

Investigation of this accident revealed that the airplane had numerous fatigue cracks and a great deal of corrosion. Subsequent inspections conducted by the operator on other high-cycle transport category airplanes in its fleet revealed that other airplanes had extensive fatigue cracking and corrosion.

Prompted by the data gained from this accident, the FAA sponsored a conference on aging airplanes in June 1988, which was attended by representatives from the aviation industry and airworthiness authorities from around the world. It became obvious that, because of the tremendous increase in air travel, the relatively slow pace of new airplane production, and the apparent economic feasibility of operating older technology airplanes rather than retiring them, increased attention needed to be focused on the aging airplane fleet and maintaining its continued operational safety.

The Air Transport Association (ATA) of America and the Aerospace Industries Association (AIA) of America agreed to undertake the task of identifying and implementing procedures to ensure the continued structural airworthiness of aging transport category airplanes. An Airworthiness Assurance Working Group (AAWG) was established initially in August 1988, with members representing aircraft manufacturers, operators, regulatory authorities, and other aviation industry representatives worldwide. The objective of the AAWG was to sponsor "Task Groups" to:

1. select service bulletins, applicable to each airplane model in the transport fleet, to be recommended for mandatory modification of aging airplanes;
2. develop corrosion-directed inspections and prevention programs;
3. review the adequacy of each operator's structural maintenance program;
4. review and update the Supplemental Inspection Documents (SID); and
5. assess repair quality.

The L-1011 Structures Task Group, which was assigned by the AAWG to review the Lockheed Model L-1011-385 series airplanes, completed its work on Item 2 in 1991 and developed a baseline program for controlling corrosion problems that may jeopardize the continued airworthiness of the Model L-1011 fleet. The program is contained Lockheed Document Number LR 31889, "Corrosion Prevention and Control Program, TriStar L-1011," dated March 15, 1991.

The FAA reviewed and approved that Document and, on October 8, 1993,

issued AD 93-20-03, amendment 39-8710 (58 FR 60775, November 18, 1993), which is applicable to all Lockheed Model L-1011 series airplanes. That AD requires the implementation of a corrosion prevention and control program (CPCP), comparable to the one outlined in the Lockheed Document, either by accomplishing specific tasks or by revising the FAA-approved maintenance inspection program to include such a program.

Current Service Information

Since issuance of AD 93-20-03, the FAA has reviewed and approved Revision A of Lockheed Document Number LR 31889, "Corrosion Prevention and Control Program, TriStar L-1011," dated April 1994. This revision of the Lockheed Document contains Section 7.2, which lists twelve Lockheed service bulletins that have been recommended for mandatory action by the L-1011 Structures Task Group.

The twelve Lockheed service bulletins recommended by the Task Group describe various modifications, installations, and inspections of the fuselage and wings that are intended to decrease the airplane's susceptibility to corrosion in specific areas. The pertinent Lockheed service bulletins are:

1. Service Bulletin 093-51-007, Revision 5, dated December 20, 1973, describes procedures for modifying the afterbody-emannage-wing area to improve drainage capability.
2. Service Bulletin 093-53-061, Revision 1, dated June 20, 1974, describes procedures for modifying the drainage provisions at the surround structure of the C-1, C-2, and C-3 cargo doors.
3. Service Bulletin 093-53-068, dated October 23, 1974, describes procedures for installing a drain at the C-1A cargo door sill.
4. Service Bulletin 093-53-095, Revision 2, dated June 22, 1987, describes procedures for installing additional provisions for drainage at the pressure deck of the nose landing gear.
5. Service Bulletin 093-53-113, dated November 12, 1975, describes procedures for a modifying the area of the stringers at Fuselage Station (FS) 1792 to improve fluid drainage.
6. Service Bulletin 093-53-157, dated May 3, 1977, describes procedures for inspecting and modifying the sealing and drainage provisions at the aft pressure bulkhead.
7. Service Bulletin 093-53-186, Revision 3, dated June 11, 1991, describes procedures for the installing

additional drainage provisions in the fuselage drain system.

8. Service Bulletin 093-53-192, Revision 2, dated December 9, 1981, describes procedures for modifying the fuselage drain system.

9. Service Bulletin 093-53-204, Revision 1, dated March 26, 1984, describes procedures for modifying the door sill drain and cargo compartment beam at the galley and door compartments.

10. Service Bulletin 093-53-234, Revision 2, dated November 12, 1992, describes procedures for modifying the galley door sill area to improve corrosion resistance.

11. Service Bulletin 093-57-089, Revision 1, dated October 4, 1976, describes procedures for installing drain provisions and a dam in the main landing gear torque box.

12. Service Bulletin 093-57-138, Revision 1, dated July 17, 1981, and Change Note, dated September 3, 1982, describe procedures for inspecting the lower surface bolts at wing body line (WBL) 115.95 to detect corrosion, and necessary modification.

The FAA has considered the recommendation of the Task Group and concurs with it. The FAA has determined that accomplishment of the actions specified in the twelve Lockheed service bulletins will contribute to positively addressing the unsafe condition presented by the problems associated with corrosion.

Proposed Requirements of AD

Since corrosion is likely to exist or develop on airplanes of this type design, an AD is proposed which would require the accomplishment of the modification, installation, and other actions specified in the twelve Lockheed service bulletins described previously.

Although the proposed AD would be a rulemaking action completely separate from AD 93-20-03, the compliance schedule for the accomplishment of the proposed actions would be consistent with that for the corrosion inspections (tasks) currently required by AD 93-20-03. The initial corrosion tasks required by AD 93-20-03 must be accomplished within various intervals of time, depending on what "airplane zone" is involved; the intervals are measured from a date one year after the effective date of that AD. Accordingly, since the effective date of AD 93-20-03 is "December 17, 1993," the schedule for the actions currently required by that AD is measured from December 17, 1994.

This proposed AD would require accomplishment of the proposed modifications, installations, and