AAIB Bulletin No: 2/95	Ref: EW/G94/07/30	Category: 1.3
Aircraft Type and Registration:	Cessna 177 RG Cardinal, G-BAFI	
No & Type of Engines:	1 Lycoming IO-360-A1B6D piston engine	
Year of Manufacture:	1973	
Date & Time (UTC):	24 July 1994 at 1210 hrs	
Location:	Bournemouth Airport, Dorset	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Propeller badly damaged, engine requiring shock load inspection, nose leg torque links worn away, nose landing gear rear doors distorted and worn away, exhaust outlet stub damaged, lower cowling slightly distorted in area of exhaust stub outlet aperture	
Commander's Licence:	Private Pilot's Licence with IMC and Night Ratings	
Commander's Age:	46 years	
Commander's Flying Experience:	252 hours (of which 43 were on type) Last 90 days - 19 hours Last 28 days - 7 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot, examination of aircraft by AAIB Engineering Inspector and liaison with repair agency	

The pilot reported that he carried out a right base join for Runway 26. On passing the Verwood VRP, he started the pre-landing checks, including selecting the landing gear down. He reported noting the gear up warning light extinguish and was aware that the aircraft slowed in the normal way. He turned and called finals about 1.5 miles out having already selected 20 degrees of flap and established an approach speed of 85 kt. He then called out the final approach checks to the passenger. On carrying out the gear down check, the single gear down light was observed and each occupant noted that the main leg visible from their respective side of the aircraft appeared to be in the correct down position.

The remainder of the approach and roundout was reported as normal, touchdown occurring on the main gear. The nose then appeared to drop further than normal, so the pilot applied power to go-around. On looking down, however, he saw that the landing gear lever was in the down position and the gear down light was lit. He therefore decided to land, but during this process the propeller hit the runway and the aircraft skidded to a halt with the nose supported by the torque links and the rear nose gear doors.

During subsequent removal of the aircraft from the runway, the nose was lifted and the partly extended nose leg moved without difficulty to the down position. The aircraft remained at Bournemouth until it could be equipped with a serviceable propeller and a rebuilt engine, after which it was ferried with the gear locked down to Gloucestershire Airport, where detailed examination, repair and testing of the landing gear system was carried out.

Adjustments were required in the normal way during installation of the new torque links and the replacement of the nose landing gear doors. A detailed examination of the remainder of the undisturbed adjustments in the nose gear system confirmed that they were all set correctly (or in instances where a range of adjustment was permissible, they were near the middle of that range).

Retraction tests revealed no evidence of incorrect operation; they did show that on gear extension the main legs move rapidly to a position at which any ground loading of the mainwheels drives them further in the direction of the fully extended position, rather than in the direction of retraction. If the motor circuit breaker is isolated with the system not fully locked down, any attempt to force the main gear towards the fully down position results in the nose leg moving towards the retracted position.