



DATE: March 21, 2020
AD #: 2020-07-51

Emergency Airworthiness Directive (AD) 2020-07-51 is sent to owners and operators of International Aero Engines AG (IAE) V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, and V2533-A5 model turbofan engines.

Background

This emergency AD was prompted by investigative findings from an event that occurred on March 18, 2020, in which an Airbus Model A321-231 airplane, powered by IAE V2533-A5 model turbofan engines, experienced an uncontained high-pressure turbine (HPT) 1st-stage disk failure that resulted in an aborted takeoff. This condition, if not addressed, could result in release of high-energy debris, damage to the engine, damage to the airplane, and loss of the airplane.

FAA's Determination

The FAA is issuing this AD because the Agency 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. Due to the need to correct an urgent safety of flight situation, good cause exists to make this AD effective in less than 30 days.

AD Requirements

This AD requires the removal from service of affected HPT 1st-stage disks installed on IAE V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, and V2533-A5 model turbofan engines.

Interim Action

The FAA considers this AD interim action. The root cause of this event is still under investigation.

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.

The FAA is 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

The FAA is issuing this AD under 49 U.S.C. Section 44701 according to the authority delegated to me by the Administrator.

2020-07-51 International Aero Engines AG: Project Identifier AD-2020-00369-E.

(a) Effective Date

This Emergency AD is effective upon receipt.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all International Aero Engines AG (IAE) V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, and V2533-A5 model turbofan engines with a high-pressure turbine (HPT) 1st-stage disk, part number (P/N) 2A5001 and serial number PKLBR37442, PKLBR38359, PKLBR73862, PKLBR73289, PKLBR73270, PKLBR38981, PKLBR38661, PKLBR40207, PKLBR37445, PKLBR73861, PKLBR73268, PKLBR38629, PKLBSC8047, or PKLBR38979, installed.

(d) Subject

Joint Aircraft System Component (JASC) Code 7250, TURBINE SECTION.

(e) Unsafe Condition

This AD was prompted by investigative findings from an event involving an uncontained failure of a HPT 1st-stage disk that resulted in high-energy debris penetrating the engine cowling. The FAA is issuing this AD to prevent failure of the HPT. The unsafe condition, if not addressed, could result in uncontained HPT failure, release of high-energy debris, damage to the engine, damage to the airplane, and loss of the airplane.

(f) Compliance

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

(g) Required Actions

(1) For affected IAE model turbofan engines with an engine serial number and HPT 1st-stage disk serial number listed in Table 1 to paragraph (g) of this AD, within 5 flight cycles after the effective date of this AD, remove the HPT 1st-stage disk from service.

Table 1 to Paragraph (g) of this AD – HPT 1st-Stage Disk with Known Engine Installations

Engine Serial Number	HPT 1st-Stage Disk Serial Number
V10443	PKLBR73268
V10976	PKLBR73270
V11303	PKLBR38359
V11490	PKLBR38979

V12265	PKLBR73289
V15638	PKLBR37445
V15686	PKLBSC8047
V16372	PKLBR73861
V16570	PKLBR38629
V16468	PKLBR38981
V16622	PKLBR73862

(2) For all other affected IAE model turbofan engines, review the engine records within 3 calendar days after the effective date of this AD to determine if an HPT 1st-stage disk with serial number PKLBR37442, PKLBR38661, or PKLBR40207 is installed in the engine. If an affected HPT 1st-stage disk is installed, within 5 flight cycles after this determination remove the affected HPT 1st-stage disk from service.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, 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 certification office, send it to the attention of the person identified in paragraph (i) of this AD. You may email your request to ANE-AD-AMOC@faa.gov.

(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.

(i) Related Information

For further information about this AD, contact: contact Nicholas J. Paine, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7116; fax: 781-238-7199; E-mail: nicholas.j.paine@faa.gov.

Issued on March 21, 2020.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.