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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0637; Directorate Identifier 2008-NM-078-AD; Amendment 39-15561; AD 2008-12-17]

RIN 2120-AA64

Airworthiness Directives; Lockheed Model L-1011 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD), which applies to all Lockheed Model L-1011 series airplanes. That AD currently requires an inspection of the fuel level control switch, the fuel level control switch wiring harness, and the wiring harness conduit for damage, wear or chafing, broken or missing O-rings, or indications of electrical arcing. That AD also requires replacement of a certain conduit in the fuel level control switch wiring harness, installation of electrical sleeving over the fuel level control switch wiring harness, and installation of the fuel level control switch that has been so modified. This new AD requires an inspection of the fuel level control switch, wiring harnesses, and harness conduit for any visible damage, wear or chafing, broken or missing O-rings, or indications of electrical arcing; an inspection to determine the part number of the wiring harness conduit; and corrective actions if necessary. This new AD also requires replacing certain sleeving with new, improved sleeving over the wiring harness of the fuel level control switch. This AD results from a design review of the fuel tank systems. We are issuing this AD to prevent chafing of the fuel level control switch wiring harness, which could cause arcing and result in a fire in the fuel tank.

DATES: This AD becomes effective July 23, 2008.

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in the AD as of July 23, 2008.

On June 1, 2001 (66 FR 21072, April 27, 2001), the Director of the Federal Register approved the incorporation by reference of a certain service bulletin.

ADDRESSES: For service information identified in this AD, contact Lockheed Continued Airworthiness Project Office, Attention: Airworthiness, 86 South Cobb Drive, Marietta, Georgia 30063-0567.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (telephone 800-647-5527) is the Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Robert A. Bosak, Aerospace Engineer, Propulsion and Services Branch, ACE-118A, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia 30349; telephone (770) 703-6094; fax (770) 703-6097.

SUPPLEMENTARY INFORMATION:

Discussion

On April 18, 2001, we issued AD 2001-08-21, amendment 39-12198 (66 FR 21072, April 27, 2001), for all Lockheed Model L-1011 series airplanes. That AD requires a general visual inspection of the fuel level control switch, the fuel level control switch wiring harness, and the wiring harness conduit for damage, wear or chafing, broken or missing O-rings, or indications of electrical arcing. That AD also requires replacement of a certain conduit in the fuel level control switch wiring harness, installation of electrical sleeving over the fuel level control switch wiring harness, and installation of the fuel level control switch that has been so modified. That AD resulted from a design review of the fuel tank systems. We issued that AD to prevent chafing of the fuel level control switch wiring harness, which could cause arcing and result in a fire in the fuel tank. That AD refers to the original issue of Lockheed Service Bulletin 093-28-094, dated March 3, 2000, as the appropriate source of service information for accomplishing the actions required by that AD.

Actions Since Existing AD Was Issued

Since we issued AD 2001-08-21, we issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to all Lockheed Model L-1011 series airplanes. That NPRM, Docket No. FAA-2008-0181, was published in the Federal Register on February 20, 2008 (73 FR 9235). That NPRM proposed to require revising the FAA-approved maintenance program by incorporating new airworthiness limitations for fuel tank systems to satisfy Special Federal Aviation Regulation No. 88 ("SFAR 88") requirements. That NPRM also proposed to require the accomplishment of certain fuel system modifications, the initial inspections of certain repetitive fuel system limitations (FSLs) to phase in those inspections, and repair if necessary. One of those FSLs involved accomplishing the actions specified in Lockheed Service Bulletin 093-28-094, Revision 1, dated June 23, 2006.

We gave the public the opportunity to participate in developing that NPRM, and we received a comment from ATA Airlines requesting that we revise the NPRM by removing the proposed requirement to accomplish the FSL specified in Revision 1 of Lockheed Service Bulletin 093-28-094. The commenter further requested that we instead issue a separate rulemaking action to supersede AD 2001-08-21 to require the accomplishment of Revision 1 of the service bulletin. As stated in the NPRM, AD 2001-08-21 requires the accomplishment of the original issue of the service bulletin, but more work is necessary for Revision 1 of the service bulletin. The additional work includes replacing any wiring harness conduit having part number (P/N) 741652-105 with new conduit having P/N 741652-121, removing any braided fiberglass sleeving installed in accordance with the original issue

of the service bulletin, and installing PVC electrical sleeving having P/N PVC-105-2 over the wiring harness of the fuel level control switch.

We agree that it is more appropriate to supersede AD 2001-08-21 to require the additional work specified in Revision 1 of the service bulletin. Therefore, we are issuing this new action to amend 14 CFR part 39 to include an AD that supersedes AD 2001-08-21. Further, we also removed the proposed requirement to accomplish the FSL specified in Revision 1 of the service bulletin from the NPRM, and we issued AD 2008-11-02, amendment 39-15524 (73 FR 29410, May 21, 2008), on May 8, 2008, to require all other actions proposed by the NPRM.

