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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0195; Directorate Identifier 2012-NE-08-AD; Amendment 39-17070; AD 2012-11-07]

RIN 2120-AA64

Airworthiness Directives; Honeywell International, Inc. Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Honeywell International, Inc. ALF502L-2C; ALF502R-3; ALF502R-3A; ALF502R-5; LF507-1F; and LF507-1H turbofan engines. This AD was prompted by two reports of engines experiencing uncontained release of low-pressure (LP) turbine blades. This AD requires operational checks of the engine overspeed trip system. We are issuing this AD to prevent LP turbine overspeed leading to uncontained release of the LP turbine blades and damage to the airplane.

DATES: This AD is effective July 5, 2012.

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: Robert Baitoo, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, 3960 Paramount Blvd., Lakewood, CA 90712; phone: 562-627-5245; fax: 562-627-5210; email: robert.baitoo@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 March 9, 2012 (77 FR 14312). That NPRM proposed to require operational checks of the engine overspeed trip system.

Comments

We gave the public the opportunity to participate in developing this AD. We have considered the one comment received. The National Transportation Safety Board supports the NPRM.

Conclusion

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting the AD as proposed, except that we determined to not incorporate by reference the engine manuals for the procedures for operational checks of the engine overspeed trip system. Instead, we have included those procedures in the AD. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (77 FR 14312, March 9, 2012) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (77 FR 14312, March 9, 2012).

Costs of Compliance

We estimate that this AD will affect 188 Honeywell International, Inc. ALF502L-2C; ALF502R-3; ALF502R-3A; ALF502R-5; LF507-1F; and LF507-1H turbofan engines, installed on airplanes of U.S. registry. We also estimate that it will take about one work-hour to perform an operational check of the overspeed trip system on each engine. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the total cost of this AD for one operational check of the overspeed trip system to U.S. operators, to be \$15,980.

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):



2012-11-07 Honeywell International, Inc.: Amendment 39-17070; Docket No. FAA-2012-0195; Directorate Identifier 2012-NE-08-AD.

(a) Effective Date

This AD is effective July 5, 2012.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Honeywell International, Inc. ALF502L-2C; ALF502R-3; ALF502R-3A; ALF502R-5; LF507-1F; and LF507-1H turbofan engines.

(d) Unsafe Condition

This AD was prompted by two reports of engines experiencing uncontained release of low-pressure (LP) turbine blades. We are issuing this AD to prevent LP turbine overspeed leading to uncontained release of the LP turbine blades and damage to the airplane.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done.

(f) Initial Check of the Overspeed Trip System

Within 30 operating hours after the effective date of this AD, perform an initial check of the overspeed trip system, in accordance with the applicable paragraphs for your engine as follows:

(1) ALF502L-2C Engines

(i) With engine operating at 65 percent NL (N1) speed (28 to 30 percent if overspeed controller 2-303-052-04 or later is installed), pull toggle lever of cockpit OVERSPEED TEST/RESET switch and hold in the OVERSPEED TEST position.

(ii) Activation of the engine overspeed system shall be verified by:

(A) Engine OVERSPEED TRIP light illuminated in cockpit.

(B) Reduction of engine NH (N2) speed.

(C) When engine NH (N2) speed begins to decrease, retract engine power lever to fuel cutoff position and turn off fuel boost pumps.

(D) Release lever of engine cockpit OVERSPEED TEST/RESET Switch.

(E) When engine is completely shut down, reset the engine Overspeed System by momentarily holding the engine cockpit OVERSPEED TEST/RESET switch on the RESET position.

(F) If engine does not shut down, manually shut down engine and perform a detailed functional test of the overspeed system. Guidance on performing a detailed functional test of the overspeed system can be found in the applicable engine maintenance manual instructions.

(2) ALF502R-3; ALF502R-3A; ALF502R-5, and LF507-1H Engines

- (i) With engine operating at ground idle, set engine NL (N1) speed to 30 to 35 percent.
- (ii) Press cockpit OVERSPEED TEST switch and hold.
- (iii) Activation of the engine overspeed system shall be verified by:
 - (A) Engine OVERSPEED TRIP light illuminated in cockpit.
 - (B) Shutdown of the engine [zero NH (N2) speed].
- (iv) Release cockpit OVERSPEED TEST switch and retract power lever to fuel cutoff position.
- (v) When the engine is completely shut down, reset the engine overspeed system.
- (vi) If engine does not shut down, manually shut down engine and perform a detailed functional test of the overspeed system. Guidance on performing a detailed functional test of the overspeed system can be found in the applicable engine manual instructions.

(3) LF507-1F Engines

- (i) With engine operating at ground idle, set engine NL (N1) speed to 30 to 35 percent.
- (ii) Activate cockpit overspeed test circuit (GRND TEST ENG OVSPD).
- (iii) After NL (N1) speed begins to decay, retard the throttle to the fuel cutoff position.
- (iv) Verify the following conditions:
 - (A) Engine shutdown.
 - (B) Overspeed system light (ENG OVSPD) is illuminated in cockpit.
- (v) Reset overspeed system circuit power.
- (vi) If engine does not shut down, manually shut down engine and perform a detailed functional test of the overspeed system. Guidance on performing a detailed functional test of the overspeed system can be found in the applicable engine manual instructions.

(g) Repetitive Checks of the Overspeed Trip System

- (1) For ALF502L-2C engines, perform repetitive checks of the overspeed trip system at 100-hour intervals of operation, as specified in paragraph (f)(1) of this AD.
- (2) For ALF502R-3; ALF502R-3A; ALF502R-5; and LF507-1H engines, perform repetitive checks of the overspeed trip system once every flight day, as specified in paragraph (f)(2) of this AD.
- (3) For LF507-1F engines, perform repetitive checks of the overspeed trip system once every flight day, as specified in paragraph (f)(3) of this AD.

(h) Definition

For the purpose of this AD, a flight day is a 24-hour period during which at least one flight is indicated.

(i) Signing Off of Daily Repetitive Checks

Upon starting the daily repetitive checks, only one sign-off is required attesting to the daily check implementation.

(j) Alternative Methods of Compliance (AMOCs)

The Manager, Los Angeles Aircraft Certification Office, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(k) Related Information

For more information about this AD, contact Robert Baitoo, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, 3960 Paramount Blvd., Lakewood, CA 90712; phone: 562-627-5245; fax: 562-627-5210; email: robert.baitoo@faa.gov.

Issued in Burlington, Massachusetts, on May 23, 2012.
Peter A. White,
Manager Engine & Propeller Directorate,
Aircraft Certification Service.