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*This is information only. Recommendations aren't mandatory.*

## Introduction

This Special Airworthiness Information Bulletin (SAIB), emphasizes to operators of the **Kelowna Flightcraft R & D Ltd Model [Allison Prop-Jet Convair 340/440] known as the Convair 580 aircraft** the importance of adhering to the manufacturer's approved operating procedures regarding fuel cross-feeding, reinforcing those procedures in their training program, and recommending the use of boost pumps with identical pressure settings on both sides.

## Background

On August 13, 2004, an air carrier operating a Convair 580 crashed while on approach. The first officer suffered fatal injuries; the captain, minor ones. The airplane was destroyed on impact. The flight was operating under Title 14 of the Code of Federal Regulations (14 CFR) part 121 as a cargo flight. The National Transportation Safety Board (NTSB) determined that the probable cause of this accident was fuel starvation resulting from the captain's failure to follow approved fuel crossfeed procedures. Accident Report # NTSB-AAR-06-03 documents additional safety concerns.

Safety Alert for Operators (SAFO) 06-011 dated 7/27/06 emphasizes to operators of the Convair 580 aircraft the importance of adhering to the manufacturer's approved operating procedures regarding fuel cross-feeding, and the need to reinforce those procedures in their training program. The SAFO also references the airplane manufacturer's Aircraft Flight Manual (AFM) Publication No.1CC1-1 dated, Revised – 29 October 1984.

The Convair 580 airplane AFM prohibits fuel transfer from one tank to the other while the airplane is on the ground or in flight. The AFM also states, "When operating the crossfeed system, turn off fuel valve for tank not being used," which would preclude fuel transfer. The AFM also prohibits the transfer of fuel from one tank to the other and cautions, "to do so might build up excessive pressure in a tank, which could result in structural failure or cause fuel to overflow through the vents."

Previously, to improve the service life of the aircraft fuel boost pump motors, Prop-Jet issued Convair Bulletin (PJCB) 10-21 dated October 10, 1969. The PJCB allows reduction in the aircraft fuel boost pump output pressure requirement to lower the motor amperage load. As a result fuel boost pumps set to different output pressures may be installed on the same aircraft, possibly contributing to unintended fuel transfer *when* procedures are **not** followed.

## **Recommendation**

1. Although PJCB 10-21 allows the use of different boost pump pressures in both tanks, it is recommended, that the aircraft be operated with identical fuel boost pump pressure settings in both tanks (ref. PJCB 10-21).

As restated from the reference SAFO, we emphasize that;

2. It is mandatory that the following “Emergency Fuel System (Cross-Feed) Operation” procedure in the Airplane Flight Manual be followed to cross-feed from one tank to the opposite engine:

- (1) Place boost pump switch ON for tank being used and place the crossfeed switch in the ON position.
- (2) Place the boost pump switch of the tank not being used to the OFF position.
- (3) Place the fuel shutoff valve switch for the tank not being used to the CLOSED position.

As noted previously, the procedures also contain a caution stating that transferring fuel from one tank to the other is prohibited because structural failure or overflow of fuel through the vent system could occur.”

3. Directors of safety, directors of operations, trainers, and pilots of certificate holders operating the Convair 580 should be familiar with the content of this SAIB, SAFO and the NTSB accident report. They should review the operating procedures contained in the manuals used by their pilots and pertinent pilot training and should make revisions as necessary to ensure uniform understanding of Convair 580 fuel crossfeed operations.

## **For Further Information Contact**

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- Convair 580 Aircraft Flight Manual (AFM) Publication, No.1CC1-1 dated, Revised – 29 October
- Prop-Jet Convair Bulletin (PJCB) 10-21 dated October 10, 1969