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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0919; Directorate Identifier 2010-NM-088-AD; Amendment 39-16903; AD 2011-27-02]

RIN 2120-AA64

Airworthiness Directives; Lockheed Martin Corporation/Lockheed Martin Aeronautics Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Lockheed Martin Corporation/Lockheed Martin Aeronautics Company Model L-1011-385-1, L-1011-385-1-14, L-1011-385-1-15, and L-1011-385-3 airplanes. This AD was prompted by results from a damage tolerance analysis conducted by the manufacturer indicating that fatigue cracking could occur in wing rear spar and upper surface zones. This AD requires repetitive inspections for cracking of the wing rear spar and upper surface zones, and repair if necessary. We are issuing this AD to detect and correct such fatigue cracking, which could result in cracking that grows large enough to reduce the wing strength below certificated requirements and possibly cause fracture of the rear spar, resulting in extensive damage to the wing and possible fuel leaks.

DATES: This AD is effective February 3, 2012.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of February 3, 2012.

ADDRESSES: For service information identified in this AD, Lockheed Martin Corporation/Lockheed Martin Aeronautics Company, Airworthiness Office, Dept. 6A0M, Zone 0252, Column P-58, 86 S. Cobb Drive, Marietta, Georgia 30063; telephone (770) 494-5444; fax (770) 494-5445; email ams.portal@lmco.com; Internet <http://www.lockheedmartin.com/ams/tools/TechPubs.html>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call (425) 227-1221.

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 (phone: (800) 647-5527) is 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: Carl Gray, Aerospace Engineer, Airframe Branch, ACE-117A, FAA, Atlanta Aircraft Certification Office (ACO), 1701 Columbia Avenue, College Park, Georgia 30337; phone: (404) 474-5554; fax: (404) 474-5606; email: Carl.W.Gray@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM published in the Federal Register on September 21, 2011 (76 FR 58416). That NPRM proposed to require repetitive inspections for cracking of the wing rear spar and upper surface zones, and repair if necessary.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (76 FR 58416, September 21, 2011) or on the determination of the cost to the public.

Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting the AD as proposed.

Interim Action

We consider this AD interim action. If final action is later identified, we might consider further rulemaking then.

Costs of Compliance

We estimate that this AD affects 4 airplanes of U.S. registry.
We estimate the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Models: L-1011-385-1, L-1011-385-1-14, L-1011-385-1-15 Zones 1A through 1E (Non-destructive Inspection)	21 work-hours X \$85 per hour = \$1,785 per inspection cycle	\$0	\$1,785 per inspection cycle	\$3,570 per inspection cycle (2 airplanes)
Models: L-1011-385-1, L-1011-385-1-14, L-1011-385-1-15, Zone 1F (Detailed Inspection)	5 work-hours X \$85 per hour = \$425 per inspection cycle	\$0	\$425 per inspection cycle	\$850 per inspection cycle (2 airplanes)
Model: L-1011-385-3, Zones 1A through 1E (Non-destructive Inspection)	24 work-hours X \$85 per hour = \$2,040 per inspection cycle	\$0	\$2,040 per inspection cycle	\$4,080 per inspection cycle (2 airplanes)
Model: L-1011-385-3, Zone 1F (Detailed Inspection)	5 work-hours X \$85 per hour = \$425 per inspection cycle	\$0	\$425 per inspection cycle	\$850 per inspection cycle (2 airplanes)

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this AD.

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

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),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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.

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 FAA amends § 39.13 by adding the following new airworthiness directive (AD):



2011-27-02 Lockheed Martin Corporation/Lockheed Martin Aeronautics Company:
Amendment 39-16903; Docket No. FAA-2011-0919; Directorate Identifier 2010-NM-088-AD.

(a) Effective Date

This AD is effective February 3, 2012.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Lockheed Martin Corporation/Lockheed Martin Aeronautics Company Model L-1011-385-1, L-1011-385-1-14, L-1011-385-1-15, and L-1011-385-3 airplanes, certificated in any category, serial numbers 1002 through 1250 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD results from a damage tolerance analysis conducted by the manufacturer indicating that fatigue cracking could occur in wing rear spar and upper surface zones. We are issuing this AD to detect and correct such fatigue cracking, which could result in cracking that grows large enough to reduce the wing strength below certificated requirements and possibly cause fracture of the rear spar, resulting in extensive damage to the wing and possible fuel leaks.

