



DATE: August 17, 2011

AD #: 2011-18-51

Emergency airworthiness directive (AD) 2011-18-51 is sent to owners and operators of airplanes with Honeywell International, Inc. TPE331 model turboprop engines installed.

Background

This emergency AD was prompted by an excessive failure rate of part manufacturer approval (PMA) main shaft bearings, part number (P/N) 3108098-1WD, manufactured by Dixie Aerospace, LLC, installed in Honeywell International, Inc. TPE331 model turboprop engines. The bearings were manufactured with inadequate inner ring guide flange clearance. The main shaft axial compressive loads combined with the inadequate clearance have a high probability of leading to a condition where the rollers are pinched between the inner ring guide flanges, leading to premature bearing failure and engine main rotor seizure. The bearing failure mechanism is severe and sudden. This condition, if not corrected, could result in engine main rotor seizure resulting in engine damage, shutdown, and damage to the airplane.

FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

AD Requirements

This AD requires an inspection of records to determine if a Dixie Aerospace, LLC main shaft bearing, P/N 3108098-1WD, is installed in Honeywell International, Inc. TPE331 model turboprop engines. Within 10 operating hours, affected bearings must be removed from service.

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.

Presentation of the Actual AD

We are issuing this AD under 49 U.S.C. Section 44701 according to the authority delegated to me by the Administrator.

2011-18-51 Honeywell International, Inc.: Directorate Identifier 2011-NE-28-AD.

Effective Date

(a) This Emergency AD is effective upon receipt.

Affected ADs

(b) None.

Applicability

(c) This emergency AD applies to all Honeywell International, Inc. TPE331 model turboprop engines with a Dixie Aerospace, LLC main shaft bearing, P/N 3108098-1WD, installed.

Unsafe Condition

(d) This AD was prompted by a report of a main shaft bearing seizure event occurring after about 100 operating hours after installation of a part manufacturer approval (PMA) main shaft bearing, part number (P/N) 3108098-1WD, manufactured by Dixie Aerospace, LLC. This bearing failure mechanism is severe and sudden. We are issuing this AD to prevent engine main rotor seizure resulting in engine damage, shutdown, and damage to the airplane.

Compliance

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

(f) For all airplanes with a Honeywell International, Inc. TPE331 model turboprop engine installed, where the engine was overhauled or replaced since February 1, 2010:

(1) Within 10 operating hours, inspect the airplane records to determine if a Dixie Aerospace, LLC main shaft bearing, P/N 3108098-1WD, is installed in the engine.

(2) Remove all Dixie Aerospace, LLC main shaft bearings, P/N 3108098-1WD, from service, before further flight.

Alternative Methods of Compliance (AMOCs)

(g) The Manager, Atlanta Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

Related Information

(h) For further information about this AD, contact: Juanita Craft, Aerospace Engineer, Atlanta Aircraft Certification Office, FAA, Atlanta Aircraft Certification Office, 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5584; fax: 404-474-5606; e-mail: juanita.craft@faa.gov.

Issued in Burlington, Massachusetts, on August 17, 2011.

Peter A. White,
Manager, Engine & Propeller Directorate,
Aircraft Certification Service.