No: 2/86 Ref: EW/G85/12/04

Aircraft type

and registration: Piper PA 28R-200 G-AZAJ (light single engined fixed wing aircraft)

Year of Manufacture: 1969

Date and time (GMT): 18 December 1985 at 0945 hrs

**Location:** Southend Airport

Type of flight: Private (pleasure)

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

Injuries: Crew — None Passengers — None

Nature of damage: Minor damage to nosewheel doors and inboard trailing edges of

wing flaps. Propeller damaged.

Commander's Licence: Private Pilot's Licence

Commander's Age: 45 years

**Commander's Total** 

Flying Experience: 184 hours (of which 127 were on type)

Information Source: Aircraft Accident Report Form submitted by the pilot and AIB

inspection of the aircraft.

When downwind the pilot was advised by ATC that he was number three to land. In his report on the accident he stated that, as he turned on to long finals, he extended flaps to the second stage and operated the landing gear down lever. He then saw a flashing white light ahead, which he thought was another aircraft on finals. Accordingly, he reduced speed to 90 mph and lowered the third stage of flap. About the time that ATC cleared him to land, he realised that the light ahead was on the ground and continued a normal approach to land. Shortly before the aircraft touched down he heard a noise that he interpreted as the stall warning buzzer, indicating to him that his speed was about 65 mph. This was followed by a metallic scraping noise and he then realised that the landing gear had failed to lower. The aircraft touched down gently and slid along the runway. The pilot estimated later that, allowing for the prevailing headwind, his groundspeed on touchdown was about 53 mph and that the aircraft slid for approximately 150 feet along the runway before coming to rest. He did not recall checking for or seeing the three green gear down lights, and did not recall seeing the red gear warning light at any time.

The aircraft has an automatic gear lowering system designed to operate whenever the airspeed falls below 105 mph at typical approach power settings. At high power, the system is intended to prevent the gear from being raised until the aircraft has reached 85 mph. The system can be overridden only by holding up a spring loaded lever. The gear warning horn is mounted behind the instrument panel, and is designed to operate whenever the throttle lever is reduced below a power setting of approximately 14 inches manifold pressure with the gear retracted. It should also sound if the automatic lowering system operates. The stall warning is also a horn, with a slightly different tone.

When the AIB inspected the aircraft at the maintenance organisation, the inner edges of the

nosewheel doors were found to be damaged, indicating that they were open when the aircraft touched the runway. The main weight of the aircraft had been borne on the inboard trailing edges of the flaps. No damage was found on the mainwheel doors or on the sides of the mainwheel tyres. AlB were informed, however, that the landing gear had dropped freely as soon as the aircraft was lifted off the runway after the accident. Both the gear and stall warning horns were found to be functional. Inspection of the automatic gear lowering system did not reveal any apparent discrepancies; it was not possible, however, to conduct a satisfactory calibrated pressure test on the system as the only procedure detailed in the Service Manual requires the aircraft to be flown and adjustments to be made in the air. A calibrated in-flight check of the system is planned when the aircraft has been repaired.