

cycles or greater than the CSN or CSO of the HPT.

(2) For any engine that undergoes an HPC overhaul after the effective date of this AD:

(i) Inspect the HPC mid hook and rear hook of the HPC inner case for wear in accordance with PW Clean, Inspect and Repair (CIR) Manual PN 51A357, Section 72-35-68 Inspection/Check-04, Indexes 8-11, dated December 15, 2002, or March 15, 2002, or September 15, 2001. If the HPC rear hook is worn beyond serviceable limits, replace the HPC inner case rear hook with an improved durability hook in accordance with PW SB PW4ENG 72-714, Revision 1, dated November 8, 2001, or Revision 2, dated February 28, 2003; or Chromalloy Florida Repair Procedure 00 CFL-039-0, dated December 27, 2000. If the HPC inner case mid hook is worn beyond serviceable limits, repair the HPC inner case mid hook in accordance with PW SB PW4ENG 72-749, dated June 17, 2002, or Revision 1, dated January 8, 2003; or Chromalloy Florida Repair Procedure 02 CFL-024-0, dated September 15, 2002.

(ii) After the effective date of this AD, any engine that undergoes an HPC overhaul may not be returned to service unless it meets the build standard of PW SB PW4ENG 72-484, PW4ENG 72-486, PW4ENG 72-514, and PW4ENG 72-575. Engines that incorporate the Phase 3 configuration already meet the build standard defined by PW SB PW4ENG 72-514.

(3) After the effective date of this AD, any engine that undergoes separation of the HPC and HPT modules must not be installed on an airplane unless it meets the build standard of PW SB PW4ENG 72-514. Engines that incorporate the Phase 3 configuration already meet the build standard defined by PW SB PW4ENG 72-514.

Minimum Build Standard for Engines Installed on Boeing 747 and 767 Airplanes

(m) For engines to be returned to service and installed on Boeing 747 and 767 airplanes, after the effective date of this AD:

(1) Any SCC HPC module that is disassembled to a level that fully separates the HPC rear case assembly at H flange from the HPC module may not be returned to service unless the RCC rear HPC is incorporated in accordance with PW SB PW4ENG 72-755, Revision 2, dated May 23, 2003. Any SCC HPC module that is not disassembled in accordance with (m)(1), must meet the following minimum build standard:

(i) Do not install an engine with HPC and HPT modules where the CSO of the HPC is 1,500 cycles or more than the CSN or CSO of the HPT.

(ii) Any engine that undergoes separation of the HPC and HPT modules must not be installed on an airplane unless it meets the build standard defined by PW SB PW4ENG 72-514. Engines that incorporate the Phase 3 configuration meet the build standard defined by PW SB PW4ENG 72-514.

Stability Testing Requirements for Engines To Be Installed on Airbus or McDonnell Douglas Airplanes

(n) For engines to be installed on Airbus or McDonnell Douglas airplanes, after the

effective date of this AD, Testing-21 must be performed in accordance with paragraph (i) of this AD, before an engine can be returned to service after having undergone maintenance in the shop, except under any of the following conditions:

(1) The engine HPC was overhauled, or replaced with an overhauled HPC with zero cycles since overhaul; or the engine HPC was replaced with an HPC that is new from production with no time in service, or

(2) Engine maintenance intended to maintain the airworthiness of the engine between planned shop visits, that requires separation of a major engine flange located between "A" flange and "T" flange, that results in the engine being reassembled with all gas path-related components remaining in the as-removed condition, or

(3) Engines with an HPC having zero CSN or CSO, or engines that successfully passed Testing-21 with zero CST; and are split at Flange E for transportation reasons as specified in the applicable Storage/Transport section of the applicable Engine Manual.

Stability Testing Requirements for Engines To Be Installed on Boeing 747 or 767 Airplanes

(o) For engines to be installed on Boeing 747 or 767 airplanes, after the effective date of this AD, Testing-21 must be performed in accordance with paragraph (j) of this AD, before an engine can be returned to service after having undergone maintenance in the shop, except under any of the following conditions:

(1) Engine HPC has incorporated the RCC rear HPC in accordance with PW SB PW4ENG 72-755, Revision 2, dated May 23, 2003. Completing this SB changes the engine configuration to Configuration I; or

(2) Engine maintenance intended to maintain the airworthiness of the engine between planned shop visits, that requires separation of a major engine flange located between "A" flange and "T" flange, that results in the engine being reassembled with all gas path-related components remaining in the as-removed condition; or

(3) Engines that successfully passed Testing-21 with zero CST, and are split at Flange E for transportation reasons as specified in the applicable Storage/Transport section of the applicable EM.

Thrust Rating Changes, Installation Changes, and Engine Transfers

(p) When a thrust rating change has been made by using the Electronic Engine Control (EEC) programming plug, or an installation change has been made during an HPC overhaul, use the lowest cyclic limit of Table 3 or Table 4 of this AD, associated with any engine thrust rating change or with any installation change made during this period. See paragraph (v)(2) for definition of HPC overhaul period.

(q) When a PW4158 engine is transferred to another PW4158 engine operator whose engine fleet has a different category, use the lowest cyclic limit in Table 4 of this AD that was used or will be used during the affected HPC overhaul period.

(r) When a PW4158 engine operator whose engine fleet changes category in accordance

with paragraph (h) of this AD, use the lowest cyclic limits in Table 4 of this AD that were used or will be used during the affected HPC overhaul period.

(s) Engines with an HPC having zero CSN or CSO at the time of thrust rating change, or installation change, or engine transfer between PW4158 engine operators, or subsequent change in operator engine fleet category in accordance with paragraph (h) of this AD in the direction of lower to higher Table 4 limits, are exempt from the lowest cyclic limit requirement in paragraphs (p), (q), and (r) of this AD.

Engines That Surge

(t) For engines that experience a surge, and after troubleshooting procedures are completed for airplane-level surge during forward or reverse thrust, do the following:

(1) For engines that experience a Group 3 takeoff surge, remove the engine from service before further flight and for engines that will be installed on Airbus or McDonnell Douglas airplanes, perform an HPC overhaul; or for engines that will be installed on Boeing airplanes, incorporate the RCC rear HPC in accordance with PW SB PW4ENG 72-755, Revision 2, dated May 23, 2003.

(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) or (j) 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 (t)(1) and (t)(2) are not applicable to engines that incorporate the RCC rear HPC in accordance with PW SB PW4ENG 72-755, Revision 2, dated May 23, 2003.

Terminating Action for Boeing Airplanes

(u) For Boeing operators with PW4000 engines installed on Boeing 747 or Boeing 767 airplanes, modify the engine HPC assembly by incorporating the RCC rear HPC in accordance with PW SB PW4ENG 72-755, Revision 2, dated May 23, 2003 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, 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