

Boeing airplanes must have incorporated a Haynes material HPC inner case rear hook. This requirement maintains the appropriate safety level and the intent of the fleet management plan to reduce the risk of a group 3 surge event. The FAA does not agree that tracking SCC engines with a Haynes material HPC inner case rear hook as well as RCC HPC engines imposes an undue burden on operators.

Service Bulletin Updated

One commenter notes that proposed paragraphs (j)(5), (m), (o)(1), (t)(1), (u), (u)(3), and Table (9) reference service bulletin (SB) PW4ENG 72-755, dated February 28, 2003, however the subject SB has been updated to Revision 1, dated April 8, 2003.

The FAA agrees. Since the issuance of the proposed rule, Revision 1 to SB PW4ENG 72-755 was issued on April 8, 2003, to correct various typographical errors, and Revision 2 was issued on May 23, 2003, to change the part number of two brackets due to interference concerns. The FAA has reviewed the data and concurs with these minor changes to the SB. The final rule incorporates SB PW4ENG 72-755, Revision 2, dated May 23, 2003.

Alternate Shroud Repair

Two commenters state that proposed paragraph (m) defines a minimum build standard for Boeing 747 and 767 airplanes that requires an HPC module to incorporate the requirements of SB PW4ENG 72-755. One of the requirements of that SB changes the abrasible sealing surface material for the stage 5, 6, and 7 shrouds from felt metal (PWA 24-1) to plasma spray (PWA279), and states that this work should be done by a PW repair facility. The commenters note that Chromalloy Georgia has an FAA-approved procedure for repairing these shrouds with plasma spray and request that the FAA include the alternate Chromalloy Georgia process in the Additional Service Information section of the AD, and in paragraphs (m), (u) and (u)(3).

The FAA does not agree. The AD mandates the incorporation of the RCC HPC into the module in accordance with SB PW4ENG 72-755 and mandates any concurrent requirements of SB PW4ENG 72-755. The other provisions of SB PW4ENG 72-755 may be done by any method, technique, and practice that is either prescribed in the current manufacturer's maintenance manual or Instructions for Continued Airworthiness or is acceptable to the administrator. Thus, the final rule requires only that after the effective date of that AD, the RCC rear HPC must have

a plasma spray abrasible sealing surface, but does not mandate how that surface must be applied. In this instance, the Chromalloy Georgia procedures numbers 96 CGT 073-08 and 96 CGT 085-05 are acceptable methods for applying plasma spray abrasible material for this shroud repair.

Accuracy of Economic Analysis

Two commenters question the accuracy of the economic analysis. These commenters suggest that the NPRM's economic analysis understated the required parts cost of approximately \$119,500 per engine.

The FAA does not agree. The NPRM's economic analysis reflects the average incremental cost of incorporating the RCC per engine during a heavy maintenance HPC compressor shop visit. This is based on the cost of the RCC hardware including the valve and harness changes, and deducts the cost of the SCC overhaul. While the actual cost for an engine may be higher or lower than the \$119,500, based on variations between the worldwide overhaul facilities to perform a SCC HPC overhaul and variations of work done in-house by the operator, the FAA believes its use of an average cost fairly estimates the economic burden of this AD.

Typographical Error

Three commenters note a typographical error in proposed Table 1, item 9 (Configuration I), where Service Bulletin "PW4ENG 72-55" should read "PW4ENG 72-755".

The FAA agrees, and has changed the final rule accordingly.

Clarifications

One commenter notes that in proposed paragraph (c) (1) the text of CSN limits should be revised to read "CSN or CST limits", to eliminate any possible confusion.

The FAA agrees and has changed the final rule accordingly.

One commenter suggests a wording change to proposed paragraph (e)(3) and (e)(4) from "remove from service", to "remove from service or perform on-wing Testing-21". The commenter states that this change would highlight that on-wing Testing-21 is an option.

The FAA agrees and has changed the final rule accordingly.

Service Bulletin 72-749

One commenter requests that proposed paragraph (u)(2)(ii) include a reference to PW SB PW4ENG 72-749, Revision 1, dated January 8, 2003, since this SB incorporates the Haynes

material HPC inner case rear hook and HPC inner case mid hook.

The FAA agrees and has added a reference to PW SB PW4ENG 72-749, dated June 2002, and Revision 1 of that SB, dated January 8, 2003, as additional methods of compliance to this paragraph as well as paragraph (u)(1)(ii) of the final rule.

Requirements Too Restrictive

Two commenters state that proposed paragraph (o)(2) is too restrictive and will result in numerous requests for alternative methods of compliance (AMOC). The commenters gave examples when the flange between "A" and "T" can be separated, without disturbing the gas path. These commenters request that the FAA remove the requirement for Testing-21 on engines that, during a shop visit, have a flange separation without disturbing the gas path hardware.

The FAA agrees. Paragraph (o)(2) of the final rule has been changed to be less restrictive for engines in the shop that have had a flange separation between "A" and "T" flanges by removing the Testing-21 requirement if, the engine is reassembled with the gas path-related components remaining in the as-removed condition.

Remove Reference to Service Document

One commenter states that in paragraph (l)(2)(i) of the proposed rule, the PW Clean, Inspect, and Repair (CIR) Manual 51A357, Section 72-35-68, Inspection/Check-04, Indexes 8-11, dated September 15, 2001, or dated March 15, 2002, should have only used the March 15, 2002 date.

The FAA does not agree. The final rule retains the September 15, 2001, reference and adds CIR 72-35-68 Insp/Chk-04, Indexes 8-11, dated December 15, 2002, as an additional method to inspect the HPC mid hook and rear hook of the HPC inner case for wear.

Table 1 Serial Number Errors

One commenter states that proposed Table 1 has serial number errors in the configuration designator "G" where the table identifies the Phase 3, 1st Run Subpopulation Engines by model and serial numbers. The serial numbers for the PW4052, PW4056, PW4060, PW4060A, PW4060C, and PW4062 rating are incorrect. The commenter states that the correct serial numbers should be SN 727732 through SN 728000 inclusive and SN 729001 through SN 729010 inclusive.

The FAA agrees and has changed the final rule accordingly.