



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:	Effective Date:
CF-2019-37	26 October 2019
ATA:	Type Certificate:
72	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

<p>High altitude climb check</p> <p style="text-align: center;">CAUTION</p> <p>Before initiation of step climbs above 29000 feet, the autothrottle must be selected off to respect the 94% N1 limitation.</p> <p>Before reaching 29000 feet:</p> <p>(1) Autothrottle..... Select off</p> <p>(2) N1Not above 94%</p> <p style="text-align: center;">CAUTION</p> <p>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.</p> <p>Before reaching 35000 feet:</p> <p>(3) ANTI-ICE, WING..... OFF</p> <p>(4) Avoid icing conditions.</p> <p>When stabilized in cruise:</p> <p>(5) Autothrottle As required</p> <p>(6) N1..... Monitor, not above 94%</p>

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

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