

**Aviation Safety Investigation Report
198803458**

Cessna 210E

14 May 1988

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NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

Occurrence Number: 198803458 **Occurrence Type:** Accident
Location: Isis (30 km South of Bundaberg) QLD
Date: 14 May 1988 **Time:** 740
Highest Injury Level: Nil
Injuries:

	Fatal	Serious	Minor	None
Crew	0	0	1	1
Ground	0	0	0	-
Passenger	0	0	0	4
Total	0	0	0	5

Aircraft Details: Cessna 210E
Registration: VH-PQF
Serial Number: 21058710
Operation Type: Private
Damage Level: Substantial
Departure Point: Archerfield QLD
Departure Time:)630
Destination: Rockhampton QLD

Approved for Release: 20 February 1989

Circumstances:

The aircraft was cruising at 9500 feet when the oil filter adaptor became detached from the engine, causing complete loss of oil pressure. As a result the number two big end failed and the number two connecting rod punctured the crankcase. During the ensuing forced landing, on a road, the pilot was unable to fully manually lower the landing gear. After touchdown the right main gear leg collapsed, causing the aircraft to strike a dirt bank. The oil filter adaptor thread had been damaged by overtightening and this allowed the adaptor to detach from the housing on the oil pump casing. Following the failure of the engine it became necessary to lower the landing gear by using the emergency system. Hydraulic power to lower the gear is normally provided by the engine driven hydraulic pump. It was determined that the pilot was unable to fully extend the gear with the emergency gear extension handle as the handle had apparently inadvertently been moved slightly inward. Any inward movement of the handle jams the pump action making the handle difficult to move thus giving the impression that the gear is fully extended.

Significant Factors:

The following factors were considered relevant to the development of the accident

1. Improper maintenance procedures. The oil filter adaptor had been overtightened causing the thread to be damaged.
2. The oil filter adaptor became detached, allowing engine oil to be pumped overboard.
3. The engine failed due to lack of lubrication.
4. The pilot was unable to fully lower the gear due to the emergency gear pump handle not being fully extended.

Reccomendations:

1. There have been several failures of this nature during the past year. A recommendation has been made to the Civil Aviation Authority to alert maintenance organisations to the danger of thread failure on oil filter adaptors if proper torquing is not carried out during fitment.
2. It is also recommended that the Civil Aviation Authority publicise the information on the use of the emergency gear extension handles in Cessna 210 type aircraft.