Accident Investigation Board Norway

REPORT

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This report has been translated into English and published by the AIBN to facilitate access by international readers. As accurate as the translation might be, the original Norwegian text takes precedence as the report of reference.
This investigation is limited in its extent. For this reason, the AIBN has chosen to use a simplified report format. The report format indicated in the ICAO annex 13 is only used when the scope of the investigation makes it necessary.

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

Aircraft information:	
- Type and reg.:	PA28-161, LN-BGQ
- Manufacturing year:	1981
- Engine(s):	Lycoming O-320-D3G
Date and time:	3rd of October 2002 at 1120 hrs
Location:	Road E39 in the vicinity of Ørsta-Volda airport Hovden, Møre og Romsdal, Norway
Type of occurence	Serious incident, emergency landing
Weather conditions:	Wind: calm, Visibility: unlimited, Temperature/dew point: 6°C / 5°C
Light conditions:	Daylight
Flight conditions:	VMC
No. of persons onboard:	2
Injuries to persons:	None
Damage to aircraft:	Minor on wing due to contact with car
Other damage:	Minor on roof of car
Commander:	
- Sex and age:	Male, 27 years old
- Licence:	PPL-A (Austrian)
- Flying experience:	Total of 95 flight hours, including 10 flight hours last 90 days
Information sources:	Report of accident/-incident (NF 0382), and AIBN investigation.

FACTUAL INFORMATION

The commander is an Austrian citizen who was visiting Norway. The local aviation club, Vigra Aeroklubb, operated the aircraft and a member of the club rented the aircraft for this flight. This member, also carrying a private pilot licence, joined as a passenger. The flight started from Ålesund Airport, Vigra (ENAL) at 1035 hrs bound for Ørsta-Volda airport, Hovden (ENOV). Hovden is located near a fjord at an elevation of 74 m.o.s (243ft). The local club member and the commander performed the daily inspection (DI) together. The club member did neither verify the commander's knowledge of the aircraft nor knowledge of Norwegian flying conditions (i.e. he was not asked to perform a check flight or equivalent before using the aircraft).

The take- off and en route part of the flight went without any problems and the passenger, with 750 flight hours on the aircraft, felt comfortable with the pilot. On final for Hovden runway 24, the commander enriched the fuel mixture by pushing the fuel mixture control and flaps were set for landing. The commander was reminded by the passenger to apply carburettor heat. Shortly after (approx 10 sec., according to commander), the engine stopped. Both the pilot and the passenger checked the magnetos, the carburettor heat, the fuel content and the fuel selector for correct settings. Altitude was low and speed was close to stall speed. The commander decided to land on the road E39 running parallel to the runway instead of attempting to reach for the airfield. The landing was performed "normally", but during the flare the right side wing touched the roof a car. The car was driving in the same direction as the aircraft and thereby the contact was smooth. The aircraft continued and landed in front of the car without any further problems.

The landing was performed uphill on a part of the road where there are dual lines.

At 1119 o'clock, on short final, the pilot declared emergency (MAYDAY) and engine problems. Shortly after declaring MAYDAY the AFIS personnel lost visual contact with the aircraft. At that point the plane disappeared behind some trees and buildings. Shortly after, they saw the aircraft rolling on the road (E39).

The rescue and fire fighting personnel from the airport arrived at the aircraft shortly after.

Immediately after the landing, fluid was observed coming from the bottom of the engine cowling. The passenger then observed that the mixture control was 1/3 out and not in the "full rich position".

After towing the aircraft to the airfield the engine was started and it ran without misfires or other problems. A licensed aircraft mechanic arrived the day after the incident for inspecting the damage and testing the engine. The scratch and the dent in the wing were deemed as minor. Testing of the engine on ground led to rime on the outside of the carburettor. The aircraft was declared airworthy and flown to its home - base.

COMMENTS FROM THE ACCIDENT BOARD

The Accident Investigation Board Norway (AIBN / SHT) believes the pilot made the correct decision when deviating and landing on the road. On the other hand, by not using proper procedure (see below) for mixture and carburettor heat, he contributed to the stoppage of the engine.

Normal procedure would be to adjust the fuel mixture to full rich and apply carburettor heat before reducing power. Use of carburettor heat is especially important on days with high humidity and minor separation between outside air - and dew point temperature. Leaning the mixture does not

normally contribute to carburettor icing, rather the opposite, but landing with too lean mixture can cause engine stoppage itself – at this altitude.

AIBN has had the engine cowling inspected without findings of fuel- or oil stains. Based on this, the board has reason to believe that the fluid coming from the bottom of the engine cowling was melted ice. Formation of ice had most probably started before carburettor heat was selected “on”. This can explain why the engine stopped shortly after. Whether the engine stopped due to formation of ice or with too lean fuel mixture is hard to tell, but both might have caused the engine to stop.

AIBN has been informed that this Austrian pilot is used to flying and landing at higher altitudes where leaning the fuel mixture on approaches and landings are normal procedures. The pilot also states that on aircrafts he is used to fly, there is a carburettor temperature gauge to inform about when to use the carburettor heat. The carburettor heat is only used when the indicator tells you to.

Nevertheless, there is a “before landing check list” in the aircraft stating the correct procedure and this shall be used, in this case it was not.

Normal procedure when renting an aircraft from Vigra Aeroklub is that the “newcomers” with valid type rating and pilot licence performs an extended DI together with the technical leader of the club. It is not required, as with many other aviation clubs, to fly a check flight.

In this incident, a club member well experienced in flying this aircraft rented it. He handed the aircraft over to the commander. The DI previous to the incident was not performed according to the club-procedure. According to the leader of Vigra Aeroklub, they feel the normal club regulation is working and that this was a “misunderstanding” between the club member and the club.

The Board prefers the flight check version. This might have attracted attention to a correct approach and landing procedure. This will also minimize the danger of mistakes where cockpit layout differs from other aircrafts of same type.