(f) Compliance

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

(g) Inspections of Wing Rear Spar and Upper Surface Zones, and Corrective Actions

At the applicable time specified in paragraph (k) of this AD, do eddy current non-destructive inspections (NDI) and detailed inspections for cracking at the applicable zones specified in paragraph (g)(1) or (g)(2) of this AD, in accordance with the Accomplishment Instructions of Lockheed Service Bulletin 093-57-226, dated August 31, 2009. Repeat the inspections thereafter at the applicable interval specified in Table 1 of this AD.

(1) For Model L-1011-385-1, L-1011-385-1-14, and L-1011-385-1-15 airplanes: Zones 1A through 1E, and Zone 1F.

(2) For Model L-1011-385-3 airplanes: Zones 3A through 3E, and Zone 3F.

(h) Additional Inspection if Cracking Is Found

Except as specified in paragraph (j) of this AD, if any cracking is detected during any inspection required by paragraph (g) of this AD: Before further flight, remove the fastener(s) at the suspect area, as defined in Lockheed Service Bulletin 093-57-226, dated August 31, 2009; and do a secondary eddy current inspection to detect cracking of fastener holes with suspected crack indications; in accordance with the Accomplishment Instructions of Lockheed Service Bulletin 093-57-226, dated August 31, 2009.

(i) Repair

Except as specified in paragraph (j) of this AD, if a crack finding is confirmed by the inspection required by paragraph (h) of this AD and the cracking is within the allowable repair limits specified in Lockheed Martin Repair Drawing LCC-7622-369, Revision March 30, 1995: Before further flight, repair the cracking, in accordance with Lockheed Martin Repair Drawing LCC-7622-369, Revision March 30, 1995. If a crack finding confirmed by the inspection required by paragraph (h) of this AD is not within the allowable repair limits specified in Lockheed Martin Repair Drawing LCC-7622-369, Revision March 30, 1995: Before further flight, repair the cracking, in accordance with a method approved by the Manager, Atlanta Aircraft Certification Office (ACO), FAA. For a repair method to be approved by the Manager, Atlanta ACO, as required by this paragraph, the Manager's approval letter must specifically refer to this AD.

(j) Exception to Service Bulletin

If any cracking is found during any inspection required by this AD, and Lockheed Service Bulletin 093-57-226, dated August 31, 2009; or Lockheed Martin Repair Drawing LCC-7622-369, Revision March 30, 1995; specifies contacting Lockheed for appropriate action: Before further flight, repair the cracking in accordance with a method approved by the Manager, Atlanta ACO, FAA. For a repair method to be approved by the Manager, Atlanta ACO, as required by this paragraph, the Manager's approval letter must specifically refer to this AD.

(k) Compliance Times for Inspections

Do the inspections required by paragraph (g) of this AD at the applicable time specified in table 1 of this AD.

Table 1—Compliance Times for Inspections

Airplane models and zones	Compliance time (whichever occurs later)		Repetitive interval (not to exceed)
L-1011-385-1 having accumulated fewer than 7,000 flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zones 1A through 1E; (Non-destructive Inspection (NDI))	Within 7,000 flight cycles or 10 years after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215, whichever occurs first.	Within 1,000 flight cycles after the effective date of this AD.	1,100 flight cycles.

L-1011-385-1 having accumulated fewer than 7,000 flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zone 1F; (Detailed Inspection).	Within 7,000 flight cycles or 10 years after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215, whichever occurs first.	Within 90 flight cycles or 30 days after the effective date of this AD, whichever occurs later.	90 flight cycles.
L-1011-385-1 having accumulated 7,000 flight cycles or more flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zones 1A through 1E; (NDI).	Within 1,000 flight cycles or 12 months after the effective date of this AD, whichever occurs first.	N/A	1,100 flight cycles.
L-1011-385-1 having accumulated 7,000 flight cycles or more after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zone 1F; (Detailed Inspection).	Within 90 flight cycles after the effective date of this AD.	Within 30 days after the effective date of this AD.	90 flight cycles.
L-1011-385-1-14 having accumulated fewer than 6,900 flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zones 1A through 1E; (NDI).	Within 6,900 flight cycles or 10 years after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215, whichever occurs first.	Within 1,000 flight cycles after the effective date of this AD.	900 flight cycles.
L-1011-385-1-14 having accumulated fewer than 6,900 flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zone 1F; (Detailed Inspection).	Within 6,900 flight cycles or 10 years after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215, whichever occurs first.	Within 90 flight cycles or 30 days after the effective date of this AD, whichever occurs later.	90 flight cycles.
L-1011-385-1-14 having accumulated 6,900 or more flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zones 1A through 1E; (NDI).	Within 1,000 flight cycles or 12 months after the effective date of this AD, whichever occurs first.	N/A	900 flight cycles.

