



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

SAFO

Safety Alert for Operators

SAFO 20006
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Flight Standards Service
Washington, DC

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: Vacuum-Type Fall-Arrest Protection Systems and Paint Peeling Issues on Boeing model 787 Airplanes.

Purpose: This SAFO serves to warn owners, operators and maintenance providers of the potential hazards of utilizing vacuum-type (suction grip) fall-arrest protection systems on Boeing model 787 airplanes due to paint adhesion failures.

Background: The Boeing Company reported to the Federal Aviation Administration (FAA) that certain Boeing model 787 airplanes are prone to paint adhesion failures due to Ultra Violet (UV) ray damage. Eleven in service Boeing 787 operators have reported vacuum-type fall-arrest protection systems failing due to the paint lifting off and away from the surface of the upper wing skin.

Discussion: Boeing attributed the paint peeling to Ultra Violet (UV) ray damage between the primer and the resin layers on the upper wing. In many cases, the paint peeling became apparent when the vacuum-type fall-arrest protection system was attached to the airplane surface and became detached when the paint lifted away from the surface of the plane, disabling its ability to provide fall protection for personnel, resulting in possible injury.

The current Boeing 787 Aircraft Maintenance Manual (787 AMM B787-A-20-10-27-01A) provides instructions for using and attaching vacuum-type fall-arrest protection system attachment points on the upper wing surface. However, when paint and resin primers have been affected by UV rays, cohesion is weakened, increasing the probability of vacuum-type suction cups coming loose, and peeling the paint off the wings. Paint adhesion failures on the upper wing surfaces could result in the failure of the vacuum-type attachment fall-arrest systems, leading to the potential for serious injury to personnel.

Recommended Action: All operators and repair facilities should review their fall protection procedures. If they allow suction grip type units to be attached to the B-787 upper wing surfaces, they should stop such actions or procedures. Additionally, if they are following the instructions in the Boeing 787 Aircraft Maintenance Manual (787 AMM B787-A-20-10-27-01A), for repair or any other approved safety fall protection procedures, they stop such actions. Utilization of Vacuum-Type Fall-Arrest Protection Systems should be stopped until further subsequent information is published by the FAA or Boeing.

Contact: Questions or comments regarding this SAFO should be directed to the Aircraft Evaluation Division's Seattle Office, at 206-231-3894.