

(ii) Incorporate the RCC rear HPC in accordance with paragraphs (i)(6)(i) through (i)(6)(iii) of this AD.

(2) For any engine that experiences a forward or reverse thrust surge at EPR's greater than 1.25 that is not a Group 3 takeoff surge, do the following:

(i) For Configuration A, B, C, D, F, G, and H engines, remove engine from service within 25 CIS or before further flight if airplane-level troubleshooting procedures require immediate engine removal, and perform Testing-21 in accordance with paragraph (i) of this AD, as applicable.

(ii) For Configuration E engines, remove engine from service within 25 CIS or before further flight if airplane-level troubleshooting procedures require immediate engine removal.

(3) Paragraphs (q)(1) and (q)(2) of this AD are not applicable to engines that incorporate the RCC rear HPC in accordance with paragraphs (i)(6)(i) through (i)(6)(iii) of this AD.

Terminating Action for Boeing, Airbus, and McDonnell Douglas MD-11 Airplanes

(r) For Boeing, Airbus, and McDonnell Douglas operators with PW4000 engines installed on Boeing 747, 767, Airbus A300, A310, or McDonnell Douglas MD-11 airplanes, modify the engine HPC assembly by incorporating the RCC rear HPC in accordance with (i)(6)(i) through (i)(6)(iii) of this AD, as follows:

(1) For engines installed on Boeing 767 airplanes, manage the engine configuration installed on the airplanes in your fleet as follows:

(i) By May 31, 2006 and thereafter, ensure that at least one Configuration I engine is installed on the airplane.

(ii) After May 31, 2006, the non-Configuration I engine (SCC HPC module) installed on the airplane must have incorporated the Haynes material in the HPC inner case rear hook during the original engine build or during an HPC overhaul in accordance with PW4ENG 72-714, dated June 27, 2000; or Revision 1, dated November 8, 2001; or Revision 2, dated February 28, 2003; or SB PW4ENG 72-749, dated June 17, 2002; or Revision 1, dated January 8, 2003; or Chromalloy Florida Repair procedure 00CFL-039-0, dated December 27, 2000.

(2) For engines installed on Boeing 747 airplanes, manage the engine configuration installed on the airplanes in your fleet as follows:

(i) By January 31, 2007 and thereafter, ensure that no more than one non-Configuration I engine is installed on the airplane.

(ii) After January 31, 2007, the non-Configuration I engine (SCC HPC module) installed on the airplane must have incorporated the Haynes material in the HPC inner case rear hook during the original build or during an HPC overhaul in accordance with SB PW4ENG 72-714, dated June 27, 2000; or Revision 1, dated November 8, 2001; or Revision 2, dated February 28, 2003; or SB PW4ENG 72-749, dated June 17, 2002; or Revision 1, dated January 8, 2003; or Chromalloy Florida Repair procedure 00CFL-039-0, dated December 27, 2000.

(3) For engines installed on Airbus A300, A310, or McDonnell Douglas MD-11 airplanes, manage the engine configuration installed on the airplanes in your fleet as follows:

(i) By August 31, 2006 and thereafter, ensure that at least one Configuration I engine is installed on the Airbus A300 or A310 airplane, and ensure that no more than one non-Configuration I engine is installed on the McDonnell Douglas MD-11 airplane.

(ii) After August 31, 2006, the non-Configuration I engine installed on the airplane must have incorporated the Haynes material in the HPC inner case rear hook during the original build or during an HPC overhaul in accordance with SB PW4ENG 72-714, dated June 27, 2000; or Revision 1, dated November 8, 2001; or Revision 2, dated February 28, 2003; or SB PW4ENG 72-749, dated June 17, 2002; or Revision 1, dated January 8, 2003; or Chromalloy Florida Repair procedure 00CFL-039-0, dated December 27, 2000.

(4) Prior to June 30, 2009, or whenever the HPC module is disassembled to a level that fully separates the HPC rear case assembly at H flange from the HPC module, whichever occurs first, incorporate the RCC rear HPC in accordance with paragraphs (i)(6)(i) through (i)(6)(iii) of this AD. Engines incorporating the RCC rear HPC are Configuration I engines. See paragraph (s)(7) of this AD for definition of HPC rear case assembly.

