



U.S. Department
of Transportation
**Federal Aviation
Administration**

AFS-600
Regulatory Support Division

ADVISORY CIRCULAR

43-16A

SPECIAL AVIATION MAINTENANCE ALERT



**SPECIAL
ALERT NO. 1**

**APRIL
2006**

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590**

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience, cooperating in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via a Mechanical Reliability Report (MRR), a Malfunction or Defect Report (M or D), or a Service Difficulty Report (SDR). Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Aviation Data Systems Branch (AFS-620); P.O. Box 25082; Oklahoma City, OK 73125-5029.

(Editor's notes are provided for editorial clarification and enhancement within an article. They will always be recognized as italicized words bordered by parentheses.)

Airplane: Experimental Amateur Built

Sonerai: Model II LT; Failed Canopy Latch Mechanism; ATA 5610

(The following Special Aviation Maintenance Alert was prompted by a recent aircraft accident involving a Sonerai Model II. The investigation was performed by the FAA Louisville Flight Standards District Office—FSDO and the National Transportation Board—NTSB. The findings of this investigation led to a Safety Recommendation from the Louisville FSDO proposing a series of actions, including a request to issue an immediate Aviation Maintenance Alert. It is published here as received. Contact information can be found at the description's end.)

“This office conducted an accident investigation involving a Sonerai II--two place experimental, amateur built aircraft. It was discovered the canopy latch had no positive or over-center latch mechanism to prevent the canopy from coming open during flight. According to a post-accident interview with the pilot/builder, the canopy inadvertently came open in flight, causing loss of control—one factor contributing to the accident. This aircraft was substantially damaged and the pilot was seriously injured.

“The canopy attachment on this aircraft consists of a right side hinge at the cockpit rim and three pieces of tubing welded to the left cockpit rim. The canopy latch mechanism on the left side of the canopy has a sliding rod that is pushed forward to engage the three pieces of tubing. There is no positive method for preventing the latch rod from sliding aft—after it is placed in the closed position. Those persons having similar latching mechanisms in their aircraft are admonished to facilitate a positive lock to this slide-type closure.”

(Amateur builders are given a great deal of latitude and responsibility in their construction approach, but no aircraft should be flown with obvious defects: if it looks like it can come loose, it most likely will...at altitude! Whether or not the above unsecured latch mechanism is an oversight of the builder, the design, or both remains unresolved. Other interested builders of this Sonerai airplane are encouraged to send relevant discussion, drawings, or photographs to this editor's office: www.daniel.roller@faa.gov. Clarifying materials will be published in future Alerts. The NTSB report number NYC06CA021 can be found at www.nts.gov/ntsb/query.asp For further information contact Aviation Safety Inspector Mr. Chuck Holsclaw, Louisville Flight Standards District Office, 1930 Bishop Lane, Louisville, KY 40218; phone 502-753-4214.)