



EMERGENCY AIRWORTHINESS DIRECTIVE

This Airworthiness Directive (AD) is issued pursuant to Canadian Aviation Regulation (CAR) 521.427. No person shall conduct a take-off or permit a take-off to be conducted in an aircraft that is in their legal custody and control, unless the requirements of CAR 605.84 pertaining to ADs are met. Standard 625 - Aircraft Equipment and Maintenance Standards Appendix H provides information concerning alternative means of compliance (AMOC) to ADs.

Number:

CF-2019-37

Effective Date:

26 October 2019

ATA:

72

Type Certificate:

A-236

Subject:

Engine - Aircraft Flight Manual – Operating Limitations

Applicability:

Airbus Canada Limited Partnership (formerly C Series Aircraft Limited Partnership (CSALP), Bombardier Inc.) aeroplanes:

Model BD-500-1A10, serial numbers 50001 and subsequent for aeroplanes with PW1524G engines,

Model BD-500-1A11, serial numbers 55001 and subsequent for aeroplanes with PW1521G-3 or PW1524G-3 engines.

Compliance:

Within 7 days from the effective date of this AD, unless already accomplished.

Background:

Several occurrences of engine in-flight shutdowns (IFSDs) were reported on Airbus Canada Limited Partnership BD-500 family aeroplanes. Investigations are ongoing to determine the root cause. Preliminary investigation results indicate high altitude climbs at higher thrust settings for engines with certain thrust ratings may be a contributor. This condition, if not corrected, could lead to an uncontained failure of the engine and damage to the aeroplane.

To address this potentially unsafe condition, this AD introduces a new Aircraft Flight Manual (AFM) limitation and normal procedure to limit the engine N1 setting to 94% while above 29000 feet.

This AD is considered an interim action and further AD action may follow.

Corrective Actions:

- A. Amend the applicable AFM, section Limitations, to incorporate the limitation as specified in Figure 1 of this AD, and section Normal Procedures, to replace the “High altitude climb check (before reaching 35000 ft.)” as specified in Figure 2 of this AD.

Figure 1 Limitation

Engine operating limits

Above 29000 feet, the maximum N1 setting is 94% N1.

Any exceedance of more than 20 continuous seconds must be reported.

Figure 2 Normal Procedure**High altitude climb check****CAUTION**

Before initiation of step climbs above 29000 feet, the autothrottle must be selected off to respect the 94% N1 limitation.

Before reaching 29000 feet:

- (1) Autothrottle..... Select off
 (2) N1Not above 94%

CAUTION

If still in icing conditions, climb must be stopped at 35000 feet. Failure to select WING ANTI-ICE to OFF above 35000 feet could result in engine nacelle overheating, and trigger engine fire warnings.

Before reaching 35000 feet:

- (3) ANTI-ICE, WING..... OFF
 (4) Avoid icing conditions.

When stabilized in cruise:

- (5) AutothrottleAs required
 (6) N1..... Monitor, not above 94%

B. Inform all flight crews of the new procedure and thereafter operate the aeroplane accordingly.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
 Chief, Continuing Airworthiness
 Issued on 25 October 2019

Contact:

Brian Daly, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail AD-CN@tc.gc.ca or any Transport Canada Centre.