(5) Incorporation of the RCC rear HPC constitutes terminating action to the Testing-21 requirements as specified in paragraph (l) of this AD, and engine stagger and or hard time limit requirements as specified in paragraphs (c), (d), (e) and (g) of this AD for engines installed on Boeing, Airbus, and McDonnell Douglas airplanes.

Definitions

(s) For the purposes of this AD, the following definitions apply:

(1) An HPC overhaul is defined as restoration of the HPC stages 5 through 15 blade tip clearances to the limits specified in the applicable fits and clearances section of the engine manual.

(2) An HPC overhaul period is defined as the time period between HPC overhauls.

(3) An HPT overhaul is defined as restoration of the HPT stage 1 and 2 blade tip clearances to the limits specified in the applicable fits and clearances section of the engine manual.

(4) A Phase 3 engine is identified by a (-3) suffix after the engine model number on the data plate if incorporated at original manufacture, or a "CN" suffix after the engine serial number if the engine was converted using PW SBs PW4ENG 72-490, PW4ENG 72-504, or PW4ENG 72-572 after original manufacture.

(5) A Group 3 takeoff surge is defined as the occurrence of any of the following engine symptoms that usually occur in combination during an attempted airplane takeoff operation (either at reduced, derated or full rated takeoff power setting) after takeoff power set, which can be attributed to no specific and correctable fault condition after completing airplane-level surge during forward thrust troubleshooting procedures:

(i) Engine noises, including rumblings and loud "bang(s)."

(ii) Unstable engine parameters (EPR, N1, N2, and fuel flow) at a fixed thrust setting.

(iii) Exhaust gas temperature (EGT) increase.

(iv) Flames from the inlet, the exhaust, or both.

(6) Takeoff EPR data is defined as Maximum Takeoff EPR if takeoff with Takeoff-Go-Around (TOGA) is selected, or Flex Takeoff EPR if takeoff with Flex Takeoff (FLXTO) is selected. Maximum Takeoff EPR or Flex Takeoff EPR may be recorded using any of the following methods:

(i) Manually recorded by the flight crew read from the Takeoff EPR power management table during flight preparation (see Aircraft Flight Manual (AFM) chapter 5.02.00 and 6.02.01, or Flight Crew Operation Manual (FCOM) chapter 2.09.20) and then adjusted by adding 0.010 to the EPR value recorded; or

(ii) Automatically recorded during Takeoff at 0.18 Mach Number (Mn) (between 0.15 and 0.20 Mn is acceptable) using an aircraft automatic data recording system and then adjusted by subtracting 0.010 from the EPR value recorded; or

(iii) Automatically recorded during takeoff at maximum EGT, which typically occurs at 0.25-0.30 Mn, using an aircraft automatic data recording system.

(7) HPC rear case assembly is defined as the HPC rear case with heat shields and other minor detail parts installed within the HPC rear case, but not including the HPC rear segmented stators.

Credit for Incorporating the RCC Rear HPC Before the Effective Date of This AD

(t) Engines that have incorporated the RCC rear HPC before the effective date of this AD, in accordance with the following, comply with the RCC rear HPC incorporation requirements of this AD:

(1) PW SB PW4ENG 72-755, Revision 3, dated September 16, 2003, or with PW SB PW4ENG 72-755, Revision 2, dated May 23, 2003 for engines installed in Boeing airplanes; or

(2) PW SB PW4ENG 72-756, Revision 1, dated September 15, 2003, or PW SB PW4ENG 72-756, dated July 7, 2003, or PW SB PW4ENG 72-759, Revision 1, dated September 16, 2003, or PW SB PW4ENG 72-759, dated July 7, 2003, for engines installed in Airbus airplanes; or

(3) PW SB PW4ENG 72-757, Revision 1, dated September 15, 2003, for engines installed in McDonnell Douglas airplanes.

Alternative Methods of Compliance

(u) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators must submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the ECO.