIRCRAFT ACCIDENT INVESTIGATION BOARD/NORWAY (AAIB/N) (TRANSLATED FROM NORWEGIAN)

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Aircraft

- type & reg.: Piper PA 34/220 T, OO-VWK
- year of man.: 1981
- No of engines: Two Teledyne Continental LTSIO-360-KB

Radio call sign: OO-VWK

Date and time: 25 September 1997 at 1420

Location: ENHA, Hamar Airport

Type of occurrence: Serious incident

Type of flight: Private

Weather cond.: No wind, few clouds, excellent visibility

Flight cond.: VMC

Flight plan: VFR

No. of persons onb.: 6

Injury: None

Aircraft damage: Nose section, propellers, engines

Other damage: None

Pilot in Command:

- age: 45 years
- licence: CPLH, PPLA
- fl.experience: Total time: 4 105 hrs. Helicopter: 3 394 hrs. Fixed wing: 711 hrs. Time on this type: 492 hrs.

Information sources: PIC's own report, Police report, AAIB/N's own investigations.

All times given in this report is local time (UTC + 2 hours), if not otherwise stated.

SUMMARY

OO-VWK was on a private flight from Belgium via EKAH (Denmark), and Torp to Hamar airport north of Oslo. It was a VFR - flight in excellent weather conditions.

The Aircraft Accident Investigation Board has compiled this bulletin for the sole purpose of improving flight safety. The object of any investigation is to identify faults or discrepancies which may endanger flight safety, whether or not these are causal factors in the accident, and to make safety recommendations. It is not the Board's task to apportion blame or liability. Use of this report for any other purpose than for flight safety should be avoided.

When arriving at the Hamar area, the PIC decided to go for a left downwind to runway 15. He tried to contact Hamar TWR but got no reply. The tower was closed at this time. As he was flying the downwind leg he inspected the landing area visually and found the runway to be clear. He then decided to continue the approach for landing. At this point everything appeared normal, and the PIC completed his checklists. 3 green lights confirmed that the landing gear was down and locked. He also checked the nose gear visually by the use of a mirror that is installed on this aircraft. At a speed of 85 kt, he landed the aircraft. Immediately after touchdown, the nosegear collapsed, and the nose and the propellers hit the ground. The PIC decided to steer the aircraft off the runway and out on the runway edge because he was afraid that the friction between the aircraft and the runway surface would result in high temperatures and a possible fire. After 322 m the aircraft came to a stop. Neither the PIC nor the passengers were injured.

COMMENTS FROM THE BOARD

The direct cause, which made the landing gear collapse, was the landing technique that was used. The aircraft hit the runway with the nosegear first. This resulted in the mount assembly for the nosegear hydraulic actuator, being torn off the bulkhead. When the mount assembly is torn loose like in this case, it will not provide sufficient support for the nosegear down-lock system to be kept in the locked position.

The PIC explains that he always performs 3-point landings with this aircraft. There are three distinct rubber marks on the runway, which clearly shows where the aircraft hit the ground. By measuring the distance between the nosewheelmark, and the mainwheelmarks, and comparing these with the distance between the nosewheel and the mainwheel axis on the aircraft, it is obvious that the nosewheel hit the runway first. The distance between the rubbermarks on the runway was 1350 mm. while the actual distance between the nosewheel and the mainwheel axis is 2215 mm. This has exceeded the loadlimit of the nosegear construction, and the collapse was unavoidable. The fact that the propellermarks on the runway are visible just a few meters after the touchdownmarks confirms that the nosegear collapsed immediately upon touchdown. AAIB/N has not found any indications of technical problems with the aircraft.

The PIC explained that when the aircraft was purchased from Switzerland in 1994, the technical logbooks showed that there had been made repairs both on the nosegear section and the propellers at earlier stages. The PIC indicated that these repairs could have been results of previous nosewheel landings. This information has been confirmed by checking the old logbooks, which shows that the aircraft has been repaired 3 times (6/89, 2/91, 11/93) in the nosesction, after what is described as "bodenberührung", (touching of the ground). The Board has not been able to confirm that these repairs have had any influence on this incident.

AAIB/N is of the opinion that the 3-pointlandings, which the PIC describes as the technique he always uses, is not recommendable. Especially not on this aircraft which is told to be "noseheavy".

AAIB/N recommends that the PIC reconsider his landing technique.