

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. FAA-2008-0638; Directorate Identifier 2008-NM-035-AD]

RIN 2120-AA64

Airworthiness Directives; Lockheed Model 382, 382B, 382E, 382F, and 382G Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all Lockheed Model 382, 382B, 382E, 382F, and 382G series airplanes. This proposed AD would require revising the FAA-approved maintenance program by incorporating new airworthiness limitations for fuel tank systems to satisfy Special Federal Aviation Regulation No. 88 requirements. This proposed AD would also require the accomplishment of certain fuel system modifications, the initial inspections of certain repetitive fuel system limitations to phase in those inspections, and repair if necessary. This proposed AD results from a design review of the fuel tank systems. We are proposing this AD to prevent the potential for ignition sources inside fuel tanks caused by latent failures, alterations, repairs, or maintenance actions, which, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane.

DATES: We must receive comments on this proposed AD by July 14, 2008.

ADDRESSES: You may send comments by any of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- *Fax:* 202-493-2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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.

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 proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone 800-647-5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

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:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include "Docket No. FAA-2008-0638; Directorate Identifier 2008-NM-035-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

The FAA has examined the underlying safety issues involved in fuel tank explosions on several large transport airplanes, including the adequacy of existing regulations, the service history of airplanes subject to those regulations, and existing maintenance practices for fuel tank systems. As a result of those findings, we issued a regulation titled "Transport Airplane Fuel Tank System Design Review, Flammability Reduction and Maintenance and Inspection Requirements" (66 FR 23086, May 7, 2001). In addition to new airworthiness

standards for transport airplanes and new maintenance requirements, this rule included Special Federal Aviation Regulation No. 88 ("SFAR 88," Amendment 21-78, and subsequent Amendments 21-82 and 21-83).

Among other actions, SFAR 88 requires certain type design (i.e., type certificate (TC) and supplemental type certificate (STC)) holders to substantiate that their fuel tank systems can prevent ignition sources in the fuel tanks. This requirement applies to type design holders for large turbine-powered transport airplanes and for subsequent modifications to those airplanes. It requires them to perform design reviews and to develop design changes and maintenance procedures if their designs do not meet the new fuel tank safety standards. As explained in the preamble to the rule, we intended to adopt airworthiness directives to mandate any changes found necessary to address unsafe conditions identified as a result of these reviews.

In evaluating these design reviews, we have established four criteria intended to define the unsafe conditions associated with fuel tank systems that require corrective actions. The percentage of operating time during which fuel tanks are exposed to flammable conditions is one of these criteria. The other three criteria address the failure types under evaluation: Single failures, single failures in combination with a latent condition(s), and in-service failure experience. For all four criteria, the evaluations included consideration of previous actions taken that may mitigate the need for further action.

We have determined that the actions identified in this proposed AD are necessary to reduce the potential of ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane.

Relevant Service Information

We have reviewed Lockheed Service Bulletin 382-28-22, Revision 3, dated March 28, 2008. The service bulletin describes procedures for incorporating new airworthiness limitations for fuel tank systems into the operator's FAA-approved maintenance program. The airworthiness limitations for fuel tank systems include fuel system limitations (FSLs) and critical design configuration control limitations (CDCCLs). FSLs are modifications, design features, and periodic inspections of certain features for latent failures that could contribute to an ignition source. CDCCLs are limitation requirements to preserve a

critical ignition source prevention feature of the fuel tank system design that is necessary to prevent the occurrence of an unsafe condition. The purpose of a CDCCL is to provide instruction to retain the critical ignition source prevention feature during configuration change that may be caused by alterations, repairs, or maintenance actions. A CDCCL is not a periodic inspection.

Lockheed Service Bulletin 382–28–22 refers to the following service bulletins as additional sources of service information for accomplishing certain FSLs and CDCCLs:

- Lockheed Service Bulletin 382–28–9, dated May 13, 1983, which describes procedures for replacing the dump masts with new, improved dump masts and installing heavy duty ground clamps and jumper wires.

