



National Transportation Safety Board

Washington, D.C. 20594
Safety Recommendation

Log # 2603

Date: October 29, 1997

In reply refer to: A-97-109 and -110

Honorable Jane F. Garvey
Administrator
Federal Aviation Administration
Washington, D.C. 20591

On March 20, 1996, a Boeing 737 (B-737), operated by Air South Airlines, Inc., made an emergency landing at Jacksonville, Florida, following a power loss that occurred on takeoff; the emergency landing was uneventful. The airplane was operating under Title 14 Code of Federal Regulations Part 121 as a scheduled domestic air carrier passenger flight from Jacksonville, Florida, to Atlanta, Georgia. The Safety Board's investigation disclosed that both engines had ingested debris from the airplane's damaged nosegear-mounted taxi light assembly. The nosegear taxi light assembly for all new B-737 airplanes is manufactured by Grimes Aerospace Company under various part numbers.

The Boeing Commercial Airplane Group reported another incident in 1995, in which the nosegear taxi light assembly separated from a B-737 during taxi. In this incident, the left engine ingested debris causing a power loss. The Safety Board is also aware of two other incidents in which damaged nosegear taxi lights on B-737s caused landing gear malfunctions.

Grimes and Boeing report that their in-service histories for nosegear taxi light assemblies on B-737s show that the cast aluminum bracket on the nosegear taxi light assembly can be damaged if struck by the tow bar during its attachment to the nose strut before towing operations. The cast aluminum bracket can be bent or cracked when struck, allowing it to contact the oleo strut; this contact causes further damage to the light assembly during normal oleo-strut vertical movement. As a result, on June 1, 1992, and on November 30, 1993, Grimes issued Service Bulletin (SB) 50-0199-33-0004 and SB 50-0128-33-0005, and on December 19, 1994, Boeing issued Service Letter (SL) 737-SL-33-016-A, applicable to the B-737 nosegear taxi light assemblies, recommending replacement of the cast aluminum support bracket with a slightly smaller corrosion-resistant (stainless) steel support bracket.

Boeing records show that of 2,810 B-737s manufactured as of December 1996, 2,693 are still in service. Boeing began installing the improved Grimes nosegear taxi light assembly

on production B-737s starting with line No. 2375. However, about 1,435 B-737s still in operation have not had the improved, stainless steel nosegear landing light bracket installed. Grimes has reportedly supplied 822 stainless steel brackets to operators and has not had any reported failures of the improved brackets,

The Safety Board is concerned that damaged cast aluminum brackets on nosegear taxi light assemblies pose a significant hazard to operating engines, and that the ingestion of nosegear taxi light assembly debris could result in a power loss in one or both engines. Further, SB 50-0199-33-0004, SB 50-0128-33-0005, and SL 737-SL-33-016-A, do not sufficiently alert operators of the ingestion hazard posed by the damaged aluminum taxi light support brackets. Therefore, the Safety Board believes that the FAA should require Boeing to revise SL 737-SL-33-016-A to include language alerting operators of the ingestion hazard to operating engines and of possible landing gear malfunction, stemming from a failure of the cast aluminum bracket in the nosegear taxi light assembly. Also, because the SBs and SL do not mandate action by the operator and data suggest that many operators have not responded to the advice given in these documents, the Safety Board believes that the FAA should require replacement of the nosegear taxi light assembly of all B-737 series airplanes preceding line No. 2375 in accordance with revised SL 737-SL-33-016-A.

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

Require Boeing to revise Service Letter 737-SL-33-016-A to include language alerting operators of the ingestion hazard to operating engines and of possible landing gear malfunction, stemming from a failure of the cast aluminum bracket in the nosegear taxi light assembly. (A-97-109)

Require replacement of the nosegear taxi light assembly of all Boeing 737 series airplanes preceding line No. 2375 in accordance with revised Service Letter 737-SL-33-016-A. (A-97-110)

Chairman HALL, Vice Chairman FRANCIS, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in these recommendations.


By: Jim Hall
Chairman