L-1011-385-1-14 having accumulated 6,900 or more flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zone 1F; (Detailed Inspection).	Within 90 flight cycles after the effective date of this AD.	Within 30 days after the effective date of this AD.	90 flight cycles.
L-1011-385-1-15 having accumulated fewer than 5,600 flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zones 1A through 1E; (NDI).	Within 5,600 flight cycles or 10 years after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215, whichever occurs first.	Within 1,000 flight cycles after the effective date of this AD.	500 flight cycles.
L-1011-385-1-15 having accumulated fewer than 5,600 flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zone 1F; (Detailed Inspection).	Within 5,600 flight cycles or 10 years after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215, whichever occurs first.	Within 60 flight cycles or 30 days after the effective date of this AD, whichever occurs later.	60 flight cycles.
L-1011-385-1-15 having accumulated 5,600 or more flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zones 1A through 1E; (NDI).	Within 1,000 flight cycles or 12 months after the effective date of this AD, whichever occurs first.	N/A	500 flight cycles.
L-1011-385-1-15 having accumulated 5,600 or more flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zone 1F; (Detailed Inspection).	Within 60 flight cycles after the effective date of this AD.	Within 30 days after the effective date of this AD.	60 flight cycles.
L-1011-385-3 having accumulated fewer than 8,400 flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zones 1A through 1E; (NDI).	Within 8,400 flight cycles or 10 years after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215, whichever occurs first.	Within 1,000 flight cycles after the effective date of this AD.	1,200 flight cycles.

L-1011-385-3 having accumulated fewer than 8,400 flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zone 1F; (Detailed Inspection).	Within 90 flight cycles or 30 days after the effective date of this AD, whichever occurs later.	Within 85 flight cycles or 30 days after the effective date of this AD, whichever occurs later.	85 flight cycles.
L-1011-385-3 having accumulated 8,400 or more flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zones 1A through 1E; (NDI).	Within 1,000 flight cycles or 12 months after the effective date of this AD, whichever occurs first.	N/A	1,200 flight cycles.
L-1011-385-3 having accumulated 8,400 or more flight cycles after the accomplishment of Lockheed Martin Service Bulletin 093-57-184, 093-57-196, or 093-57-215; as of the effective date of this AD; Zone 1F; (Detailed Inspection).	Within 85 flight cycles after the effective date of this AD.	Within 30 days after the effective date of this AD.	85 flight cycles.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Atlanta ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(m) Related Information

For more information about this AD, contact Carl Gray, Aerospace Engineer, Airframe Branch, ACE-117A, FAA, Atlanta ACO, 1701 Columbia Avenue, College Park, Georgia 30337; phone: (404) 474-5554; fax: (404) 474-5606; email: Carl.W.Gray@faa.gov.

(n) Material Incorporated by Reference

(1) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) under 5 U.S.C. 552(a) and 1 CFR part 51 of the following service information on the date specified:

(i) Lockheed Service Bulletin 093-57-226, dated August 31, 2009, approved for IBR February 3, 2012.

(ii) Lockheed Martin Repair Drawing LCC-7622-369, Revision March 30, 1995, approved for IBR February 3, 2012. Only the first page of this document contains the manufacturer name, revision, and date of the document.

(2) For service information identified in this AD, contact Lockheed Martin Corporation/Lockheed Martin Aeronautics Company, Airworthiness Office, Dept. 6A0M, Zone 0252, Column P-58, 86 S. Cobb Drive, Marietta, Georgia 30063; telephone (770) 494-5444; fax (770) 494-5445; email ams.portal@lmco.com; Internet <http://www.lockheedmartin.com/ams/tools/TechPubs.html>.

(3) You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call (425) 227-1221.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on December 19, 2011.

Kalene C. Yanamura,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.