

ACCIDENT

Aircraft Type and Registration:	Piper PA31-350 Navajo Chieftan, VQ-TAC
No & Type of Engines:	1 x Lycoming TIO-540-J2BD piston engine 1 x Lycoming LTIO-540-J2BD piston engine
Year of Manufacture:	(Serial no: 31-7952057)
Date & Time (UTC):	28 June 2013 at 2000 hrs
Location:	JAGS McCartney International Airport, Turks and Caicos Islands
Type of Flight:	Commercial Air Transport (Non-Revenue)
Persons on Board:	Crew - 2 Passengers - None
Injuries:	Crew - None Passengers - N/A
Nature of Damage:	Damage to propeller blades and underside fuselage skin
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	49 years
Commander's Flying Experience:	12,777 hours (of which 1,181 were on type) Last 90 days - 30 hours Last 28 days - 5 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot

Synopsis

The aircraft had arrived at Providenciales when the pilot noticed that the left Main Landing Gear (MLG) oleo strut was leaking oil. After consultation with his employer, it was decided to ferry the aircraft back to its base for rectification. However, upon arrival the MLG could not be extended and a successful wheels-up landing was made. It was found that the left MLG torque link was fouling the bay interior because the oleo had not extended fully.

History of the flight

The aircraft had flown from Grand Turk to Providenciales in the Turks and Caicos Islands. Upon arrival, having shut down and vacated the aircraft, the pilot noticed

an oily substance on the left inboard flap. Inspection showed that the source of the leak was the left MLG oleo strut, so the pilot contacted his base with this information and asked for advice.

The decision was made to return to Grand Turk without passengers for further investigation and the return journey was normal until the pilot selected landing gear DOWN on the approach; only the nose landing gear indicated 'down and locked'. He discontinued the approach and climbed away to investigate, coming to the conclusion that the two MLGs were not extending. He then performed a flypast of the control tower, who confirmed that only the nose landing gear appeared to be extended.

The pilot declared an emergency and committed himself to a wheels-up landing. He raised the nose landing gear and feathered both engines on final approach, closing the firewall fuel valves and selecting fuel off. The landing was successful and there was no fire.

Subsequent examination showed that the pilot's initial suspicions following the accident were correct. Because of the leaking oleo, the left MLG leg had not

extended fully when it entered the bay and the torque link had fouled the side of it, mechanically jamming and preventing the leg from extending. The cause of the leak was traced to a twisted and broken O-ring seal on the bottom bearing which had prevented free movement of the piston.