



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) with ADs.

Number:

CF-2022-11

Effective Date:

31 March 2022

ATA:

72

Type Certificate:

A-236

Subject:

Engine – Airplane Flight Manual (AFM) Normal and Non-Normal Procedures – Erroneous Uncontrolled High Thrust Detection

Replacement:

Supersedes AD CF-2021-44, issued 2 December 2021.

Applicability:

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

Model BD-500-1A10, serial numbers 50001 and subsequent,

Model BD-500-1A11, serial numbers 55001 and subsequent.

Compliance:

As indicated below, unless already accomplished.

Background:

There has been one in-service event where a BD-500-1A11 aeroplane experienced a dual engine automatic shutdown upon landing. The crew successfully stopped the aeroplane with degraded systems and functions.

An investigation is ongoing to determine the root cause, but preliminary findings of this event indicate that erroneous uncontrolled high thrust (UHT) detection can occur above 16,000 feet when the thrust lever is manually and abruptly moved towards the idle position.

An erroneous UHT detection in flight would result in engine shutdown on landing with or without indications or crew alerting system (CAS) messages displayed before landing. An automatic dual engine shutdown upon landing could lead to a runway excursion.

As interim action to address this unsafe condition, AD CF-2021-44 was issued to mandate interim procedure changes into the AFM. Since then, ACLP has updated the Master AFM at Issue 018 to incorporate the new normal procedure and revise the non-normal procedures. This AD retains the requirements of AD CF-2021-44 to maintain continuity of mandatory actions, gives credit for an associated Global AMOC, and mandates procedures introduced by this new Master AFM version, which supersede those required by AD CF-2021-44 as a final action.

Corrective Actions:

For the purpose of this AD, the **Master AFM Issue 018** refers to:

- ACLP's BD-500-1A10 Master AFM (publication BD500-3AB48-22200-00), Issue 018, dated 4 January 2022 and published on 27 January 2022, or

- ACLP's BD-500-1A11 Master AFM (publication BD500-3AB48-32200-00), Issue 018, dated 4 January 2022 and published on 27 January 2022.
- A. Within 30 days from the effective date of AD CF-2021-44 (9 December 2021), amend the applicable AFM, section Normal Procedures, by adding the new interim procedure as specified in Figure 1 below.

Figure 1 – Normal Procedure “If above 16,000 feet pressure altitude, thrust lever(s) were abruptly moved manually towards IDLE”.

Normal Procedure - “If above 16,000 feet pressure altitude, thrust lever(s) were abruptly moved manually towards IDLE”.		
Before landing:		
<ul style="list-style-type: none"> • Start and use the APU for landing. • Select the longest runway with minimal crosswind. • Use the autobrake for landing. • Land on dry or wet runway if possible. • Select the SPOILER lever to FULL immediately after touchdown. • Use the OLD factors that follow for landing: 		
	OLD Factor Dry or Wet Runway Condition	OLD Factor Contaminated Runway Condition
APU GEN On	1.25	1.40
APU GEN Off	1.40	1.60
Definition: Abrupt throttle movement is defined as when N1 is above 80% N1, a sudden change of thrust lever position from MAX to IDLE in less than 2 seconds.		

Note: OLD in Figure 1 above stands for Operational Landing Distance.

- B. Within 30 days from the effective date of AD CF-2021-44 (9 December 2021), amend the applicable AFM, section Non-Normal Procedures, by adding the new interim steps into each of the following two Non-Normal procedures, as specified in Figure 2 below: L THROTTLE FAIL (Caution) and R THROTTLE FAIL (Caution).

Figure 2 – Non-Normal Procedures

Non-Normal Procedure		
<ul style="list-style-type: none"> • L THROTTLE FAIL (Caution) or • R THROTTLE FAIL (Caution) 		
Before landing:		
<ul style="list-style-type: none"> • Start and use the APU for landing. • Select the longest runway with minimal crosswind. • Use the autobrake for landing. • Land on dry or wet runway if possible. • Select the SPOILER lever to FULL immediately after touchdown. • Use the OLD factors that follow for landing: 		
	OLD Factor Dry or Wet Runway Condition	OLD Factor Contaminated Runway Condition
APU GEN On	1.25	1.40
APU GEN Off	1.40	1.60

Note: OLD in Figure 2 above stands for Operational Landing Distance.

- C. Incorporation of the Figure 1 and Figure 2 procedures in Global AMOC AARDG-2021/A54 meets the requirements of paragraphs A and B of this AD.
- D. Within 120 days from the effective date of this AD, amend the applicable AFM by incorporating the procedure Low altitude descent check (below 16,000 feet) in Chapter 3 Normal Procedures and the revised procedures L THROTTLE FAIL and R THROTTLE FAIL in Chapter 4 Non-Normal Procedures, introduced by the Master AFM Issue 018, or amended in later AFM revisions approved by Transport Canada.
- E. After compliance with paragraph D of this AD, remove the AFM changes introduced by paragraphs A and B, or C if applicable, of this AD.
- F. Inform all flight crews of these changes in the AFM procedures and thereafter operate the aeroplane accordingly.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 17 March 2022

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