

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: May 2, 1977

Forwarded to:

Honorable Quentin S. Taylor
Acting Administrator
Federal Aviation Administration
Washington, D.C. 20591

SAFETY RECOMMENDATION(S)

A-77-20 through 22

On January 3, 1977, the National Transportation Safety Board investigated a fatal accident at Rockford, Illinois, involving a Cessna 310J. The airplane crashed during an instrument approach after a 1 hour 49 minute flight. The pilot reported during the approach that he had lost all power from both engines. Examination of the engines disclosed neither mechanical failures nor any other reason for the power loss; however, our investigators determined that both fuel selector valves were in the auxiliary tank position.

The usable fuel capacity of the auxiliary tanks is 30 gallons. If, in cruise 28 to 30 gallons per hour is consumed, a pilot might reasonably expect to cruise for an hour using the auxiliary tanks. However, the fuel injection system bypasses and returns approximately half the fuel delivered by the engine-driven pump. In the Cessna 300 and 400 series airplanes, the bypassed fuel is returned only to the main tank, in effect, reducing the endurance on auxiliary tanks in the Cessna 310 to approximately 30 minutes.

Cessna has advised the Board that their test pilots and marketing personnel consider the auxiliary tanks suitable for only 30 minutes' operation. However, the owner's manuals for the various models of the 310 series do not provide enough specific information for the pilot to determine the auxiliary tank's endurance, except through trial and error. Earlier manuals generally contained more information than later ones, and the manual for the 310J is least descriptive of all. A pilot might easily assume that he could operate for an hour on auxiliary tanks, then run out of fuel after just 30 minutes. The Safety Board believes that such was the case in this accident.

2058

Honorable Quentin S. Taylor

- 2 -

A review of Cessna 310 accidents involving fuel starvation for the years 1966 through 1976 disclosed 10 accidents in which early depletion of auxiliary fuel most likely was the reason for fuel starvation. The Safety Board believes that the pilot should be given more specific information regarding the actual operating time using auxiliary fuel tanks.

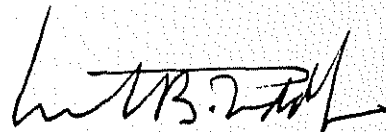
The National Transportation Safety Board, therefore, recommends that the Federal Aviation Administration:

Issue an Airworthiness Directive requiring that all Cessna Model 310 airplanes with an auxiliary fuel system installed be placarded, in the cockpit, to caution pilots that only 30 minutes flight time may be available when using auxiliary tanks. (Class II--Priority Followup) (A-77-20)

Require, for all new airplanes in which some auxiliary fuel is returned to tanks other than the auxiliary tanks, that the flight manual or approved manual material specifies the amount of fuel returned to another tank and the flight time available when using the auxiliary tanks. (Class II--Priority Followup) (A-77-21)

Require that district accident prevention specialists disseminate this information as widely as possible among pilots of the Cessna 310. (Class II--Priority Followup) (A-77-22)

TODD, Chairman, BAILEY, Vice Chairman, McADAMS, HOGUE, and HALEY, Members, concurred in the above recommendations.



By: Webster B. Todd, Jr.
Chairman