Relevant Service Information

We have reviewed Revision 1 of Lockheed Service Bulletin 093-28-094. That service bulletin describes the following procedures:

- Inspecting the fuel level control switch, wiring harness, and wiring harness conduit for any visible damage, wear or chafing, broken or missing O-rings, or indications of electrical arcing.
- Verifying the part number of the wiring harness conduit.
- Removing any braided fiberglass sleeving installed in accordance with the original issue of the service bulletin, and installing PVC electrical sleeving having P/N PVC-105-2 over the wiring harness of the fuel level control switch.
- Doing corrective actions if necessary.

The corrective actions include replacing the fuel level control switch with a new part if any visible damage, wear or chafing, broken or missing O-ring, or indication of electrical arcing is found; and replacing any wiring harness conduit having P/N 741652-103 or -105 with new conduit having P/N 741652-121.

The service bulletin also describes procedures for notifying Lockheed of any discrepancies found during the inspection, and revising the airplane records and maintenance planning documents to repeat the inspection at intervals not to exceed 120 months.

FAA's Determination and Requirements of the AD

We have evaluated all pertinent information and identified an unsafe condition that is likely to develop on other airplanes of the same type design. For this reason, we are issuing this AD, which would supersede AD 2001-08-21 and would retain the requirements of the existing AD. This AD would also require the following actions:

- A general visual inspection of the fuel level control switch, wiring harness, and wiring harness conduit for any visible damage, wear or chafing, broken or missing O-rings, or indications of electrical arcing, and corrective action as applicable.
- An inspection to determine the part number of the wiring harness conduit, and corrective action as applicable.
- Replacement of any braided fiberglass sleeving with PVC electrical sleeving over the wiring harness of the fuel level control switch.
- A revision to the FAA-approved maintenance program to incorporate repetitive general visual inspections of the fuel level control switch, wiring harness, and wiring harness conduit for any visible damage, wear or chafing, broken or missing O-rings, or indications of electrical arcing.

This AD allows accomplishing the revision to the FAA-approved maintenance program in accordance with later revisions of Lockheed Service Bulletin 093-28-094 as an acceptable method of compliance if they are approved by the Manager, Atlanta Aircraft Certification Office, FAA.

Difference Between This AD and Service Bulletin

Although Lockheed Service Bulletin 093-28-094, Revision 1, describes procedures for notifying Lockheed of any discrepancies found during the inspection, this AD does not require that action.

Clarification of Inspection Terminology

The "inspection" specified in Lockheed Service Bulletin 093-28-094, Revision 1, is referred to as a "general visual inspection" in this AD. We have included the definition for a general visual inspection in a note in this AD.

Change to Existing AD

This AD retains all requirements of AD 2001-08-21. Since AD 2001-08-21 was issued, the AD format has been revised, and certain paragraphs have been rearranged. As a result, the corresponding paragraph identifiers have changed in this AD, as listed in the following table:

Revised Paragraph Identifiers	
Requirement in AD 2001-08-21	Corresponding requirement in this AD
paragraph (a)	paragraph (f)
paragraph (b)	paragraph (g)

Costs of Compliance

There are about 108 airplanes of the affected design in the worldwide fleet. The following table provides the estimated costs, at an average labor rate of \$80 per work hour, for U.S. operators to comply with this AD.

Action	Estimated Costs				
	Work hours	Parts	Cost per airplane	Number of U.S.-registered airplanes	Fleet cost
Inspection of fuel level control switch and installation of braided fiberglass sleeving (required by AD 2001-08-21)	19	\$200	\$1,720	63	\$108,360
Inspection of fuel level control switch and installation of PVC sleeving (new action)	3	\$41,785	\$42,025	63	\$2,647,575
Maintenance program revision to incorporate repetitive inspection (new action)	1	None	\$80	63	\$5,040

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This

regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The Federal Aviation Administration (FAA) amends § 39.13 by removing amendment 39-12198 (66 FR 21072, April 27, 2001) and by adding the following new airworthiness directive (AD):



2008-12-17 Lockheed: Amendment 39-15561. Docket No. FAA-2008-0637; Directorate Identifier 2008-NM-078-AD.

Effective Date

- (a) This AD becomes effective July 23, 2008.

Affected ADs

- (b) This AD supersedes AD 2001-08-21.

Applicability

- (c) This AD applies to all Lockheed Model L-1011 series airplanes, certificated in any category.