- Lockheed Service Bulletin 382–28–19, Revision 3, dated November 30, 2006, which describes procedures for (1) doing a visual inspection of the ground/bonding jumpers for corrosion and/or incorrect resistance, misplaced or inappropriately installed ground/bonding jumpers, and repairing as necessary, (2) installing new ground/bonding jumpers, (3) doing a visual inspection of the fuel system electrical wires, (4) doing a visual inspection of the fuel tanks for contamination, a visual inspection of all fuel tank internal wire conduits for evidence of temperature discoloration or arcing through the conduit wall, and replacing the wire conduit with new conduit if necessary, (5) installing color-coded cable markers or heat shrink sleeving on the fuel quantity indicating system (FQIS) wiring, and (6) doing a zonal inspection of the dry bay areas and other areas, which includes inspections of the electrical systems, all units essential to safe operation, lightning protection, pneumatic system failures, structural and non-electrical equipment bonding, fuel tank access panel bonding, fuel system pumps, and fuel level control valve bonding.

- Lockheed Service Bulletin 382–28–20, Revision 4, dated May 21, 2007, which describes procedures for replacing the vent lines of the fuel tank with improved vent line assemblies having flame arrestors, installing ground fault interrupters (GFIs) in the cargo

compartment and modifying the wiring to protect the fuel system pumps from short-circuiting.

- Lockheed Service Bulletin 382–28–21, Revision 2, dated November 20, 2006, which describes procedures for installing lightning bonding jumpers across the fuel system fittings and fuel tube bulkhead feed-through joints.

- Lockheed Service Bulletin 382–28–24, Revision 1, dated November 5, 2007, which describes procedures for applying a certain sealant to the interior of fuel tanks 1 and 4 and to all external fuel tank nose caps, tail sections, and mid-section tank skins.

FAA's Determination and Requirements of This Proposed AD

We are proposing this AD because we evaluated all relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the(se) same type design(s). This proposed AD would require revising the FAA-approved maintenance program to incorporate the FSLs and CDCCLs specified in Lockheed Service Bulletin 382–28–22. This proposed AD would also require the accomplishment of certain fuel system modifications, the initial inspections of certain repetitive FSLs to phase in those inspections, and repair if necessary.

This proposed AD would also allow accomplishing the maintenance program revision in accordance with later revisions of Lockheed Service Bulletin 382–28–22 as an acceptable method of compliance if they are approved by the Manager, Atlanta Aircraft Certification Office (ACO), FAA.

Differences Between the Proposed AD and Service Bulletin

Paragraph 2.C.(1)(c) of Lockheed Service Bulletin 382–28–22 specifies to change the maintenance program to indicate that repetitive inspections of the lightning and static bonding jumpers must be done in accordance with Lockheed Service Bulletin 382–28–21. However, Lockheed Service Bulletin 382–28–21 does not contain inspection procedures. The applicable inspection procedures are contained in Lockheed Service Bulletin 382–28–19. Therefore, paragraph (g)(2) of the proposed AD

specifies that the repetitive inspections must be done in accordance with Lockheed Service Bulletin 382–28–19.

Paragraph 2.C.(4)(c) of Lockheed Service Bulletin 382–28–22 specifies to install identification cable markers or sleeving on the FQIS wires in accordance with the Hercules wiring diagram manual. However, Table 1 of this proposed AD refers to Lockheed Service Bulletin 382–28–19 as an additional source of service information for accomplishing that action, since Lockheed Service Bulletin 382–28–19 refers to the Hercules wiring diagram manual.

Where Lockheed Service Bulletin 382–28–19 specifies to do a visual inspection, this proposed AD would require a general visual inspection. We have included Note 2 in this proposed AD to define this type of inspection.

Although Lockheed Service Bulletin 382–28–19 describes procedures for notifying Lockheed of any discrepancies found during inspection, this proposed AD would not require that action.

Explanation of Compliance Time

In most ADs, we adopt a compliance time allowing a specified amount of time after the AD's effective date. In this case, however, the FAA has already issued regulations that require operators to revise their maintenance/inspection programs to address fuel tank safety issues. The compliance date for these regulations is December 16, 2008. To provide for efficient and coordinated implementation of these regulations and this proposed AD, we are using that same compliance date in this proposed AD.

