

NATIONAL TRANSPORTATION SAFETY BOARD WASHINGTON, D.C.

ISSUED: February 6, 1980

Forwarded to:

Honorable Langhorne M. Bond
Administrator
Federal Aviation Administration
Washington, D.C. 20591

SAFETY RECOMMENDATION(S)

A-80-12

Recently, the National Transportation Safety Board received a copy of a letter sent by an air carrier check pilot to a Federal Aviation Administration operations inspector. The letter described certain potentially critical flight characteristics of the deHavilland Twin Otter, DHC-6 airplane, which involve the proper pitch attitude and airspeed during go-around maneuvers in the short takeoff and landing full-flap configuration.

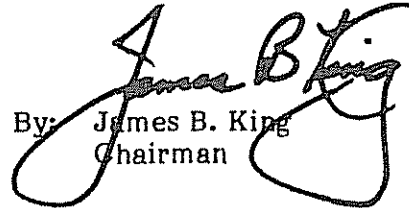
A go-around or balked landing in the DHC-6 with full-flaps (37 1/2°) must be performed with the nose below the horizon, avoiding rotation of the nose of the airplane above the horizon. An excessive initial pitch attitude or a very rapid pitch change, or both, results in rapid deterioration of airspeed, a stall and a loss of control. The nose of the airplane must be kept below the actual flightpath until the flaps have been retracted.

A DHC-6 pilot accustomed to conventional nose-high pitch attitudes during go-around may not be fully appreciative of or familiar with the relatively nose-low, short takeoff and landing pitch requirements of the DHC-6 during a full-flap go-around. Currently, there is no precautionary or instructive material in the DHC-6 flight manual relating specifically to this phase of flight. DeHavilland Aircraft of Canada, Ltd., has informed the Safety Board of its intention to provide such supplemental information in the manual in the near future. However, according to the Ministry of Transport, Canada, the certifying authority for the DHC-6, some flight testing of the airplane will be required before the new information is approved.

In the interim, the Safety Board believes that all DHC-6 operators should be advised explicitly of the unique and critical pitch attitude requirements during a full-flap go-around and of the need to maintain the recommended go-around airspeed. The Safety Board, therefore, recommends that the Federal Aviation Administration:

Immediately notify all DHC-6 operators of the aircraft's unique operational requirements during a full-flap go-around, and of the need for maintaining a nose-down airplane pitch attitude and adequate airspeed during this phase of flight. (Class II, Priority Action) (A-80-12)

KING, Chairman, DRIVER, Vice Chairman, McADAMS and BURSLEY, Members, concurred in this recommendation. GOLDMAN, Member, did not participate.

By:  James B. King
Chairman