



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

# SAFO

Safety Alert for Operators

SAFO 07008  
DATE 10/24/07

Flight Standards Service  
Washington, DC

[http://www.faa.gov/other\\_visit/aviation\\_industry/airline\\_operators/airline\\_safety/safo](http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo)

*A SAFO contains important safety information and may include recommended action. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO.*

**Subject:** Cabin Fluorescent Light (Luminaire) Assembly (Fixtures)

**Purpose:** This SAFO increases operators' awareness of the importance of correctly installed luminaires and maintaining fixtures in an airworthy condition. This SAFO also identifies typical failures resulting from mishandling that can lead to damage and consequent overheating or fire.

**Background:** Several incidents have been reported of smoke emanating in the passenger cabin caused by overheating of fluorescent luminaire assemblies and ballasts. Frequently, the cause of overheating is an aircraft mechanic mishandling the fluorescent luminaire by not fully inserting it into the fixture's contacts or intentionally removing the spring loading clip that reduces vibration by placing tension on the luminaire. Partially inserted or unseated fluorescent luminaires vibrate without the clip or arc within the fixture's contacts, which overheats the contacts and associated ballast transformer and could result in smoke or fire.

**Discussion:** Particular attention should be given when inserting a fluorescent luminaire to ensure that the loading clip provides sufficient tension to the luminaire. Aircraft mechanics should inspect the luminaire pins, contacts, and connector blocks; ballasts; and the associated wiring insulation for signs of damage, overheating, or melting. If discovered, the parts should be replaced. Visual inspection should verify that the luminaire is correctly seated into its contacts. Reports of overheating due to arcing between the fluorescent luminaire pins and the contacts prompted the FAA to publish Airworthiness Directives for several aircraft makes and models. Some manufactured ballasts have arch fault protection and are no longer manufactured without such protection. Some aircraft manufacturers may have adapted instructions for replacement of fluorescent luminaires into their aircraft maintenance manual.

**Recommended Action:** Directors of safety, flight crewmembers, training managers, directors of maintenance, aircraft mechanics, and responsible persons at certificated repair stations should be aware of the potential hazards and mitigations discussed in this SAFO.

Questions concerning this SAFO should be directed to the Aircraft Maintenance Division, AFS-300, at (202) 267-3546.