

(1) After passing a cool-engine fuel spike stability test (Testing-21) that has been done in accordance with one of the following PW4000 Engine Manuals (EM) as applicable, except for engines configured with Configuration E, or engines that have experienced a Group 3 takeoff surge:

- (i) PW4000 EM 50A443, 71-00-00, TESTING-21, dated March 15, 2002.
- (ii) PW4000 EM 50A822, 71-00-00, TESTING-21, dated March 15, 2002.

(2) Engines tested before the effective date of this AD, in accordance with PW4000 EM 50A443, Temporary Revision No. 71-0026, dated November 14, 2001; or PW4000 EM 50A822, Temporary Revision No. 71-0018, dated November 14, 2001; or PW Internal Engineering Notice (IEN) 96KC973D, dated October 12, 2001, meet the requirements of Testing-21; or

(3) After passing an on-wing Testing-21 on PW4460 and PW4462 engines installed on the MD-11 airplanes that has been done in accordance with Major IEN 02KCW13H, dated December 9, 2002 or done prior to the approval of Major IEN 02KCW13H, dated December 9, 2002 in accordance with Minor IEN 02KCW13F, dated October 14, 2002 except for engines configured with Configuration E, or engines that have experienced a Group 3 takeoff surge; or

(4) The engine HPC was replaced with an HPC that is new from production with no time in service; or

(5) The engine HPC has been overhauled, or the engine HPC replaced with an overhauled HPC with zero cycles since overhaul; or

(6) An engine that is either below or exceeds the limits of Table 3 or Table 4 of this AD may be removed and installed on another airplane without Testing-21, as long as the requirements of paragraph (c), (d), or (g) of this AD are met at the time of engine installation.

Return to Service Requirements for Engines To Be Installed on Boeing 747 or 767 Airplanes

(j) Engines removed from service in accordance with paragraph (c), (d), or (e) of this AD may be returned to service and installed on Boeing airplanes under the following conditions:

(1) After passing a cool-engine fuel spike stability test (Testing-21) that has been done in accordance with PW4000 EM 50A605, 71-00-00, Testing-21, dated March 15, 2002, except for engines configured with Configuration E, or engines that have experienced a Group 3 takeoff surge; or

(2) Engines tested before the effective date of this AD, in accordance with PW IEN 96KC973D, dated October 12, 2001, or PW4000 EM 50A605, Temporary Revision No. 71-0035, dated November 14, 2001 meet the requirements of Testing-21; or

(3) For PW4056 engines installed on Boeing 747 airplane, after successfully completing on-wing Testing-21 in accordance with Major IEN 02KCW13E, dated November 21, 2002 or if done prior to the approval of Major IEN 02KCW13E dated November 21, 2002 in accordance with Minor IEN's 02KCW13, dated October 14, 2002, 02KCW13A, dated October 14, 2002,

02KCW13C, dated July 25, 2002, or 02KCW13D, July 29, 2002 except for engines configured with Configuration E, or engines that have experienced a Group 3 takeoff surge; or

(4) An engine that is either below or exceeds the limits of Table 3 or Table 4 of this AD may be removed and installed on another airplane without Testing-21, as long as the requirements of paragraph (c), (d), or (e) of this AD are met at the time of engine installation.

(5) Engine has incorporated the RCC rear HPC in accordance with PW SB PW4ENG 72-755, dated February 28, 2003. Completing this SB changes the engine configuration to Configuration I.

Phase 0 or Phase 1, FB2T or FB2B Fan Blade Configurations

(k) For Configuration A, B, C, D, E, F, G, and H engines with Phase 0 or Phase 1, FB2T or FB2B fan blade configurations complying with the requirements of AD 2001-09-05, (66 FR 22908, May 5, 2001), AD 2001-09-10, (66 FR 21853, May 2, 2001), or AD 2001-01-10, (66 FR 6449, January 22, 2001), do the following:

(1) Operators complying with the ADs listed in paragraph (k) of this AD using the weight restriction compliance method, must perform Testing-21 in accordance with paragraph (i) or (j) of this AD whenever any quantity of fan blades are replaced with new fan blades, overhauled fan blades, or with fan blades having the leading edges recontoured after the effective date of this AD, if during the shop visit the HPC is not overhauled and separation of a major engine flange, located between "A" flange and "T" flange, does not occur.

(2) If an operator changes from the weight restriction compliance method to the fan blade leading edge recontouring method after the effective date of this AD, testing-21 in accordance with paragraph (i) or (j) of this AD is required each time fan blade leading edge recontouring is done, if the fan blades accumulate more than 450 cycles since new or since fan blade overhaul, or since the last time the fan blade leading edges were recontoured.

Minimum Build Standard For Engines Installed on Airbus and McDonnell Douglas Airplanes

(l) Use the following minimum build standards for engines to be returned to service and installed on Airbus and McDonnell Douglas airplanes:

(1) After the effective date of this AD, do not install an engine with HPC and HPT modules where the CSO of the HPC is 1,500 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 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 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 CIR PN 51A357 Section 72-35-68, Repair-16, dated June 15, 1996, or in accordance with PW SB PW4ENG 72-749, dated June 17, 2002, 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, any HPC module that is disassembled to a level that 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, dated February 28, 2003.

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.

(2) The shop visit did not result in the separation of a major engine flange located between "A" flange and "T" flange; 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