Aviation Safety Investigation Report 199700978

Douglas Aircraft Co Inc Dakota

26 March 1997

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Occurrence Number: 199700978 **Occurrence Type:** Incident
Location: Camden, Aerodrome
State: NSW **Inv Category:** 4
Date: Wednesday 26 March 1997
Time: 1315 hours **Time Zone** ESuT
Highest Injury Level: None

Aircraft Manufacturer: Douglas Aircraft Co Inc
Aircraft Model: DC3C-S1C3G
Aircraft Registration: VH-SBL **Serial Number:** 12056
Type of Operation: Instructional Check
Damage to Aircraft: Minor
Departure Point: Bankstown NSW
Departure Time: 1200 ESuT
Destination: Camden NSW

Crew Details:

Role	Class of Licence	Hours on Type	Hours Total
Pilot-In-Command	ATPL	6500.0	20000
Pilot-In-Command (AICUS)	ATPL	5280.0	18500

Approved for Release: Tuesday, May 13, 1997

The flight was being conducted as a command check of the handling pilot, who occupied the left control seat. The pilot in command was the non-handling pilot. During an asymmetric circuit, with the left propeller feathered, the landing gear was lowered on mid-base at a height of about 600-700 ft. Because of the aircraft configuration, primary attention was given to the approach path while awaiting the build up of the landing gear down-line hydraulic pressure.

At about 400-500 ft, the hydraulic landing gear lever was returned to the neutral position after both pilots confirmed the landing gear down-line pressure was above 500 PSI. The landing gear latch lever was then moved from the spring lock to the positive lock position without having first monitored the green landing gear light. The handling pilot called for the final flap setting (3/4 flap) as the aircraft descended below the 300 ft commit height, below which a go-around would not be attempted. Having made the final flap selection, the non-handling pilot then checked the green light, and the landing gear down-line pressure for 500 PSI minimum.

He noticed that the red unsafe landing gear light was illuminated but had experienced this situation before, with a red light showing and the landing gear warning horn sounding (the warning horn on this occasion was not operating). He assumed that the problem was due to a micro switch and felt that a safe landing could be made if the landing gear pressure was kept above 500 PSI, and the brakes used gently. The decision was made to continue to land after visually checking that the right landing gear was down. A lack of time and the state of the left sliding cockpit window did not allow for a visual check of the left landing gear.

Consideration was given to raising the latch lever and moving the hydraulic lever to "crack" the landing gear, and then selecting down again to re-lock. However, the aircraft was approaching the threshold and the pressure was above 500 PSI with the landing gear hydraulic lever in neutral. On touchdown, the pilot in command observed the pressure at 500 PSI and immediately pushed the hydraulic lever down to keep the pressure up. This enabled the aircraft to roll the length of the runway, slowing to walking pace. During the final roll out, the flaps were selected up, resulting in the right landing gear very slowly retracting. As this occurred, the handling pilot closed the right mixture control. The propeller was almost stationary as the aircraft settle onto one blade.

A post-flight inspection found that the right landing gear spade lock had been locked out before the landing gear had completed the extension cycle. This action prevented the hook on the extension jack from engaging the spade lock and closing the micro switch. The action of retracting the flaps whilst the landing gear hydraulic selector was down, allowed hydraulic pressure to bleed from the landing gear down line, resulting in inadvertent retraction.