Explanation of Comment Period

Operators should note that because of the critical need to prevent the potential for ignition sources inside fuel tanks, we have determined that a comment period of 30 days, rather than 45 days, is necessary in this case.

Costs of Compliance

We estimate that this proposed AD would affect 21 airplanes of U.S. registry. The following table provides the estimated costs, at an average labor rate of \$80 per hour, for U.S. operators to comply with this proposed AD.

ESTIMATED COSTS

Action	Work hours	Parts	Cost per product	Number of U.S.-registered airplanes	Fleet cost
Maintenance program revision	1	None	\$80	21	\$1,680
Installation of new, improved fuel dump masts	12	\$10,288	11,248	21	236,208

ESTIMATED COSTS—Continued

Action	Work hours	Parts	Cost per product	Number of U.S.-registered airplanes	Fleet cost
Dry bay zonal inspection, inspection and repair of static ground terminals, marking of FQIS wiring, initial inspection of lightning and static bonding jumpers	952	None	76,160	21	1,599,360
Installation of GFIs and flame arrestors	120	115,000	124,600	21	2,616,600
Initial inspection of GFIs and flame arrestors	8	None	640	21	13,440
Installation of lightning bonding jumpers	910	10,000	82,800	21	1,738,800
Sealant application	320	None	25,600	21	537,600

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 determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

1. Is not a "significant regulatory action" under Executive Order 12866,
2. Is not a "significant rule" under the 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.

You can find our regulatory evaluation and the estimated costs of compliance in the AD Docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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 AD:

Lockheed: Docket No. FAA-2008-0638; Directorate Identifier 2008-NM-035-AD.

Comments Due Date

- (a) We must receive comments by July 14, 2008.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to all Lockheed Model 382, 382B, 382E, 382F, and 382G 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 according to paragraph (k) 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 the potential for ignition sources inside fuel tanks caused by latent failures, alterations, repairs, or maintenance actions, which, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane.

Compliance

- (e) Comply with this AD within the compliance times specified, unless already done.

Service Bulletin Reference

- (f) The term "service bulletin," as used in this AD, means the Accomplishment Instructions of Lockheed Service Bulletin 382-28-22, Revision 3, dated March 28, 2008.

Maintenance Program Revision

- (g) Before December 16, 2008, revise the FAA-approved maintenance program to incorporate the fuel system limitations (FSLs) and the critical design configuration control limitations (CDCCLs) specified in the Accomplishment Instructions of the service bulletin; except as provided by paragraphs (g)(1), (g)(2), and (g)(3) of this AD, and except that the modifications and initial inspections specified in Table 1 of this AD must be done at the compliance time specified in paragraph (h) of this AD.

(1) For the CDCCLs specified in paragraphs 2.C.(3)(c), 2.C.(3)(h), 2.C.(4)(a), 2.C.(5)(c), 2.C.(7)(h), and 2.C.(8) of the service bulletin, do the applicable actions using a method approved in accordance with the procedures specified in paragraph (k) of this AD. Lockheed Service Bulletin 382-28-19, Revision 3, dated November 30, 2006, is one approved method.

(2) Where paragraph 2.C.(1)(c) of the service bulletin specifies to change the maintenance program to indicate that repetitive inspections of the lightning and static bonding jumpers must be done in accordance with Lockheed Service Bulletin 382-28-21, instead do the repetitive inspections in accordance with Lockheed Service Bulletin 382-28-19, Revision 3, dated November 30, 2006.

(3) Where the service bulletin specifies to inspect, this AD requires doing a general visual inspection.

Note 2: For the purposes of this AD, a general visual inspection is: "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 from within touching distance unless otherwise specified. A mirror may be necessary to ensure visual access to all surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight 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.”

Fuel System Modifications, Initial Inspections, and Repair if Necessary

(h) Within 24 months after the effective date of this AD, do the applicable actions

specified in Table 1 of this AD, and repair any discrepancy before further flight, in accordance with the service bulletin.