Note 1: This AD requires revisions to certain operator maintenance documents to include new inspections. Compliance with these inspections is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by these inspections, the operator may not be able to accomplish the inspections described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance (AMOC) according to paragraph (l) of this AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane.

Unsafe Condition

- (d) This AD results from a design review of the fuel tank systems. We are issuing this AD to prevent chafing of the fuel level control switch wiring harness, which could cause arcing and result in a fire in the fuel tank.

Compliance

- (e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Restatement of Requirements of AD 2001-08-21

Inspection, Replacement, and Installation

- (f) Within 18 months after June 1, 2001 (the effective date of AD 2001-08-21): Verify the part number (P/N) of the wiring harness conduit and perform a general visual inspection of the fuel level control switch, the fuel level control switch wiring harness, and the wiring harness conduit to detect any visible damage, any wear or chafing, broken or missing O-rings, or indications of electrical arcing, in accordance with the Accomplishment Instructions in Lockheed Service Bulletin 093-28-094, dated March 3, 2000; or Revision 1, dated June 23, 2006.

Note 2: For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

(g) Prior to further flight after accomplishment of the requirements in paragraph (f) of this AD, accomplish the actions specified in paragraphs (g)(1) and (g)(2), as applicable, in accordance with the Accomplishment Instructions in Lockheed Service Bulletin 093-28-094, dated March 3, 2000; or Revision 1, dated June 23, 2006.

(1) Install sleeving over each fuel level control switch wiring harness and install the modified fuel level control switch.

(2) If a conduit with P/N 97590-103 is installed, replace the conduit with one having P/N 97590-121, install sleeving over each fuel level control switch wiring harness, and install the modified fuel level control switch.

New Requirements of This AD

New Inspections, Replacement, and Corrective Actions

(h) Within 60 months after the effective date of this AD: Do a general visual inspection of the fuel level control switch, wiring harness, and wiring harness conduit for any visible damage, wear or chafing, broken or missing O-rings, or indications of electrical arcing; do an inspection to determine the part number of the wiring harness conduit; replace any braided fiberglass sleeving with PVC electrical sleeving over the wiring harness of the fuel level control switch; and do all applicable corrective actions; by accomplishing all of the applicable actions specified in the Accomplishment Instructions of Lockheed Service Bulletin 093-28-094, Revision 1, dated June 23, 2006. The corrective actions must be done before further flight after doing the inspections.

Maintenance Program Revision

(i) Concurrently with accomplishing the actions specified in paragraph (h) of this AD: Revise the FAA-approved maintenance program to incorporate the information specified in Table 1 of this AD.

Table 1 – Fuel System Limitation for Fuel Level Control Switch

Task	Repetitive Interval	Applicability	Description
Airworthiness limitation instruction (ALI)	120 months	All airplanes modified in accordance with Lockheed Service Bulletin 093-28-094, Revision 1, dated June 23, 2006	General visual inspection of the fuel level control switch, wiring harness, and wiring harness conduit for any visible damage, wear or chafing, broken or missing O-rings, or indications of electrical arcing, in accordance with Lockheed Service Bulletin 093-28-094, Revision 1, dated June 23, 2006

No Alternative Inspections or Inspection Intervals

(j) After accomplishing the action specified in paragraph (i) of this AD, no alternative inspections or inspection intervals may be used unless the inspections or intervals are part of a later

revision of Lockheed Service Bulletin 093-28-094, Revision 1, dated June 23, 2006, that is approved by the Manager, Atlanta Aircraft Certification Office (ACO), FAA; or unless the inspections or intervals are approved as an AMOC in accordance with the procedures specified in paragraph (l) of this AD.

No Reporting Requirement

(k) Although Lockheed Service Bulletin 093-28-094, Revision 1, dated June 23, 2006, specifies notifying Lockheed of any discrepancies found during the inspection, this AD does not require that action.

Alternative Methods of Compliance (AMOCs)

(1)(1) The Manager, Atlanta ACO, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

Material Incorporated by Reference

(m) You must use Lockheed Service Bulletin 093-28-094, dated March 3, 2000; or Lockheed Service Bulletin 093-28-094, Revision 1, dated June 23, 2006; as applicable; to perform the actions that are required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of Lockheed Service Bulletin 093-28-094, Revision 1, dated June 23, 2006, in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) On June 1, 2001 (66 FR 21072, April 27, 2001), the Director of the Federal Register approved the incorporation by reference of Lockheed Service Bulletin 093-28-094, dated March 3, 2000.

(3) Contact Lockheed Continued Airworthiness Project Office, Attention: Airworthiness, 86 South Cobb Drive, Marietta, Georgia 30063-0567, for a copy of this service information. You may review copies at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on June 5, 2008.

Michael J. Kaszycki,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E8-13277 Filed 6-17-08; 8:45 am]