

Unsafe Condition

(d) This AD is prompted by the discovery of cracks in the cooling air hole areas of the IP compressor stage 5 disc front spacer arm. We are issuing this AD to prevent IP compressor stage 5 disc failure, which could

result in uncontained engine failure and possible damage to the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Cycle Limits

(f) Change the service cyclic limits for the IP compressor stage 5 discs installed in the engine models listed in the following Table 3, within 30 days after the effective date of this AD.

TABLE 3.—CYCLIC LIFE LIMITS WITHOUT QUALIFYING MAGNETIC PARTICLE INSPECTION (MPI) OR EDDY CURRENT INSPECTION (ECI)

Date of reduced life limit	Engine models			
	-524G2, G2-T, G3, G3-T, H2, H2-T, H-36, H-T-36	-524D4, D4-B, D4-B-39, D4X, D4X-B, D4-39	-524B2, B2-B, C2, C2-B	-524B-02, B-B-02, B3-02, B4-02, B4-D-02
November 30, 2002	¹ 13,500 CIS	16,150 CIS	16,000 CIS	16,200 CIS
April 1, 2003	13,500 CIS	13,500 CIS	13,500 CIS	14,000 CIS
December 1, 2003	12,000 CIS	13,500 CIS	13,500 CIS	14,000 CIS
December 1, 2004	11,000 CIS	13,500 CIS	12,000 CIS	12,000 CIS
December 1, 2005	11,000 CIS	12,000 CIS	12,000 CIS	12,000 CIS
December 1, 2008	7,830 CIS	8,700 CIS	12,000 CIS	12,000 CIS

¹ Cycles-in-service.

Optional Inspections

(g) Before December 1, 2008, optional inspections are allowed at each shop visit or a one-time on-wing ECI is allowed to extend the disc life. Guidance for these inspections is provided in paragraphs (h) or (i) of this AD.

Optional Inspections at Shop Visit

(h) Perform optional inspections at shop visit, as follows:

(1) Remove corrosion protection from IP stage 5 disc. Information on corrosion protection removal can be found in the Engine Manual.

(2) Visual-inspect and binocular-inspect the IP stage 5 disc for corrosion pitting at the cooling air holes and defender holes in the disc front spacer arm. Follow paragraph 3.C. of the Accomplishment Instructions of RR MSB No. RB.211-72-D428, Revision 3, dated June 30, 2003.

(3) Discs with corrosion pitting in excess of limits must be removed from service. Information on disc corrosion pitting limits can be found in the Engine Manual.

(4) If the disc is free from corrosion pitting, MPI entire disc. Inspection on MPI can be found in the Engine Manual.

(5) If the disc has corrosion pitting within limits, ECI all disc cooling air holes, defender holes, and inner and outer faces. Follow paragraph 3.D. of the Accomplishment Instructions of RR MSB No. RB.211-72-D428, Revision 3, dated June 30, 2003. Information on corrosion pitting limits can be found in the Engine Manual.

(6) If the disc passes ECI and no cracks are found, MPI entire disc. Information on MPI can be found in the Engine Manual.

(7) If the disc passes MPI and no cracks are found, re-apply corrosion protection to disc, and return the disc to service in accordance with the cyclic limits allowed by paragraph (l) of this AD. Information on MPI limits can be found in the Engine Manual. Information on re-applying corrosion protection can be found in RR Repair FRS5900.

Optional One-Time On-Wing EC Inspection

(i) For RB211-524B2/C2 and RB211-524B4/D4 engine models, a one-time on-wing ECI of the IP compressor stage 5 disc may be performed in lieu of a shop visit inspection. Follow RR paragraph 3.A. through 3.F. of Accomplishment Instructions of SB No. RB.211-72-E148, and RR SB No. RB.211-72-E150, respectively, to do the ECI. If the disc

passes the ECI and no cracks are found, an extension is allowed as specified in paragraph (l) of this AD.

Definition of Shop Visit

(k) For the purposes of this AD, a shop visit is defined as the separation of an engine major case flange. This definition excludes shop visits when only field maintenance type activities are performed in lieu of performing them on-wing. (*i.e.*, for purposes such as to perform an on-wing inspection of a tail engine installation on an L1011 airplane).

Cyclic Life Extension

(l) Discs that pass an optional inspection may remain in service after that inspection for the additional cycles listed in the following Table 4, or until the next inspection, or until the December 1, 2008 life limit in Table 3 is reached, whichever occurs first.

Note 1: Discs may remain in service for additional periods if repeat optional inspections are conducted and associated AD criteria are met.

TABLE 4.—CYCLIC LIFE EXTENSION

	Engine models			
	-524G2, G2-T, G3, G3-T, H2, H2-T, H-36, H-T-36	-524D4, D4-B, D4-B-39, D4X, D4X-B, D4-39	-524B2, B2-B, C2, C2-B	-524B-02, B-B-02, B3-02, B4-02, B4-D-02
Extension after passing MPI	1,600 cycles	2,000 cycles	2,000 cycles	2,000 cycles.
Extension after passing In-Shop ECI	3,800 cycles	4,500 cycles	4,500 cycles	4,500 cycles.
Extension after passing On-Wing ECI	1,000 cycles	1,200 cycles	1,200 cycles	1,200 cycles.