TABLE 1.—MODIFICATIONS AND INITIAL INSPECTIONS

Action	Additional source of service information for accomplishing the action
For airplanes having any serial number prior to 4962: Install new, improved fuel dump masts in accordance with paragraph 2.C.(1)(d) of the service bulletin.	Lockheed Service Bulletin 382–28–9, dated May 13, 1983.
Mark the fuel quantity indicating system (FQIS) wires in accordance with paragraph 2.C.(1)(a)2, 2.C.(4)(b), and 2.C.(4)(c) of the service bulletin.	Lockheed Service Bulletin 382–28–19, Revision 3, dated November 30, 2006.
Do the dry bay zonal inspection and inspect the static ground terminals of the fuel system plumbing in accordance with paragraph 2.C.(1)(a) of the service bulletin.	Lockheed Service Bulletin 382–28–19, Revision 3, dated November 30, 2006.
Install ground fault interrupters (GFIs) and flame arrestors for protection of the fuel system in accordance with paragraphs 2.C.(1)(b) and 2.C.(7)(c) of the service bulletin.	Lockheed Service Bulletin 382–28–20, Revision 4, dated May 21, 2007.
Inspect the GFIs for protection of the fuel system in accordance with paragraph 2.C.(1)(b)1 of the service bulletin.	Paragraph 2.C.(2) of the service bulletin.
Install the lightning bonding jumpers (straps) in accordance with paragraphs 2.C.(1)(c) and 2.C.(6)(a) of the service bulletin.	Lockheed Service Bulletin 382–28–21, Revision 2, dated November 20, 2006.
Inspect the lightning and static bonding jumpers (straps) in accordance with paragraphs 2.C.(1)(c) of the service bulletin.	Lockheed Service Bulletin 382–28–19, Revision 3, dated November 30, 2006.
Apply a certain sealant to the interior of the main wing fuel tanks; and apply a certain sealant to the all external fuel tank nose caps, mid sections, and tail sections; as applicable; in accordance with paragraphs 2.C.(1)(e)1, 2.C.(1)(e)3, and 2.C.(7)(i)1 of the service bulletin.	Lockheed Service Bulletin 382–28–24, Revision 1, dated November 5, 2007, including the Errata Notice, dated January 7, 2008.

No Alternative Inspections, Inspection Intervals, or CDCCLs

(i) After accomplishing the actions specified in paragraphs (g) and (h) of this AD, no alternative inspections, inspection intervals, or CDCCLs may be used unless the inspections, intervals, or CDCCLs are part of a later revision of the service bulletin that is approved by the Manager, Atlanta Aircraft Certification Office (ACO), FAA; or unless the inspections, intervals, or CDCCLs are approved as an alternative method of compliance in accordance with the procedures specified in paragraph (k) of this AD.

No Reporting Requirement

(j) Although Lockheed Service Bulletin 382–28–19, Revision 3, dated November 30, 2006, specifies to notify Lockheed of any discrepancies found during inspection, this AD does not require that action.

Alternative Methods of Compliance (AMOCs)

(k)(1) The Manager, Atlanta ACO, FAA, ATTN: 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; has the authority to approve AMOCs for this AD, if requested using 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.

Issued in Renton, Washington, on June 9, 2008.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E8–13322 Filed 6–12–08; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2008–0649; Directorate Identifier 2008–CE–038–AD]

RIN 2120–AA64

Airworthiness Directives; DG Flugzeugbau GmbH Model DG–500MB Powered Sailplanes

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

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for the products listed above. This proposed AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation

product. The MCAI describes the unsafe condition as:

A DG–500MB experienced, after the engine shutdown, an uncommanded retraction of its powerplant.

Investigations revealed that some bolts of the extension retraction mechanism had fractured because of fatigue stress due to increasing push-pull loads acting on incorrectly tightened screws.

This condition, if not corrected, could lead to damage of the propeller and the fuselage, thereby reducing the structural integrity of the sailplane.

The proposed AD would require actions that are intended to address the unsafe condition described in the MCAI.

DATES: We must receive comments on this proposed AD by July 14, 2008.

ADDRESSES: You may send comments by any of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- *Fax:* (202) 493–2251.

- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.