

- It is not plausible to board the aircraft using the forward emergency exits. A maintenance action is required to reinstall the emergency exits.
- The left forward exit will be placarded with the words, “Caution, Propellers Must be Stopped Before Opening this Exit” or similar language. In addition, the flight manual will contain expanded instructions on how to stop the engines before opening the exit.

The applicant also claims there are only two scenarios that require consideration when using the left-hand emergency exit:

1. An impact severe enough to render the pilot unconscious and to stop the propellers from turning, and
2. An incident that leaves the pilot in a conscious state, capable of shutting down the engines.

The Small Airplane Directorate Response

The intent of the rule is to avoid endangering persons using this exit. The hazard is to a person using the exit. Just stating that not using the exit in certain situations does not address the hazard. Stopping the propeller(s) does address the hazard but the method proposed does not provide an equivalent level of safety to the rule. With the exit in its current proposed location, the above mentioned scenarios do not adequately address mitigating the hazard when using this exit. The Directorate does not believe that the two above mentioned scenarios quantify all the possibilities that would lead to the use of the left-hand emergency exit. One scenario envisioned by the Directorate is a situation of smoke or fire in the cockpit. This may force a panicked pilot to attempt an egress from the left-hand emergency door, without properly shutting down both engines. The applicant’s petition does not adequately address this or similar scenarios; therefore, the Directorate does not see the applicant’s proposal as providing an equivalent level of safety to Section 23.807(a)(4).

In consideration of the current vehicle configuration, the Directorate believes one option that the applicant has is to relocate the left-hand emergency exit door to a position that complies with all relevant regulations. Another alternative is the installation of a fail-safe mechanical or electrical system that automatically shuts down both engines upon opening the left-hand emergency exit or an interlock that will not allow the door to open while the engines are operating. The installation of this type of system must not introduce other hazards to the safe operation of the aircraft.

Therefore, based on the information provided by the Morrow Aircraft Corporation and the existing requirements of 14 CFR Section 23.807(a)(4), the Directorate denies the request for a positive ELOS finding. If you need additional information or clarification, please contact Mr. Doug Rudolph, Morrow Boomerang Project Officer, at 816-329-4059.

Concur:

S/ Scott Sedgwick

Manager, Standards Office, ACE-110

MAY 24 2001

Date

S/ Michael Gallagher

Manager, Small Airplane Directorate,
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